REMEDIAL INVESTIGATION/
REMEDIAL ALTERNATIVES ANALYSIS REPORT

BROWNFIELD CLEANUP PROGRAM
NYSDEC Site ID C828124
185 MOUNT HOPE AVENUE
(TOWER PROPERTY)
ROCHESTER, NEW YORK

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This report was completed in general accordance with the work plans listed in Section 1.0 of this report, as modified and as discussed within this report.

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President

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EXECUTIVE SUMMARY

The findings and conclusions of the site investigation conducted as part of this project, and the remedial alternatives analysis with the recommended remedial alternative for the Site are summarized in this section of the report.

Background

The Site consists of an apartment building with an associated paved parking lot located on approximately 1.106 acres of land. The Site is located in a mixed-use urban area. Commercial and residential properties bound the Site to the north and east, residential properties bound the site to the south, and the Genesee Gateway Park with the Genesee River beyond bound the Site to the west.

The apartment building totals approximately 143,000 square feet and consists of a multi-level eight to twelve-story brick and concrete-block, slab-on-grade building constructed in 1975. The apartment building houses 202 residential units. Prior to the residential development in 1975, past uses of the Site included commercial and warehouse use. Portions of a feeder canal and rail yards were also once located on the Site.

The Site is located in an urban area that is serviced by the public water system. The Monroe County Department of Health (MCDOH) has no records of public or private drinking water wells or process water wells within a 0.25-mile radius of the Site. A review of a document titled "Ground Water Resources of Monroe County" (1935) revealed no groundwater supply wells on, or in the immediate area of, the Site.

The Site and surrounding area are generally level. The Genesee River is located approximately 130 feet west of the site. Surface water appears to flow off the Site toward Mount Hope Avenue to the east, and into the City of Rochester sewer system. Groundwater flows toward the southeast away from the Genesee River. This flow direction may be modified locally due to buried utilities, seasonal conditions, or other factors.

An October 2000 Phase I Environmental Site Assessment (Phase I ESA) identified the following recognized environmental conditions (RECs) at the Site:

a. **Historic Use of the Site:** Former uses at the Site include: rail yards, former Erie Canal feeder, and possibly a portion of a gasoline station.

b. **Historic Use of Adjoining Properties:** Historic uses of adjoining properties include: gasoline stations to the north and possibly east of the Site (i.e., east of Mt. Hope Avenue); former railroad infrastructure to the west of the Site; and a former Erie Canal feeder, a rail yard, a tannery, iron cutting, and auto repair to the south of the Site.

Subsequent intrusive environmental studies conducted between 2000 and 2003 identified petroleum contamination in soil and groundwater on the northeastern portion of the Site. In August 2004, the New York State Department of Environmental Conservation (NYSDEC) assigned Spill File # 0470234 due to the petroleum contamination that is present on the Site (i.e., 185 Mt. Hope Avenue).

A Remedial Investigation Work Plan dated August 2004 was prepared by Day Environmental, Inc. (DAY). The primary objective of the work plan was to perform environmental work at the Site in accordance with the requirements of the Brownfield Cleanup Program to evaluate the nature and extent of contamination at the Site. Other objectives included: performing an exposure assessment; confirming and/or further delineating contamination in areas identified as RECs during previous studies; evaluating fate and transport of contaminants; identifying remedial alternatives; performing a detailed analysis of selected remedial alternatives; and selecting a remedial alternative.

Tasks performed as part of this project to evaluate or address the RECs identified above included:

- Conducting an EM-61 geophysical survey and subsequent test pit study to assist in evaluating the locations of suspect underground storage tanks (USTs);
- Evaluating surface soil conditions;
- Evaluating subsurface soil conditions;
- Evaluating groundwater quality conditions and groundwater movement characteristics;
- Conducting a vapor intrusion study to evaluate whether volatile organic compounds (VOCs) in soil or groundwater were volatilizing and impacting indoor air inside the apartment building on the Site; and
- Conducting a soil vapor study to evaluate whether VOCs were preferentially migrating along select buried utilities.

Physical Characteristics of Site

Based on the work performed to date at the Site, heterogeneous fill material generally consisting of reworked soil (e.g., silt, sand, gravel, and clay) with lesser amounts of brick, cinders, roots, wood, ash, and concrete is present over most of the Site from the ground surface to depths ranging between approximately 2.0 feet and 12.0 feet. At most test locations, the uppermost layer of indigenous soil predominantly consists of varying grades of sands, some silts, and lesser amounts of gravel and clay. As measured during this study, groundwater generally flows toward the southeast.

Nature and Extent of Contamination

The nature and extent of contamination are summarized below:

- Constituents were not detected in surface soil samples at concentrations above NYSDEC Track 2 Brownfield Cleanup Program (BCP) soil cleanup objectives (SCOs) restricted residential use.
- Concentrations of petroleum-related VOCs and semi-volatile organic compounds (SVOCs) in subsurface soil and groundwater were generally highest on the northeastern portion of the Site in proximity to the portion of the adjoining property to the north that was formerly improved with gasoline/service stations. A plume associated with this area of petroleum contamination appears to extend southward across the Site.

- Track 2 SCOs for restricted residential use for this area of petroleum contamination were only exceeded at one test location (i.e., test boring SBDAY-09). In addition, test boring SBDAY-08 located within this area of petroleum contamination contained a concentration of manganese [i.e., 4,060 parts per million (ppm)] that exceeded its Track 2 restricted residential use SCO of 2,000 ppm.
- Groundwater samples from wells MWDAY-01 and MW-3 contained concentrations of VOCs and/or SVOCs that exceeded NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 groundwater standards or guidance values. Well MW-3 is located on the northeastern portion of the Site, and well MWDAY-01 is located along the southern property boundary near the apparent leading edge of the petroleum plume. Concentrations of VOCs in groundwater tend to decrease as the distance away from the northeast portion of the Site is increased. Based on field findings and analytical laboratory testing of soil and groundwater samples, the length of the petroleum plume located south of the northeastern portion of the Site is estimated to be at least 140 feet long.
- The results of the vapor intrusion evaluation suggests indoor air quality inside the on-site high-rise apartment building had not been impacted as a result of VOCs present in subsurface soil and groundwater beneath and in proximity to this building.
- VOCs associated with the on-site petroleum plume were detected in groundwater from well MWDAY-01 and soil vapor point SV-3 that are located nearby or in proximity to an abandoned 54-inch diameter sewer line that extends from the Site to beneath the northern residential apartment building on the adjoining property located south of the Site. The concentrations of detected VOCs on this southern portion of the Site are lower than the concentration of VOCs detected in soil and groundwater on the northeast portion of the Site. Based on this data, and on the findings of the vapor intrusion evaluation conducted at the on-site high-rise apartment building, it appears unlikely that the lower concentrations of VOCs detected on the southern portion of the Site will adversely impact indoor air quality of the low-rise apartment/townhouse buildings on the adjoining property located south of the Site. [Note: A vapor intrusion evaluation is planned for the low-rise apartment/townhouse buildings on the adjoining property located south of the Site under a separate Brownfield Cleanup Project. It is suggested that this evaluation include the sampling and testing of sub-slab and indoor air samples from the northern portion of the northern-most low-rise apartment/townhouse building.]
- A sample of fill material at test location SBDAY-02 contained some polyaromatic hydrocarbon (PAH) SVOCs and the metal mercury at concentrations that exceeded Track 2 SCOs for restricted residential use. This test boring was advanced within the footprint of the former feeder canal.
- The results of photoionization detector (PID) screening of unsaturated soil samples collected from test boring and test pit locations indicate that petroleum vapors are present in unsaturated soils on some portions of the Site.
- Evidence of light non-aqueous phase liquid (LNAPL) or dense non-aqueous phase liquid (DNAPL) was not detected at test boring, test pit or monitoring well locations during this study.

- Evidence of underground storage tanks was not encountered on the Site during this project.
- Apparent sources of petroleum identified during this investigation include former gasoline/service station use on the northeast portion of the Site (i.e., gasoline tanks associated with a former gasoline station that may have been present at the site) and at locations on adjoining/nearby property(s) north of the Site.
- Apparent sources of other types of constituents (e.g., some PAH SVOCs, metals, cyanide, etc.) may be attributable to surficial fill materials that were documented at the Site.

Contaminant Fate and Transport

This section summarizes contaminant fate and transport for the Site including identification of potential routes of migration, contaminant persistence, and contaminant migration.

Potential Routes of Migration

Potential routes of migration identified for this Site include:

- VOCs, SVOCs and metals in soil leaching and impacting groundwater through precipitation or contact with groundwater;
- VOCs, SVOCs and metals migrating in a dissolved groundwater plume;
- VOCs migrating as a vapor in the unsaturated zone;
- VOC volatilization from groundwater or soil to indoor air inside buildings [Note: the vapor intrusion evaluation does not suggest this is occurring at the current residential apartment building that is located on the Site]; and
- Indirect migration pathways such as volatilization to air, transportation on construction equipment/workers, windborne processes, etc., if the impacted media (e.g., soil, groundwater) were to be disturbed in the future.

Contaminant Persistence

The contamination at the Site is identified as generally consisting of organic constituents (VOCs and SVOCs), and also various metals. The persistence of these constituents is further discussed in this section of the report.

Organic Constituents

The VOCs and SVOCs detected at the Site are generally associated with weathered petroleum products. Much of the non-target VOCs and SVOCs detected in soil and groundwater samples may reflect biodegradation products of the petroleum contamination or other non-target compounds typically associated with petroleum products. Petroleum-type VOCs detected in soil and groundwater may be attributable to products such as gasoline. The majority of SVOCs detected in the soil and groundwater are considered PAHs. The VOCs and SVOCs encountered at the Site biodegrade aerobically and anaerobically. These VOCs and SVOCs in an aqueous setting will biodegrade faster under aerobic conditions when compared to biodegradation rates under

anaerobic conditions. Most of the SVOCs detected at the Site would generally be anticipated to persist longer than the VOCs that were detected at the Site.

In addition to biodegradation, VOC and SVOC concentrations in the groundwater would presumably decrease as the distance from the suspected source area is increased due to processes such as advection, dispersion, sorption, diffusion, etc. The analytical laboratory test results for groundwater samples collected as part of this study confirm that contamination concentrations decrease as the distance from the suspected source area is increased.

Inorganics

Various metals were detected in samples of surface soil, subsurface soil, and groundwater. Some of the metals detected may be associated with contamination from past uses of the Site, and other metals may be associated with naturally occurring concentrations of metals in soil or groundwater for the area of the Site. Metals can change form (e.g., Fe^{+2} to Fe^{+3}), but are persistent in the environment and do not degrade. Some of the metals detected at the Site can bioaccumulate.

Only the metals mercury and manganese were detected in soil at concentrations exceeding Track 2 SCOs for restricted residential use. The metals iron, magnesium, manganese and sodium were detected more often in groundwater at concentrations exceeding TOGS 1.1.1 groundwater standards or guidance values than other detected metals.

Processes such as advection, dispersion, sorption, diffusion, etc, can result in decreases in metals concentrations dissolved in groundwater as the distance away from their source is increased.

Contaminant Migration

The petroleum contamination within the soil and groundwater at the Site is detected at highest concentrations in proximity to the northeast portion of the Site.

Given the fact that petroleum contamination is present in test boring/monitoring well locations along the northern property boundary, it appears possible that historic petroleum releases from former gasoline/service station uses at the Site and/or on adjoining/nearby property(s) north of the Site could have impacted the Site.

The findings of this project indicate petroleum-related impacts present on the northeastern portion of the Site appear to have migrated laterally in a southward direction. Based on field findings and analytical laboratory testing of soil and groundwater samples, the length of the petroleum plume located south of the northeastern portion of the Site is estimated to be at least 140 feet long.

Petroleum contamination also appears to have migrated vertically downward resulting in a zone of impacted soil that is up to approximately 7 feet thick on the northeastern portion of the Site.

Factors Affecting Contaminant Migration

Factors affecting contaminant migration include: groundwater flow; advection; mechanical dispersion; molecular diffusion; partitioning between air, soil and groundwater; and adsorption of constituents onto soil particles or particles suspended in groundwater.

The type of contamination present at the Site generally consists of petroleum-related VOCs, SVOCs, and selected metals. In general, the VOCs tend to be more mobile in the environment than SVOCs and metals. The estimated groundwater flow velocity for the site may range between 0.004 ft/day and 0.85 ft/day (i.e., 1.46 ft/year to 310.25 ft/year). The factors described above impact the contaminant flow rates, and the physical properties of the contaminants can impact migration rates.

Exposure Assessment

Under current site conditions, a complete human health exposure pathway has not been identified, and it was determined that a Fish and Wildlife Resources Impact Analysis was not needed. However, the following potential future activities have been identified as potential human health exposure pathways:

- Future site workers and occupants of future buildings that are constructed over areas of soil and groundwater containing VOCs could be exposed to VOCs, SVOCs and metals that are present in subsurface soil or groundwater at concentrations exceeding standards, criteria and guidance (SCG) values. Examples of exposure include: during disturbance of contaminated material, potential volatilization of VOCs into future site structures, etc. Routes of exposure to future Site workers could include inhalation, ingestion, dermal contact, eye contact, and puncture/injection.
- Future potential use of groundwater at the Site could pose a potential exposure pathway to VOCs, SVOCs and metals that are present in groundwater at concentrations exceeding SCGs. The primary potential route of exposure would be ingestion. However, other potential routes of exposure include inhalation, dermal contact, eye contact, and puncture/injection.

Conclusions

Constituent concentrations detected in surface soil samples collected as part of this project did not exceed Track 2 SCOs for restricted residential use. Further actions do not appear warranted in relation to surface soil at the Site.

Petroleum contamination was encountered in soil and groundwater on the northeastern portion of the Site. An apparent plume extends southward across the Site from this area. The concentration of the VOCs ethylbenzene and xylene detected in one subsurface soil sample, and the concentration of the metal manganese detected in a different subsurface soil sample, that were collected on the northeastern portion of the Site exceeded Track 2 SCOs for restricted residential use. In addition, groundwater samples collected from a monitoring well on the northeastern portion of this area, and from a monitoring well near the foot of the plume located southward from this area, contained petroleum-related constituents. Also, groundwater samples from these two monitoring wells contained some metals and cyanide at concentrations exceeding groundwater standards or guidance values. VOCs in subsurface

soil and groundwater do not appear to be impacting indoor air inside the existing high-rise apartment on the Site. In addition, buried utilities that were monitored do not appear to be acting as preferential migration pathways of contaminants at concentrations that would result in an adverse exposure. However, further actions appear warranted to address the northeast portion of the Site and the associated plume that is predominantly impacted with petroleum-related constituents.

Fill material present at the Site may be contributing to a random distribution of detected constituents in subsurface soil and groundwater at the Site. Track 2 SCOs for restricted residential use were exceeded for some PAH SVOCs and the metal mercury at one subsurface soil sample location. Also, groundwater samples collected from some well locations contained antimony, barium, cyanide and gamma-chlordane at concentrations that exceeded groundwater standards or guidance values. Further actions appear warranted to address the nature of these detected constituents on the Site.

It is reported that the source areas of petroleum contamination on the adjoining/nearby properties north of the Site will be remediated. In an interview with a representative of the City of Rochester, the representative indicated that remediation of this adjoining/nearby property may commence in August or September of 2007. As such, the evaluation of remedial alternatives in this report assumes that there will not be an on-going source of contamination migrating onto the Site from these adjoining/nearby properties (i.e., from former gasoline stations that were located to the north of the Site, etc.).

Data Limitations

Due the location of the petroleum contaminated media on the Site in relation to Mt. Hope Avenue, the extent of petroleum contamination eastward of the Site could not be fully defined. However, the exposure assessment completed as part of this project does provide an evaluation of potential off-site receptors, including in the direction of Mt. Hope Avenue. Also, the vertical extent of petroleum contamination at some test boring locations was not fully defined. However, the physical properties of the type of contamination (i.e., petroleum tends to float on water or migrate in a dissolved phase), and the observations/data obtained from deeper groundwater monitoring wells advanced at the Site, provide insight into the relative vertical extent of petroleum contamination at the Site.

Remedial Alternatives Analysis

As part of this project, remedial action objectives, contaminants of interest, remediation criteria, and general response actions have been identified. In regard to these criteria, four remedial alternatives were developed and evaluated. These alternatives are summarized below:

Alternative #1 No Action

Alternative #2 Monitored Natural Attenuation and Institutional Controls

Alternative #3 Limited In-Situ Remediation, Institutional Controls, and Groundwater Monitoring

Alternative #4 Full Excavation, In-Situ Remediation, and Groundwater Monitoring

A detailed evaluation of the four remedial alternatives was performed, and implementation of Alternative #3 (Limited In-Situ Remediation, Institutional Controls, and Groundwater Monitoring) is recommended for the Site. Specifically, Alternative #3 consists of various technical and administrative actions that are intended to perform remediation of the highest concentrations of contamination at the Site, reduce exposure to Site contaminants, and provide monitoring of groundwater to ensure that the contamination is not migrating any further.

Under this alternative, limited in-situ remediation would be conducted in subsurface soils and groundwater on the northeast portion of the Site where the highest concentrations of petroleum constituents have been detected. The in-situ remediation would be implemented during or after the remedial activities that the City of Rochester is planning on the adjacent/nearby property located north of the Site. The in-situ chemical oxidation would be performed to remediate contamination in subsurface soil and groundwater on an assumed 60-foot by 90-foot area (i.e., 5,400 square foot area) on the northeast portion of the Site where contaminant concentrations exceed SCGs. Regenesis' RegenOx^{tm} (or a similar chemical oxidation product) would be injected in a grid consisting of approximately fifty-four injection points set on 10-foot centers over the northeast portion of the Site (i.e., area with highest concentrations of petroleum constituents in subsurface soil and groundwater). RegenOx^{tm} is a solid alkaline oxidant that uses a sodium percarbonate complex with a multi-part catalytic formula. The product consists of an oxidizer and activator that are mixed with water, and combined and injected into the subsurface using common drilling or direct-push equipment. Once in the subsurface, the product produces an effective surface-mediated oxidation reaction comparable to that of Fenton's Reagent, without a violent exothermic reaction. RegenOx^{tm} destroys a wide range of contaminants (including petroleum constituents) in both soil and groundwater. Regenesis' estimated one-time application of 10,020 pounds of RegenOx^{tm} is based on treating 90% of the contaminant mass in the source area on the northeast portion of the Site. Baseline and performance groundwater monitoring would be completed to evaluate the effectiveness of the in-situ chemical oxidation treatment.

Institutional controls would be implemented to protect against exposure to residual Site contamination. These institutional controls would be used to address any residual contamination that may remain in soil or groundwater subsequent to the one-time in-situ chemical oxidation application. It is anticipated that institutional controls may include the following elements:

- Development and implementation of a Site Management Plan (SMP) to address the characterization, handling, and disposal/re-use of residual contaminated media (e.g., soil, fill, groundwater) that is disturbed during any future site activities. The SMP would also evaluate the potential for vapor intrusion into any future buildings to be constructed on the Site, including requirements to mitigate such potential vapor intrusions through use of environmental engineering controls (e.g., sub-slab vapor barrier, sub-slab ventilation system, etc.) or other means. In addition, the SMP would identify use restrictions for the Site (e.g., property development and groundwater use restrictions, etc.).

- Annual certification by the property owner prepared by a professional engineer or environmental professional that is acceptable to the NYSDEC. The certification is intended to validate that the institutional controls (and also engineering controls if

required in the future) that are implemented for the Site are unchanged from the previous certification and that no circumstances have occurred that impair the ability of the controls to protect public health and the environment, or constitute a violation or failure to comply with any O&M or SMP for the Site.

- Development and implementation of an environmental easement to require compliance with the SMP; limit use of the Site to restricted residential, commercial and industrial use; restrict use of groundwater as a source of potable water or process water, without necessary water quality treatment as determined by the New York State Department of Health (NYSDOH); and require the property owner to complete and submit to the NYSDEC the annual certification described above.

It is anticipated that the continued use of the current high-rise residential apartment complex and associated paved parking lot at the Site will not require environmental engineering controls.

As part of Alternative #3, a groundwater monitoring program would be implemented using the five existing groundwater monitoring wells and two new wells that are installed upgradient and downgradient from the most contaminated portion of the Site (i.e., upgradient and downgradient of northeast portion of the Site). This well field should result in an upgradient to downgradient transect of monitoring points across the plume. The new wells would also assist in evaluating whether the contamination is solely attributable to an off-site source(s) to the north, or is possibly a co-mingled plume attributable to an on-site source and an off-site source(s) to the north. This alternative assumes that the groundwater monitoring will continue for a period of up to five years. It is assumed that the wells will be sampled on a bi-annual basis during the 1st and 2nd years, and on an annual basis for the 3rd through 5th years. As part of this monitoring program, groundwater will be tested for parameters that evaluate the presence and concentration of Site contaminants, and to determine the extent and potential movement of the contamination plume. It is anticipated that during each round of groundwater sampling, samples from the seven groundwater monitoring wells will be tested for: VOCs (ASP Method OLM04.2); SVOCs (ASP Method OLM04.2); TAL metals (ASP Method ILM04.1); and, water quality parameters such as dissolved oxygen, oxidation-reduction potential, conductivity, temperature, and pH. With approval from regulatory agencies, the duration and frequency of the groundwater monitoring, as well as the list of parameters to be tested, may be adjusted as the monitoring program progresses.

Alternative #3 is a Track 4 cleanup program identified in the BCP and is intended to allow restricted residential use at the Site. Alternative #3 can be successfully implemented and is cost effective in relation to the current and future use of the Site. Alternative #3 can adequately address Remedial Action Objectives (RAOs), and provides adequate post-treatment groundwater monitoring to evaluate compliance trends in relation to chemical-specific SCGs. Location-specific SCGs are met since the institutional controls are protective of human health and the environment. Action-specific SCGs are also adequately addressed for this alternative. Alternative #3 is also acceptable since groundwater is not used as a potable source at, or in proximity to, the Site. Institutional controls such as the health and safety plan will ensure that future workers and the public are not adversely exposed to Site contaminants, and the site management plan will assist in the proper characterization, handling and disposal of impacted site media should any be disturbed or displaced in the

future. This alternative allows for very little disruption of the current and future use of the Site as a high-rise residential apartment complex with an associated paved parking lot. This alternative also seems appropriate given the fact that the actual source of petroleum impact may be located on adjoining/nearby properties north of the northeast portion of the Site, and that remediation will be conducted on these adjoining/nearby properties in the future. Owners/occupants of the Site do not have control over the management of petroleum impact that is present on these adjoining/nearby properties.

The groundwater monitoring will assist in assuring that contamination does not migrate away from the Site. If the groundwater monitoring indicates that the dissolved constituents are moving away from the Site, additional remedial measures could be implemented at that time. Also, Alternative #3 is more cost effective, and would cause less short-term risks than Alternative #4. Alternative #3 would also likely result in the constituents of concern remaining on-site for less time than Alternative #2.

In summary, Alternative #3 is a cost effective alternative that is being recommended for implementation at the Site.

It is anticipated that the NYSDEC would issue a Certificate of Completion once the in-situ chemical oxidation treatment was completed, and the institutional controls were developed and implemented.

1.0 INTRODUCTION

The subject property (Site) consists of an apartment building with an associated paved parking lot located on approximately 1.106 acres of land. The property is addressed as: 185 Mount Hope Avenue, City of Rochester, County of Monroe, New York. Copies of a project locus map (Figure 1) and a site plan with select test locations (Figure 2) are provided at the end of the text of this report. The Site is located in a mixed-use urban area. Commercial and residential properties bound the Site to the north and east, residential properties bound the Site to the south, and the Genesee Gateway Park with the Genesee River beyond bound the Site to the west.

The apartment building totals approximately 143,000 square feet and consists of a multi-level eight to twelve-story brick and concrete-block, slab-on-grade building constructed in 1975. The apartment building houses 202 residential units. The units primarily are one bedroom and studio apartments. Prior to the residential development in 1975, past uses of the Site included commercial and warehouse uses. Portions of a feeder canal and rail yards were also once located on the Site.

The Site is located in an urban area that is serviced by the public water system. The MCDOH has no records of public or private drinking water wells or process water wells within a 0.25-mile radius of the Site. A review of a document titled "Ground Water Resources of Monroe County" (1935) revealed no groundwater supply wells on, or in the immediate area of, the Site.

The Site and surrounding area are generally level. The Genesee River is located approximately 130 feet west of the site. Surface water appears to flow off the Site toward Mount Hope Avenue to the east, and into the City of Rochester sewer system. Based upon previous investigations at the Site, groundwater appears to flow to the southeast away from the Genesee River. This flow direction may be modified locally due to buried utilities, seasonal conditions, or other factors.

Conifer Hamilton, LLC (Applicant), submitted an application to the NYSDEC for conducting environmental studies and cleanup at the Site under the New York State Brownfield Cleanup Program (BCP). The NYSDEC documents titled "*DER Draft Brownfield Cleanup Program Guide* (May 2004) and Dr*aft DER-10 Technical Guidance for Site Investigation and Remediation* (December 2002) were used to assist in the development of this report. The purpose of this Remedial Investigation/Remedial Alternatives Analysis report is to present the findings of the remedial investigation performed at the Site, identify areas requiring remediation or corrective actions, provide an analysis of remedial alternatives that were evaluated, and present the remedial alternative(s) proposed for the Site so it can be redeveloped.

1.1 Previous Environmental Studies

DAY previously performed various studies on properties that include the Site. The reports completed include the following:

- *Phase I Environmental Site Assessment Report; 151 to 435 Mt. Hope Avenue and 562 Ford Street; Rochester; New York*; dated October 24, 2000 (DAY File #2307E-00)

- *Phase II Environmental Study Data Package; 151-435 Mount Hope Avenue and 562 Ford Street Rochester; New York,* dated October, 2000 (DAY File #2395S-00)
- *Phase II Environmental Study Data Evaluation Report; 151, 171, 173, 175, 177, 191, 425 and 435 Mount Hope Avenue, and 562 Ford Street Rochester; New York;* dated February, 2002 (DAY File #2506S-00). [Note: This report does not include the Site, but the findings further define potential impacts on the Site from off-site sources.]

URS Corporation (URS) also completed an environmental study on property that included the Site. The report for the URS study is titled; *Phase II Report; Environmental Site Assessment of River Park Commons Apartment Complex; Rochester, New York*, and is dated June 2003.

Aspects of these previous environmental studies that involve the Site are summarized below, and further details are discussed in the actual reports referenced.

DAY Phase I ESA Report

DAY completed a Phase I ESA report dated October 24, 2000 for the Site in general accordance with American Society for Testing and Materials (ASTM) Practice E 1527-00. A copy of this Phase I ESA report was provided in the BCP Application. Information obtained from the Phase I ESA indicates that the building on the Site is currently heated with electric baseboard units, and water is currently heated with natural gas. In addition, the Site buildings were connected to the public sewer and water systems at the time they were constructed.

The Phase I ESA included the identification of the following RECs at the Site that are further evaluated under this Remedial Investigation/Remedial Alternatives Analysis Report:

1. **Historic Use of the Site:** Former uses at the Site include: rail yards, former Erie Canal feeder, and possibly a portion of a gasoline station. A review of historical Sanborn Maps suggested gasoline tanks associated with a former gasoline station may be present on the Site (refer to Figure 2).

2. **Historic Use of Adjoining Properties:** Historic uses of adjoining properties include: gasoline stations to the north and possibly east of the Site (i.e., east of Mt. Hope Avenue); former railroad infrastructure to the west of the Site; and a former Erie Canal feeder, a rail yard, a tannery, iron cutting, and auto repair to the south of the Site.

DAY Phase II Environmental Study Data Package

During the Phase II environmental study conducted during August and September 2000 and summarized in this report dated October 2000, two test borings (TB-7 and TB-27) and a groundwater monitoring well (MW-3) were advanced on the Site. The test boring and groundwater monitoring well locations are depicted on Figure 2. Various petroleum-related constituents were detected in soil and groundwater samples from TB-7 and MW-3, at concentrations exceeding NYSDEC SCG values.

DAY Phase II Environmental Study Evaluation Report

This report included studies conducted on an adjoining property to the north (off-site North Study Area) and a nearby property to the south (off-site South Study Area). The Site was not included in this study, but contamination in the North Study Area has the potential to impact the Site; thus, the North Study Area is further discussed below.

The off-site North Study Area has historically been improved with a gasoline station(s), an auto sale and repair facility, a railroad "tack" house, and a concrete plant. Records indicate USTs have been located on the North Study Area. There appears to be at least two sources of petroleum-related contamination related to former tanks or pump dispensers located in the off-site North Study Area. Concentrations of contamination in soil and groundwater at the off-site North Study Area exceed NYSDEC SCG values.

The NYSDEC was notified of subsurface conditions encountered at the North Study Area and the NYSDEC subsequently assigned Spill #0070377 to the North Study Area, which is comprised of parcels addressed as 151, 171, 173, 175, 177, and 191 Mount Hope Avenue. The spill is currently listed as "active".

URS Phase II ESA Report

As part of the Phase II ESA conducted by URS at 185-425 Mount Hope Avenue, two test borings were advanced at the Site and completed as monitoring wells (MW-URS3 and MW-URS4). The locations of these monitoring wells are depicted on Figure 2. Analytical laboratory results for soil and groundwater samples collected from MW-URS3 and MW-URS4 indicated that VOCs or SVOCs were not detected at these locations.

Summary of Previous Environmental Studies

The previous environmental studies identified petroleum contamination in soil and groundwater on the northeastern portion of the Site. In August 2004, the NYSDEC assigned Spill File # 0470234 to apply to petroleum contamination that is present on the Site (i.e., 185 Mt. Hope Avenue). The source(s) of the contamination on the Site appears to be from a former adjoining gasoline station to the north; however, as shown on Figure 2, it is possible that USTs associated with this former gas station may have actually been located on the Site. In addition to the identified petroleum contamination on the Site, potential impacts associated with the former Erie Canal feeder, the former railroad yard and tracks on the western two-thirds of the Site, and the effect of VOC vapor accumulation beneath the building slab require additional evaluation.

1.2 Project Objectives

The primary objective of this project was to perform environmental work at the Site in accordance with the requirements of the Brownfield Cleanup Program to evaluate the nature and extent of contamination at the Site. Another objective was to qualitatively evaluate potential human health exposures for on-site and off-site receptors, and also to determine if a Fish and Wildlife Resource Impact Analysis is warranted. The scope of work included: confirmation and/or further delineation of contamination in areas identified as RECs during previous studies (excluding asbestos); identification of potential routes of exposure, and

potential receptors; evaluation of fate and transport of contaminants; identification of remedial alternatives; and performance of a detailed analysis of selected remedial alternatives.

1.3 Report Organization

This report is organized into sections that pertain to various aspects of this project. Sections 1.0 through 7.0 are associated with the remedial investigation portion of this project. Sections 8.0 and 9.0 are associated with evaluation of alternatives for addressing the environmental impacts that exist at this Site. The contents of Sections 2.0 through 9.0 are summarized below:

Section 2.0 - Remedial Investigation Activities: This section of the report presents the investigative work conducted as part of this project. The work conducted includes: evaluation of surface soil, subsurface soil, and groundwater; subsurface exploration for buried tanks; a sub-slab vapor evaluation, a soil vapor evaluation, associated testing by analytical laboratories; etc.

Section 3.0 - Physical Characteristics of the Site: This section of the report presents the physical characteristics of the Site such as geology, lithology, hydrogeology, demography and land use.

Section 4.0 - Nature and Extent of Impact: This section of the report presents the findings of the investigative work that is described in Section 2.0.

Section 5.0 - Contaminant Fate and Transport: This section of the report presents information on the fate and transport of contaminants detected at the Site. This includes information on potential routes of migration, contaminant persistence, and contaminant migration.

Section 6.0 - Exposure Assessment: This section of the report summarizes the findings of a qualitative human health exposure assessment, as well as a fish and wildlife resources impact analysis decision key, that were conducted as part of this project.

Section 7.0 - Remedial Investigation Conclusions: This section of the report summarizes the findings of the investigative work that was conducted as part of this project and provides recommendations for additional work as deemed necessary.

Section 8.0 - Identification and Development of Alternatives: This section of the report discusses identification and development of alternatives intended to address the environmental impacts present at this Site. The constituents of interest and remediation goals are also identified in this section.

Section 9.0 - Detailed Evaluation of Alternatives: This section of the report presents a detailed evaluation of the alternatives for addressing the environmental impacts at the Site. The recommended alternative is also identified in this section.

Section 10.0 provides a list of references used for development of this report. Section 11.0 provides a list of acronyms used in this report.

2.0 REMEDIAL INVESTIGATION ACTIVITIES

The scope of work presented herein includes studies that characterized conditions at the Site in order to identify potential remedial alternatives and their feasibility. The studies included: surface soil sampling; a geophysical EM-61 electromagnetic metal detector survey; subsurface soil sampling; advancement of test borings; installation of groundwater monitoring wells; a sub-slab vapor evaluation; a soil vapor evaluation near select buried utilities, and subsequent analysis of samples. The analytical laboratory data collected was compared to available and applicable SCGs. The scope of work also included the preparation of this Remedial Investigation/Remedial Alternatives Analysis (RI/RAA) report.

The work presented in this RI/RAA report was performed in general accordance with the document titled "Remedial Investigation Work Plan, Brownfield Cleanup Program (BCP), NYSDEC Site ID C828124, 185 Mt. Hope Avenue (Tower Property), Rochester, New York dated August 2004, as modified and approved in a letter from the NYSDEC dated January 14, 2005 (RI Work Plan), and a September 21, 2005 Work Plan Addendum as modified and approved by the NYSDEC in various written and verbal correspondences. The following subsections describe the scope of studies performed at the Site.

Unless otherwise noted, samples tested as part of this project were delivered under chain-of-custody control to Mitkem Corporation (Mitkem) located in Warwick, Rhode Island. Mitkem is a NYSDOH Environmental Laboratory Approval Program (ELAP)-certified analytical laboratory (NYSDOH ELAP ID#11522). Table 1 included in Appendix A summarizes the sample designations, locations, dates, applicable depth intervals and test parameters for each sample collected as part of this project. NAD83 UTM Zone 18 horizontal coordinates (in meters) for test locations are provided on Table 2 included in Appendix A.

2.1 EM-61 Electromagnetic Survey and Subsequent Test Pit

On April 7, 2005, an EM-61 electromagnetic detector geophysical survey was conducted at the Site by Geomatrix Consultants, Inc. to evaluate the subsurface at the Site for evidence of buried metallic anomalies that could be indicative of possible USTs, associated piping, and/or active utilities. A copy of the Geophysical Survey Report dated April 14, 2005 is included in Appendix B.

Based on the results of the EM-61 electromagnetic detector survey, a test pit (designated as TP-1) was excavated on August 5, 2005, at an area of magnetic anomaly (Designated as Anomaly A) using a Kubota Model KX121-3 mini-excavator and operator that were provided by Arrow Construction, Inc. A DAY representative visually observed excavated and in-situ materials for evidence of tanks or suspect contamination (e.g., staining, unusual odors). Portions of the samples were placed in sealable plastic bags and screened with a PID in order to evaluate if VOCs are present in the samples. A DAY representative recorded pertinent information for the test pit on a log, a copy of which is included in Appendix B. The location of test pit TP-1 is depicted on Figure 3.

2.2 Surface Soil Evaluation

On February 3 and 4, 2005, two surface soil samples (designated as Sample 001 from location SSDAY-01 and Sample 002 from location SSDAY-02) were collected at the Site from a depth interval of 0-2 inches below the top of exposed soil surfaces or immediately beneath vegetative cover. These samples were collected from vegetated areas located near the apartment complex on the Site as depicted on Figure 2. The purpose of these surface soil samples was to evaluate whether surficial contamination is present that could pose potential human health exposures.

The two surface soil samples were analyzed for full target compound list (TCL)/target analyte lest (TAL) parameters, including cyanide using NYSDEC ASP Methods OLM04.2 and ILM04.1.

2.3 Subsurface Soil and Groundwater Evaluation

This section describes the tasks that were performed to evaluate subsurface soil and groundwater conditions at the Site.

2.3.1 Test Borings

Between February 3 and 4, 2005, eleven test borings (designated as SBDAY-01 through SBDAY-10 and SBDAY-01A) were advanced on the Site using direct-push drilling equipment provided by SLC Environmental Services (SLC). The locations of these test borings are depicted on Figure 2. Sampling equipment was used to collect soil samples in four-foot intervals or less throughout the entire depth of the test borings. The soil samples were collected in new disposable plastic liners.

The direct-push equipment was not capable of being advanced to depths that intercepted the uppermost water-bearing zone. As such, three additional test borings (designated as SBDAY-01B, SBDAY-05A, and SBDAY-11) were advanced on February 24 and 25, 2005 using a CME-75 rotary drill rig. The truck-mounted rotary drill-rig was used to advance 4 1/4-inch ID hollow stem augers at each location. Continuous split spoon samples, driven by a 140-pound hammer free-falling 30 inches, were collected ahead of the augers in general conformance with ASTM 1586. The locations of these test borings are depicted on Figure 2.

The fourteen test borings described above were advanced to depths between approximately 9.2 feet and 22.0 feet below the existing ground surface. The recovered soil samples were visually examined by a DAY representative for evidence of suspect contamination (e.g., staining, unusual odors). Portions of the recovered soil samples were placed in containers for possible laboratory analysis. Different portions of the recovered soil samples were placed in sealable plastic bags, and the ambient headspace air inside the sample bags was later screened with a MiniRae Model 2000 PID. Test borings SBDAY-11 and SBDAY-05A were subsequently converted into groundwater monitoring wells MWDAY-01 and MWDAY-02, respectively (refer to Section 2.3.2). The remaining test borings not converted into groundwater monitoring wells were backfilled to the ground surface with cement grout.

The test borings were used to evaluate the areas around the apartment building complex, within the former Erie Canal feeder, in the area formerly occupied by the rail yards, and to further delineate the petroleum contamination identified during previous investigations on the northeastern portion of the Site.

A DAY representative recorded pertinent information for test borings on logs, copies of which are included in Appendix C. PID readings are summarized on the test boring logs, and peak PID readings detected on soil samples from test locations are summarized on Table 3 included in Appendix A.

Subsurface soil samples were selected for analytical laboratory testing based upon PID measurements, sample observations, and relative location on the Site for delineation purposes. A total of 13 subsurface soil samples from 13 different test boring locations were selected for analytical laboratory testing. These samples were delivered under chain-of custody (COC) control to Mitkem, and subsequently tested for full TCL/TAL parameters and cyanide. The samples selected for analytical testing are listed below:

- Sample 004 from SBDAY-02 (4-8')
- Sample 005 from SBDAY-03 (8-9.2')
- Sample 006 from SBDAY-04 (4-8')
- Sample 007 from SBDAY-06 (8-10.3')
- Sample 008 from SBDAY-07 (12-15.5')
- Sample 009 from SBDAY-09 (8-12')
- Sample 010 from SBDAY-10 (8-10.2')
- Sample 011 from SBDAY-08 (8-10.4')
- Sample 012 from SBDAY-01B (12-14')
- Sample 013 from SBDAY-05A (16-18')
- Sample 014 from SBDAY-11 (10-12')

Additional information for these samples is presented on Table 1 included in Appendix A, and the test results are discussed in Section 4.3.

2.3.2 Groundwater Monitoring Wells

On February 24 and 25, 2005, test borings SBDAY-11 and SBDAY-05A were converted into overburden groundwater monitoring wells MWDAY-01 and MWDAY-02, respectively. DAY retained SLC to install these wells using a truck-mounted rotary drill-rig. The locations of these wells are summarized below:

- MWDAY-01 is located in the paved parking lot along the south-central portion of the Site.
- MWDAY-02 is located near the east end of the building on the Site.

Monitoring wells MWDAY-01 and MWDAY-02 consist of a pre-cleaned ten-foot long, 2-inch ID, threaded, flush-jointed, No. 10 slot, schedule 40 polyvinyl chloride (PVC) screen with attached riser casing of the same material. The well screen for each well was installed to intercept the top of the water table. The well installations included a washed and graded sand pack surrounding the screens and extending up to two feet below them, and about one foot above them. A bentonite seal was placed above the sand packs and the remaining annulus at each well was filled with cement/bentonite grout. A protective curb box was cemented in place over each well. Monitoring well logs are included in Appendix C.

Well Development

On March 11, 2005, monitoring wells MWDAY-01 and MWDAY-02 were developed. In addition, existing monitoring wells MW-3, MW-URS3 and MW-URS4 were sounded and determined not to require redevelopment (i.e., significant amounts of fine materials had not accumulated within the screened interval of these three existing wells). Well development on the two new wells was performed utilizing dedicated polyethylene bailers and dedicated cord. No fluids were added to the wells during development, and well development monitoring equipment was decontaminated prior to development of each well. In general, the well development procedure was as follows:

- Obtain pre-development static water level readings.
- Calculate water/sediment volume in the well.
- Obtain groundwater sample for field analysis using bailer.
- Select development method and set up equipment depending on method used.
- Begin pumping or bailing.
- Obtain initial field water quality measurements (e.g., pH, conductance, turbidity, temperature, and PID readings). Record water quantities and rates removed.
- Obtain field water quality measurements for every well casing volume of water removed.
- Stop development when water quality criteria are met.
- Obtain post-development water level readings.
- Document development procedures, measurements, quantities, etc.

Development continued until the following criteria was achieved:

- Monitoring parameters had stabilized (i.e., pH varies less than 0.1 unit; conductance, temperature, and other parameters vary less than 10%); and
- A minimum of three well volumes have been removed, or to dryness.

The well development was terminated prior to well water being clear and turbidity less than 5 nephelometric turbidity units (NTU). Well development logs are included in Appendix D.

Sampling of Groundwater

The following groundwater quality monitoring program was implemented as part of this project. Well sampling logs for each groundwater sampling event are included in Appendix D.

- On March 29, 2005, DAY measured static water levels and looked for LNAPL by using visual observations and a Heron Oil/Water Interface Meter Model H.O1L at well locations MWDAY-01, MWDAY-02, MW-3, MW-URS3 and MW-URS4. On March 29 and 30, 2005, groundwater samples were collected from wells MWDAY-01, MWDAY-02, MW-3, MW-URS3 and MW-URS4 (designated as Lab Samples 016 through 020). The wells were purged and sampled using a low-flow bladder pump system in general accordance with the protocol outlined in the RI Work Plan. Subsequent to collecting samples, the Heron Oil/Water Interface Meter Model H.O1L was used to look for DNAPL. The analytical laboratory testing program for these samples is shown on Table 1 included in

Appendix A, and the test results are presented in Section 4.4. As shown, these samples were analyzed for full TCL/TAL parameters and cyanide.

- On September 8, 2005, DAY measured static water levels and looked for LNAPL by using visual observations and a Heron Oil/Water Interface Meter Model H.O1L at well location MWDAY-01, MWDAY-02, MW-3, MW-URS3 and MW-URS4. On September 8, 2005, groundwater samples were collected from wells MWDAY-01, MWDAY-02, MW-3, MW-URS3 and MW-URS4 (designated as Lab Samples 023 through 027). The wells were purged and sampled using a low-flow bladder pump system in general accordance with the protocol outlined in the RI Work Plan. Subsequent to collecting samples, the Heron Oil/Water Interface Meter Model H.O1L was used to look for DNAPL. The analytical laboratory testing program for these samples is shown on Table 1 included in Appendix A, and the test results are presented in Section 4.4. As shown, these samples were analyzed for TCL VOCs and TCL SVOCs.

Prior to use and between collection of samples from the wells, the portable bladder pump and Heron Oil/Water Interface Meter Model H.O1L were decontaminated in general accordance with the protocol outlined in the RI Work Plan.

Potentiometric Groundwater Contour Maps

On April 8, 2005, James Parker, L.S. surveyed the locations and elevations of the three existing monitoring wells (i.e., MW-3, MW-URS3 and MW-URS4) and the two new monitoring wells (i.e., MWDAY-01 and MWDAY-02) to the same datum previously used at this Site by DAY.

On March 29, 2005 and September 8, 2005, DAY measured static water levels in the monitoring wells that were present on these dates. The groundwater data and calculated groundwater elevations for March 29, 2005 and September 8, 2005 are included in Appendix A as Table 4 and Table 5, respectively. DAY developed potentiometric groundwater contour maps using each set of measurements (i.e., Figure 4 and Figure 5 for March 29, 2005 and September 8, 2005, respectively). The Surfer 8 software program by Golden Software, Inc. was used to assist in developing the maps.

2.4 Vapor Intrusion Evaluation

In order to evaluate the exposure pathway for volatile vapors in soil or groundwater intruding the indoor air space of the building, a soil vapor intrusion evaluation was performed at the Site in February 2005. The study was conducted in accordance with provisions set forth in the NYSDOH draft document titled "Guidance for Evaluating Soil Vapor Intrusion in the State of New York" dated February 2005. The study consisted of the collection of two sub-slab soil-gas samples (designated as Samples SLB-01 and SLB-02), two indoor air samples (designated as Samples IA-01 and IA-02), and one outdoor air background sample (designated as Sample BKG-01) collected upwind of the building near the ground. The sample locations are shown on Figure VI-1. The sample locations were selected with input from the NYSDOH site representative. The samples were collected over an approximate 6-hour period on February 23, 2005 in general accordance with the protocol set forth in the RI Work Plan. Vacuum inside the canisters prior to commencing sampling were measured to be greater than –100 Kpa. Vacuum measured inside the canisters after the 6-hour sampling

period ranged between –12 Kpa and –28 Kpa. A NYSDOH Indoor Air Quality Questionnaire and Building Inventory form was completed as part of the vapor intrusion evaluation.

The five air samples were delivered under chain-of-custody control to Paradigm Environmental Services, Inc. (Paradigm) and subsequently tested for VOCs using United States Environmental Protection Agency (USEPA) Method TO-15. Information regarding these air samples is also provided on Table 1 included in Appendix A. Documents pertaining to the vapor intrusion evaluation are provided in Appendix E

2.5 Soil Vapor Evaluation

As part of this Remedial Investigation, work was performed to evaluate whether selected buried utilities were acting as preferential migration pathways for contaminants detected in subsurface soil or groundwater at the Site. A review of buried utilities on the Site in relation to known locations of VOC-impacted subsurface soil or groundwater indicated that some buried utilities had the potential to act as preferential migration pathways for VOCs. The soil vapor evaluation described below was intended to further evaluate whether VOCs were preferentially migrating along select buried utilities.

On December 21, 2005, three soil vapor samples (designated as SV-1 through SV-3) and one outdoor background ambient air sample (designated as B-1) were collected from the Site in general accordance with the provisions set forth in a September 21, 2005 Work Plan Addendum as modified and approved by the NYSDEC in various written and verbal correspondences. These sample locations are shown on Figure SV-1. Specifically, soil vapor samples SV-1 and SV-2 were placed near the apartment building where numerous buried utilities enter the building. These soil vapor sample points are situated cross-gradient from the known petroleum plume on the Site. Soil vapor sample SV-3 was collected in proximity to an abandoned 54" storm sewer in a downgradient position in relation to the documented petroleum plume on the Site.

Truck-mounted direct-push Geoprobe Systems soil sampling equipment were used to collect continuous soil samples in 4-foot intervals, which resulted in the creation of open boreholes. Soil vapor points SV-1 and SV-2 were advanced to depths of approximately 3.7 feet below the existing ground surface, which is a depth in proximity to the buried utilities. Soil vapor point SV-3 was advanced to an approximate depth of 12 feet below the existing ground surface, which is a depth in proximity to the abandoned 54-inch diameter sewer line that is present at this location. Plastic tubing that was perforated on the bottom four inches was then inserted to near the bottom of each soil vapor point. Clean sand was used to backfill the annulus around, and at least 0.5 foot above, the perforated tubing in each soil vapor point. A bentonite grout was then used to backfill the annulus above the sand to the ground surface at each soil vapor point.

During this work, soil/fill samples collected from the three soil vapor points were screened with a PID. Peak PID readings measured on soil/fill from SV-1 and SV-3 were 0.0 ppm. A peak PID reading of 0.8 ppm was detected on fill from a depth of approximately 2 feet at SV-2. Petroleum or VOC-type odors were not noted in any of the soil or fill samples collected from the three soil vapor points.

Prior to collect of soil vapor samples, a helium tracer gas test was performed at each soil vapor point in accordance with provisions and referenced guidance document(s) outlined in the September 21, 2005 Work Plan Addendum. Rochester Welding and Supply Corp. provided the helium used for the tracer gas test. Helium was detected at each soil gas point, but at concentrations that allowed the soil vapor samples to be collected from the existing sample probes (i.e., Helium in soil gas tubing was detected well below the 20% tracer gas threshold identified in Section 2.7.5 of the NYSDOH document "Guidance for Evaluating Soil vapor Intrusion in the State of New York". As such, enhancements to the sample probe seals were not required).

The three soil vapor samples and the background outdoor ambient air sample were collected in summa canisters that were "batch certified" by Con-test Analytical Laboratory (Con-Test). The four air samples were then submitted to Con-Test under chain-of-custody control for analytical testing. Con-Test analyzed the samples for VOCs using Method TO-15.

Information regarding these soil vapor evaluation air samples is also provided on Table 1 included in Appendix A. Documents pertaining to the soil vapor analytical results are provided in Appendix F.

2.6 QA/QC and Data Usability Summary Report

Quality Assurance/Quality Control (QA/QC)

Specific QA/QC measures implemented during this study are outlined below:

- During sampling activities, personnel used disposable latex gloves. Between the collection of each sample, personnel performing the sampling discarded used latex gloves and put on new latex gloves to ensure no cross-contamination of the samples.
- Samples retained for testing were placed in new laboratory-grade sample containers. DAY collected samples with zero headspace when VOC analysis was to be performed. Efforts were made to obtain sufficient volume (i.e., as specified by the analytical laboratory) to ensure that the laboratory had adequate sample to perform the specified analyses.
- Samples that were collected as part of the project were handled using COC control. COC documentation accompanied samples from their inception to their analysis, and copies of COC documentation are included with the laboratory reports.
- The laboratory analyzed the samples using the lowest practical quantitation limits (PQL) possible. The laboratory that performed the analyses provided internal QA/QC data that are required by NYSDEC ASP protocol, such as analyses performed on method blanks, and surrogate recovery results.
- Sample holding times and preservation protocols were adhered to during this project. Soil samples were reported on a dry-weight basis.
- In order to provide control over the collection, analysis, review, and interpretation of analytical data, QA/QC samples identified on Table 1 in Appendix A were collected as part of this project. The laboratory reports that include these QA/QC samples are provided electronically in Appendix G. The following types of QA/QC samples were

generally collected and analyzed as part of this project in accordance with the provisions of the RI/RAA Work Plan:

- A trip blank accompanied each shipment that contained liquid samples that were analyzed for VOCs using ASP Method OLM04.2.
- One matrix spike/matrix spike duplicate (MS/MSD) was generally analyzed for each 20 samples of each matrix (i.e., soil, groundwater, etc.) that were shipped within each seven-day period. Specific parameters that MS/MSD samples were tested for depended upon the test parameters of the samples that were analyzed. Samples that included MS/MSD analyses are identified with an asterisk on Table 1 included in Appendix A.
- Equipment rinsate field blanks were analyzed for various parameters such as: full TCL/TAL, VOCs, SVOCs, polychlorinated biphenyls (PCBs) and TAL metals using ASP Methods OLM04.2 and ILM04.1.

Data Usability Summary Report

- Data Validation Services (DVS) was retained by DAY to perform a Data Usability Summary Report (DUSR) on Mitkem's analytical laboratory data for this project. DVS submitted a DUSR dated January 2, 2006). A copy of the text for this DUSR is included in Appendix H. One complete copy of the DUSR was submitted to the NYSDEC, and the original is in DAY's files, copies of which is available upon request. The analytical laboratory summary tables included in Appendix A have been revised to reflect the findings of the DUSR.

2.7 Investigation-Derived Wastes

Soil cuttings, decontamination water, well development and purge water, decontamination water, etc. that were generated during the investigative work were placed in six New York State Department of Transportation (NYSDOT)-approved 55-gallon drums that were labeled, staged on-site, and were later disposed of as non-hazardous waste in accordance with applicable regulations. Transport and disposal documentation for these materials is included in Appendix I.

3.0 PHYSICAL CHARACTERISTICS OF THE SITE

3.1 Bedrock

A review of a geologic map from the document titled "Subsurface Structure and Stratigraphy of Rochester, New York" dated 1983 by Jolie Lynn Scherzer, and based on information in the document titled "New York State Geological Highway Map" dated 1990, bedrock underlying the overburden deposits in proximity to the Site consists of Lockport Dolomite belonging to the Lockport Group, Upper Silurian Period, Paleozoic Era. Test Borings advanced to depths up to 22 feet below the ground surface during this project did not encounter bedrock.

3.2 Overburden

According to the Monroe County, New York Soil Survey, United States Department of Agriculture Soil Conservation Service, 1973, soils at the Site are listed as urban land (Ub). This listing is applied to areas where it is presumed that disturbance of soils has occurred.

Based on a review of the New York State Geological Survey, "Surficial Geologic Map of New York - Fingerlakes Sheet", E.H Muller and D.H. Cadwell, 1986, soils in the area of the Site predominantly consist of lacustrine silt and clay that was deposited in proglacial lakes.

Based on the work performed to date at the Site, heterogeneous fill material generally consisting of reworked soil (e.g., silt, sand, gravel, and clay) with lesser amounts of brick, cinders, roots, wood, ash, concrete is present in 12 out of 14 test boring/well locations (i.e., fill was observed in samples from each test boring/well, except for test borings SBDAY-03 and SBDAY-07) from the ground surface to depths ranging between approximately 2.0 feet (test boring SBDAY-06) and 12.0 feet (test boring SBDAY-04).

At most test locations, the uppermost layer of indigenous soil predominantly consists of varying grades of sands, some silts, and lesser amounts of gravel and clay. Detailed information regarding the overburden deposits identified at the Site is documented on test pit logs and test boring logs included in Appendix C.

Two geologic cross-sections (A-A' and B-B') were developed for the Site (refer to Figure 2 included in Appendix A for plan view), are included as Figure 6 and Figure 7, respectively. Cross-section A-A' generally trends south to north, and cross-section B-B' generally trends west to east. These cross-sections illustrate the overburden types and corresponding depths identified in test borings and wells that were advanced as part of these studies. In addition, the depth to the groundwater table on March 29, 2005 is depicted on these cross-sections.

3.3 Hydrogeology

Based on field observations, surface water appears to generally flow off the Site toward Mount Hope Avenue to the east, and into the City of Rochester sewer system.

As per the United States Department of the Interior Geological Survey, Water-Resources Investigations Report #87-4122, "Unconsolidated Aquifers in Upstate New York (Finger Lakes Sheet)", a primary water-supply aquifer has not been identified at, or in proximity to, the Site.

A review of a "Generalized Groundwater Contour Map" for the Rochester East quadrangle dated 1980 by Dr. Richard A. Young indicates groundwater in proximity to the Site flows toward the north and/or northeast. As per the United States Department of the Interior Geological Survey, Water-Resources Investigations Report #84-4259 Potentiometric Surface and Groundwater Movement Map, groundwater in proximity to the Site is shown to flow toward the northeast.

Figure 4 and Figure 5 included in Appendix A illustrate groundwater flow conditions at the Site on March 29, 2005 and September 8, 2005, respectively. As shown, groundwater generally flows toward the southeast as measured on these dates. Based on the groundwater data for March 29, 2005 and September 8, 2005, the average hydraulic gradient across the Site was calculated to be 0.05 ft/ft.

The MCDOH has no records of public or private drinking water wells or process water wells within a 0.25-mile radius of the Site. A review of The Ground Water Resources of Monroe County document (1935) revealed no groundwater supply wells on or in the immediate area of the Site.

The Genesee River (a New York State Class B river with best usage designated as primary and secondary contact recreation and fishing, and also designated for possible use for fish propagation and survival) is approximately 130 feet west of the site and flows northerly. Based on the potentiometric groundwater flow maps developed for the Site as part of this project, it appears that the Genesee River is hydraulically upgradient from the Site.

3.4 Demography, Land Use and Water Use

The Site is located on the west side of Mt. Hope Avenue in the City of Rochester, County of Monroe, New York. According to the 2000 census listed by the U.S. Census Bureau, the City of Rochester had a population of 219,773. The estimated population in 2003 is listed as 215,093.

A 202-unit apartment building totaling approximately 143,000 square feet is present on the Site, and consists of a multi-level eight to twelve-story brick and concrete-block, slab-on-grade building constructed in 1975. The units are primarily comprised of one bedroom and studio apartments.

The Site is located in an urban area that is serviced by a public water system and public sewer system. The Site is zoned for residential use and is located in a mixed-use urban area. Commercial and residential properties bound the Site to the north and east, residential properties bound the Site to the south, and the Genesee Gateway Park and the Genesee River bound the Site to the west.

4.0 NATURE AND EXTENT OF IMPACT

This section of the report presents the findings of the investigative work described in Section 2.0. Mitkem's analytical laboratory test results were reported in NYSDEC ASP Category B deliverable reports, and are included electronically with this report as Appendix G. Surface soil and subsurface soil sample test results are summarized on Table 6 through Table 9 included in Appendix A. Groundwater sample test results are summarized on Table 10 through Table 13 included in Appendix A. The test results for associated QA/QC samples are summarized on Table 14 through Table 17 included in Appendix A. Where applicable, the tables include the following SCGs:

- Brownfield Cleanup Program soil cleanup objectives (SCOs) for Track 2 Restricted Residential Use as referenced in the NYSDEC document titled "6 NYCRR Part 375 Environmental Remediation Programs"; effective December 14, 2006.
- Recommended soil cleanup objectives (RSCOs) as referenced in the NYSDEC document titled "Division of Technical and Administrative Guidance Memorandum: *Determination of Soil Cleanup Objectives and Cleanup Levels*" (TAGM 4046) dated January 24, 1994, as amended by the NYSDEC's supplemental Tables dated August 22, 2001.
- Typical background ranges (metals only) for soil as referenced in TAGM 4046.
- RSCOs for the metals cadmium and chromium as referenced in the "proposed" 1995 TAGM 4046.
- Groundwater standards and guidance values as referenced in the NYSDEC Division of Water Technical and Operational Guidance Series 1.1.1 document titled "*Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations*" (TOGS 1.1.1) dated June 1998 (as amended by an April 2000 addendum).

Table 18 included in Appendix A provides a cumulative comparison summary of contaminants of concern in soil samples and groundwater samples to available Track 2 (restricted residential use) SCOs and TOGS 1.1.1 groundwater standards and guidance values. This table also includes the frequency of samples analyzed that exceed SCGs for contaminants of concern.

4.1 Peak PID Readings

A PID meter equipped with a 10.6 eV lamp was used to monitor the VOC vapors in the ambient air above direct-push and split spoon samples, and in headspace above selected samples retained during the advancement of test borings that were advanced as part of the subsurface evaluation. Peak PID readings for each sample interval are included on the test boring logs included in Appendix C. The peak PID readings measured at each test location, and the corresponding depths are presented on Table 3 included in Appendix A. Peak PID readings measured at the test locations ranged between 0.0 ppm (TSBDAY-01A, SBDAY-02, SBDAY-04, SBDAY-05, and SBDAY-07 for depth intervals of 0.0' up to 17.3') and 1,505 ppm (SBDAY-09 at a depth of 10' to 11').

DAY used the Surfer 8 software program by Golden Software, Inc. to develop a peak PID contour map included as Figure 8. As shown, areas with the highest peak PID readings were detected on the northeast portion of the property closest to where source(s) of petroleum contamination have been identified on the adjoining property to the north that is currently owned by the City of Rochester.

4.2 Surface Soil Sample Test Results

Two surface soil samples (designated as Sample 001 from location SSDAY-01 and Sample 002 from location SSDAY-02) were tested for Full TCL/TAL parameters, including cyanide. The detected concentrations of these parameters, and a comparison to NYSDEC SCOs, NYSDEC TAGM RSCOs and typical background concentrations (i.e., metals only), and "proposed" RSCOs referenced in the draft 1995 NYSDEC TAGM 4046, are provided on corresponding Table 6 through Table 9 included in Appendix A. Copies of the analytical laboratory summary reports prepared by Mitkem for surface soil samples and executed COC documentation are included electronically as part of Appendix G of this report.

The detected concentrations and comparison to corresponding NYSDEC Track 2 SCOs for restricted residential use are summarized as follows:

VOCs

The target VOC tetrachlotoethene (PCE) was detected in Samples 001 and 002 at concentrations of 0.11 and 0.026 mg/kg, or parts per million (ppm), respectively. Tentatively identified compounds (TICs) were detected in Sample 001 (i.e., total TICs of 0.027 ppm), but were not detected in Sample 002. The concentrations of PCE were compared to NYSDEC Track 2 SCOs for restricted residential use. As shown on Table 6, SCOs for VOCs were not exceeded in the two surface soil samples that were tested.

SVOCs

SVOC test results indicate that target SVOCs were detected in surface soil Samples 001 and 002. Target SVOCs detected in one or both surface soil samples included: benzaldehyde; acenaphthylene; anthracene; benzo(a)pyrene; benzo(k)fluoranthene; benzo(b)fluoranthene; benzo(a)anthracene; benzo(g,h,i)perylene; chrysene; carbazole; dibenzo(a,h)anthracene; indeno(1,2,3-cd)pyrene; pyrene; phenanthrene; fluoranthene; and bis(2-ethylhexyl)phthalate. TICs were detected in each of the two surface soil samples. The majority of the specific SVOCs detected are typically associated with petroleum products. Exceptions include benzaldehyde, bis(2-ethylhexyl)phthalate, and carbazole. The concentrations of specific SVOCs were compared to NYSDEC Track 2 SCOs for restricted residential use. As shown on Table 7, available SCOs for SVOCs were not exceeded in the two surface soil samples that were tested.

Table 7 also provides total carcinogenic polyaromatic hydrocarbon (cPAH) SVOC values and total cPAH benzo(a)pyrene (BAP) toxicity equivalents for each surface soil sample that was analyzed for SVOCs. SVOCs identified as cPAHs are: benzo(a)pyrene; dibenzo(a,h)anthracene; benzo(a)anthracene; benzo(b) fluoranthene; indeno(1,2,3-cd)pyrene; benzo(k)fluoranthene; and chrysene. As shown, total cPAHs were detected in surface soil Samples 001 and 002 at concentrations of 1.66 ppm and 3.232 ppm, respectively. BAP toxicity equivalents were derived for the two surface soil samples that contained cPAH SVOCs using the protocol provided in a NYSDEC letter dated October 22, 2004. BAP toxicity equivalents are used by the NYSDEC in consultation with the NYSDOH to evaluate potential exposure concerns and appropriate remedial measures for SVOC concentrations. As shown on Table 7, BAP toxicity equivalents for surface soil

Samples 001 and 002 were calculated as 0.3685 ppm and 0.7939 ppm, respectively. It is anticipated that cPAH concentrations detected in the two surface soil samples do not warrant corrective actions.

TAL Metals and Cyanide

TAL metals detected in one or both surface soil samples included: aluminum, arsenic, barium, beryllium, chromium, cobalt, copper, iron, lead, manganese, mercury, nickel, potassium, silver, thallium, vanadium, and zinc. Many of these metals (e.g., copper, iron, nickel, zinc, etc.) may be attributable to naturally occurring concentrations of metals at the Site, historical use of the Site, surficial fill material, or a combination of these factors. The concentrations of specific metals were compared to NYSDEC Track 2 SCOs for restricted residential use. As shown on Table 8, available SCOs for metals were not exceeded in the two surface soil samples that were tested.

Cyanide was not detected in Sample 001 at a concentration above the reported analytical laboratory detection limit. Cyanide was detected in Sample 002 at a concentration of 0.51 mg/kg or ppm. The concentration of cyanide detected in Sample 002 was compared to the NYSDEC Track 2 SCO for restricted residential use. As shown on Table 8, the SCO for cyanide was not exceeded for this sample.

PCBs/Pesticides

Surface soil Samples 001 and 002 contained the PCB aroclor 1260 at concentrations of 0.05 ppm and 0.1 ppm, respectively. The concentrations of PCBs detected in these two samples were compared to the NYSDEC Track 2 SCO for restricted residential use. As shown on Table 9, the SCO for PCBs was not exceeded for these samples.

The pesticides heptachlor epoxide; 4,4-DDE; endosulfan II; endosulfan sulfate; 4,4-DDT; methoxychlor; endrin ketone; endrin aldehyde; and chlordane were detected in one or both surface soil samples at concentrations ranging between 0.0023 ppm and 0.024 ppm. The concentrations of pesticides detected in these two samples were compared to the NYSDEC Track 2 SCOs for restricted residential use. As shown on Table 9, the available SCOs for pesticides were not exceeded for these samples.

4.3 Subsurface Soil Sample Test Results

Subsurface soil samples were collected from test boring locations and were tested for full TCL/TAL parameters. The detected concentrations of these parameters, and a comparison to NYSDEC Track 2 SCOs for restricted residential use, NYSDEC TAGM RSCOs and typical background concentrations (i.e., metals only), and "proposed" RSCOs referenced in the draft 1995 NYSDEC TAGM 4046, are provided on corresponding Table 6 through Table 9 included in Appendix A. Copies of the analytical laboratory summary reports prepared by Mitkem for subsurface soil samples and executed COC documentation are included electronically as part of Appendix G of this report.

The detected concentrations, and comparison to corresponding NYSDEC Track 2 SCOs for restricted residential use are summarized as follows:

VOCs

As shown on Table 6, VOC test results indicate that target VOCs were detected in 11 of 11 subsurface soil samples tested. Target VOCs detected in one or more soil samples included: acetone, carbon disulfide, 2-butanone, cis-1,2-dichloroethene, cyclohexane, benzene, tetrachloroethene, ethylbenzene, methylcyclohexane, isopropylbenzene, toluene and total xylenes. TICs were detected in 8 of the 11 subsurface soil samples tested. The concentrations of specific VOCs were compared to available NYSDEC Track 2 SCOs for restricted residential use. As shown, only SCOs for concentrations of ethylbenzene and total xylene were exceeded in 1 of the 11 subsurface soil samples tested (i.e., a sample from test boring SBDAY-09). Soil at test boring SBDAY-09 exhibited evidence of petroleum impact (e.g., elevated PID readings, petroleum-type odors, staining) and is situated on the northeast portion of the Site in proximity to the off-site area to the north with known source(s) of petroleum contamination. Most of the VOCs detected are typically associated with petroleum products. The VOCs cis-1,2-dichloroethene and tetrachloroethene that were detected at concentrations below SCOs are typically associated with chlorinated degreasers. Other non-petroleum VOCs that were detected at concentrations below SCOs include acetone, carbon disulfide, 2-butanone, methylcyclohexane, and cyclohexane.

DAY used the Surfer 8 software program by Golden Software, Inc. to develop a contour map for total TCL and TIC VOCs in subsurface soil, which is included as Figure 9 in Appendix A. As shown, the area with the highest total TCL and TIC VOCs in subsurface soil is at test location SBDAY-09 located on the northeast portion of the Site in proximity to the off-site known source(s) of petroleum contamination. In addition, cross-section A-A' included as Figure 6 shows the location of test boring SBDAY-09 where petroleum-related VOCs were detected at concentrations that exceeded respective SCOs.

SVOCs

As shown on Table 7, SVOC test results indicate that target SVOCs were detected in 9 of the 11 subsurface soil samples tested. Target SVOCs detected in one or more soil samples included: benzaldehyde; acenaphthene; acenaphthylene; anthracene; benzo(a)pyrene; benzo(a)anthracene; benzo(k)fluoranthene; benzo(b)fluoranthene; benzo(g,h,i) perylene; 1,1-biphenyl; chrysene; carbazole; dibenzofuran; dibenzo(a,h)anthracene; fluoranthene; 2-methylnaphthalene; fluorene; indeno(1,2,3-cd)pyrene; naphthalene; pyrene; phenanthrene; and bis(2-ethylhexyl)phthalate. TICs were detected in 11 of the 11 subsurface soil samples tested. The concentrations of specific SVOCs were compared to available NYSDEC Track 2 SCOs for restricted residential use. As shown, the concentrations of benzo(a)anthracene, benzo(b)fluoranthene and benzo(a)pyrene detected in the sample from test location SBDAY-02 exceeded SCOs. This sample was collected from the 4-8 foot depth interval and consisted of fill material containing reworked soil with lesser amounts of brick, ash and cinders that did not exhibit evidence of petroleum impact. Test boring SBDAY-02 is located in the center of the paved parking lot over the former canal feeder that was filled

in. The majority of specific SVOCs detected are typically associated with petroleum products. Non-petroleum SVOCs that were detected in one or more samples include: benzaldehyde; carbazole; and dibenzofuran; and bis(2-ethylhexyl)phthalate.

TAL Metals and Cyanide

As shown on Table 8, TAL metals detected in one or more subsurface soil sample included: aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, silver, sodium, thallium, vanadium, and zinc. The concentrations of metals were compared to available NYSDEC Track 2 SCOs for restricted residential use.

The metal mercury was detected at a concentration of 0.89 ppm in the sample from test boring SBDAY-02, which exceeds the SCO of 0.81 ppm. The metal manganese was detected at a concentration of 4,060 ppm in the sample from test boring SBDAY-08, which exceeds the SCO of 2,000 ppm. The concentrations of other metals detected in the samples that were tested were below their respective SCOs. Naturally occurring concentrations of metals in soil at the Site may be contributing to the detected concentrations of metals in the subsurface soil samples (e.g., calcium, iron, magnesium, zinc).

As shown on Table 8, cyanide was detected in 6 of 11 soil samples at concentrations ranging between 0.12 ppm (SBDAY-01B) and 3.1 ppm (SBDAY-09). The concentrations of cyanide detected in the six samples were compared to the NYSDEC Track 2 SCO for restricted residential use. The SCO for cyanide was not exceeded for these samples.

PCBs/Pesticides

As shown on Table 9, the PCB Aroclor 1260 was detected in sample SBDAY-04 at a concentration of 0.11 ppm, which is below the respective NYSDEC Track 2 SCO for restricted residential use of 1 ppm. PCBs were not detected at concentrations above reported analytical laboratory detection limits in the other ten samples that were tested.

As shown on Table 9, pesticides were detected in 2 of 11 subsurface soil samples that were tested. Sample 004 from SBDAY-02 contained 0.0056 ppm of endosulfan sulfate. Sample 006 from SBDAY-04 contained 4,4-DDE, endosulfan sulfate, methoxychlor, and endrin ketone at concentrations of 0.0027 ppm, 0.004 ppm, 0.025 ppm and 0.0062 ppm, respectively. The concentrations of pesticides in these two samples are below their respective NYSDEC Track SCOs for restricted residential use.

4.4 Groundwater Sample Test Results

Groundwater samples were collected from the five well locations in March 2005 and September 2005, and the analytical laboratory test parameters are listed on Table 1 included in Appendix A. As shown, March 2005 groundwater samples were tested for full TCL/TAL parameters including cyanide, and the September 2005 groundwater samples were tested for TCL VOCs and TCL SVOCs. The detected concentrations of these parameters were compared to NYSDEC TOGS 1.1.1 groundwater standards or guidance values. Copies of the analytical laboratory summary reports and executed COC documentation for the groundwater

samples tested are included electronically as part of Appendix G. The detected concentrations and comparison to corresponding NYSDEC criteria are summarized on Table 10 through Table 13 included in Appendix A.

The test results for groundwater samples are summarized as follows:

VOCs

Target VOCs were detected in March 2005 groundwater samples from wells MWDAY-01 and MW-3. Target VOCs detected in one or both of these samples include: cyclohexane, methylcyclohexane, benzene, 1,2-dichloroethane, toluene, ethylbenzene, xylene, and isopropylbenzene. Target VOCs were not detected at concentrations above reported analytical laboratory detection limits in the March 2005 groundwater samples collected from wells MWDAY-02, MWURS-3 and MWURS-4. TICs were detected in the March 2005 groundwater samples from wells MWDAY-01 and MW-3. TICs were not detected in the March 2005 groundwater samples from wells MWDAY-02, MWURS-3 and MWURS-4. The measured concentrations of specific VOCs were compared on Table 10 to NYSDEC TOGS 1.1.1 groundwater standards and guidance values. As shown, the concentration of xylene [i.e., 6 ug/l or parts per billion (ppb)] detected in the groundwater sample from well MWDAY-01 exceeds its groundwater standard or guidance value of 5 ppb. The concentrations of benzene, 1,2-dichloroethane, toluene, ethylbenzene, xylene, and isopropylbenzene (i.e., ranging between 13 ppb and 2,600 ppb) detected in the groundwater sample from well MW-3 exceed their respective groundwater standards or guidance values (i.e., ranging between 0.6 ppb and 5 ppb).

Target VOCs were detected in the September 2005 groundwater samples from wells MWDAY-01 and MW-3. Target VOCs detected in one or both of these samples include: cyclohexane, methylcyclohexane, benzene, toluene, ethylbenzene, xylene, and isopropylbenzene. Target VOCs were not detected at concentrations above reported analytical laboratory detection limits in the September 2005 groundwater samples from wells MWDAY-02, MWURS-3 and MWURS-4. TICs were detected in the September 2005 groundwater samples from wells MWDAY-01, MWDAY-02 and MW-3. TICs were not detected in the September 2005 groundwater samples from wells MWURS-3 and MWURS-4. The measured concentrations of specific VOCs were compared on Table 10 to NYSDEC TOGS 1.1.1 groundwater standards and guidance values. As shown, the concentration of xylene (i.e., 5 ug/l or ppb) detected in the groundwater sample from well MWDAY-01 is at the groundwater standard or guidance value of 5 ppb. The concentrations of benzene, toluene, ethylbenzene, xylene, and isopropylbenzene (i.e., ranging between 110 ppb and 1,500 ppb) detected in the groundwater sample from well MW-3 exceed their respective groundwater standards or guidance values (i.e., ranging between 0.6 ppb and 5 ppb).

DAY used the Surfer 8 software program to develop a contour map for total TCL and TIC VOCs in groundwater (September 2005 samples), which is included as Figure 10. As shown, the area with the highest total TCL and TIC VOCs in groundwater were detected on the northeastern portion of the Site in proximity to the off-site known source(s) of petroleum contamination.

SVOCs

Target SVOCs were detected in the March 2005 groundwater sample from well MW-3. Target SVOCs detected in this sample included: phenol; 2-methylphenol; 2,4-dimethyphenol; naphthalene; 2-methylnaphthalene; and carbazole. Target SVOCs were not detected at concentrations above reported analytical laboratory detection limits in the March 2005 groundwater samples from wells MWDAY-01, MWDAY-02, MWURS-3 and MWURS-4. TICs were detected in March 2005 groundwater samples from wells MWDAY-01, MWDAY-02, and MW-3. TICs were not detected in the March 2005 groundwater samples from wells MWURS-3 and MWURS-4. The measured concentrations of specific SVOCs detected in the March 2005 groundwater samples were compared to NYSDEC TOGS 1.1.1 groundwater standards and guidance values on Table 11. As shown, the concentrations of phenol and naphthalene detected in the March 2005 groundwater sample from well MW-3 exceeded their respective groundwater standards or guidance values.

Target SVOCs were detected in the September 2005 groundwater samples from wells MWDAY-01, MWDAY-02, MW-3, MWURS-3 and MWURS-4. Target SVOCs detected in one or more sample included: phenol; naphthalene; caprolactam, 2-methylnaphthalene; and carbazole. TICs were detected in the September 2005 groundwater samples from wells MWDAY-01, MWDAY-02, MW-3, MWURS-3 and MWURS-4. The measured concentrations of specific SVOCs detected in the September 2005 groundwater samples were compared to NYSDEC TOGS 1.1.1 groundwater standards and guidance values on Table 11. As shown, the concentrations of phenol and naphthalene detected in the September 2005 groundwater sample from well MW-3 exceeded their respective groundwater standards or guidance values. The detected concentrations of SVOCs in the September 2005 groundwater samples from wells MWDAY-01, MWDAY-02, MWURS-3 and MWURS-4 did not exceed their respective groundwater standards or guidance values.

TAL Metals and Cyanide

As shown on Table 12, TAL metals were detected in the March 2005 groundwater samples from wells MWDAY-01, MWDAY-02, MW-3, MWURS-3 and MWURS-4. TAL metals detected in one or more groundwater sample included: aluminum; antimony; arsenic; barium; calcium; cobalt; copper; iron; lead; magnesium; manganese; nickel; potassium; sodium; thallium; vanadium; and zinc.

The detected concentrations of TAL metals were compared to NYSDEC TOGS 1.1.1 groundwater standards and guidance values. Based upon this comparison, groundwater standards and guidance values for TAL metals were exceeded for:

- Antimony in the groundwater sample from well MWDAY-02;
- Barium and thallium in the groundwater sample from well MWURS-4;
- Iron and sodium in the groundwater samples from wells MWDAY-01, MWDAY-02, MW-3, MWURS-3 and MWURS-4;

- Magnesium in the groundwater samples from wells MWDAY-01, MW-3, MWURS-3 and MWURS-4; and
- Manganese in the groundwater samples from wells MWDAY-01, MWDAY-02, MWURS-3 and MWURS-4.

Based on local geology, naturally occurring background conditions may be contributing to the detected concentrations of most of these metals. The source of barium and thallium in the groundwater sample from well MWURS-4 at concentrations above SCGs is less understandable. Based on review of Agency for Toxic Substances and Disease Registry internet site (www.atsdr.cdc.gov/ToxProfiles), examples of the use of barium and thallium are provided as follows:

- Barium and its compounds are used in oil and gas drilling muds, automotive paints, stabilizers for plastics, case hardening steels, bricks, tiles, lubricating oils, and jet fuel as well as in various types of pesticides. The only referenced use of barium that is speculated to correspond to the Site or adjoining/nearby properties is the possible historic use in paints and lubricating oil.
- The current primary use of thallium is in the production of switches and closures within the semiconductor industry, in the pharmaceutical industry for cardiac imaging, and to manufacture highly refractive optical glass. Thallium compound uses include: the semiconductor industry; in low-range thermometers, optical systems and photoelectric cells; to prepare solutions of high specific gravity for use in separating ore constituents; as a catalyst in chlorination; in the production of low melting glass, photocells and fireworks; as an oxidizing agent in organic syntheses; in the manufacture of highly refractive glass; and for the production of artificial gems. Until banned in 1972, thallium was also used as a pesticide for control of rodents and insects. The only referenced use of thallium that is speculated to correspond to the Site or adjoining/nearby properties is the possible historic use as a pesticide for control of rodents and insects.

Cyanide was detected in the March 2005 groundwater samples from wells MWDAY-02, MW-3 and MWURS-4 at concentrations of 11.7 ppb, 280 ppb and 4 ppb, respectively. As shown on Table 12, the concentration of cyanide detected in the March 2005 groundwater sample from well MW-3 exceeds the TOGS 1.1.1 groundwater standard or guidance value of 200 ppb.

PCBs/Pesticides

PCBs were not detected in the March 2005 groundwater samples at concentrations above reported analytical laboratory detection limits.

The pesticides gamma-BHC (Lindane) and gamma-chlordane were detected in the groundwater sample from well MWDAY-02 at concentrations of 0.028 and 0.073 ug/l or ppb. As shown on Table 13, the concentration of gamma-BHC (Lindane) does not exceed the TOGS 1.1.1 groundwater standard of guidance value of 0.05 ppb. The concentration of gamma-chlordane exceeds the TOGS 1.1.1 groundwater standard of guidance value of 0.05 ppb.

4.5 EM-61 Electromagnetic Survey and Subsequent Test Pit

On April 7, 2005, an EM-61 electromagnetic detector geophysical survey was conducted at the Site by Geomatrix Consultants, Inc. A copy of the Geophysical Survey Report dated April 14, 2005 is included in Appendix B. As shown, a magnetic anomaly (designated Anomaly A) on the northeast portion of the Site was identified as possibly representing a buried tank.

On August 5, 2005, a test pit (designated as TP-1) was excavated in the area of Anomaly A. Pertinent information collected in the field is provided on a test pit log that is included in Appendix B. The location of test pit TP-1 is depicted on Figure 3. Evidence of an underground storage tank was not observed during this work. However, a steel beam set in a 3-foot square concrete pier was encountered approximately 0.5 feet below the ground surface in the Anomaly A area. This steel beam and potential steel rebar in the concrete pier appear to be the source of Anomaly A.

During excavation of test pit TP-1, staining and petroleum-type odors were detected on soil starting at a depth of approximately four feet and extending to the termination depth of approximately 10 feet. A peak PID reading of 1,500 ppm was measured on soil from a depth of approximately seven feet below the ground surface. No samples from test pit TP-1 were submitted for analytical laboratory testing.

4.6 Vapor Intrusion Evaluation

The vapor intrusion evaluation included the collection and analysis of two sub-slab air samples (designated as SLB-1 and SLB-2), two indoor air samples (designated as IA-01 and IA-02), and one outdoor background ambient upwind air sample (designated as BKG-01). The completed NYSDOH Indoor Air Quality Questionnaire and Building Inventory form, a Table VI-1 that summarizes VOCs detected in one or more air samples, and the laboratory report with the executed chain-of-custody documentation for the air samples, are included in Appendix E.

Target VOCs were detected in indoor air samples IA-01 and IA-02 and sub-slab air samples SLB-01 and SLB-02 Specific VOCs detected in one or both of the indoor air samples included: acetone; 2-butanone (MEK); trichlorofluoromethane, toluene, and xylenes. Specific VOCs detected in one or both of the sub-slab air samples included: acetone; benzene, methylene chloride, 2-butanone (MEK); trichloroethene; trichlorofluoromethane, toluene, and xylenes. VOCs were not detected above reported analytical laboratory detection limits in outdoor background ambient air sample BKG-01.

The detected concentrations of VOCs in the air samples were compared to the 25^{th} and 75^{th} percentile ranges of indoor air levels (used to compare to samples IA-01, IA-02, SLB-01 and SLB-02) and outdoor air levels (used to compare to sample BKG-01) of VOCs as listed in Table C1 (NYSDOH 2003: Study of Volatile Organic Chemicals in Air of Fuel Oil Heated Homes) of the NYSDOH document titled "Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York" dated October 2006. Only the concentration of trichloroethene detected in sub-slab air sample SLB-02 (i.e., 3.9 ug/m^3) exceeded the 75^{th} percentile of indoor levels of VOCs (i.e., <0.25 ug/m^3).

The concentration of the VOC methylene chloride detected in sub-slab air sample SLB-01 (i.e., 2.2 ug/m3) does not exceed its air guidance value (i.e., 60 ug/m^3) referenced in the NYSDOH draft document titled "Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York" dated October 2006.

Trichloroethene (TCE) was detected in sub-slab soil gas sample SLB-02 (3.9 ug/m3), but was not detected in indoor air (sample IA-02) at a reporting limit of 1.5 ug/m3. A direct comparison with Matrix 1 of the State's October 2006 Guidance for Evaluating Soil Vapor Intrusion in the State of New York is not appropriate because the reporting limit for the indoor air sample exceeded the recommended reporting limit for TCE in indoor air of 0.25 ug/m3. However, since TCE was not detected in the indoor air at or above 1.5 ug/m3 and because the concentration of TCE in the sub-slab soil gas sample is considered low, no additional work to address vapor intrusion on this site is recommended.

4.7 Soil Vapor Evaluation

The soil vapor evaluation was performed to evaluate whether selected buried utilities were acting as preferential migration pathways of contaminants detected in subsurface soil or groundwater at the Site. Also, other laterals that enter the building on the Site were identified as possible locations of buried utilities that could be acting as preferential pathways of subsurface petroleum contamination. Table SI-1 that summarizes VOCs detected in one or more air sample, and the laboratory report and executed chain-of-custody documentation for the air samples are included in Appendix F.

Target VOCs detected in one or more soil vapor samples included: acetone; benzene; 1,3-butadiene; 2-butanone; carbon disulfide; chloromethane; cyclohexane; dichlorodifluoromethane; ethanol; ethylbenzene; 4-ethyl toluene; n-heptane; hexane; isopropanol; methyl tert butyl ether; methylene chloride; propene; toluene; trichloroethylene; trichlorofluoromethane; 1,2,4-trimethylbenzene; 1,3,5-trimethylbenzene; vinyl acetate; m/p-xylene; and o-xylene.

Target VOCs detected in the ambient outdoor background air sample B-1 included: acetone, benzene, 2-butanone; chloromethane; dichlorodifluoromethane; ethanol; isopropanol; methylene chloride; toluene; trichloroethylene; trichlorofluoromethane; 1,2,4-trimethylbenzene; and m/p-xylene.

Based on review of site operations and test results for vapor intrusion samples, soil samples and groundwater samples in relation to the soil vapor air samples, many of the VOCs detected in the soil vapor samples do not appear attributable to the Site. An example is dichlorodifluoromethane (i.e., Freon 12), which is a refrigerant.

The following sets of data were compared to the regulatory SCGs noted:

- The concentrations of detected VOCs in the soil vapor samples were compared to the 25th to 75th percentile range of indoor levels of VOCs listed in Table C1 (NYSDOH 2003: Study of Volatile Organic Chemicals in Air of Fuel Oil Heated Homes) of the NYSDOH document titled "Final Guidance for Evaluating Soil Vapor Intrusion in the

State of New York" dated October 2006. As shown, the following VOCs were detected in one or more soil vapor sample at concentrations exceeding their respective 75th percentile of indoor levels: benzene; chloromethane; cyclohexane; dichlorodifluoromethane; ethylbenzene, n-heptane, hexane; trichloroethylene; 1,2,4-trimethylbenzene; 1,3,5-trimethylbenzene; m/p-xylene; and o-xylene.

- The concentrations of detected VOCs in the ambient outdoor background air sample B-1 were compared to the 25th to 75th percentile range of outdoor levels of VOCs listed in Table C1 (NYSDOH 2003: Study of Volatile Organic Chemicals in Air of Fuel Oil Heated Homes) of the NYSDOH document titled "Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York" dated October 2006. As shown, the following VOCs were detected in the ambient outdoor background air sample B-1 at concentrations exceeding their respective 75th percentile of indoor levels: methylene chloride; toluene; 1,2,4-trimethylbenzene; and m/p-xylene

- The concentrations of the VOC methylene chloride detected in air samples SV-2, SV-3 and B-1 do not exceed its air guidance value (i.e., 60 ug/m^3) referenced in the NYSDOH draft document titled “Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York” dated October 2006.

- The concentrations of the VOC trichloroethylene detected in air samples SV-1, SV-2, SV-3 and B-1 do not exceed its air guidance value (i.e., 5 ug/m^3) referenced in the NYSDOH draft document titled “Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York” dated October 2006.

The results of the soil vapor evaluation suggest significant migration of site-related VOCs detected in soil or groundwater at the Site is not occurring in proximity to the buried utilities that were evaluated.

5.0 CONTAMINANT FATE AND TRANSPORT

This section includes an evaluation of contaminant fate and transport for the Site including identifying potential routes of migration, contaminant persistence, and contaminant migration.

5.1 Potential Routes of Migration

Potential routes of migration identified for this Site include:

- VOCs, SVOCs and metals in soil leaching and impacting groundwater through precipitation or contact with groundwater;
- VOCs, SVOCs and metals migrating in a dissolved groundwater plume;
- VOCs migrating as a vapor in the unsaturated zone;
- VOC volatilization from groundwater or soil to indoor air inside buildings [Note: the vapor intrusion evaluation does not suggest this is occurring at the current residential apartment building that is located on the Site]; and
- Indirect migration pathways such as volatilization to air, transportation on construction equipment/workers, windborne processes, etc., if the impacted media (e.g., soil, groundwater) were to be disturbed in the future.

5.2 Contaminant Persistence

The contamination at the Site is identified as generally consisting of organic constituents (VOCs and SVOCs), and also various metals. The persistence of these constituents is further discussed in this section of the report.

Organic Constituents

The VOCs and SVOCs detected at the Site are generally associated with weathered petroleum products. Much of the non-target VOCs and SVOCs detected in soil and groundwater samples may reflect biodegradation products of the petroleum contamination or other non-target compounds typically associated with petroleum products. Petroleum-type VOCs detected in soil and groundwater may be attributable to products such as gasoline. The SVOCs detected in the soil and groundwater are generally considered PAHs. The VOCs and SVOCs encountered at the Site biodegrade aerobically and anaerobically. Half-lives for constituents commonly detected in soil or groundwater were referenced in the "Handbook of Environmental Degradation Rates", P.H. Howard, et. al, 1991. This reference suggests these VOCs and SVOCs in an aqueous setting will biodegrade faster under aerobic conditions when compared to biodegradation rates under anaerobic conditions.

As referenced in the "*Handbook of Environmental Degradation Rates*" (1991), the range of specific half lives for many of the organic constituents commonly detected at the Site in soil are summarized below:

- Benzene: Half-life in soil between 5 days and 16 days.
- Cyclohexane: Half-life in soil between 28 days and 180 days.

- Ethylbenzene: Half-life in soil between 3 days and 10 days.
- Toluene: Half-life in soil between 4 days and 22 days.
- Xylenes: Half-life in soil between 7 days and 28 days.
- Naphthalene: Half-life in soil between 16.6 days and 48 days.
- Chrysene: Half-life in soil between 372 days and 993 days.
- Benzo(a)pyrene: Half-life in soil between 57 days and 529 days.
- Benzo(a)anthracene: Half-life in soil between 102 days and 679 days.
- Benzo(k)fluoranthene: Half-life in soil between 909 days and 2,139 days.
- Benzo(b)fluoranthene: Half-life in soil between 360 days and 610 days.
- Phenanthrene: Half-life in soil between 16 days and 200 days.
- Fluoranthene: Half-life in soil between 140 days and 440 days.
- Indeno(1,2,3-cd)pyrene: Half-life in soil between 599 days and 730 days.
- Dibenzo(a,h)anthracene: Half-life in soil between 361 days and 942 days.
- Benzo(g,h,i)perylene: Half-life in soil between 590 days and 650 days.

As referenced in the "*Handbook of Environmental Degradation Rates*" (1991), the available range of specific half lives for many of the organic constituents commonly detected in the groundwater at the Site are summarized below:

- Benzene: Half-life in groundwater between 10 days and 730 days.
- Ethylbenzene: Half-life in groundwater between 6 days and 228 days.
- Toluene: Half-life in groundwater between 7 days and 28 days.
- Xylenes: Half-life in groundwater between 14 days and 365 days.
- Cyclohexane: Half-life in groundwater between 56 days and 365 days.
- Naphthalene: Half-life in groundwater between 2 days and 250 days.
- Phenol: Half-life in groundwater between 1 days and 10 days.
- 1,2-Dichloroethane: Half-life in groundwater between 100 days and 365 days.
- Isopropylbenzene: Half-life in groundwater between 4 days and 16 days.

As shown by the biodegradation rates presented above, most of the SVOCs detected at the Site would generally be anticipated to persist longer than most of the VOCs that were detected at the Site.

The Agency for Toxic Substances and Disease Registry (www.atsdr.cdc.gov) was referenced to obtain information on the VOCs detected at the Site. A summary of information for these VOCs is provided below:

- Benzene: Benzene can be emitted into the air from water and soil where it readily breaks down. Benzene in air can be brought back to the ground surface via rain or snow. It breaks down more slowly in water and soil, and can pass through the soil into groundwater. Benzene does not bioaccumulate.

- Ethylbenzene: Ethylbenzene can be emitted into the air from water and soil where it readily breaks down. In surface water, ethylbenzene breaks down by reacting with other chemicals found naturally in water. In soil, ethylbenzene is broken down by bacteria.

- Toluene: Toluene does not typically persist for long periods of time when released to the environment. Toluene does not bioaccumulate.

- Xylene: Xylene evaporates quickly from the soil and surface water into the air where it is broken down by sunlight. Xylene biodegrades in soil and water. Xylene has been determined to somewhat bioaccumulate in flora and fauna found in water bodies.

A summary of information for PAH SVOCs referenced from the ATSDR website is provided below:

- PAHs can occur in air attached to dust particles, and some can evaporate into the air from soil or surface waters.
- PAHs can break down by reacting with sunlight and other chemicals in the air, over a period of days to weeks.
- Most PAHs do not dissolve easily in water, but tend to absorb onto solid particles such as soil. Certain PAHs (e.g., 2-methylnaphthalene, phenanthrene) can migrate through soil and contaminate groundwater.
- Microorganisms can break down PAHs in soil or water after a period of weeks to months.
- PAH contents of plants and animals may be much higher than the PAH contents of soil or water in which they live.

In addition to biodegradation, VOC and SVOC concentrations in the groundwater would presumably decrease as the distance from the source area is increased due to processes such as advection, dispersion, sorption, diffusion, etc.

The analytical laboratory test results for groundwater samples collected as part of this study support the presumption that contamination concentrations decrease as the distance from the suspected source area is increased (e.g., total TCL VOCs plus TICs detected in the September 2005 groundwater sample from well MW-3 located in proximity to the known source area was 9,936 ppb, and total TCL VOCs plus TICs detected in the September 2005 groundwater sample from well MWDAY-01 located approximately 160 feet south of the known source area was 63 ppb).

Inorganics

Various metals were detected in samples of surface soil, subsurface soil, and groundwater. Some of the metals detected may be associated with contamination from past uses of the Site, and other metals may be associated with naturally occurring concentrations of metals in soil or groundwater for the area of the Site. Metals can change form (e.g., Fe^{+2}, Fe^{+3}), but are persistent in the environment and do not degrade.

Only the metals mercury and manganese were detected in soil at concentrations exceeding SCOs. The metals iron, magnesium, manganese and sodium were detected most often in groundwater at concentrations exceeding TOGS 1.1.1 groundwater standards or guidance values.

The ATSDR internet site was referenced for information on many of the metals that were detected above NYSDEC criteria in soil and groundwater samples as part of this study. A summary of information for two of the more toxic of these metals is provided below:

- Manganese: Manganese exists naturally in rivers, lakes, and underground water. Manganese has been determined to somewhat bio-accumulate in flora found in water bodies.
- Mercury: Mercury is a naturally occurring element, which has several forms and can be released by both natural and manufacturing processes. The metallic mercury is a shiny, silver-white, odorless liquid. Mercury combines with other elements, such as chlorine, sulfur or oxygen, to form inorganic mercury compounds or "salts". Mercury also combines with carbon to make organic mercury compounds. The most common one, methylmercury, is produced mainly by microscopic organisms in the water and soil. More mercury in the environment can increase the amounts of methylmercury that these small organisms make. Mercury can bio-accumulate.

Processes such as advection, dispersion, sorption, diffusion, etc, can result in decreases in metals concentrations dissolved in groundwater as the distance away from their source is increased.

5.3 Contaminant Migration

The petroleum contamination within the soil and groundwater at the Site is detected at highest concentrations in proximity to the northeast portion of the Site.

Given the fact that petroleum contamination is present in test boring/monitoring well locations along the northern property boundary, it appears possible that historic petroleum releases from former gasoline/service station uses at the Site and/or on adjoining/nearby property(s) north of the Site could have impacted the Site.

The findings of this project indicate petroleum-related impacts present on the northeastern portion of the Site appear to have migrated laterally in a southward direction. VOCs (e.g., xylene) were detected farther away from the northeastern portion of the Site than SVOCs (e.g., naphthalene). Based on field findings and analytical laboratory testing of soil and groundwater samples, the length of the petroleum plume located south of the northeastern portion of the Site is estimated to be at least 140 feet.

Petroleum contamination also appears to have migrated vertically downward resulting in a zone of impacted soil that is up to approximately 7 feet thick on the northeastern portion of the Site. During the course of this study, variations in groundwater levels at well locations ranged between approximately one and three feet, which substantiate the presence of a zone of impacted soil.

5.3.1 Factors Affecting Contaminant Migration

Factors affecting contaminant migration include: groundwater flow; advection; mechanical dispersion; molecular diffusion; partitioning between air, soil and groundwater; and adsorption of constituents onto soil particles or particles suspended in groundwater.

The type of contamination present at the Site generally consists of petroleum-related VOCs, SVOCs and selected metals. In general, the detected VOCs are more soluble in water than the detected SVOCs and metals; thus, the VOCs tend to be more mobile in the environment (e.g., migrating through the groundwater and vaporizing into the unsaturated zone).

Based on the type of soils at the Site (i.e., predominantly fine to medium sands and some silts), hydraulic conductivities are estimated to range between 1×10^{-5} cm/sec and 1×10^{-3} cm/sec). Using measured Site groundwater gradients ranging between is 0.05 ft/ft and 0.06 ft/ft, and an estimated porosity range of 0.2 and 0.35, the estimated groundwater flow velocity for the site is calculated to range between 0.004 ft/day and 0.85 ft/day (i.e., 1.46 ft/year to 310.25 ft/year).

6.0 EXPOSURE ASSESSMENT

An exposure assessment was conducted to evaluate the potential for exposure of humans and wildlife to site contaminants.

6.1 Qualitative Human Health Exposure Assessment

A qualitative human health exposure assessment was conducted as part of this project in accordance with the guidelines referenced in the document titled "*New York State Department of Health Qualitative Human Health Exposure Assessment*" that is included as Appendix B of Draft DER-10. The purpose of the qualitative human health exposure assessment was to identify the exposure setting and exposure pathways, and evaluate contaminant fate and transport in relation to human health exposure.

An exposure pathway is comprised of the following components:

1. A contaminant source;
2. Contaminant release and transport mechanisms;
3. A point of exposure;
4. A route of exposure; and
5. A receptor population.

Contaminant Sources

On-going point sources of contamination (e.g., USTs) do not appear present at the Site. However, the following environmental media are identified as sources of contaminants-of-concern at the Site:

- Petroleum-related VOCs in subsurface soil (refer to Table 6 included in Appendix A). The VOCs ethylbenzene and xylene were detected in Sample 009 from test boring SBDAY-09 at concentrations exceeding SCOs.
- Apparent fill-related SVOCs and metals in subsurface soil (refer to Tables 7 and 8 included in Appendix A). The SVOCs benzo(a)anthracene; chrysene; benzo(b)fluoranthene; and benzo(a)pyrene were detected in sample 004 from test boring SBDAY-02 at concentrations exceeding SCGs. The metal mercury was detected in Sample 004 from test boring SBDAY-02 at a concentration exceeding its SCG. The metal manganese was detected in Sample 011 from test boring SBDAY-08 at a concentration exceeding its SCG.
- Petroleum-related VOCs/SVOCs, various metals, cyanide and one pesticide in groundwater (refer to Tables 10, 11, 12, and 13 included in Appendix A). VOCs most frequently detected at concentrations exceeding SCGs include: benzene, ethylbenzene; xylenes; isopropylbenzene; and toluene. The SVOCs phenol and naphthalene were most frequently detected at concentrations exceeding SCGs. Metals most frequently detected at concentrations exceeding SCGs include: iron; sodium; magnesium; and manganese. Cyanide was only detected above groundwater SCGs at well MW-3, which is situated on the northeast portion of the Site where petroleum contamination has been identified. The pesticide gamma chlordane was only detected above groundwater SCGs at well MWDAY-02, which is situated next to the high-rise residential apartment building where petroleum contamination has been identified.

The types of contaminants discussed above have been detected in soil or groundwater on-site at concentrations exceeding SCGs.

Contaminant Release and Transport Mechanisms

Release and transport mechanisms for known or suspected contaminants-of-concern include:

- VOCs and SVOCs in soil leaching and impacting groundwater through precipitation or contact with groundwater;
- VOCs, SVOCs and metals migrating in a dissolved groundwater plume;
- VOCs migrating as a vapor in the unsaturated zone;
- VOC volatilization from groundwater or soil to indoor air;
- VOC volatilization to air if impacted media are disturbed; and
- Transportation of VOCs or SVOCs in soil on construction equipment/workers if impacted media are disturbed.

Point of Exposure

Based on the findings of this remedial investigation (including field monitoring, and analytical laboratory test results for soil, groundwater, soil vapor and vapor intrusion study samples), current points of exposure have not been identified. The soil vapor evaluation indicates that VOCs in soil and groundwater are not adversely impacting indoor air quality inside the high-rise apartment building, part of which happens to be located in proximity to the area where the highest concentrations of VOCs have been detected at the Site. The concentrations of VOCs detected at a soil vapor point next to an abandoned 54-inch sewer line and at the nearby groundwater monitoring well MWDAY-01, suggest that the petroleum plume on the Site likely has no potential for impacting indoor air quality at the low-rise residential apartment/townhouse buildings located on the adjoining property to the south. [Note: A vapor intrusion evaluation will be conducted on these adjoining low-rise residential buildings under a separate Brownfield Cleanup Project (i.e., BCP Project #C828125). This future vapor intrusion evaluation can in part be used to confirm this conclusion].

Potential future points of exposure include the following:

- The air space within certain buried utilities (e.g., sewer piping, utility vaults, etc.) that run parallel with Mt. Hope Avenue if they are entered.
- Future intrusive work or excavations that come into contact with contaminated soil or groundwater.
- Indoor air of future buildings if constructed over areas of soil or groundwater containing VOCs.
- Future groundwater wells used for drinking water, etc. if placed in areas of contaminated groundwater.

Routes of exposure

Under current site conditions and use, inhalation is considered the primary potential route of exposure. If contaminated soil or groundwater is disturbed or used in the future, potential routes of exposure may include inhalation, ingestion, dermal contact, eye contact, and puncture/injection.

Receptor Population

The receptor population includes:

- Construction workers and occupants of future buildings that are constructed over areas of soil and groundwater containing VOCs.
- Future workers that may enter buried utility confined spaces, or that may disturb contaminated soil or groundwater, as part of their work in the future.
- Future population that may use groundwater that originates from the Site

Findings

The findings of this human health exposure assessment have identified the following potential exposure pathways:

- Future site workers and occupants of future buildings that are constructed over areas of soil and groundwater containing VOCs could be exposed to VOCs, SVOCs and metals that are present in subsurface soil or groundwater at concentrations exceeding SCGs. Examples of exposure include: during disturbance of contaminated material; potential volatilization of VOCs into future site structures; etc. Routes of exposure to future Site workers could include inhalation, ingestion, dermal contact, eye contact, and puncture/injection.
- Future potential use of groundwater at the Site could pose a potential exposure pathway to VOCs, SVOCs and metals that are present in groundwater at concentrations exceeding SCGs. The primary potential route of exposure would be ingestion. However, other potential routes of exposure include inhalation, dermal contact, eye contact, and puncture/injection.

The findings of this human health exposure assessment have been used in the selection of the recommended remedial alternative for the Site as identified in Section 9.0 of this report.

6.2 Fish and Wildlife Resources Impact Analysis

A copy of a completed Fish and Wildlife Resources Impact Analysis (FWRIA) Decision Key is included in Appendix J. The findings of the site investigation, and the information provided above, were used to assist in completing the FWRIA Decision Key. As shown, the Site contains a point source of soil and groundwater contamination, which does not discharge to surface water based on the direction of groundwater flow away from the nearby Genesee River. It is concluded that a Fish and Wildlife Resources Analysis is not needed since this contamination does not have the potential to migrate to, erode into or otherwise impact any on-site or off-site habitat, of endangered, threatened or special concern species or other fish and wildlife resource.

7.0 SITE INVESTIGATION CONCLUSIONS

The findings and conclusions of the site investigation conducted as part of this project are provided in this section of the report.

7.1 Background

The Site consists of an apartment building with an associated paved parking lot located on approximately 1.106 acres of land. The Site is located in a mixed-use urban area. Commercial and residential properties bound the Site to the north and east, residential properties bound the Site to the south, and the Genesee Gateway Park with the Genesee River beyond bound the Site to the west.

The apartment building totals approximately 143,000 square feet and consists of a multi-level eight to twelve-story brick and concrete-block, slab-on-grade building constructed in 1975. The apartment building houses 202 residential units. Prior to the residential development in 1975, past uses of the S2ite included commercial and warehouse uses. Portions of a feeder canal and rail yards were also once located on the Site.

The Site is located in an urban area that is serviced by the public water system. The MCDOH has no records of public or private drinking water wells or process water wells within a 0.25-mile radius of the Site. A review of a document titled "Ground Water Resources of Monroe County" (1935) revealed no groundwater supply wells on, or in the immediate area of, the Site.

The Site and surrounding area are generally level. The Genesee River is located approximately 130 feet west of the site. Surface water appears to flow off the Site toward Mount Hope Avenue to the east, and into the City of Rochester sewer system. Groundwater flows toward the southeast away from the Genesee River. This flow direction may be modified locally due to buried utilities, seasonal conditions, or other factors.

An October 2000 Phase I ESA identified the following RECs at the Site:

1. **Historic Use of the Site:** Former uses at the Site include: rail yards, former Erie Canal feeder, and possibly a portion of a gasoline station.

2. **Historic Use of Adjoining Properties:** Historic uses of adjoining properties include: gasoline stations to the north and possibly east of the Site (i.e., east of Mt. Hope Avenue); former railroad infrastructure to the west of the Site; and a former Erie Canal feeder, a rail yard, a tannery, iron cutting, and auto repair to the south of the Site.

Subsequent intrusive environmental studies conducted between 2000 and 2003 identified petroleum contamination in soil and groundwater on the northeastern portion of the Site. In August 2004, the NYSDEC assigned Spill File # 0470234 due to the petroleum contamination that is present on the Site (i.e., 185 Mt. Hope Avenue).

Tasks performed as part of this project to evaluate or address the RECs identified above included:

- Conducting a EM-61 geophysical survey and subsequent test pit to assist in evaluating the locations of suspect USTs;
- Evaluating surface soil conditions;

- Evaluating subsurface soil conditions;
- Evaluating groundwater quality conditions and groundwater movement characteristics;
- Conducting a vapor intrusion study to evaluate whether VOCs in soil or groundwater were volatilizing and impacting indoor air inside the apartment building on the Site; and
- Conducted a soil vapor study to evaluate whether VOCs were preferentially migrating along select buried utilities.

7.2 Physical Characteristics of Site

Based on the work performed to date at the Site, heterogeneous fill material generally consisting of reworked soil (e.g., silt, sand, gravel, and clay) with lesser amounts of brick, cinders, roots, wood, ash, and concrete is present over most of the Site from the ground surface to depths ranging between approximately 2.0 feet and 12.0 feet. At most test locations, the uppermost layer of indigenous soil predominantly consists of varying grades of sands, some silts, and lesser amounts of gravel and clay. As measured during this study, groundwater generally flows toward the southeast.

7.3 Nature and Extent of Contamination

The nature and extent of contamination are summarized below:

- Constituents were not detected in surface soil samples at concentrations above NYSDEC Track 2 SCOs restricted residential use.
- Concentrations of petroleum-related VOCs and SVOCs in subsurface soil and groundwater were generally highest on the northeastern portion of the Site in proximity to the portion of the adjoining property to the north that was formerly improved with gasoline/service stations. A plume associated with this area of petroleum contamination appears to extend southward across the Site.
- Track 2 SCOs for restricted residential use for this area of petroleum contamination were only exceeded at one test location (i.e., test boring SBDAY-09). In addition, test boring SBDAY-08 located within this area of petroleum contamination contained a concentration of manganese (i.e., 4,060 ppm) that exceeded its Track 2 restricted residential use SCO of 2,000 ppm.
- Groundwater samples from wells MWDAY-01 and MW-3 contained concentrations of VOCs and/or SVOCs that exceeded NYSDEC TOGS 1.1.1 groundwater standards or guidance values. Well MW-3 is located on the northeastern portion of the Site, and well MWDAY-01 is located along the southern property boundary near the apparent leading edge of the petroleum plume. Concentrations of VOCs in groundwater tend to decrease as the distance away from the northeast portion of the Site is increased. Based on field findings and analytical laboratory testing of soil and groundwater samples, the length of the petroleum plume located south of the northeastern portion of the Site is estimated to be at least 140 feet.
- The results of the vapor intrusion evaluation suggests indoor air quality inside the on-site high-rise apartment building has not been impacted as a result of VOCs present in subsurface soil and groundwater beneath and in proximity to this building.

- VOCs associated with the on-site petroleum plume were detected in groundwater from well MWDAY-01 and soil vapor point SV-3 that are located nearby or in proximity to an abandoned 54-inch diameter sewer line that extends from the Site to beneath the northern residential apartment building on the adjoining property located south of the Site. The concentrations of detected VOCs in soil and groundwater on this southern portion of the Site are lower than the concentrations of detected VOCs in soil and groundwater on the northeast portion of the Site. Based on this data, and on the findings of the vapor intrusion evaluation conducted at the on-site high-rise apartment building, it appears unlikely that the lower concentrations of VOCs detected on the southern portion of the Site will adversely impact indoor air quality of the low-rise apartment/townhouse buildings on the adjoining property located south of the Site. [Note: A vapor intrusion evaluation is planned for the low-rise apartment/townhouse buildings on the adjoining property located south of the Site under a separate Brownfield Cleanup Project. It is suggested that this evaluation include the sampling and testing of sub-slab and indoor air samples from the northern portion of the northern-most low-rise apartment/townhouse building.]
- A sample of fill material at test location SBDAY-02 contained some PAH SVOCs and the metal mercury at concentrations that exceeded Track 2 SCOs for restricted residential use. This test boring was advanced within the footprint of the former feeder canal.
- The results of PID screening of unsaturated soil samples collected from test boring and test pit locations indicate that petroleum vapors are present in unsaturated soils on some portions of the Site.
- Evidence of LNAPL or DNAPL was not detected at test boring, test pit or monitoring well locations during this study.
- Evidence of underground storage tanks was not encountered on the Site during this project.
- Apparent sources of petroleum identified during this investigation include possible former gasoline/service station use on the northeast portion of the Site (i.e., gasoline tanks associated with a former gasoline station may have been present at the Site), and at locations on adjoining/nearby property(s) north of the Site.
- Apparent sources of other types of constituents (e.g., some PAH SVOCs, metals, cyanide, etc.) may be attributable to surficial fill materials that were documented at the Site.

7.4 Contaminant Fate and Transport

This section summarizes contaminant fate and transport for the Site including identification of potential routes of migration, contaminant persistence, and contaminant migration.

7.4.1 Potential Routes of Migration

Potential routes of migration identified for this Site include:

- VOCs, SVOCs and metals in soil leaching and impacting groundwater through precipitation or contact with groundwater;
- VOCs, SVOCs and metals migrating in a dissolved groundwater plume;

- VOCs migrating as a vapor in the unsaturated zone;
- VOC volatilization from groundwater or soil to indoor air inside buildings [Note: the vapor intrusion evaluation does not suggest this is occurring at the current residential apartment building that is located on the Site]; and
- Indirect migration pathways such as volatilization to air, transportation on construction equipment/workers, windborne processes, etc., if the impacted media (e.g., soil, groundwater) were to be disturbed in the future.

7.4.2 Contaminant Persistence

The contamination at the Site is identified as generally consisting of organic constituents (VOCs and SVOCs), and also various metals. The persistence of these constituents is further discussed in this section of the report.

Organic Constituents

The VOCs and SVOCs detected at the Site are generally associated with weathered petroleum products. Much of the non-target VOCs and SVOCs detected in soil and groundwater samples may reflect biodegradation products of the petroleum contamination or other non-target compounds typically associated with petroleum products. Petroleum-type VOCs detected in soil and groundwater may be attributable to products such as gasoline. The majority of SVOCs detected in the soil and groundwater are considered PAHs. The VOCs and SVOCs encountered at the Site biodegrade aerobically and anaerobically. These VOCs and SVOCs in an aqueous setting will biodegrade faster under aerobic conditions when compared to biodegradation rates under anaerobic conditions. Most of the SVOCs detected at the Site would generally be anticipated to persist longer than the VOCs that were detected at the Site.

In addition to biodegradation, VOC and SVOC concentrations in the groundwater would presumably decrease as the distance from the source area is increased due to processes such as advection, dispersion, sorption, diffusion, etc. The analytical laboratory test results for groundwater samples collected as part of this study support the presumption that contamination concentrations decrease as the distance from the suspected source area is increased.

Inorganics

Various metals were detected in samples of surface soil, subsurface soil and groundwater. Some of the metals detected may be associated with contamination from past uses of the Site, and other metals may be associated with naturally occurring concentrations of metals in soil or groundwater for the area of the Site. Metals can change form (e.g., Fe^{+2}, Fe^{+3}), but are persistent in the environment and do not degrade. Some of the metals detected at the Site can bioaccumulate.

Only the metals mercury and manganese were detected in soil at concentrations exceeding Track 2 SCOs for restricted residential use. The metals iron, magnesium, manganese and sodium were detected most often in groundwater at concentrations exceeding TOGS 1.1.1 groundwater standards or guidance values.

Processes such as advection, dispersion, sorption, diffusion, etc, can result in decreases in metals concentrations dissolved in groundwater as the distance away from their source is increased.

7.4.3 Contaminant Migration

The petroleum contamination within the soil and groundwater at the Site is detected at highest concentrations in proximity to the northeast portion of the Site.

Given the fact that petroleum contamination is present in test boring/monitoring well locations along the northern property boundary, it appears possible that historic petroleum releases from former gasoline/service station uses at the Site and/or on adjoining/nearby property(s) north of the Site could have impacted the Site.

The findings of this project indicate petroleum-related impacts present on the northeastern portion of the Site appear to have migrated laterally in a southward direction. Based on field findings and analytical laboratory testing of soil and groundwater samples, the length of the petroleum plume located south of the northeastern portion of the Site is estimated to be at least 140 feet.

Petroleum contamination also appears to have migrated vertically downward resulting in a zone of impacted soil that is up to approximately 7 feet thick on the northeastern portion of the Site.

7.4.4 Factors Affecting Contaminant Migration

Factors affecting contaminant migration include: groundwater flow; advection; mechanical dispersion; molecular diffusion; partitioning between air, soil and groundwater; and adsorption of constituents onto soil particles or particles suspended in groundwater.

The type of contamination present at the Site generally consists of petroleum-related VOCs, SVOCs, and selected metals. In general, the VOCs tend to be more mobile in the environment than SVOCs and metals. The estimated groundwater flow velocity for the site may range between 0.004 ft/day and 0.85 ft/day (i.e., 1.46 ft/year to 310.25 ft/year). The factors described above impact the contaminant flow rates, and the physical properties of the contaminants can impact migration rates.

7.5 Exposure Assessment

Under current site conditions, a complete human health exposure pathway has not been identified, and it was determined that a Fish and Wildlife Resources Impact Analysis was not needed. However, the following potential future activities have been identified as potential human health exposure pathways:

- Future site workers and occupants of future buildings that are constructed over areas of soil and groundwater containing VOCs could be exposed to VOCs, SVOCs and metals that are present in subsurface soil or groundwater at concentrations exceeding SCGs. Examples of exposure include: during disturbance of contaminated material; potential volatilization of

VOCs into future site structures; etc. Routes of exposure to future Site workers could include inhalation, ingestion, dermal contact, eye contact, and puncture/injection.

- Future potential use of groundwater at the Site could pose a potential exposure pathway to VOCs, SVOCs and metals that are present in groundwater at concentrations exceeding SCGs. The primary potential route of exposure would be ingestion. However, other potential routes of exposure include inhalation, dermal contact, eye contact, and puncture/injection.

7.6 Conclusions

Constituent concentrations detected in surface soil samples collected as part of this project did not exceed Track 2 SCOs for restricted residential use. Further actions do not appear warranted in relation to surface soil at the Site.

Petroleum contamination was encountered in soil and groundwater on the northeastern portion of the Site. An apparent plume extends southward across the Site from this area. The concentration of the VOCs ethylbenzene and xylene detected in one subsurface soil sample, and the concentration of the metal manganese detected in a different subsurface soil sample, that were collected on the northeastern portion of the Site exceeded Track 2 SCOs for restricted residential use. In addition, groundwater samples collected from a monitoring well on the northeastern portion of this area, and from a monitoring well near the foot of the plume located southward from this area, contained petroleum-related constituents. Also, groundwater samples from these two monitoring wells contained some metals and cyanide at concentrations exceeding groundwater standards or guidance values. VOCs in subsurface soil and groundwater do not appear to be impacting indoor air inside the existing high-rise apartment on the Site. In addition, buried utilities that were monitored do not appear to be acting as preferential migration pathways of contaminants at concentrations that would result in an adverse exposure. However, further actions appear warranted to address the northeast portion of the Site and the associated plume that is predominantly impacted with petroleum-related constituents.

Fill material present at the Site may be contributing to a random distribution of detected constituents in subsurface soil and groundwater at the Site. Track 2 SCOs for restricted residential use were exceeded for some PAH SVOCs and the metal mercury at one subsurface soil sample location. Also, groundwater samples at some well locations contained antimony, barium, cyanide and/or gamma-chlordane at concentrations that exceeded groundwater standards or guidance values. Further actions appear warranted to address the nature of these detected constituents on the Site.

It is reported that the source areas of petroleum contamination on the adjoining/nearby properties north of the Site will be remediated. In an interview with a representative of the City of Rochester, the representative indicated that remediation of this adjoining/nearby property may commence in August or September 2007. As such, the evaluation of remedial alternatives in this report assumes that there will not be an on-going source of contamination migrating onto the Site from these adjoining/nearby properties (i.e., from former gasoline stations that were located to the north of the Site, etc.).

7.7 Data Limitations

Due the location of the petroleum contaminated media on the Site in relation to Mt. Hope Avenue, the extent of petroleum contamination eastward of the Site could not be fully defined. However, the exposure assessment completed as part of this project does provide an evaluation of potential off-site receptors, including in the direction of Mt. Hope Avenue. Also, the vertical extent of petroleum contamination at some test boring locations was not fully defined. However, the physical properties of the type of contamination (i.e., petroleum tends to float on water or migrate in a dissolved phase), and the observations/data obtained from deeper groundwater monitoring wells advanced at the Site, provide insight into the relative vertical extent of petroleum contamination at the Site.

8.0 IDENTIFICATION AND DEVELOPMENT OF ALTERNATIVES

This section of the report presents the identification and development of remedial action objectives and remedial alternatives for the Site.

8.1 Remedial Action Objectives

Remedial action objectives (RAOs) for contamination detected in soil and groundwater, contaminants of interest, and remediation goals are identified in this section of the report. Based on the findings of the remedial investigation, RAOs for soil and groundwater are provided as follows:

Soil

RAOs for public health protection include:

- Prevent ingestion and direct contact with contaminated soil.
- Prevent inhalation of, and exposure to, volatilization of contaminants in soil.

RAOs for environmental protection include:

- Prevent migration of contamination that would result in impacts to surface water or groundwater.
- Prevent impacts to biota via ingestion or direct contact with contaminated soil that would result in toxic conditions or impacts from bioaccumulation through the terrestrial food chain.

Groundwater

RAOs for public health protection include:

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of, volatiles from contaminated groundwater.

RAOs for environmental protection include:

- Restore the groundwater aquifer to pre-disposal/pre-release conditions, to the extent practicable.
- Prevent the discharge of contaminants to surface water.
- Remove the source of groundwater contamination.

8.1.1 Contaminants of Interest

Based on the studies performed to date, the contaminants of interest are primarily comprised of VOCs and SVOCs that are associated with petroleum products. To a lesser degree, random areas of some SVOCs, metals, cyanide and gamma chlordane were detected in soil or groundwater samples at concentrations exceeding Track 2 SCOs for restricted residential use,

and/or groundwater standards or guidance values. These random areas of contamination could be attributable to historic uses of the Site or fill materials present on the Site. The most prevalent VOCs detected in soil or groundwater at concentrations exceeding SCG values include: benzene; ethylbenzene; isopropylbenzene; toluene; and xylenes. The most prevalent SVOCs detected in soil or groundwater at concentrations exceeding SCG values include: naphthalene; benzo(a)anthracene; benzo(a)pyrene; chrysene; and benzo(b)fluoranthene. VOCs, SVOCs, some metals, cyanide and gamma chlordane were detected in one or more subsurface soil sample or groundwater sample at concentrations that exceeded Track 2 SCOs for restricted residential use or groundwater standards or guidance values. LNAPL and DNAPL were not encountered during these studies.

8.1.2 Development of Remediation Criteria

In order to evaluate the effectiveness of remedial alternatives for this Site, the following general and site-specific remediation goals were evaluated in accordance with the provisions set forth in Draft DER-10:

- Protection of Human Health and the Environment. This criterion is an evaluation of the remedy's ability to protect public health and the environment, and assesses how risks posed through each existing or potential pathway of exposure are eliminated, reduced or controlled through removal, treatment, engineering controls or institutional controls. The remedy's ability to achieve each of the RAOs is evaluated.

- Compliance with SCGs. Compliance with SCGs addresses whether or not a remedy will meet applicable environmental laws, regulations, standards, and guidance. The SCGs for the site are listed along with a discussion of whether or not the remedy will achieve compliance.

- Long-Term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of the remedy after implementation. If wastes or treated residuals remain on-site after the selected remedy has been implemented, the following items are evaluated:

  - The magnitude of the remaining risks (i.e., will there be any significant threats, exposure pathways, or risks to the community and environment from the remaining wastes or treated residuals?);

  - The adequacy of the engineering and institutional controls intended to limit the risk;

  - The reliability of these controls; and,

  - The ability of the remedy to continue to meet RAOs in the future.

- Reduction of Toxicity, Mobility and Volume. The remedy's ability to reduce the toxicity, mobility or volume of site contamination is evaluated. Preference is given to remedies that permanently and significantly reduce the toxicity, mobility or volume of the wastes at the Site.

- Short-Term Impacts and Effectiveness. The potential short-term adverse impacts and risks of the remedy upon the community, the workers and the environment during its construction and/or its implementation are evaluated. A discussion of how the identified adverse impacts and health risks to the community or workers at the Site will be controlled, and the effectiveness of the controls, are presented. A discussion of engineering controls that will be used to mitigate short term impacts (i.e. dust control measures) is provided where applicable. The length of time needed to achieve the remedial objectives is also estimated.

- Implementability. The technical and administrative feasibility of implementing the remedy is evaluated. Technical feasibility includes the difficulties associated with the construction and the ability to monitor the effectiveness of the remedy. For administrative feasibility, the availability of the necessary personnel and material is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, etc.

- Cost. Capital, operation, maintenance and monitoring costs are estimated for the remedy and presented on a present worth basis.

- Planned Future Use of the Site. This criterion is intended to evaluate the remedial alternatives in relation to the planned future use of the Site. Presently, it is anticipated that the Site will continue to be used as a high-rise residential apartment complex with a paved parking lot.

- Community Acceptance. This criterion is intended to select a remedial alternative that is acceptable to the community. The public's comments, concerns and overall perception of the remedy are later addressed through the Citizen Participation Plan for this project, which provides a format that responds to questions and comments that are raised by the public (i.e., responsiveness summary). As such, community acceptance is not discussed in this report.

8.2 General Response Actions

Soil and groundwater at this Site are contaminated with VOCs and SVOCs that are generally attributed to petroleum products. Petroleum-contaminated soils were encountered in the saturated and unsaturated zones over an approximate 14,500 square foot (0.33-acre) area. Various metals were also detected in this area. Within this area, contaminated soil exceeding Track 2 SCOs for restricted residential use for petroleum contamination is estimated to be present over an approximate 800 square foot (0.03-acre) area in proximity to test boring SBDAY-09. Based on the work completed, the volume of subsurface soil that is estimated to exceed NYSDEC Track 2 SCOs for restricted residential use is estimated to be 210 cubic yards (i.e., 345 tons). Based on the work completed, the contaminated soil exceeding NYSDEC Track 2 SCOs for restricted residential use appears to be at least seven feet below the ground surface. During this study, the top of the groundwater table on the northeast portion of the Site (i.e., area with highest concentrations of petroleum constituents) was measured to range between approximately 14.5 feet and 16.9 feet below the ground surface (i.e., at well MW-3).

Petroleum-contaminated groundwater is estimated to be present over an approximate 0.35-acre area of the Site and is likely to also be present in the right-of-way of Mt. Hope Avenue that abuts the northeastern portion of the Site. Within this area, contaminated groundwater exceeding TOGS 1.1.1 groundwater standards or guidance values is estimated to be present over an approximate 0.25-acre area of the Site.

General response actions to address the identified contamination in soil include treatment, containment, excavation, extraction, disposal, environmental engineering controls, and institutional controls. The response actions are primarily evaluated for application in addressing soil contamination that exceeds NYSDEC Track 2 SCOs for restricted residential use.

General response actions to address the identified contamination in groundwater include treatment, containment, extraction, disposal, environmental engineering controls, institutional controls, and monitored natural attenuation. The response actions are primarily evaluated for application in addressing groundwater contamination that exceeds NYSDEC TOGS 1.1.1 groundwater standards or guidance values.

8.3 Development of Alternatives

The alternatives considered for this Site are directed at addressing contamination in soil and groundwater in combination, and these alternatives are presented below. The alternatives consider that the Site will continue to be used as a high-rise residential apartment complex with a paved parking lot.

1. No Action: The no action alternative is included as a procedural requirement and as a baseline to evaluate other alternatives. Under this alternative, remedial and monitoring activities as well as placement of institutional controls or engineering controls at the Site are not implemented. The Site would remain virtually as it is and change in use would not be limited.

2. Monitored Natural Attenuation and Institutional Controls: Under this alternative, natural attenuation would be used to remediate and control groundwater contamination and reduce risk to exposure. Groundwater monitoring would be implemented to ensure that natural attenuation is adequately controlling and remediating the contamination in the groundwater. Institutional controls would be implemented to protect against exposure to contamination in subsurface soil and groundwater. This alternative is considered a Track 4 cleanup for restricted residential use.

3. Limited In-Situ Remediation, Institutional Controls, and Groundwater Monitoring: Under this alternative, limited in-situ remediation would be conducted in subsurface soils and groundwater on the northeastern portion of the Site where the highest concentrations of petroleum constituents have been detected. Groundwater monitoring would be implemented to ensure that the limited in-situ remediation adequately remediated the contamination. Institutional controls would be implemented to protect against exposure to residual Site contamination. This alternative is considered a Track 4 cleanup for restricted residential use.

4. Full Excavation, In-Situ Remediation and Groundwater Monitoring: Under this alternative, excavation and off-site disposal would be implemented to remediate soil contamination that exceeds NYSDEC Track 1 SCOs. In-situ remediation would be conducted to enhance bioremediation of residual contamination in groundwater. Constituents to be remediated would include VOCs and SVOCs in the petroleum plume area, and also certain metals, cyanide, and pesticides (i.e., gamma chlordane) that have been randomly detected in soil, fill or groundwater at the Site. Site improvements would be restored. Groundwater monitoring would be implemented to ensure that the excavation and in-situ remediation adequately remediated the contamination.

9.0 DETAILED EVALUATION OF ALTERNATIVES

The selected alternatives for addressing Site contamination are further evaluated in this section. These alternatives are evaluated relative to the criteria presented in Section 8.0, including the continued use of the Site as a high-rise residential apartment complex with a paved parking lot. Table A included in Appendix K compares the assessments of each alternative in relation to the remediation goals, and compares the opinion of costs to implement each alternative.

9.1 Individual Evaluation of Alternatives

Each of the alternatives identified in Section 8.3 are further evaluated in detail in this section of the report.

9.1.1 Alternative #1 - No Action

Under Alternative #1, the Site remains virtually as it is today, and future Site use and development would not be limited. This alternative contains no substantive technical permit requirements. In addition, remedial and monitoring activities as well as placement of institutional controls at the Site are not implemented. Inclusion of this "No Action" alternative is a program requirement.

9.1.1.1 Alternative #1 Assessment

Protection of Human Health and the Environment: This alternative may not be protective of human health and the environment. Risks associated with potential human health exposure pathways would not be eliminated. RAOs for soil and groundwater are not adequately addressed by this alternative.

Compliance with SCGs: Alternative #1 does not provide adequate monitoring to evaluate compliance with chemical-specific SCGs. Location-specific SCGs are not met since the Site is located within a mixed residential and commercial use area and could adversely impact human health. Action-specific SCGs are not applicable under the no action alternative.

Long-Term Effectiveness and Permanence: Long-term effectiveness and permanence would not be adequately monitored. Potential exposure pathways identified as part of this project could occur under the No Action alternative.

Reduction of Toxicity, Mobility and Volume: It is likely that natural attenuation and other factors such as advection, dispersion, sorption, diffusion, etc. are occurring at this Site that would result in reduction of contaminant toxicity, mobility or volume over time. This alternative would likely require a longer period of time than more aggressive alternatives being evaluated.

Short-Term Impacts and Effectiveness: There would be no increased short-term impacts associated with Alternative #1 since remedial activities are not implemented

Implementability: Of the alternatives being considered, Alternative #1 is easiest to implement since remedial, institutional, monitoring, etc. activities are not required. Spatial requirements are limited and would not impede completion of this alternative.

Planned Future Use of the Site: Based on the findings of studies performed to date, it is anticipated that Alternative #1 may not be acceptable in relation to the continued future use of the Site as a high-rise residential apartment complex with a paved parking lot.

Cost: There are no capitol costs or operation and maintenance (O&M) costs associated with the No Action alternative. The costs for this alternative are summarized below and detailed in Table B included in Appendix K.

Total Present Worth Cost	$ 0
Capital/Initial Cost	$ 0
O&M/Annual/Closeout Present Worth Cost	$ 0

9.1.2 Alternative #2 – Monitored Natural Attenuation and Institutional Controls

Alternative #2 consists of various technical and administrative actions that are intended to reduce exposure to Site contaminants, and provide adequate monitoring of groundwater to ensure that the contamination is not migrating any further.

Natural attenuation, including biodegradation, is likely occurring at the Site and has the potential to remediate the organic contamination present in the subsurface soil and groundwater. In addition, other factors such as advection, dispersion, sorption, diffusion, etc. will likely decrease contaminant concentrations with time.

It is anticipated that institutional controls would include the following elements:

- Development and implementation of a Site Management Plan (SMP) to address the characterization, handling, and disposal/re-use of residual contaminated media (e.g., soil, fill, groundwater) that is disturbed during any future site activities. The SMP would also evaluate the potential for vapor intrusion into any future buildings to be constructed on the Site, including requirements to mitigate such potential vapor intrusions through use of environmental engineering controls (e.g., sub-slab vapor barrier, sub-slab ventilation system, etc.) or other means. In addition, the SMP would identify use restrictions for the Site (e.g., property development and groundwater use restrictions, etc.). The SMP would also include a health and safety plan (HASP) to assist in reducing potential exposures to Site contaminants.
- Annual certification by the property owner prepared by a professional engineer or environmental professional that is acceptable to the NYSDEC. The certification is intended to validate that the institutional controls (and also engineering controls if required in the future) that are implemented for the Site are unchanged from the previous certification and that no circumstances have occurred that impair the ability of the controls to protect public health and the environment, or constitute a violation or failure to comply with any O&M or SMP for the Site.

- Development and implementation of an environmental easement to require compliance with the SMP; limit use of the Site to restricted residential, commercial and industrial use; restrict use of groundwater as a source of potable water or process water, without necessary water quality treatment as determined by the NYSDOH; and require the property owner to complete and submit to the NYSDEC the annual certification described above.

It is anticipated that the continued use of the current high-rise residential apartment complex and associated paved parking lot at the Site will not require environmental engineering controls.

A monitoring program would be implemented as part of Alternative #2 that would contain the following components:

- The existing groundwater monitoring wells and two new wells that are installed upgradient and downgradient from the most contaminated portion of the Site (i.e., upgradient and downgradient of northeast portion of the Site) would be utilized during the monitoring program. This well field should result in an upgradient to downgradient transect of monitoring points across the plume. The new wells would also assist in evaluating whether the contamination is solely attributable to an off-site source(s) to the north, or is possibly a co-mingled plume attributable to an on-site source and an off-site source(s) to the north.
- For the purposes of the cost estimate identified for this alternative, it is anticipated that the NYSDEC would require monitoring of natural attenuation for a period of ten years. It is assumed that the five existing wells and two new wells (i.e., seven wells) will be sampled on a bi-annual basis during the 1st and 2nd years, and on an annual basis for the 3rd through 10th years. Groundwater will be tested for the following parameters:
  - VOCs (ASP Method OLM04.2)
  - SVOCs (ASP Method OLM04.2)
  - TAL metals (ASP Method ILM04.1)
  - Natural attenuation parameters such as nitrate, iron (II), manganese, sulfate, methane, and chloride (Methods SM3500D, E300IC, SW6010B, and RSK175)
  - Water quality measurements such as dissolved oxygen, oxidation-reduction potential, pH, temperature, conductivity, and turbidity using a Horiba U-22 water quality meter (or equivalent).
- The cumulative data will be evaluated as it is generated in order to determine if natural attenuation processes are occurring in a manner that control migration of contamination away from the Site and at a rate that is acceptable to the NYSDEC. For instance, hydrologic data, geochemical data, chemical data and/or biological data would be used to assist in evaluating the following conditions and trends:
  - Chemical mass, concentrations, and toxicity at appropriate monitoring wells over time.
  - Specific types of natural attenuation processes that are, or may be, occurring such as advection, adsorption, mechanical dispersion, dissolution, aerobic decay (e.g., aerobic respiration involving oxygen) and anaerobic decay (e.g., denitrification, ferric reduction sulfate reduction, and methanogenesis).

- Under this alternative, computer software, such as the USEPA's BIOSCREEN Model and Groundwater Services, Inc.'s Mass Flux ToolKit, would be used to assist in evaluating the effectiveness of natural attenuation, make projections on the estimated time of remediation (i.e., rate of natural attenuation), and calculating contaminant mass flux based on site-specific data. BIOSCREEN is a screening model that simulates remediation through natural attenuation of dissolved hydrocarbons at petroleum release sites. The software utilizes the Domenico analytical solute transport model, has the ability to simulate advection, dispersion, adsorption, aerobic decay, and anaerobic reactions/decay. BIOSCREEN model types that can be run include: solute transport without decay; solute transport with biodegradation modeled as a first-order decay process (simple, lumped-parameter approach); and, solute transport with biodegradation modeled as an instantaneous biodegradation reaction with multiple soluble electron acceptors including dissolved oxygen, nitrate, and sulfate. The BIOSCREEN model is designed to simulate biodegradation by both aerobic and anaerobic reactions and can perform mass flux calculations. Using the Mass Flux ToolKit, the calculated contaminant mass flux data can be used to demonstrate the progress of natural attenuation.

- With approval from regulatory agencies, the duration and frequency of the groundwater monitoring, as well as the list of parameters to be tested, may be adjusted as the monitoring program progresses. This groundwater monitoring will continue until the NYSDEC is satisfied that natural attenuation is an operative and effective remedy for the Site.

9.1.2.1 Alternative #2 Assessment

Protection of Human Health and the Environment: It is anticipated that Alternative #2 would be protective of human health and the environment under current site conditions and continued future use of the Site as a high-rise residential apartment complex and associated paved parking lot. Risks associated with potential human health exposure pathways would be eliminated or adequately controlled. With the exception of restoring the groundwater aquifer to pre-disposal/pre-release conditions, RAOs for soil and groundwater are adequately addressed by this alternative in relation to protection of public health and the environment. The tasks associated with addressing the RAOs can readily be completed.

Compliance with SCGs: Alternative #2 provides adequate monitoring of natural attenuation to evaluate compliance trends in relation to chemical-specific SCGs. Location-specific SCGs are met since the institutional controls are protective of human health and the environment. Action-specific SCGs are also adequately addressed for this alternative.

Long-Term Effectiveness and Permanence: This alternative would likely result in the constituents of concern remaining on-site for a longer period of time than more aggressive alternatives being evaluated. The long-term risk associated with the contamination will be reduced by the institutional controls that are to be implemented. It is anticipated that the institutional controls would prove to be reliable, and would have the ability to continue to meet RAOs in the future. The long-term effectiveness and permanence of this alternative would be adequately monitored.

Reduction of Toxicity, Mobility and Volume: It is likely that natural attenuation and other factors such as advection, dispersion, sorption, diffusion, etc. are occurring at this Site that would result in reduction of contaminant toxicity, mobility or volume. This alternative would likely require a longer period of time than more aggressive alternatives being evaluated.

Short-Term Impacts and Effectiveness: This alternative will likely result in a slight risk to short-term impacts. It is anticipated that Site workers will have an increased potential to be exposed to Site contamination during long-term groundwater monitoring and Site development operations; however, implementation of the SMP and a HASP would protect site workers from these short-term risks. It is anticipated that this alternative will not increase short-term risks to the surrounding community.

Implementability: This alternative can be implemented easily in relation to the anticipated continued future use of the Site as a high-rise apartment complex and associated paved parking lot. Spatial requirements are limited and would not impede completion of this alternative.

Planned Future Use of the Site: Based on the findings of studies performed to date, it is anticipated that Alternative #2 would be acceptable in relation to the continued future use of the Site as a high-rise residential apartment complex with a paved parking lot.

Cost: Alternative #2 costs are less than the costs associated with the more aggressive remedial alternatives. The costs for this alternative are summarized below and detailed in Table C included in Appendix K.

Total Present Worth Cost	$151,456.00
Capital/Initial Cost	$35,400.00
O&M/Annual/Closeout Present Worth Cost	$116,056.00

9.1.3 Alternative #3 - Limited In-Situ Remediation, Institutional Controls, and Groundwater Monitoring

Specifically, Alternative #3 consists of various technical and administrative actions that are intended to perform remediation of the highest concentrations of contamination at the Site, reduce exposure to Site contaminants, and provide monitoring of groundwater to ensure that the contamination is not migrating.

Under this alternative, limited in-situ remediation would be conducted in subsurface soils and groundwater on the northeast portion of the Site where the highest concentrations of petroleum constituents have been detected. The in-situ remediation would be implemented during or after the remedial activities that the City of Rochester is planning on the adjacent/nearby property located north of the Site. Groundwater monitoring would be implemented to ensure that the limited in-situ remediation is adequately controlling and remediating the contamination. Institutional controls would be implemented to protect against exposure to residual Site contamination. This alternative is considered a Track 4 cleanup for restricted residential use.

The in-situ chemical oxidation would be performed to remediate contamination in subsurface soil and groundwater on an assumed 60-foot by 90-foot area (i.e., 5,400 square foot area) on the northeast portion of the Site where contaminant concentrations exceed SCGs. Regenesis' RegenOx^{tm} (or a similar chemical oxidation product) would be injected in a grid consisting of approximately fifty-four injection points set on 10-foot centers over the northeast portion of the Site (i.e., area with highest concentrations of petroleum constituents in subsurface soil and groundwater). RegenOx^{tm} is a solid alkaline oxidant that uses a sodium percarbonate complex with a multi-part catalytic formula. The product consists of an oxidizer and activator that are mixed with water, and combined and injected into the subsurface using common drilling or direct-push equipment. Once in the subsurface, the product produces an effective surface-mediated oxidation reaction comparable to that of Fenton's Reagent, without a violent exothermic reaction. RegenOx^{tm} destroys a wide range of contaminants (including petroleum constituents) in both soil and groundwater. Regenesis has estimated that one application using 10,020 pounds of RegenOx^{tm} should remediate the petroleum contamination on the northeast portion of the Site. This estimate is based on treating 90% of the load of contaminant mass. Baseline and performance groundwater monitoring would be completed to evaluate the effectiveness of the in-situ chemical oxidation treatment.

The institutional controls for this alternative are similar to that presented in Section 9.1.2 (Alternative #2). These institutional controls (e.g., environmental easement, site management plant) would in part be used to address any residual contamination that may remain in soil or groundwater subsequent to the one in-situ chemical oxidation application.

As part of Alternative #3, a groundwater monitoring program would be implemented using the five existing groundwater monitoring wells and two new wells that are installed upgradient and downgradient from the most contaminated portion of the Site (i.e., upgradient and downgradient of northeast portion of the Site). This well field should result in an upgradient to downgradient transect of monitoring points across the plume. The new wells would also assist in evaluating whether the contamination is solely attributable to an off-site source(s) to the north, or is possibly a co-mingled plume attributable to an on-site source and an off-site source(s) to the north. This alternative assumes that the groundwater monitoring will continue for a period of up to five years. It is assumed that the wells will be sampled on a bi-annual basis during the 1st and 2nd years, and on an annual basis for the 3rd through 5th years. As part of this monitoring program, groundwater will be tested for parameters that evaluate the presence and concentration of Site contaminants, and to determine the extent and potential movement of the contamination plume. It is anticipated that during each round of groundwater sampling, samples from the seven groundwater monitoring wells will be tested for: VOCs (ASP Method OLM04.2); SVOCs (ASP Method OLM04.2); TAL metals (ASP Method ILM04.1); and, water quality parameters such as dissolved oxygen, oxidation-reduction potential, conductivity, temperature, and pH. With approval from regulatory agencies, the duration and frequency of the groundwater monitoring, as well as the list of parameters to be tested, may be adjusted as the monitoring program progresses.

9.1.3.1 Alternative #3 Assessment

Protection of Human Health and the Environment: It is anticipated that Alternative #3 would be protective of human health and the environment under current site conditions, and continued future use of the Site as a high-rise residential apartment complex and associated paved parking lot. Risks associated with potential human health exposure pathways would be eliminated or adequately controlled. With the exception of restoring the groundwater aquifer to pre-disposal/pre-release conditions, RAOs for soil and groundwater are adequately addressed by this alternative in relation to protection of public health and the environment. The tasks associated with addressing the RAOs can readily be completed.

Compliance with SCGs: Alternative #3 provides adequate groundwater monitoring to evaluate compliance trends in relation to chemical-specific SCGs. Location-specific SCGs are met since the institutional controls are protective of human health and the environment. Action-specific SCGs are also adequately addressed for this alternative.

Long-Term Effectiveness and Permanence: This alternative would likely result in the constituents of concern remaining on-site for less time than Alternative #2, but more time than Alternative #4. The long-term risk associated with the contamination will be reduced by the limited in-situ remediation and institutional controls that are to be implemented. It is anticipated that the limited in-situ remediation and institutional controls would prove to be reliable, and would have the ability to continue to meet RAOs in the future. The limited in-situ chemical oxidation is effective in the long term and permanently destroys the petroleum constituents. The long-term effectiveness and permanence of this alternative in relation to residual contaminants would be monitored.

Reduction of Toxicity, Mobility and Volume: The limited in-situ chemical oxidation, natural attenuation and other factors such as advection, dispersion, sorption, diffusion, etc. that are occurring at this Site will result in reduction of contaminant toxicity, mobility or volume.

Short-Term Impacts and Effectiveness: This alternative will likely result in a slight risk in regard to short-term impacts. It is anticipated that Site workers will have an increased potential to be exposed to Site contamination during the limited in-situ chemical oxidation remediation, long-term groundwater monitoring, and Site development operations; however, implementation of the SMP and a Health and Safety Plan would protect site remediation workers from these short-term risks. It is anticipated that this alternative will not increase short-term risks to the surrounding community.

Implementability: This alternative can be implemented easily in relation to the anticipated continued future use of the Site as a high-rise apartment complex and associated paved parking lot. Spatial requirements are limited and would not impede completion of this alternative.

Planned Future Use of the Site: Based on the findings of studies performed to date, it is anticipated that Alternative #3 would be acceptable in relation to the continued future use of the Site as a high-rise residential apartment complex with a paved parking lot.

Cost: Alternative #3 costs are less than Alternative #4 costs. The costs for this alternative are summarized below and detailed in Table D included in Appendix K.

Total Present Worth Cost	$ 255,758.00
Capital/Initial Cost	$ 191,880.00
O&M/Annual/Closeout Present Worth Cost	$ 63,878.00

9.1.4 Alternative #4: Full Excavation, In-Situ Remediation and Groundwater Monitoring

Alternative #4 consists of various technical actions that are intended to perform extensive remediation of Site contaminants, and provide monitoring of groundwater to ensure the contamination is no longer migrating at the Site. Inclusion of this Track 1 alternative is a program requirement (i.e., restore the Site to "pre-disposal conditions"), and would allow unrestricted use of the Site.

Under this alternative, contaminated subsurface soil exceeding NYSDEC Track 1 SCOs would be removed. For the purposes of this alternative analysis, it is assumed that removal areas include soil from the northeast portion of the Site that is contaminated with petroleum, and soil/fill from the former feeder canal that contains heavy metals and/or SVOCs. For the purposes of this report, it is estimated that approximately 2,592 cubic yards (i.e., 4,280 tons) of impacted soil or fill would be removed from the portion of the former canal feeder (175' x 50' x 8'thick) that is not covered by building, and that approximately 3,590 cubic yards (i.e., 5,930 tons) of petroleum-contaminated soil would be removed from the northeast portion of the Site (70' x 105' x 13.2' thick). A design-phase investigation would be needed to further refine these areas of soil requiring removal. It is anticipated that up to four of the existing monitoring wells would be decommissioned during the removal. The removed soil would be transported off-site using Part 364 permitted trucks, and disposed of at a NYSDEC-approved disposal facility (i.e., landfill). It is anticipated that shoring of portions of excavations, and temporary support of buried utilities, would be required. Confirmatory soil samples would be collected from excavations, and the excavation would then be backfilled with NYSDEC-approved fill material (e.g., clean soil, crushed stone, etc.).

In-situ remediation (i.e., in-situ chemical oxidation using RegenOx^{tm} injected at 54 points in the most contaminated area on the northeast portion of the Site, and in-situ bioremediation using ORC-Advanced^{tm} injected at 117 points in the less contaminated area on the central portion of the Site) would be conducted to remediate contaminated subsurface soil beneath the building, and contaminated groundwater on the Site. It is anticipated that the treatment area would be about three times larger than the area to be treated under Alternative #3. Anticipated dewatering of the excavation during the soil removal work would likely result in removing some contaminated groundwater from the impacted areas of the Site. This water would subsequently be treated (if required) and disposed through the Monroe County Pure Waters (MCPW) publicly-owned treatment works (POTW) in Rochester, New York.

Constituents to be remediated would include VOCs and SVOCs in the petroleum plume area, and also certain metals, cyanide and a pesticide (gamma chlordane) that have been randomly detected in soil, fill or groundwater at the Site (to the extent these areas can be defined and

removed). Site improvements would be restored, and groundwater monitoring would be implemented to ensure that the excavation and in-situ remediation adequately remediated the contamination.

As part of Alternative #4, a groundwater monitoring program would be implemented using one existing well and four new wells that are installed upgradient, downgradient and cross-gradient from the formerly most contaminated portion of the Site (i.e., upgradient and downgradient of northeast portion of the Site). This well field should result in an upgradient to downgradient transect of monitoring points across the plume. The new wells would also assist in evaluating whether any residual contamination on the adjoining/nearby properties to the north is migrating onto the Site. This alternative assumes that the groundwater monitoring will continue for a period of up to five years. It is assumed that the wells will be sampled on a bi-annual basis during the 1st and 2nd years, and on an annual basis for the 3rd through 5th years. As part of this monitoring program, groundwater will be tested for parameters that evaluate the presence and concentration of Site contaminants, and to determine the extent and potential movement of the contamination plume. It is anticipated that during each round of groundwater sampling, samples from the five groundwater monitoring wells will be tested for: VOCs (ASP Method OLM04.2); SVOCs (ASP Method OLM04.2); TAL metals (ASP Method ILM04.1); and, water quality parameters such as dissolved oxygen, oxidation-reduction potential, conductivity, temperature, and pH. With approval from regulatory agencies, the duration and frequency of the groundwater monitoring, as well as the list of parameters to be tested, may be adjusted as the monitoring program progresses.

9.1.4.1 Alternative #4 Assessment

Protection of Human Health and the Environment: It is anticipated that Alternative #4 would be protective of human health and the environment under current site conditions and continued future use of the Site as a high-rise residential apartment complex and associated paved parking lot. Risks associated with potential human health exposure pathways would be eliminated or adequately controlled. RAOs for soil and groundwater are adequately addressed by this alternative in relation to protection of public health and the environment. The tasks associated with addressing the RAOs would be difficult to complete.

Compliance with SCGs: Alternative #4 is anticipated to meet chemical-specific SCGs and location-specific SCGs. Action-specific SCGs can be adequately addressed for this alternative. If unacceptable concentrations of contaminants are still present after depletion of the initial series of in-situ remediation applications, additional applications could be completed or alternative treatment options could be evaluated/implemented. As an option, natural attenuation and other factors such as advection, dispersion, sorption, diffusion, etc. could be relied upon to address residual contamination, but at a slower rate.

Long-Term Effectiveness and Permanence: This alternative would be effective in the long term and result in a permanent remedy (i.e., assuming contamination does not migrate onto the Site from the adjoining/nearby properties to the north). The long-term risk associated with the contamination will be eliminated. It is anticipated that this alternative would prove to be reliable, and would meet RAOs in the future.

Reduction of Toxicity, Mobility and Volume: Under Alternative #4, the toxicity, mobility and volume of the bulk of the contamination is reduced for the Site, but since the material is relocated to a landfill, these parameters will remain at a new location and treatment or creation of the favorable biodegradation setting would be required to result in a reduction of this relocated contaminated media. The effects of removing this contamination from the Site and the effects of remediating residual contamination would be irreversible (i.e., assuming contamination does not migrate onto the Site from the adjoining/nearby properties to the north).

Short-Term Impacts and Effectiveness: This alternative will likely result in the greatest increased risk to short-term impacts to human health and the environment. The worst contamination would be physically excavated, and site workers and the community would have greater risk at exposure to site contamination (i.e., nuisance odors, inhalation and contact with site contaminants, etc.). However, implementation of a HASP that includes dust and fume control contingencies would protect site workers and the nearby community from these short-term risks. This alternative includes the most disruption to the Site and would take the longest time on-site to implement. The removal of the contamination would result in significant reduction of potential impacts to workers during subsequent development operations. Physical hazard risks will also likely increase during excavation and backfill activities (e.g., excavation wall stability issues, dewatering issues, etc.).

Implementability: It is anticipated that future settling of the fill material used to backfill excavations as part of this alternative could potentially result in problems associated with future uses or improvements of the Site. In addition, implementation of this alternative is complicated by buried utilities on the Site and by factors associated with excavating in proximity to the existing high-rise residential apartment complex that is actively used at the Site.

Planned Future Use of the Site: Based on the findings of studies performed to date, it is anticipated that Alternative #4 would be acceptable in relation to the continued future use of the Site as a high-rise residential apartment complex with a paved parking lot.

Cost: Costs for implementing Alternative #4 would be excessive in relation to the benefits gained. The costs for this alternative are summarized below and detailed in Table E included in Appendix K.

Total Present Worth Cost	$ 1,632,194.00
Capital/Initial Cost	$ 1,549,072.00
O&M/Annual Closeout Present Worth Cost	$ 83,122.00

9.2 Comparative Evaluation and Recommended Alternative

This section of the report compares the remedial alternatives proposed for this Site. For reference, the alternatives are reiterated as follows:

Alternative #1 No Action

Alternative #2 Monitored Natural Attenuation and Institutional Controls

Alternative #3 Limited In-Situ Remediation, Institutional Controls, and Groundwater Monitoring

Alternative #4 Full Excavation, In-Situ Remediation and Groundwater Monitoring

As previously indicated, Table A included in Appendix K compares the assessments of each alternative in relation to the remediation goals, and compares the opinion of costs to implement each alternative. A detailed breakdown of estimated costs for each alternative is found in Tables B - E included in Appendix K. The costs provided are for comparative purposes only and actual costs will likely vary.

A detailed evaluation of the four remedial alternatives was performed, and implementation of Alternative #3 (Limited In-Situ Remediation, Institutional Controls, and Groundwater Monitoring) is recommended for the Site. This alternative is a Track 4 cleanup program identified in the BCP and is intended to allow restricted residential use at the Site. Alternative #3 can be successfully implemented and is cost effective in relation to the current and future use of the Site. Alternative #3 can adequately address RAOs, and provides adequate post-treatment groundwater monitoring to evaluate compliance trends in relation to chemical-specific SCGs. Location-specific SCGs are met since the institutional controls are protective of human health and the environment. Action-specific SCGs are also adequately addressed for this alternative. Alternative #3 is also acceptable since groundwater is not used as a potable source at, or in proximity to, the Site. Institutional controls such as the health and safety plan will ensure that future workers and the public are not adversely exposed to Site contaminants, and the site management plan will assist in the proper characterization, handling and disposal of impacted site media should any be disturbed or displaced in the future. This alternative allows for very little disruption of the current and future use of the Site as a high-rise residential apartment complex with an associated paved parking lot. This alternative also seems appropriate given the fact that the actual source of petroleum impact may be located on adjoining/nearby properties north of the northeast portion of the Site, and that remediation will be conducted on these adjoining/nearby properties in the future. Owners/occupants of the Site do not have control over the management of petroleum impact that is present on these adjoining/nearby properties.

The groundwater monitoring will assist in assuring that contamination does not migrate away from the Site. If the groundwater monitoring indicates that the dissolved constituents are moving away from the Site, additional remedial measures could be implemented at that time. Also, Alternative #3 is more cost effective, and would cause less short-term risks than Alternative #4. Alternative #3 would also likely result in the constituents of concern remaining on-site for less time than Alternative #2.

In summary, Alternative #3 is a cost effective alternative that is being recommended for implementation at the Site.

It is anticipated that the NYSDEC would issue a Certificate of Completion once the in-situ chemical oxidation treatment was completed, and the institutional controls were developed and implemented.

10.0 REFERENCES

Previous Reports

Phase I Environmental Site Assessment, 151 to 435 Mount Hope Avenue and 562 Ford Street, Rochester, New York; October 24, 2000; Day Environmental, Inc.

Phase II Environmental Study Data Package, 151 to 435 Mount Hope Avenue and 562 Ford Street, Rochester, New York; October 2000; Day Environmental, Inc.

Phase II Environmental Study Data Evaluation Report, 151, 171, 173, 175, 177, 191, 425, and 435 Mount Hope Avenue and 562 Ford Street, Rochester, New York; February 2002; Day Environmental, Inc.

Phase II Report; Environmental Site Assessment of River Park Commons Apartment Complex, Rochester, New York; June 2003; URS Corporation.

Regulatory Documents

NYSDEC Division of Water Technical and Operational Guidance Series 1.1.1 document titled "Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations" (TOGS 1.1.1) dated June 1998, including April 2000 Addendum Table 1.

NYSDEC DER Draft Brownfield Cleanup Program Guide; May 2004

NYSDEC 6 NYCRR Part 375 Environmental Remediation Programs; effective December 14, 2006

NYSDEC Division of Technical and Administrative Guidance Memorandum, Determination of Soil Cleanup Objectives and Cleanup Levels (TAGM 4046) dated January 24, 1994, as amended by Memorandums dated December 20, 2000, April 10, 2001, and July 10, 2001.

NYSDEC Proposed Division of Technical and Administrative Guidance Memorandum, Determination of Soil Cleanup Objectives and Cleanup Levels (TAGM 4046) dated 1995.

Guidance for Evaluating Soil Vapor Intrusion in the State of New York; February 2005

Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York; October 2006

Summary of Indoor and Outdoor Levels of Volatile Organic Compounds from Fuel Oil Heated Homes in NYS, 1997-2003"; revised November 14, 2005

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

Reference Materials

Monroe County, New York Soil Survey, US Dept. of Agriculture Soil Conservation Service, 1973.

Ground Water Resources of Monroe County; 1935; R.M. Leggette, L.O. Gould and B.H. Dollen

United States Department of the Interior Geological Survey, Water-Resources Investigations Report #87-4122, Unconsolidated Aquifers in Upstate New York – Finger Lakes Sheet, T.S. Miller, 1988.

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New York State Geological Highway Map, W.B Rogers et. al., 1990.

Subsurface Structure and Stratigraphy of Rochester, New York, J. L. Scherzer, 1983

USGS topographic map for the Rochester East, New York quadrangle, 1995.

USGS topographic map for the Rochester West, New York quadrangle, 1995.

Handbook of Environmental Degradation Rates, P.H. Howard, et. al, 1991.

BAP Toxicity Equivalent factors provided in NYSDEC letter dated October 22, 2004.

Internet References

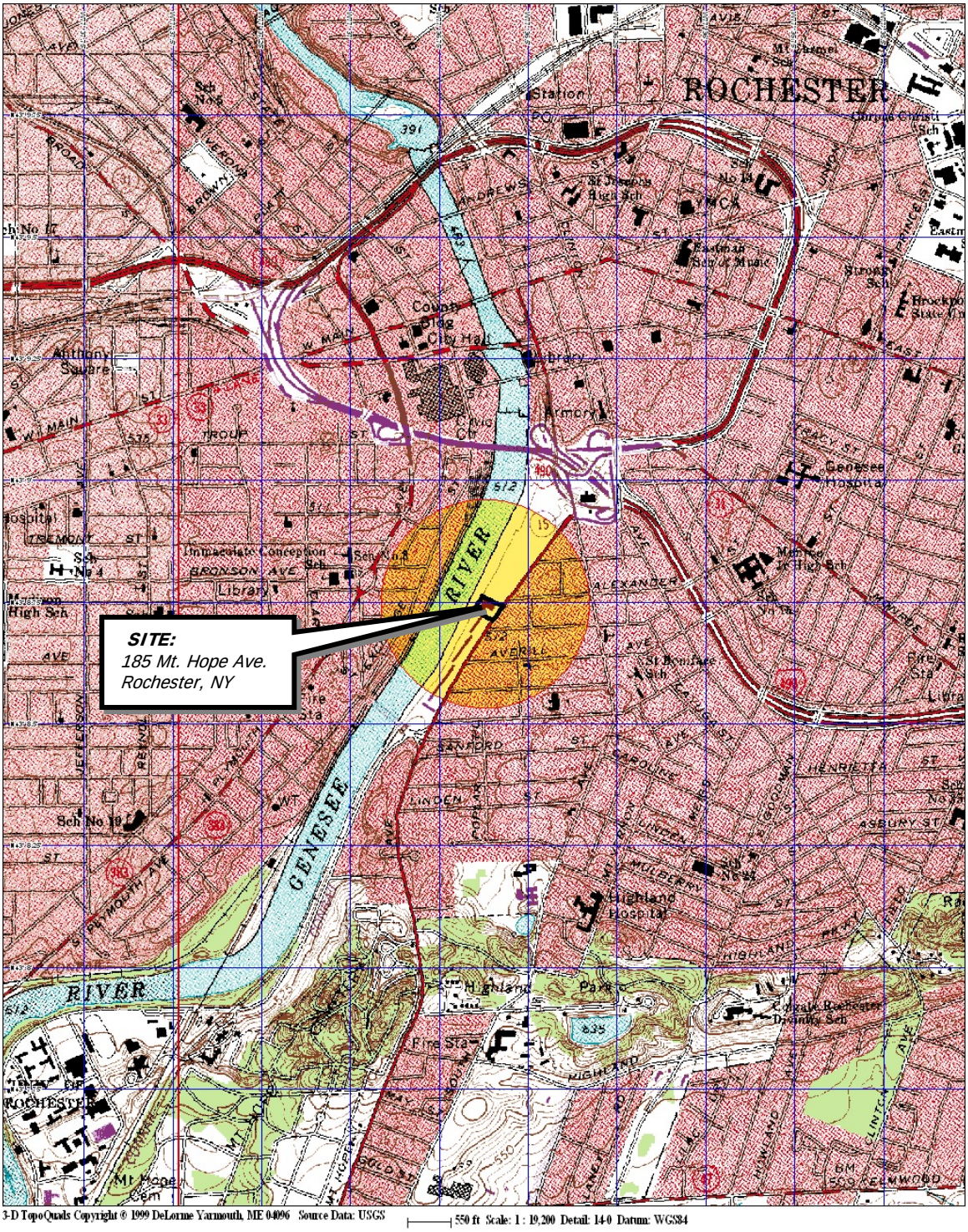
U.S. Census Bureau information (http://factfinder.census.gov).

Agency for Toxic Substances and Disease Registry internet site (www.atsdr.cdc.gov/ToxProfiles)

11.0 ACRONYMS

ASP	Analytical Services Protocol
ASTM	American Society for Testing and Materials
ATSDR	Agency for Toxic Substance of Disease Registry
BAP	Benzo(a)pyrene
BCP	Brownfield Cleanup Program
CPAH	Carcinogenic Polyaromatic Hydrocarbon
COC	Chain Of Custody
DAY	Day Environmental, Inc.
DNAPL	Dense Non-Aqueous Phase Liquid
DUSR	Data Usability Summary Report
DVS	Data Validation Services
ELAP	Environmental Laboratory Approval Program
HASP	Health And Safety Plan
KG	Kilogram
LNAPL	Light Non-Aqueous Phase Liquid
MCDOH	Monroe County Department of Health
Mitkem	Mitkem Corporation
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NTU	Nephelometric Turbidity Unit
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOT	New York State Department of Transportation
O&M	Operation and Maintenance
PAH	Polyaromatic Hydrocarbon
Paradigm	Paradigm Environmental Services, Inc.
PCB	Polychlorinated Biphenyl
Phase I ESA	Phase I Environmental Site Assessment
PID	Photoionization Detector
POTW	Publicly Owned Treatment Works
PPB	Parts Per Billion
PPM	Parts Per Million
PQL	Practical Quantitation Limit
PVC	Polyvinyl Chloride
QA/QC	Quality Assurance/Quality Control
RAO	Remedial Action Objective
REC	Recognized Environmental Condition
RI/RAA	Remedial Investigation/Remedial Alternatives Analysis
RSCO	Recommended Soil Cleanup Objective
SCG	Standard, Criteria and Guidance
SCO	Soil Cleanup Objective
SLC	SLC Environmental Services
SMP	Site Management Plan
SVOC	Semi-Volatile Organic Compound
TAGM	Technical and Administrative Guidance Memorandum
TAL	Target Analyte List
TCL	Target Compound List
TIC	Tentatively Identified Compound
TOGS	Technical and Operational Guidance Series
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UST	Underground Storage Tank
VOC	Volatile Organic Compound

FIGURES

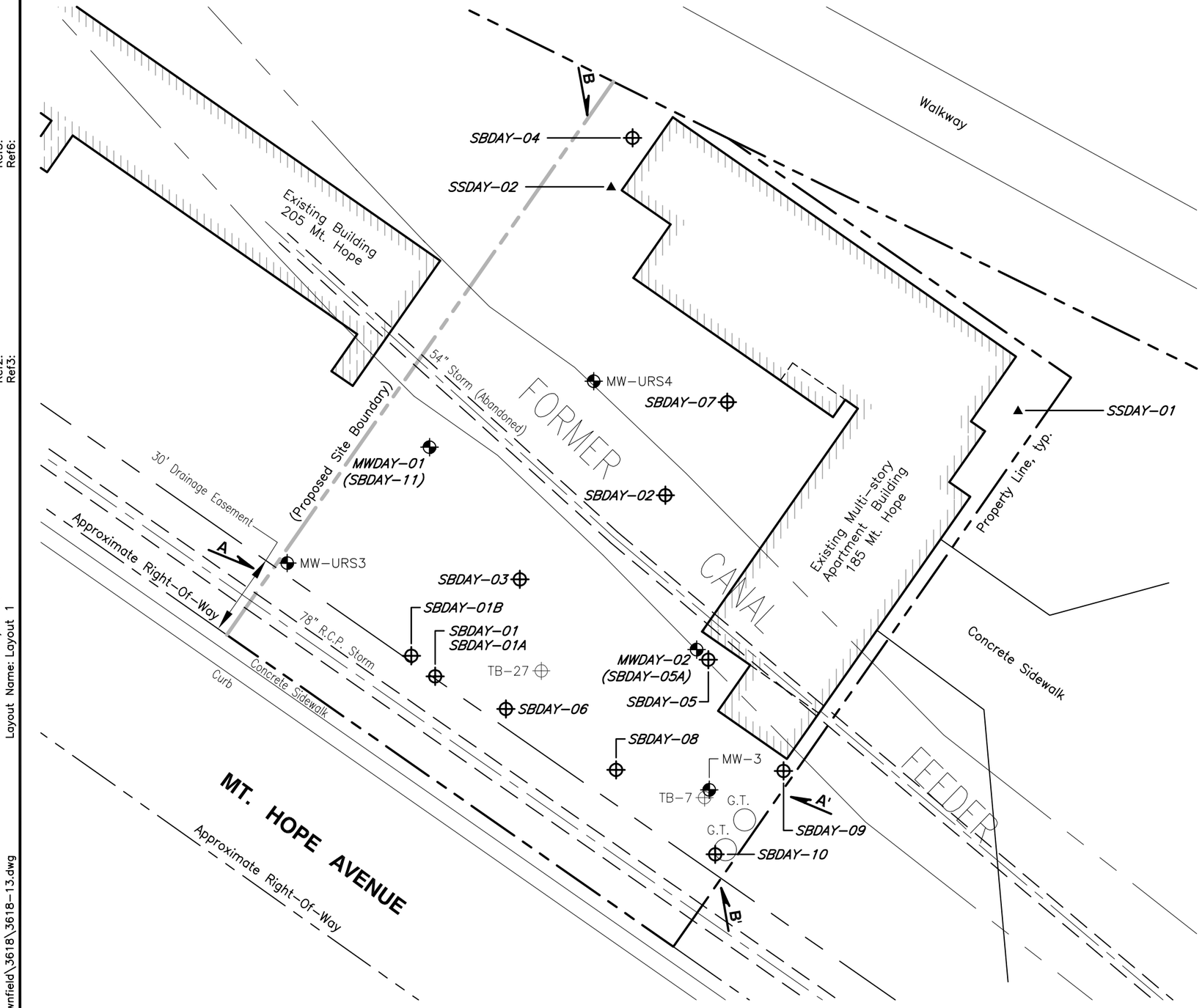


Drawing Produced From: 3-D TopoQuads, DeLorme Map Co., referencing USGS quad maps Rochester East (NY) 1995 and Rochester West (NY) 1995. Site Lat/Long: N43d-8.75' – W77d-36.62'

DATE **05-10-2005** DRAWN BY **RJM** SCALE **1" = 2000'**	day DAY ENVIRONMENTAL, INC. ENVIRONMENTAL CONSULTANTS ROCHESTER, NEW YORK 14623-2700	PROJECT TITLE **185 MT. HOPE AVENUE** **ROCHESTER, NEW YORK** **BROWNFIELD CLEANUP PROGRAM** DRAWING TITLE **PROJECT LOCUS MAP**	PROJECT NO. **3618S-05** **FIGURE 1**

Ref4:
Ref5:
Ref6:

Ref1:
Ref2:
Ref3:



Site Plan
1"= 40'

N

LEGEND:

MWDAY–01	Monitoring Well Location Installed February 2005
MW–URS3	Monitoring Well Location Installed Prior To February 2005
SSDAY–01	Surface Soil Sample Location
SBDAY–08	New Test Boring Location
TB–7	Existing Test Boring Location
G.T.	Suspect Gas Tank Location Based On Historic Sanborn Map Interpretation
B — B'	Approximate Location Of Geologic Cross Section

NOTES:

1. This drawing was adapted from a drawing by the City of Rochester, DCD–Housing & Project Development, titled "River Park Commons" dated August 28, 2000, untitled partial utitility plan from Conifer Reality and from an instrument survey performed by James M. Parker, Land Surveyor, on September 13, 2000. No boundary survey was performed.

2. Former site features were located using Sanborn Maps provided by Environmental Risk Information & Imagaing Services, map no. 49S, 138, 141, 151, 431, 432 and 486, for years dated 1892, 1912, 1938, 1950, and 1071. Locations of former site features transferred to this figure by using swing ties and right angle distances in relation to nearby street corners. It is possible that historic street corners vary from existing street corners, etc. Locations of former site features should be considered approximate.

3. Location of 54" abandoned storm sewer from an as–built drawing by Teetor–Dobbins P.C., tiltled "Relocation Of Storm Drain Plan & Profile Sheet 2 of 3", drawing No. 2, dated June 1973. Accuracy of location should be to the degree implied by the meathod used.

FIELD VERIFIED BY: TMD	DATE: 02-2006	
DRAWN BY: RJM	DATE DRAWN: 02-24-2006	
SCALE: 1" = 40'	DATE ISSUED: 02-24-2006	

day
DAY ENVIRONMENTAL, INC.
ENVIRONMENTAL CONSULTANTS
ROCHESTER, NEW YORK 14614-1008
NEW YORK, NEW YORK 10165-1617

PROJECT TITLE
185 MT. HOPE AVENUE
ROCHESTER, NEW YORK

BROWNFIELD STUDY

DRAWING TITLE
Site Plan with Select Test Locations

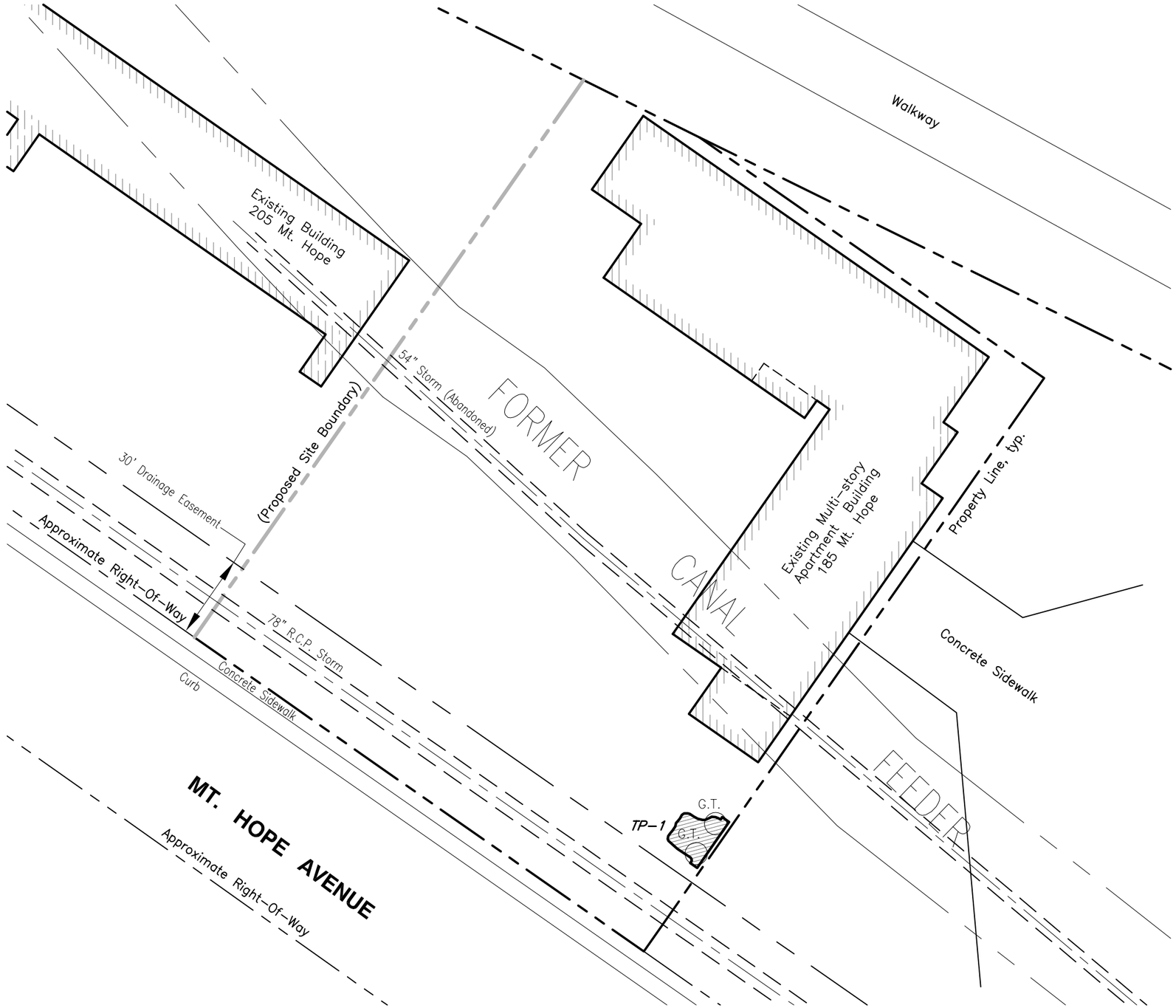
PROJECT NO.
3618S-05

FIGURE 2

Xerox432AnsiB–2; 11 x 17
Layout Name: Layout 1
Time Plotted: Fri Feb 24 13:00 2006
File Name: Brownfield\3618\3618–13.dwg

Ref4:
Ref5:
Ref6:

Ref1:
Ref2:
Ref3:



Site Plan
1"= 40'

N

LEGEND:

G.T. ○ Suspect Gas Tank Location Based On Historic Sanborn Map Interpretation

TP-1 Test Pit Location Excavated August 5, 2005

NOTES:

1. This drawing was adapted from a drawing by the City of Rochester, DCD-Housing & Project Development, titled "River Park Commons" dated August 28, 2000, untitled partial utitility plan from Conifer Reality and from an instrument survey performed by James M. Parker, Land Surveyor, on September 13, 2000. No boundary survey was performed.

2. Former site features were located using Sanborn Maps provided by Environmental Risk Information & Imagaing Services, map no. 49S, 138, 141, 151, 431, 432 and 486, for years dated 1892, 1912, 1938, 1950, and 1071. Locations of former site features transferred to this figure by using swing ties and right angle distances in relation to nearby street corners. It is possible that historic street corners vary from existing street corners, etc. Locations of former site features should be considered approximate.

3. Location of 54" abandoned storm sewer from an as-built drawing by Teetor-Dobbins P.C., tiltled "Relocation Of Storm Drain Plan & Profile Sheet 2 of 3", drawing No. 2, dated June 1973. Location should be considered accurate to the degree implied by the method used.

FIELD VERIFIED BY	DATE	DRAWN BY	DATE DRAWN	SCALE	DATE ISSUED
JAD	08-05-2005	RJM	11-29-2005	1" = 40'	01-02-2006

day
DAY ENVIRONMENTAL, INC.
ENVIRONMENTAL CONSULTANTS
ROCHESTER, NEW YORK 14614-1008
NEW YORK, NEW YORK 10165-1617

PROJECT TITLE
185 MT. HOPE AVENUE
ROCHESTER, NEW YORK

BROWNFIELD STUDY

DRAWING TITLE
Site Plan With Test Pit Location

PROJECT NO.
3618S-05

FIGURE 3

Xerox432AnsiB-2; 11 x 17
Layout Name: Layout 1

Time Plotted: Mon Jan 2 11:45 2006
File Name: Brownfield\3618\3618-10.dwg

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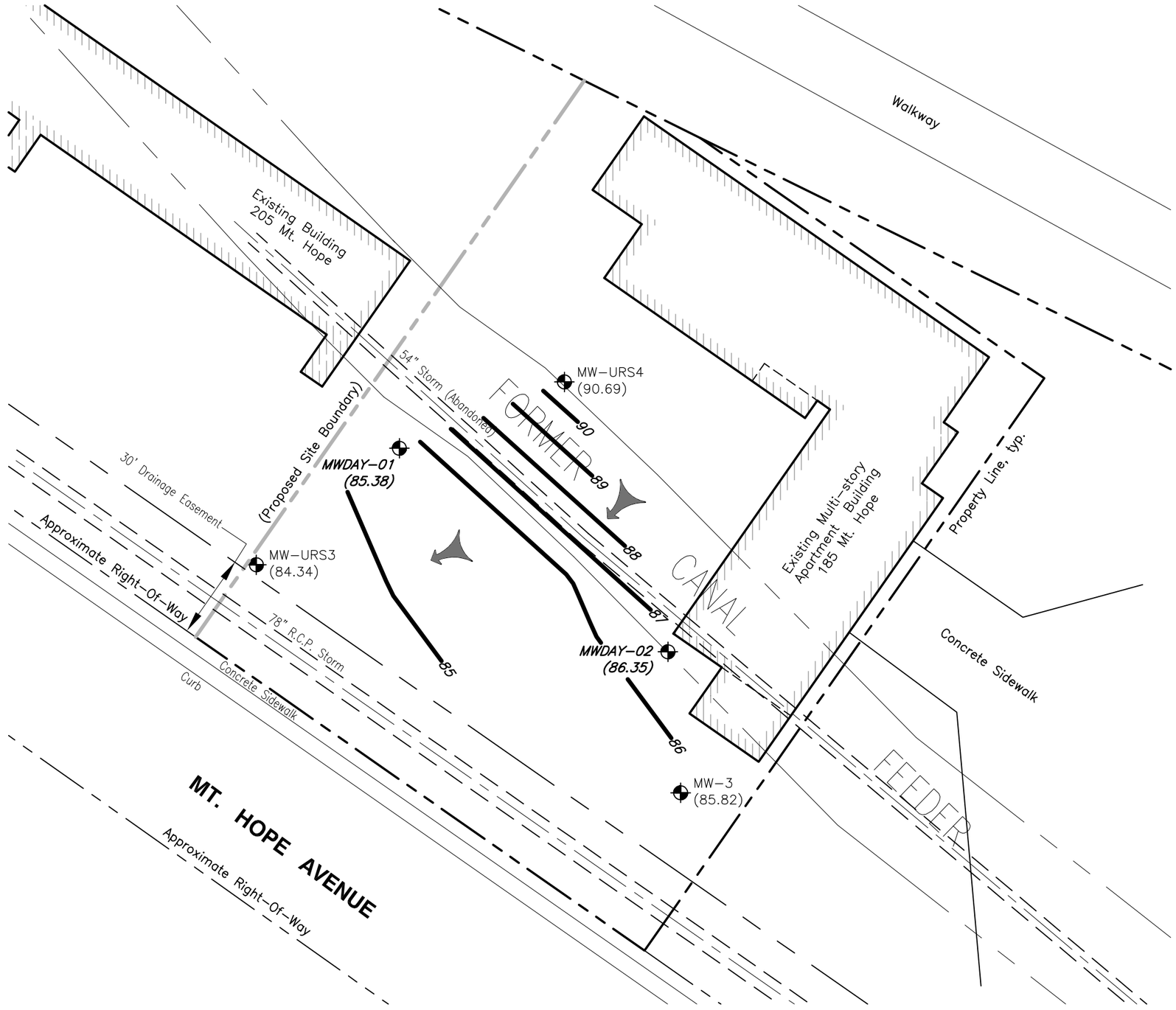
Ref2: Ref5:
Ref3: Ref6:



Site Plan
1"= 40'

N

LEGEND:

MWDAY-01 (85.38)	Monitoring Well Location Installed February 2005 With Groundwater Elevation Obtained On March 29, 2005 In Parenthesis
MW-URS3 (84.34)	Monitoring Well Location Installed Prior To February 2005 With Groundwater Elevation Obtained On March 29, 2005 In Parenthesis
87	Potentiometric Contour Line
	Apparent Groundwater Flow Direction

NOTES:

1. This drawing was adapted from a drawing by the City of Rochester, DCD-Housing & Project Development, titled "River Park Commons" dated August 28, 2000, untitled partial utitility plan from Conifer Reality and from an instrument survey performed by James M. Parker, Land Surveyor, on September 13, 2000. No boundary survey was performed.
2. Former site features were located using Sanborn Maps provided by Environmental Risk Information & Imagaing Services, map no. 49S, 138, 141, 151, 431, 432 and 486, for years dated 1892, 1912, 1938, 1950, and 1071. Locations of former site features transferred to this figure by using swing ties and right angle distances in relation to nearby street corners. It is possible that historic street corners vary from existing street corners, etc. Locations of former site features should be considered approximate.
3. Location of 54" abandoned storm sewer from an as-built drawing by Teetor-Dobbins P.C., tiltled "Relocation Of Storm Drain Plan & Profile Sheet 2 of 3", drawing No. 2, dated June 1973. Accuracy of location should be to the degree implied by the meathod used.

FIELD VERIFIED BY	JAD
DATE	03-29-2005
DRAWN BY	RJM
DATE DRAWN	04-27-2005
SCALE	1" = 40'
DATE ISSUED	05-03-2005

day
DAY ENVIRONMENTAL, INC.
ENVIRONMENTAL CONSULTANTS
ROCHESTER, NEW YORK 14614-1008
NEW YORK, NEW YORK 10165-1617

PROJECT TITLE
185 MT. HOPE AVENUE
ROCHESTER, NEW YORK

BROWNFIELD STUDY

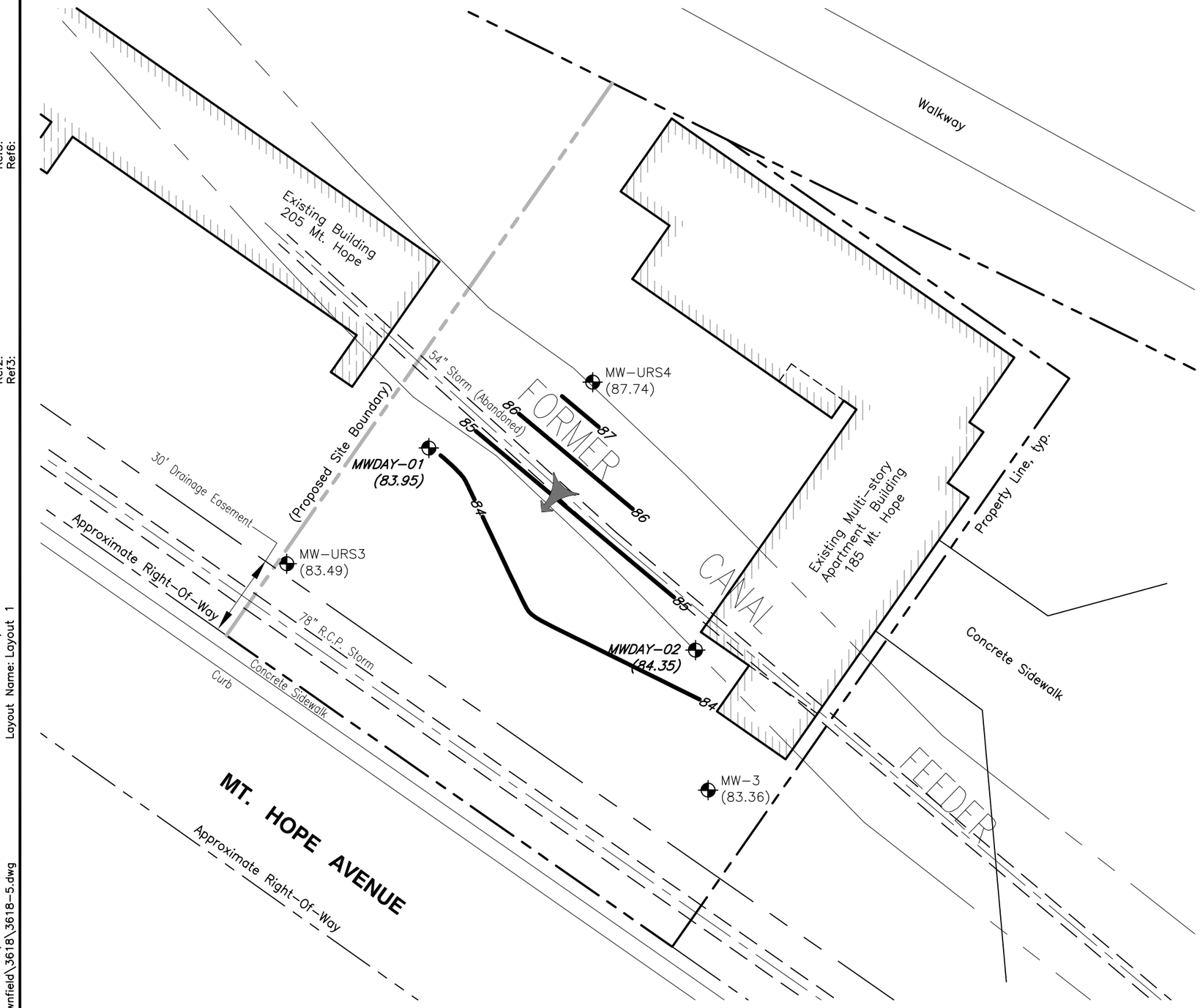
DRAWING TITLE
Potentiometric Groundwater Contour Map For March 29, 2005

PROJECT NO.
3618S-05

FIGURE 4

Time Plotted: Tues May 3 09:05 2005
File Name: Brownfield\3618\3618-3.dwg

Xerox432AnsiB-2; 11 x 17
Layout Name: Layout 1



Site Plan
1"= 40'

LEGEND:

- **MWDAY-01 (83.95)** — Monitoring Well Location Installed February 2005 With Groundwater Elevation Obtained On September 8, 2005 In Parenthesis
- MW-URS3 (83.49) — Monitoring Well Location Installed Prior To February 2005 With Groundwater Elevation Obtained On September 8, 2005 In Parenthesis
- 87 — Potentiometric Contour Line
- Apparent Groundwater Flow Direction

NOTES:

1. This drawing was adapted from a drawing by the City of Rochester, DCD–Housing & Project Development, titled "River Park Commons" dated August 28, 2000, untitled partial utitility plan from Conifer Reality and from an instrument survey performed by James M. Parker, Land Surveyor, on September 13, 2000. No boundary survey was performed.
2. Former site features were located using Sanborn Maps provided by Environmental Risk Information & Imagaing Services, map no. 49S, 138, 141, 151, 431, 432 and 486, for years dated 1892, 1912, 1938, 1950, and 1071. Locations of former site features transferred to this figure by using swing ties and right angle distances in relation to nearby street corners. It is possible that historic street corners vary from existing street corners, etc. Locations of former site features should be considered approximate.
3. Location of 54" abandoned storm sewer from an as–built drawing by Teetor–Dobbins P.C., tiltled "Relocation Of Storm Drain Plan & Profile Sheet 2 of 3", drawing No. 2, dated June 1973. Accuracy of location should be to the degree implied by the meathod used.

FIELD VERIFIED BY	DATE	DRAWN BY	DATE DRAWN	SCALE	DATE ISSUED
TMD	09-08-2005	RJM	11-01-2005	1" = 40'	11-02-2005

day
DAY ENVIRONMENTAL, INC.
ENVIRONMENTAL CONSULTANTS
ROCHESTER, NEW YORK 14614-1008
NEW YORK, NEW YORK 10165-1617

PROJECT TITLE
185 MT. HOPE AVENUE
ROCHESTER, NEW YORK

BROWNFIELD STUDY

DRAWING TITLE
Potentiometric Groundwater Contour Map For September 8, 2005

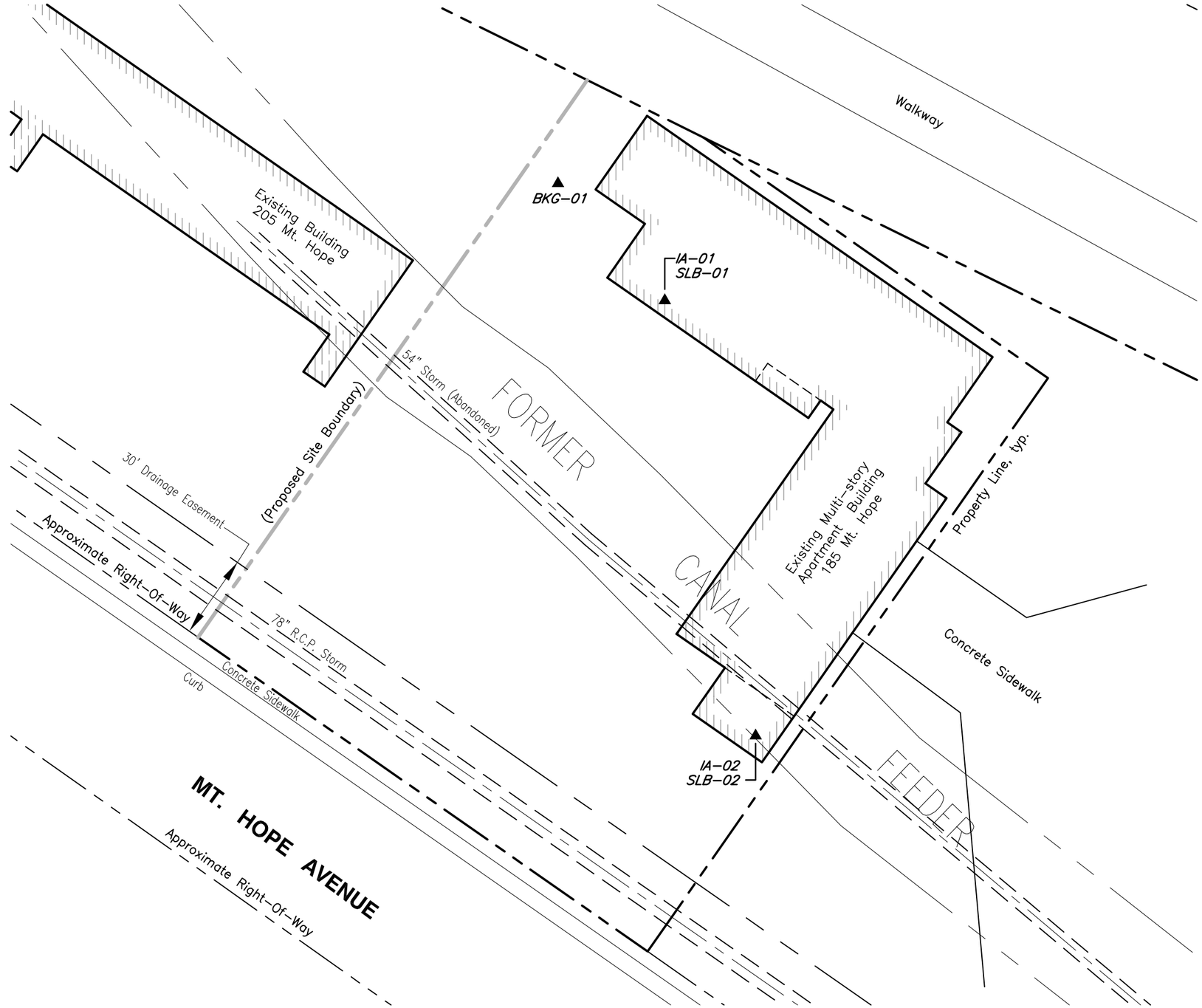
PROJECT NO.
3618S-05

FIGURE 5

Ref1: GWConours_9-9-05.dwg
Ref2:
Ref3:
Ref4:
Ref5:
Ref6:

Xerox432AnsiB-2; 11 x 17
Layout Name: Layout 1

Time Plotted: Tues Nov 1, 13:30 2005
File Name: Brownfield\3618\3618-5.dwg



Site Plan
1"= 40'

LEGEND:

▲ *IA–01*	Indoor Air Sample
▲ *SLB–01*	Sub–Slab Air Sample
▲ *BKG–01*	Background Air Sample

NOTES:

1. This drawing was adapted from a drawing by the City of Rochester, DCD–Housing & Project Development, titled "River Park Commons" dated August 28, 2000, untitled partial utitility plan from Conifer Reality and from an instrument survey performed by James M. Parker, Land Surveyor, on September 13, 2000. No boundary survey was performed.

2. Former site features were located using Sanborn Maps provided by Environmental Risk Information & Imagaing Services, map no. 49S, 138, 141, 151, 431, 432 and 486, for years dated 1892, 1912, 1938, 1950, and 1071. Locations of former site features transferred to this figure by using swing ties and right angle distances in relation to nearby street corners. It is possible that historic street corners vary from existing street corners, etc. Locations of former site features should be considered approximate.

3. Location of 54" abandoned storm sewer from an as–built drawing by Teetor–Dobbins P.C., tiltled "Relocation Of Storm Drain Plan & Profile Sheet 2 of 3", drawing No. 2, dated June 1973. Accuracy of location should be to the degree implied by the meathod used.

4. Prevailing wind direction was toward the north during the air sampling event.

FIELD VERIFIED BY	JAD
DATE	03-2005
DRAWN BY	RJM
DATE DRAWN	03-04-2005
SCALE	1" = 40'
DATE ISSUED	05-04-2005

day
DAY ENVIRONMENTAL, INC.
ENVIRONMENTAL CONSULTANTS
ROCHESTER, NEW YORK 14614-1008
NEW YORK, NEW YORK 10165-1617

PROJECT TITLE
185 MT. HOPE AVENUE
ROCHESTER, NEW YORK

BROWNFIELD STUDY

DRAWING TITLE
Vapor Intruslon Sample Locatlon Plan

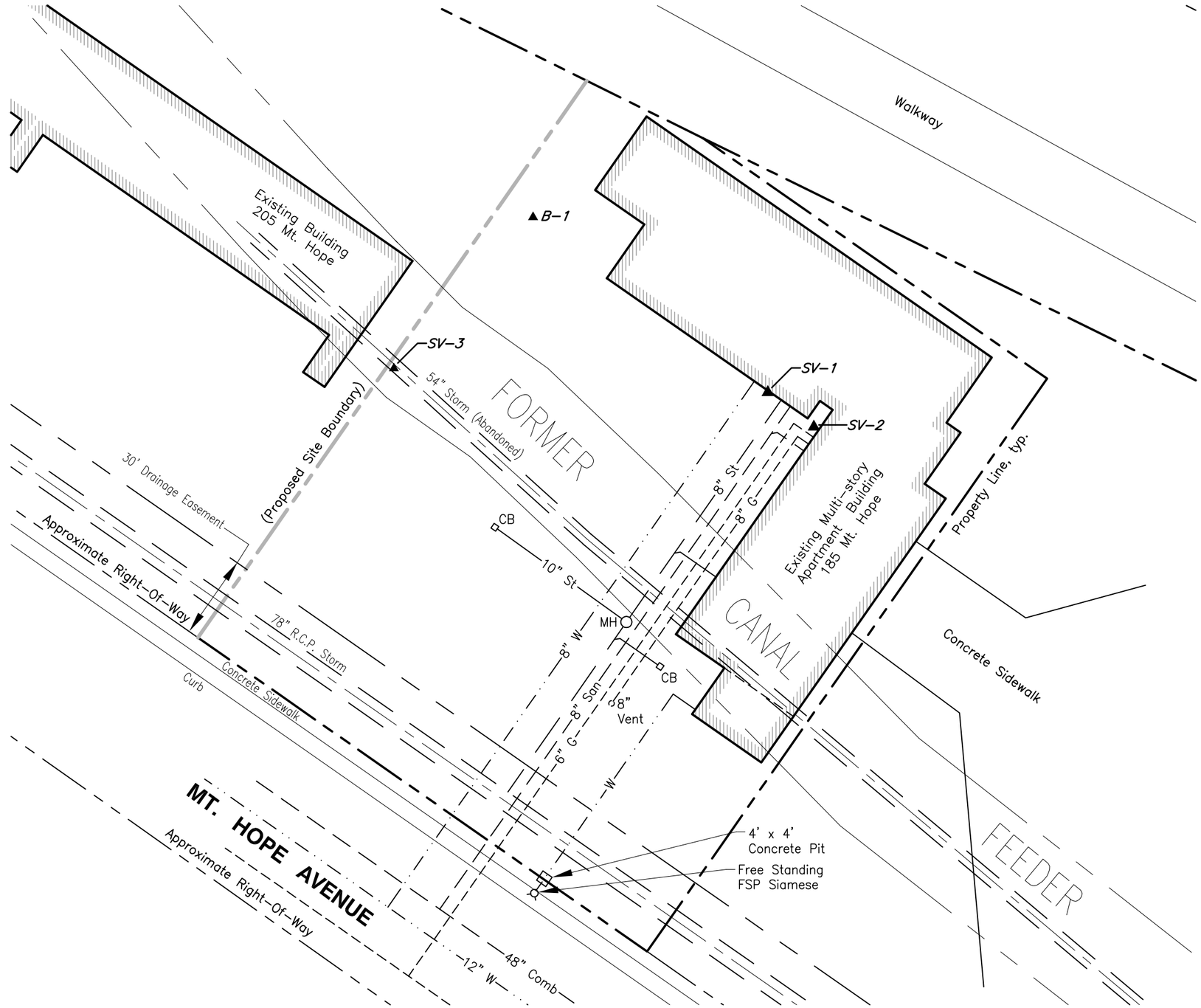
PROJECT NO.
3618S-05

FIGURE VI-1

Ref1: Base–1.dwg
Ref2:
Ref3:
Ref4:
Ref5:
Ref6:

Xerox432AnsiB–2; 11 x 17
Layout Name: Layout 1

Time Plotted: Wed May 4 11:00 2005
File Name: Brownfield\3618\3618–2.dwg



Site Plan
1"= 40'

N

LEGEND:

▲ *SV–1*	Soil Vapor Air Sample
▲ *B–1*	Background Air Sample
8" G	Gas Line
8" San	Sanitary Sewer
10" St	Storm Sewer
12" W	Water Line
CB	Catch Basin
MH	Manhole

NOTES:

1. This drawing was adapted from a drawing by the City of Rochester, DCD–Housing & Project Development, titled "River Park Commons" dated August 28, 2000, untitled partial utitility plan from Conifer Reality and from an instrument survey performed by James M. Parker, Land Surveyor, on September 13, 2000. No boundary survey was performed.

2. Former site features were located using Sanborn Maps provided by Environmental Risk Information & Imagaing Services, map no. 49S, 138, 141, 151, 431, 432 and 486, for years dated 1892, 1912, 1938, 1950, and 1071. Locations of former site features transferred to this figure by using swing ties and right angle distances in relation to nearby street corners. It is possible that historic street corners vary from existing street corners, etc. Locations of former site features should be considered approximate.

3. Location of 54" abandoned storm sewer from an as–built drawing by Teetor–Dobbins P.C., tiltled "Relocation Of Storm Drain Plan & Profile Sheet 2 of 3", drawing No. 2, dated June 1973. Location should be considered accurate to the degree implied by the method used.

4. Location of utilities servicing 185 Mt. Hope Avenue obtained from a drawing by Passero Associates, titled "Genesee Gateway, West Side of Ht. Hope Ave., Subdivision Plat", dated August, 2003 and from a drawing by Gruzen & Partners, titled "Genesee Gateway, Rochester, N.Y., Utility Site Plan & Details (Part 2)", dated 7/16/73. Locations should be considered accurate to the degree implied by the method used.

5. Prevailing wind direction was toward the east during the air sampling event.

FIELD VERIFIED BY	JAD
DATE	12-2005
DRAWN BY	RJM
DATE DRAWN	01-09-2006
SCALE	1" = 40'
DATE ISSUED	01-11-2006

day
DAY ENVIRONMENTAL, INC.
ENVIRONMENTAL CONSULTANTS
ROCHESTER, NEW YORK 14614-1008
NEW YORK, NEW YORK 10165-1617

PROJECT TITLE
185 MT. HOPE AVENUE
ROCHESTER, NEW YORK

BROWNFIELD STUDY

DRAWING TITLE
Soil Vapor Sample Location Plan

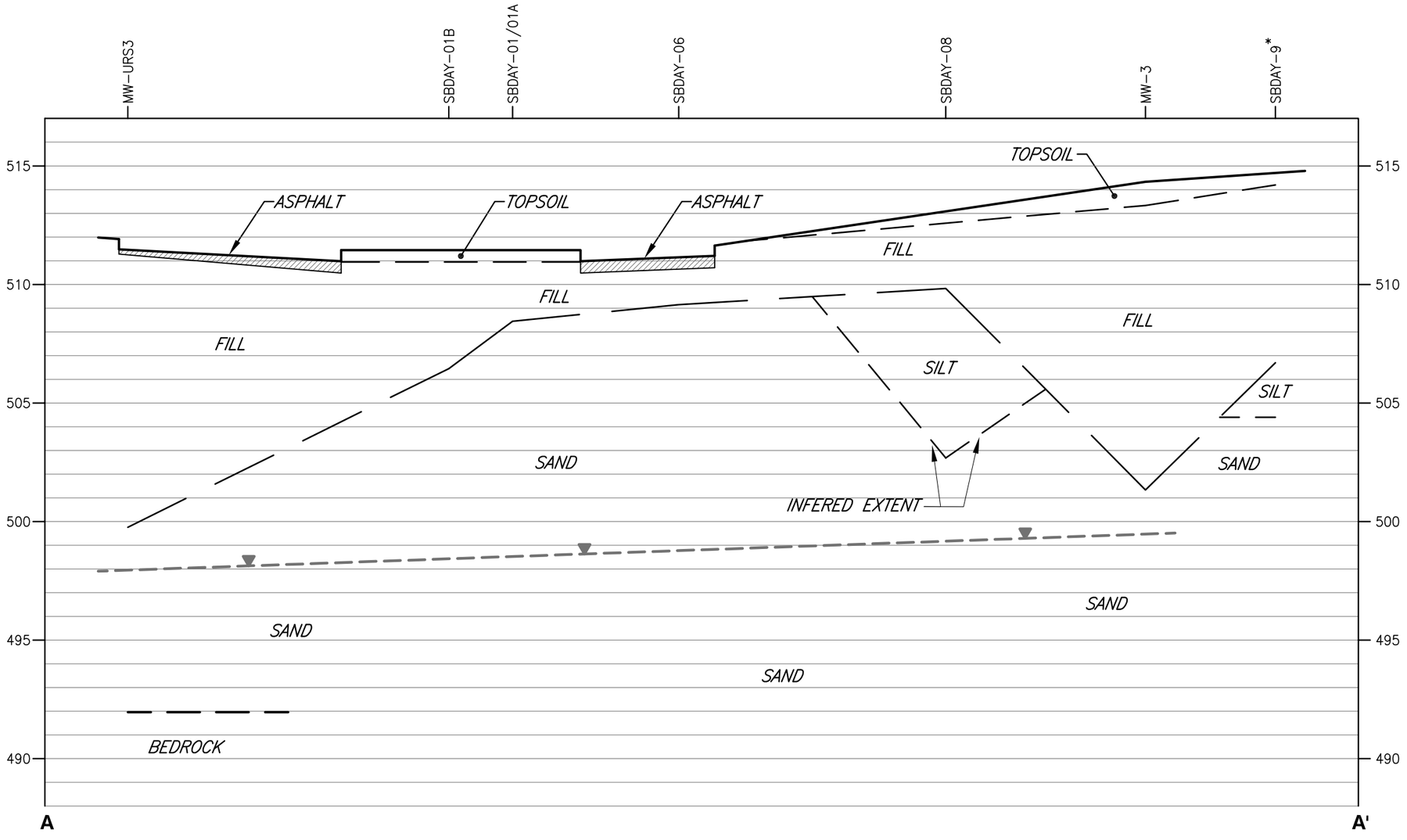
PROJECT NO.
3618S-05

FIGURE SV-1

Ref4:
Ref5:
Ref6:
Ref1:
Ref2:
Ref3:

Xerox432AnsiB–2; 11 x 17
Layout Name: Layout 1

Time Plotted: Wed Jan 11 09:10 2006
File Name: Brownfield\3618\3618–12.dwg



GEOLOGIC CROSS-SECTION A-A'

1" = 20' Horizontal
1" = 5' Vertical

LEGEND

Inferred Ground Surface

Inferred Groundwater Elevations Based On Static Water Level Measurements Collected From Monitoring Wells On March 29, 2005

*Sample 009 taken at SBDAY-009 collected from a depth interval of 8'-12' contained petroleum-related volatile organic compunds at concentrations that exceeded Track 2 Brownfield Cleanup Program Soil Cleanup Objectives.

NOTE

Surveyed ground elevation data from monitoring wells used on this figure. Ground elevations are inferred for test boring locations due to lack of elevation data.

FIELD VERIFIED BY	TMD
DATE	02-2006
DRAWN BY	RJM
DATE DRAWN	02-2006
SCALE	As Noted
DATE ISSUED	03-13-2006

DAY ENVIRONMENTAL, INC.
ENVIRONMENTAL CONSULTANTS
ROCHESTER, NEW YORK 14614-1008
NEW YORK, NEW YORK 10165-1617

PROJECT TITLE
185 MT. HOPE AVENUE
ROCHESTER, NEW YORK

BROWNFIELD STUDY

DRAWING TITLE
Geologic Cross Section A-A'

PROJECT NO.
3618S-05

FIGURE 6

Ref1: Section A_A.dwg
Ref2:
Ref3:
Ref4:
Ref5:
Ref6:

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Layout Name: Layout 1

Time Plotted: Mon Mar 13 12:10 2006
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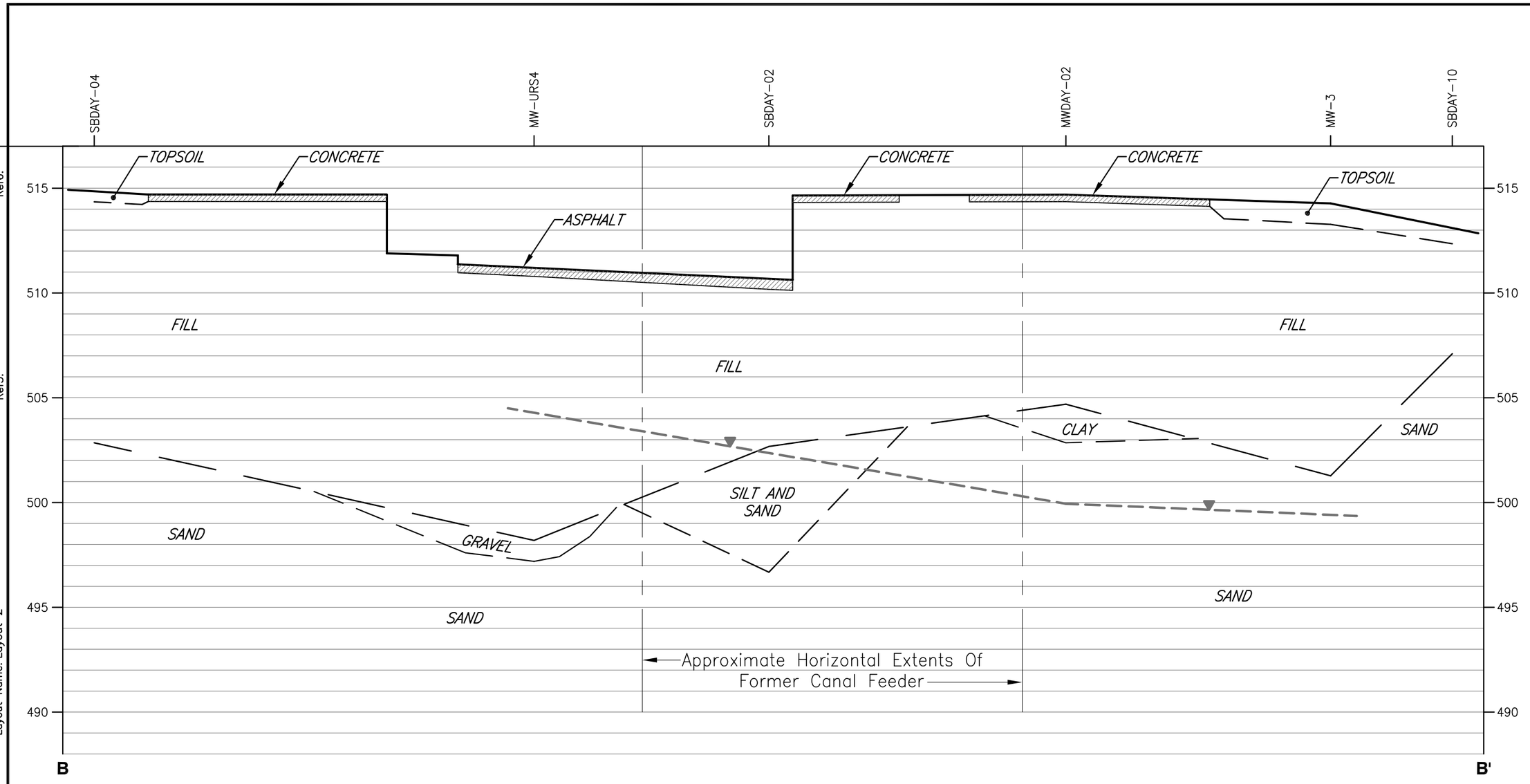

GEOLOGIC CROSS-SECTION B-B'

1" = 20' Horizontal
1" = 5' Vertical

LEGEND

- Inferred Ground Surface
- Inferred Groundwater Elevations Based On Static Water Level Measurements Collected From Monitoring Wells On March 29, 2005

NOTE

Surveyed ground elevation data from monitoring wells used on this figure. Ground elevations are inferred for test boring locations due to lack of elevation data.

FIELD VERIFIED BY: TMD	DATE: 02-2006
DRAWN BY: RJM	DATE DRAWN: 02-2006
SCALE: As Noted	DATE ISSUED: 03-13-2006

DAY ENVIRONMENTAL, INC.
ENVIRONMENTAL CONSULTANTS
ROCHESTER, NEW YORK 14614-1008
NEW YORK, NEW YORK 10165-1617

PROJECT TITLE: 185 MT. HOPE AVENUE ROCHESTER, NEW YORK

BROWNFIELD STUDY

DRAWING TITLE: Geologic Cross Section B-B'

PROJECT NO. 3618S-05

FIGURE 7

Ref1: Section B_B.dwg
Ref2:
Ref3:
Ref4:
Ref5:
Ref6:

Xerox432AnsiB-2; 11 x 17
Layout Name: Layout 2

Time Plotted: Mon Mar 13 12:30 2006
File Name: Brownfield\3618\3618-14.dwg

Ref1: PID Contours-R2.dwg
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Ref3:
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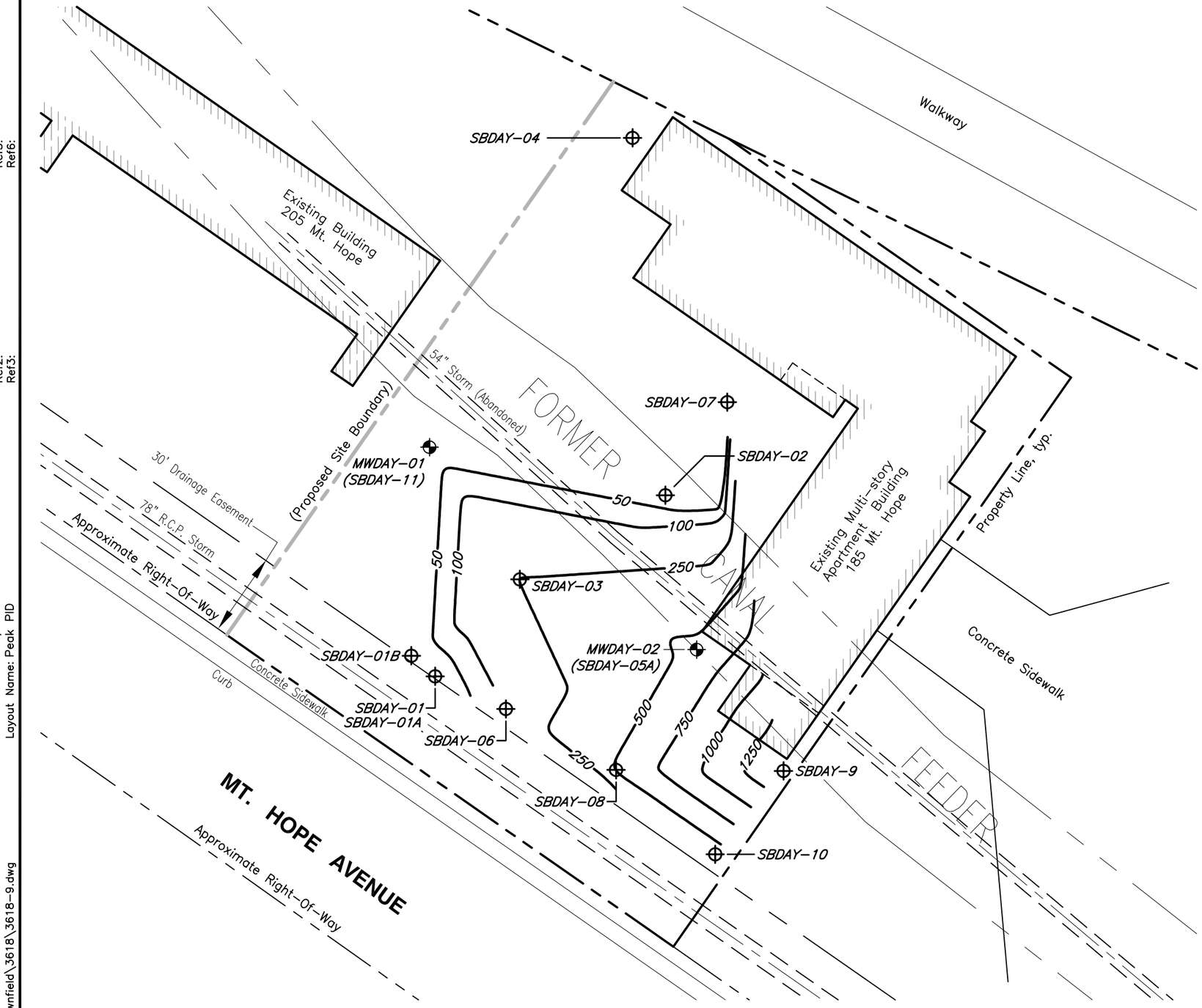
Ref5:
Ref6:



Site Plan
1"= 40'

N

LEGEND:

MWDAY-01	Monitoring Well Location Installed February 2005
SBDAY-08	Test Boring Location Advanced February 2005
500	Peak Photoionization Detector (PID) Reading Contour Line, Created by Golden Software, Inc. Surfer8 Program

NOTES:

1. This drawing was adapted from a drawing by the City of Rochester, DCD-Housing & Project Development, titled "River Park Commons" dated August 28, 2000, untitled partial utitility plan from Conifer Reality and from an instrument survey performed by James M. Parker, Land Surveyor, on September 13, 2000. No boundary survey was performed.
2. Former site features were located using Sanborn Maps provided by Environmental Risk Information & Imagaing Services, map no. 49S, 138, 141, 151, 431, 432 and 486, for years dated 1892, 1912, 1938, 1950, and 1071. Locations of former site features transferred to this figure by using swing ties and right angle distances in relation to nearby street corners. It is possible that historic street corners vary from existing street corners, etc. Locations of former site features should be considered approximate.
3. Location of 54" abandoned storm sewer from an as-built drawing by Teetor-Dobbins P.C., tiltled "Relocation Of Storm Drain Plan & Profile Sheet 2 of 3", drawing No. 2, dated June 1973. Location should be considered accurate to the degree implied by the method used.

FIELD VERIFIED BY	TMD
DATE	11-2005
DRAWN BY	RJM
DATE DRAWN	12-19-2005
SCALE	1" = 40'
DATE ISSUED	01-02-2006

day
DAY ENVIRONMENTAL, INC.
ENVIRONMENTAL CONSULTANTS
ROCHESTER, NEW YORK 14614-1008
NEW YORK, NEW YORK 10165-1617

PROJECT TITLE
185 MT. HOPE AVENUE
ROCHESTER, NEW YORK

BROWNFIELD STUDY

DRAWING TITLE
Peak PID Readings Measured On Soil Samples

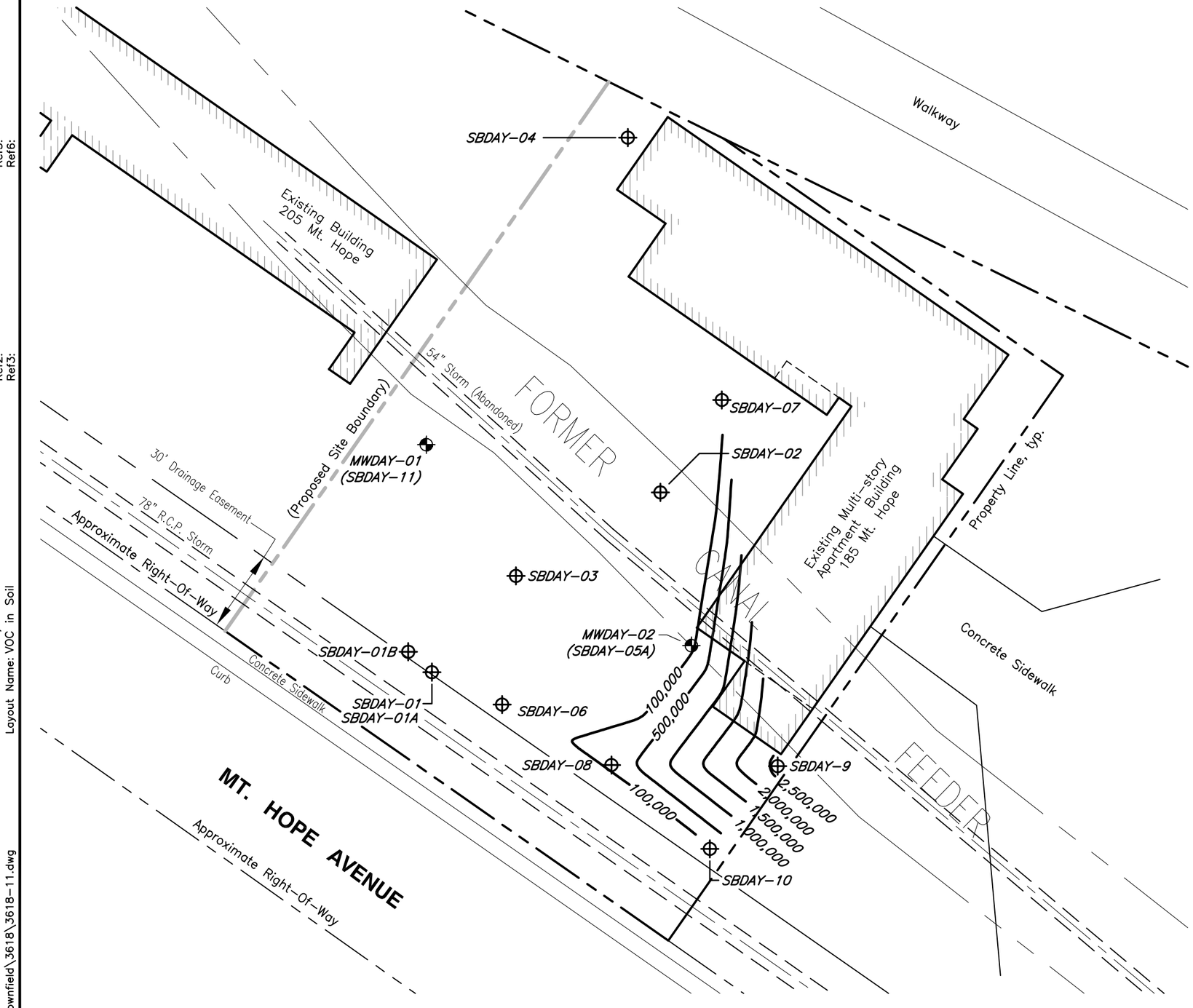
PROJECT NO.
3618S-05

FIGURE 8

Xerox432AnsiB-2; 11 x 17
Layout Name: Peak PID

Time Plotted: Mon Jan 2 14:20 2006
File Name: Brownfield\3618\3618-9.dwg

Ref1: VOC Soil-Contours.dwg
Ref2:
Ref3:
Ref4:
Ref5:
Ref6:



Site Plan
1"= 40'

LEGEND:

MWDAY-01	Monitoring Well Location Installed February 2005
SBDAY-08	Test Boring Location
100,000	Total TCL and TIC VOCs Contour Line (ppb), Created by Golden Software, Inc. Surfer8 Program

NOTES:

1. This drawing was adapted from a drawing by the City of Rochester, DCD-Housing & Project Development, titled "River Park Commons" dated August 28, 2000, untitled partial utitility plan from Conifer Reality and from an instrument survey performed by James M. Parker, Land Surveyor, on September 13, 2000. No boundary survey was performed.

2. Former site features were located using Sanborn Maps provided by Environmental Risk Information & Imagaing Services, map no. 49S, 138, 141, 151, 431, 432 and 486, for years dated 1892, 1912, 1938, 1950, and 1071. Locations of former site features transferred to this figure by using swing ties and right angle distances in relation to nearby street corners. It is possible that historic street corners vary from existing street corners, etc. Locations of former site features should be considered approximate.

3. Location of 54" abandoned storm sewer from an as-built drawing by Teetor-Dobbins P.C., tiltled "Relocation Of Storm Drain Plan & Profile Sheet 2 of 3", drawing No. 2, dated June 1973. Location should be considered accurate to the degree implied by the method used.

FIELD VERIFIED BY: TMD	DATE: 11-2005	DRAWN BY: RJM	DATE DRAWN: 12-19-2005
SCALE: 1" = 40'	DATE ISSUED: 01-02-2006		

day
DAY ENVIRONMENTAL, INC.
ENVIRONMENTAL CONSULTANTS
ROCHESTER, NEW YORK 14614-1008
NEW YORK, NEW YORK 10165-1617

PROJECT TITLE: 185 MT. HOPE AVENUE ROCHESTER, NEW YORK
BROWNFIELD STUDY
DRAWING TITLE: Total TCL And TIC VOCs In Subsurface Soil Samples

PROJECT NO. 3618S-05

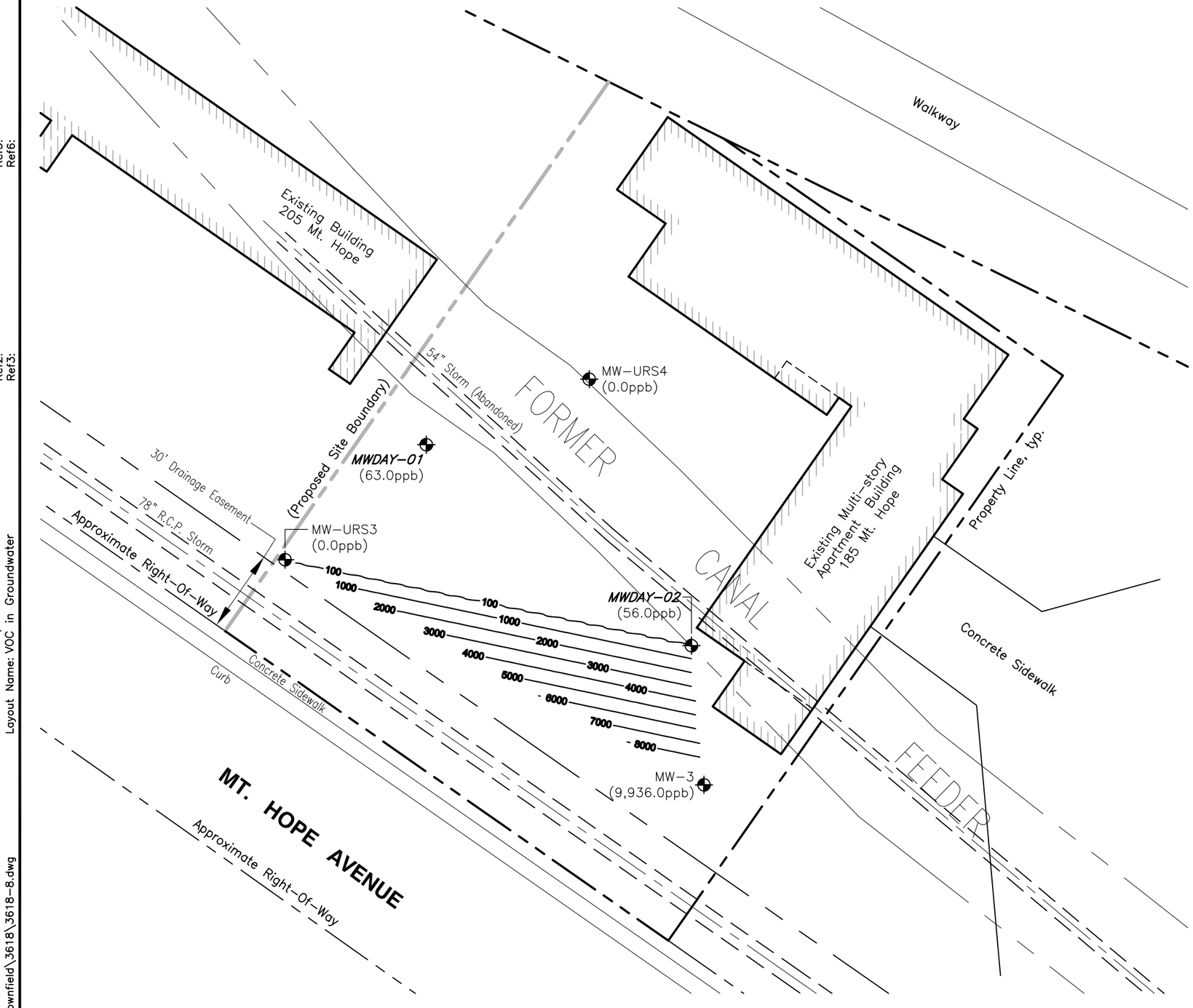
FIGURE 9

Time Plotted: Mon Jan 2 12:55 2006
File Name: Brownfield\3618\3618-11.dwg
Xerox432AnsiB-2; 11 x 17
Layout Name: VOC in Soil

Ref1: VOC GW-Contours.dwg
Ref2:
Ref3:
Ref4:
Ref5:
Ref6:

Xerox432AnsiB-2; 11 x 17
Layout Name: VOC in Groundwater

Time Plotted: Mon Jan 2 12:05 2006
File Name: Brownfield\3618\3618-8.dwg



Site Plan
1"= 40'

LEGEND:

⊕ *MWDAY-01* (64.0ppb)	Monitoring Well Location Installed February 2005 With Total TCL and TIC VOCs Detected In 09/08/05 Groundwater Sample In Parenthesis
⊕ MW-URS3 (2.0ppb)	Monitoring Well Location Installed Prior To February 2005 With Total TCL and TIC VOCs Detected In 09/08/08 Groundwater Sample In Parenthesis
100	Total TCL and TIC VOCs Contour Line (ppb) For 09/08/05 Groundwater Samples, Created by Golden Software, Inc. Surfer8 Program

NOTES:

1. This drawing was adapted from a drawing by the City of Rochester, DCD-Housing & Project Development, titled "River Park Commons" dated August 28, 2000, untitled partial utitility plan from Conifer Reality and from an instrument survey performed by James M. Parker, Land Surveyor, on September 13, 2000. No boundary survey was performed.
2. Former site features were located using Sanborn Maps provided by Environmental Risk Information & Imagaing Services, map no. 49S, 138, 141, 151, 431, 432 and 486, for years dated 1892, 1912, 1938, 1950, and 1071. Locations of former site features transferred to this figure by using swing ties and right angle distances in relation to nearby street corners. It is possible that historic street corners vary from existing street corners, etc. Locations of former site features should be considered approximate.
3. Location of 54" abandoned storm sewer from an as-built drawing by Teetor-Dobbins P.C., tiltled "Relocation Of Storm Drain Plan & Profile Sheet 2 of 3", drawing No. 2, dated June 1973. Location should be considered accurate to the degree implied by the method used.

FIELD VERIFIED BY	DATE	DRAWN BY	DATE DRAWN
TMD	11-2005	RJM	12-19-2005
SCALE	DATE ISSUED		
1" = 40'	01-02-2006		

day
DAY ENVIRONMENTAL, INC.
ENVIRONMENTAL CONSULTANTS
ROCHESTER, NEW YORK 14614-1008
NEW YORK, NEW YORK 10165-1617

PROJECT TITLE
185 MT. HOPE AVENUE
ROCHESTER, NEW YORK

BROWNFIELD STUDY

DRAWING TITLE
Total TCL and TIC VOCs In Groundwater Samples Collected 09-08-2005

PROJECT NO.
3618S-05

FIGURE 10

APPENDIX A

Site Investigation Tables

Table 1

185 MT. HOPE AVENUE, ROCHESTER, NEW YORK
NYSDEC SITE #C828124

ANALYTICAL LABORATORY PROGRAM FOR SAMPLES

SAMPLE	DATE	LOCATION	DEPTH	MEDIA TYPE	LABORATORY ANALYSES
001	02/04/05	SSDAY-01	0-2"	Surface soil	Full TCL/TAL + CN
002	02/03/05	SSDAY-02	0-2"	Surface soil	Full TCL/TAL + CN*
003	02/04/05	FB020405	NA	Equipment Rinsate	Full TCL/TAL + CN
004	02/03/05	SBDAY-02	4-8'	Subsurface soil	Full TCL/TAL + CN
005	02/03/05	SBDAY-03	8-9.2'	Subsurface soil	Full TCL/TAL + CN
006	02/04/05	SBDAY-04	4-8'	Subsurface soil	Full TCL/TAL + CN
007	02/03/05	SBDAY-06	8-10.3'	Subsurface soil	Full TCL/TAL + CN
008	02/03/05	SBDAY-07	12-15.9'	Subsurface soil	Full TCL/TAL + CN
009	02/04/05	SBDAY-09	8-12'	Subsurface soil	Full TCL/TAL + CN
010	02/04/05	SBDAY-10	8-10.2'	Subsurface soil	Full TCL/TAL + CN
011	02/04/05	SBDAY-08	8-10.4'	Subsurface soil	Full TCL/TAL + CN
012	02/24/05	SBDAY-01B	12-14'	Subsurface soil	Full TCL/TAL + CN
013	02/25/05	SBDAY-05A	16-18'	Subsurface soil	Full TCL/TAL + CN*
014	02/24/05	SBDAY-11	10-12'	Subsurface soil	Full TCL/TAL + CN
015	02/24/05	FB022405	NA	Equipment Rinsate	Full TCL/TAL + CN
SLB-01	02/23/05	Sub-Slab Air	NA	Air	TO-15 VOCs
SLB-02	02/23/05	Sub-Slab Air	NA	Air	TO-15 VOCs
IA-01	02/23/05	Indoor Air	NA	Air	TO-15 VOCs
IA-02	02/23/05	Indoor Air	NA	Air	TO-15 VOCs
BKG-01	02/23/05	Outdoor Air	NA	Air	TO-15 VOCs
016	03/29/05	MWDAY-01	NA	Groundwater	Full TCL/TAL + CN
017	03/29/05	MWDAY-02	NA	Groundwater	Full TCL/TAL + CN*
018	03/29/05	MW-3	NA	Groundwater	Full TCL/TAL + CN
019	03/30/05	MW-URS3	NA	Groundwater	Full TCL/TAL + CN
020	03/30/05	MW-URS4	NA	Groundwater	Full TCL/TAL + CN
021	03/30/05	FB032905	NA	Equipment Rinsate	Full TCL/TAL + CN
022	03/30/05	TB033005	NA	Trip Blank	TCL VOC
023	09/08/05	MWDAY-01	NA	Groundwater	TCL VOC, TCL SVOC
024	09/08/05	MWDAY-02	NA	Groundwater	TCL VOC, TCL SVOC
025	09/08/05	MW-3	NA	Groundwater	TCL VOC, TCL SVOC
026	09/08/05	MW-URS3	NA	Groundwater	TCL VOC, TCL SVOC*
027	09/08/05	MW-URS4	NA	Groundwater	TCL VOC, TCL SVOC
028	09/08/05	FB090805	NA	Equipment Rinsate	TCL VOC, TCL SVOC
029	09/08/05	TB090805	NA	Trip Blank	TCL VOC
SV-1	12/21/05	Soil Vapor Air	3.7'	Air	TO-15 VOCs
SV-2	12/21/05	Soil Vapor Air	3.7'	Air	TO-15 VOCs
SV-3	12/21/05	Soil Vapor Air	12'	Air	TO-15 VOCs
B-1	12/21/05	Outdoor Air	NA	Air	TO-15 VOCs

Full TCL/TAL + CN = Full Target compound list/Target Analyte List and cyanide via ASP Methods OLM04.2 and ILM04.1
TAL Metals = Target analyte list metals and cyanide
Full TCL/TAL = Full target compound list / target analyte list parameters
NA = Not applicable
* = MS/MSD performed
TCL VOC = Target compound list volatile organic compounds via ASP Method OLM04.2
TCL SVOC = Target compound list semi-volatile organic compounds via ASP Method OLM04.2

TABLE 2

NAD83 Horizontal Coordinates for Test Locations

185 Mt. Hope Avenue
Rochester, New York

Test Location	Type	Northing	Easting
SBDAY-01	test boring	4780270.567399	287757.993854
SBDAY-01A	test boring	4780270.567399	287757.993854
SBDAY-01B	test boring	4780268.215179	287755.305602
SBDAY-02	test boring	4780296.273805	287739.176093
SBDAY-03	test boring	4780280.312311	287747.576879
SBDAY-04	test boring	4780294.593648	287699.860413
SBDAY-05	test boring	4780300.138167	287757.489807
MWDAY-02 (SBDAY-05A)	monitoring well	4780298.962056	287756.145681
SBDAY-06	test boring	4780277.960091	287761.858216
SBDAY-07	test boring	4780303.666497	287728.927134
SBDAY-08	test boring	4780289.889207	287768.914876
SBDAY-09	test boring	4780308.370937	287769.754955
SBDAY-10	test boring	4780300.474198	287778.827804
MWDAY-01 (SBDAY-11)	monitoring well	4780270.567399	287732.623480
SBDAY-07	test boring	4780303.666497	287728.927134
SBDAY-07	test boring	4780303.666497	287728.927134
MW-3	monitoring well	4780299.970151	287771.771144
MW-URS3	monitoring well	4780254.773921	287745.056643
MW-URS4	monitoring well	4780289.217144	287726.238882
SSDAY-01	surface soil	4780335.362304	287731.589573
SSDAY-02	surface soil	4780291.737380	287704.732869
TP-1	test pit	4780301.818324	287777.483678
BKG-01	background air	4780289.217144	287704.228822
IA-01/SLB-01	indoor air/sub-slab air	4780300.306182	287717.8380916
IA-02/SLB-02	indoor air/sub-slab air	4780308.034906	287764.714483
B-1	background air	4780286.192861	287707.925168
SV-1	soil vapor point	4780311.059189	287728.087055
SV-2	soil vapor point	4780315.931645	287732.287448
SV-3	soil vapor point	4780270.399383	287723.718646

NAD83 UTM Zone 18 horizontal coordinates in meters obtained via instrument survey, GPS, or swing ties from located site features.

TABLE 3

185 MT. HOPE AVENUE
ROCHESTER, NEW YORK

PEAK PID READINGS MEASURED ON
AIR ABOVE SUBSURFACE SOIL SAMPLES

LOCATION	Peak PID Reading (ppm) With Depth Interval	
SBDAY-01	1.5	10-10.5’
SBDAY-01A	0.0	0-10’
SBDAY-01B	1.0	13-14’
SBDAY-02	0.0	0 - 14.8’
SBDAY-03	254	8-9’
SBDAY-04	0.0	0 - 17.3’
SBDAY-05	0.0	0 - 13.2’
SBDAY-05A	551	17 - 18’
SBDAY-06	101	9.5-10’
SBDAY-07	0.0	0 - 16.7’
SBDAY-08	520	9-10’
SBDAY-09	1,505	10-11’
SBDAY-10	381	9’
SBDAY-11	16.2	10-11’

PPM = Parts per million
PID = Photoionization detector
NA = Not Available

TABLE 4

GROUNDWATER ELEVATION DATA FOR MARCH 29, 2005

185 MOUNT HOPE AVENUE
ROCHESTER NEW YORK

WELL ID	GROUND SURFACE ELEVATION	TOP OF PVC CASING ELEVATION (FT)	STATIC WATER LEVEL (SWL) MEASUREMENT (FT)**	GROUNDWATER ELEVATION (FT)	TYPE OF WELL
MW-3	100.68	100.28	14.46	85.82	Overburden
MWDAY-01	97.38	97.05	11.67	85.38	Overburden
MWDAY-02	101.10	100.68	14.33	86.35	Overburden
MW-URS3	97.85	97.58	13.22	84.34	Overburden
MW-URS4	97.60	97.26	6.57	90.69	Overburden

NC = Measurement not collected

SWL measurements at wells collected using a Heron H01.L oil/water interface probe. Evidnce of non-aqueos phase liquid not detected.

** = Data from Top of Outer Casing

TABLE 5

GROUNDWATER ELEVATION DATA FOR SEPTEMBER 8, 2005

185 MOUNT HOPE AVENUE
ROCHESTER NEW YORK

WELL ID	GROUND SURFACE ELEVATION	TOP OF PVC CASING ELEVATION (FT)	STATIC WATER LEVEL (SWL) MEASUREMENT (FT)**	GROUNDWATER ELEVATION (FT)	TYPE OF WELL
MW-3	100.68	100.28	16.92	83.36	Overburden
MWDAY-01	97.38	97.05	13.10	83.95	Overburden
MWDAY-02	101.10	100.68	16.33	84.35	Overburden
MW-URS3	97.85	97.58	14.09	83.49	Overburden
MW-URS4	97.60	97.26	9.52	87.74	Overburden

NC = Measurement not collected

SWL measurements at wells collected using a Heron H01.L oil/water interface probe. Evidnce of non-aqueos phase liquid not detected.

** = Data from Top of Outer Casing

Table 6 (Page 1 of 2)
185 Mt. Hope Avenue, Rochester, New York
NYSDEC Site #C828124

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

Soil Samples

Detected Compound	RSCO (1)	SCO (2)	001 SSDAY-01 (0-2")	002 SSDAY-02 (0-2")	004 SBDAY-02 (4-8')	005 SBDAY-03 (8-9.2')	006 SBDAY-04 (4-8')	007 SBDAY-06 (8-10.3')	008 SBDAY-07 (12-15.9')
Acetone	0.2	100	U	U J	0.031 J	0.019 J	U J	0.009 J	0.019 J
Carbon Disulfide	2.7	NA	U J	U J	U J	0.002 J	U J	U J	U J
2-Butanone	0.3	NA	U	U J	0.01 J	U J	U J	U J	U J
cis-1,2-Dichloroethene	NA	100	U	U J	U J	U J	0.001 J	U J	0.002 J
Methylcyclohexane	NA	NA	U	U J	U J	0.053 J	U J	U J	U J
Cyclohexane	NA	NA	U	U J	U J	U J	U J	U J	U J
Benzene	0.06	4.8	U	U J	U J	U J	U J	U J	U J
Tetrachloroethene	1.4	19	0.11 J	0.026 J	0.004 J	0.033 J	0.032 J	0.034 J	0.002 J
Toluene	1.5	100	U J	U J	U J	U J	U J	U J	U J
Ethylbenzene	5.5	41	U J	U J	U J	0.019 J	U J	U J	U J
Xylene (Total)	1.2	100	U J	U J	0.002 J	0.1 J	0.003 J	0.002 J	U J
Isopropylbenzene	2.3	NA	U J	U J	U J	0.14 J	U J	U J	U J
TOTAL VOCS	NA	NA	0.11 J	0.026 J	0.047 J	0.366 J	0.036 J	0.045 J	0.023 J
TOTAL TICS	NA	NA	0.027 J	U	0.016 NJ	18.81 NJ	U	2.371 NJ	U
TOTAL VOCS AND TICS	10	NA	0.137 J	0.026 J	0.063 NJ	19.176 NJ	0.036 J	2.416 NJ	0.023 J

NA = Not available TIC = Tentatively identified compound

(1) = Recommended soil cleanup objective (RSCO) as referenced in NYSDEC TAGM 4046 dated January 24, 1994 as amended by the NYSDEC's supplemental Tables dated August 22, 2001

(2) = Brownfield Cleanup Program soil cleanup objective (BCP SCO) for Track 2 (restricted residential use) as referenced in 6 NYCRR Part 375 Environmental Remediation Programs dated December 14, 2006.

J = Estimated value B = Detected in associated method blank

D = Compound identified in an analysis at a secondary dilution factor

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

N = Indicates presumptive evidence of tentatively identified compound

Table 6 (Page 2 of 2)
185 Mt. Hope Avenue, Rochester, New York
NYSDEC Site #C828124

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

Soil Samples

Detected Compound	RSCO (1)	SCO (2)	009 SBDAY-09 (8-12')		010 SBDAY-10 (8-10.2')		011 SBDAY-08 (8-10.4')		012 SBDAY-01B (12-14')		013 SBDAY-05A (16-18')		014 SBDAY-11 (10-12')	
Acetone	0.2	100	U	J	0.008	J	U		0.012		0.009	J	0.01	J
Carbon Disulfide	2.7	NA	U	J	U	J	U		U		U		U	
2-Butanone	0.3	NA	U	J	U	J	U		U		U		U	
cis-1,2-Dichloroethene	NA	100	U	J	U	J	U		U		U		U	
Methylcyclohexane	NA	NA	270	DJ	0.012	J	24	D	U		U		0.001	J
Cyclohexane	NA	NA	49	DJ	U	J	5.8	D	U		U		U	
Benzene	0.06	4.8	0.21	J	U	J	U		U		U		U	
Tetrachloroethene	1.4	19	0.37	J	0.006	J	U		U		U		U	
Toluene	1.5	100	5.6	J	U	J	U		U		U		U	
Ethylbenzene	5.5	41	**110**	DJ	0.022	J	1.5	DJ	U		U		U	
Xylene (Total)	1.2	100	**380**	DJ	0.049	J	12	D	U		U		0.002	J
Isopropylbenzene	2.3	NA	25	J	0.047	J	1.7	DJ	U		U		U	
TOTAL VOCS	NA	NA	840.18	DJ	0.144	J	45	DJ	0.012		0.009	J	0.013	J
TOTAL TICS	NA	NA	1838	NJ	28.170	NJ	727	NJ	U		0.114	NJ	0.512	NJ
TOTAL VOCS AND TICS	10	NA	2678.18	DNJ	28.314	NJ	772	DNJ	0.012		0.123	NJ	0.525	NJ

NA = Not available TIC = Tentatively identified compound

(1) = Recommended soil cleanup objective (RSCO) as referenced in NYSDEC TAGM 4046 dated January 24, 1994 as amended by the NYSDEC's supplemental Tables dated August 22, 2001

(2) = Brownfield Cleanup Program soil cleanup objective (BCP SCO) for Track 2 (restricted residential use) as referenced in 6 NYCRR Part 375 Environmental Remediation Programs dated December 14, 2006.

110 = Exceeds SCO

J = Estimated value B = Detected in associated method blank

D = Compound identified in an analysis at a secondary dilution factor

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

N = Indicates presumptive evidence of tentatively identified compound

Table 7 (Page 1 of 2)
185 Mt. Hope Avenue, Rochester, New York
NYSDEC Site #C828124

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

Soil Samples

Detected Compound	RSCO (1)	SCO (2)	001 SSDAY-01 (0-2")	002 SSDAY-02 (0-2")	004 SBDAY-02 (4-8')	005 SBDAY-03 (8-9.2')	006 SBDAY-04 (4-8')	007 SBDAY-06 (8-10.3')	008 SBDAY-07 (12-15.9')
Benzaldehyde	NA	NA	0.064 J	U J	0.055 J	U J	U	U J	U J
Naphthalene	13	100	U	U J	0.074 J	0.085 J	U	U J	U J
2-Methylnaphthalene	36.4	NA	U	U J	0.092 J	0.062 J	U	U J	U J
1,1-Biphenyl	NA	NA	U	U J	U J	U J	U	U J	U J
Acenaphthylene	50	100	U	0.057 J	0.053 J	U J	U	U J	U J
Acenaphthene	50	100	U	U J	0.059 J	U J	U	U J	U J
Dibenzofuran	6.2	NA	U	U J	0.069 J	U J	U	U J	U J
Fluorene	50	100	U	U J	0.065 J	U J	U	U J	U J
Phenanthrene	50	100	0.19 J	0.37 J	0.77 J	U J	0.054 J	U J	U J
Anthracene	50	100	U	0.074 J	0.19 J	U J	U	U J	U J
Carbazole	NA	NA	U	0.07 J	0.08 J	U J	U	U J	U J
Fluoranthene	50	100	0.45 J	1.1 J	2.4 J	0.076 J	0.12 J	U J	U J
Pyrene	50	100	0.45 J	1.1 J	2.4 J	0.073 J	0.1 J	U J	U J
Benzo(a)anthracene	0.224 or MDL	1	0.26 J	0.63 J	**1.4** J	U J	0.067 J	U J	U J
Chrysene	0.4	3.9	0.36 J	0.59 J	1.2 J	U J	0.071 J	U J	U J
bis(2-Ethylhexyl)phthalate	50	NA	0.35 J	0.31 J	0.45 J	2.3 J	0.064 J	0.15 J	0.11 J
Benzo(b)fluoranthene	0.22 or MDL	1	0.4 J	0.79 J	**2** J	0.049 J	0.083 J	U J	U J
Benzo(k)fluoranthene	0.22 or MDL	3.9	0.19 J	0.4 J	0.62 J	U J	U	U J	U J
Benzo(a)pyrene	0.061 or MDL	1	0.28 J	0.56 J	**1.3** J	U J	0.05 J	U J	U J
Indeno(1,2,3-cd)pyrene	3.2	0.5	0.17 J	0.2 J	0.42 J	U J	U	U J	U J
Dibenzo(a,h)anthracene	0.0143 or MDL	0.33	U	0.062 J	0.15 J	U J	U	U J	U J
Benzo(g,h,i)perylene	50	100	0.16 J	0.19 J	0.46 J	U J	U	U J	U J
TOTAL SVOCS*	NA	NA	3.324 J	6.503 J	14.307 J	2.645 J	0.609 J	0.15 J	0.11 J
TOTAL TICS*	NA	NA	22.66 NJ	8.044 NJ	20.02 NJ	9.4 NJ	3.316 NJ	4.473 NJ	17.1 NJ
TOTAL SVOCS AND TICS*	500	NA	25.984 NJ	14.547 NJ	34.327 NJ	12.045 NJ	3.925 NJ	4.623 NJ	17.21 NJ
TOTAL cPAH SVOCS	NA	NA	1.66	3.232	7.09	0.049	0.271	U	U
TOTAL cPAH SVOCS as BAP Toxicity Equivalent*	NA	NA	0.3685	0.7939	1.8502	0.0049	0.06571	U	U

NA = Not available TIC = Tentatively ide TIC = Tentatively identified compound

(1) = Recommended soil cleanup objective (RSCO) as referenced in NYSDEC TAGM 4046 dated January 24, 1994 as amended by the NYSDEC's supplemental Tables dated August 22, 2001

(2) = Brownfield Cleanup Program soil cleanup objective (BCP SCO) for Track 2 (restricted residential use) as referenced in 6 NYCRR Part 375 Environmental Remediation Programs dated December 14, 2006.

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

B = Detected in associated method blank

260 = Exceeds SCO N = Indicates presumptive evidence of tentatively identified compound

cPAH = Carcinogenic polyaromatic hydrocarbon

BAP = Benzo(a)pyrene * = Does not include compounds that were also detected in the associated method blank

Table 7 (Page 2 of 2)
185 Mt. Hope Avenue, Rochester, New York
NYSDEC Site #C828124

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

Soil Samples

Detected Compound	RSCO (1)	SCO (2)	009 SBDAY-09 (8-12')	010 SBDAY-10 (8-10.2')	011 SBDAY-08 (8-10.4')	012 SBDAY-01B (12-14')	013 SBDAY-05A (16-18')	014 SBDAY-11 (10-12')
Benzaldehyde	NA	NA	U	U	U	U	U	U
Naphthalene	13	100	12 D	0.067 J	1.5	U	U	U
2-Methylnaphthalene	36.4	NA	10 D	0.13 J	1.5	U	U	U
1,1-Biphenyl	NA	NA	0.16 J	U	U	U	U	U
Acenaphthylene	50	100	U	U	U	U	U	U
Acenaphthene	50	100	0.15 J	U	U	U	U	U
Dibenzofuran	6.2	NA	0.17 J	U	U	U	U	U
Fluorene	50	100	0.31 J	U	0.058 J	U	U	U
Phenanthrene	50	100	1	U	0.18 J	U	U	U
Anthracene	50	100	0.21 J	U	U	U	U	U
Carbazole	NA	NA	0.054 J	U	U	U	U	U
Fluoranthene	50	100	0.76	U	0.17 J	U	U	U
Pyrene	50	100	0.73	U	0.16 J	U	U	U
Benzo(a)anthracene	0.224 or MDL	1	0.29 J	U	0.075 J	U	U	U
Chrysene	0.4	3.9	0.26 J	U	0.077 J	U	U	U
bis(2-Ethylhexyl)phthalate	50	NA	0.049 J	0.074 J	0.32 J	U	0.071 J	U
Benzo(b)fluoranthene	0.22 or MDL	1	0.23 J	U	0.068 J	U	U	U
Benzo(k)fluoranthene	0.22 or MDL	3.9	0.13 J	U	U	U	U	U
Benzo(a)pyrene	0.061 or MDL	1	0.19 J	U	0.05 J	U	U	U
Indeno(1,2,3-cd)pyrene	3.2	0.5	0.077 J	U	U	U	U	U
Dibenzo(a,h)anthracene	0.0143 or MDL	0.33	U	U	U	U	U	U
Benzo(g,h,i)perylene	50	100	0.071 J	U	U	U	U	U
TOTAL SVOCS*	NA	NA	26.841 JU	0.271 J	4.158 J	U	0.071 J	U
TOTAL TICS*	NA	NA	87.78 NJ	5.678 NJ	28.25 NJ	2.947 J	11.055 NJ	7.046 NJ
TOTAL SVOCS AND TICS*	500	NA	114.621 NJ	5.949 NJ	32.408 NJ	2.947 J	11.126 NJ	7.046 NJ
TOTAL cPAH SVOCS	NA	NA	1.177	U	0.270	U	U	U
TOTAL cPAH SVOCS as BAP Toxicity Equivalent*	NA	NA	0.2536	U	0.06507	U	U	U

NA = Not available TIC = Tentatively identified TIC = Tentatively identified compound

(1) = Recommended soil cleanup objective (RSCO) as referenced in NYSDEC TAGM 4046 dated January 24, 1994 as amended by the NYSDEC's supplemental Tables dated August 22, 2001

(2) = Brownfield Cleanup Program soil cleanup objective (BCP SCO) for Track 2 (restricted residential use) as referenced in 6 NYCRR Part 375 Environmental Remediation Programs dated December 14, 2006.

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

B = Detected in associated method blank cPAH = Carcinogenic polyaromatic hydrocarbon

N = Indicates presumptive evidence of tentatively identified compound

BAP = Benzo(a)pyrene * = Does not include compounds that were also detected in the associated method blank

Table 8 (Page 1 of 3)
185 Mt. Hope Avenue, Rochester, New York
NYSDEC Site #C828124

Summary of Target Analyte List Metals and Cyanide
in mg/Kg or Parts Per Million (ppm)

Soil Samples

Detected Analyte	RSCO (1)	Typical Background Range (2)	SCO (3)	001 SSDAY-01 (0-2")	002 SSDAY-02 (0-2")	004 SBDAY-02 (4-8')	005 SBDAY-03 (8-9.2')	006 SBDAY-04 (4-8')
Aluminum	SB	33000	NA	10900	9660	6420	18100	10100
Antimony	SB	NA	NA	U NJ	U NJ	U NJ	U NJ	U NJ
Arsenic	7.5 or SB	3-12	16	8.5	8.5	10	13.5	6
Barium	300 or SB	15-600	400	82.9	140	65.9	174	49.9
Beryllium	0.16 or SB	0-1.75	72	0.67 BJ	0.56 BJ	0.66 BJ	1	0.53 BJ
Cadmium	1 or SB (10)	0.1-1	4.3	U	U	U	U	U
Calcium	SB	130-35000	NA	U	U	U	U	U
Chromium	10 or SB (50)	1.5-40	180	14.9	13.4	10.8	23.4	12.5
Cobalt	30 or SB	2.5-60	NA	6.5 BJ	7.2 B	5.9 BJ	14.3	5.3 BJ
Copper	25 or SB	1-50	270	26.8	36	83.3	15.6	16.6
Iron	2,000 or SB	2000-550000	NA	18400 *	18100 *	6990 *	33200 *	15200 *
Lead	SB	200-500**	400	60.4	119	89.1	20.5	79.2
Magnesium	SB	100-5000	NA	U *	U *	U *	U *	U *
Manganese	SB	50-5000	2000	562 *	723 *	169 *	1520 *	436 *
Mercury	0.1	0.001-0.2	0.81	0.14 BJ	0.36	**0.89**	0.066 BJ	U
Nickel	13 or SB	0.5-25	310	14.9	14.7	13.3	27.5	12.8
Potassium	SB	8500-43000	NA	1750	1830	875 BJ	1680	1710
Selenium	2 or SB	0.1-3.9	180	U NJ	U NJ	U NJ	U NJ	U NJ
Silver	SB	NA	180	7.3 *	5 *J	2.1 B*	11.8 *	U *
Sodium	SB	6000-8000	NA	U	U	U	U	U
Thallium	SB	NA	NA	3	2.1 BJ	1.2 BJ	3.8	0.77 BJ
Vanadium	150 or SB	1-300	NA	23.3	21	20.6	29.2	19.1
Zinc	20 or SB	9-50	10000	112 *	189 *	50.2 *	127 *	107 *
Cyanide	NA	NA	27	U	0.51 B	0.31 B	U	0.27 B

** = Average lead background levels in metropolitan or suburban areas or near highways.

SB = Site background.

1) = Recommended soil cleanup objective (RSCO) as referenced in NYSDEC TAGM 4046 dated January 24, 1994.
Cadmium results also compared to RSCO of 10 ppm listed in the 1995 “proposed” TAGM 4046.
Chromium results also compared to RSCO of 50 ppm listed in the 1995 “proposed” TAGM 4046.

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

(3) = Brownfield Cleanup Program soil cleanup objective (BCP SCO) for Track 2 (restricted residential use) as referenced in 6 NYCRR Part 375 Environmental Remediation Programs dated December 14, 2006.

0.89 = Exceeds SCO

E = Reported value estimated due to interference

B= Reported value less than contract required detection limit, but greater than instrument detection limit

N = Spiked sample recovery not within control limits

* = Duplicate analysis not within control limits

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

Table 8 (Page 2 of 3)
185 Mt. Hope Avenue, Rochester, New York
NYSDEC Site #C828124

Summary of Target Analyte List Metals and Cyanide
in mg/Kg or Parts Per Million (ppm)

Soil Samples

Detected Analyte	RSCO (1)	Typical Background Range (2)	SCO (3)	007 SBDAY-06 (8-10.3')	008 SBDAY-07 (12-15.9')	009 SBDAY-09 (8-12')	010 SBDAY-10 (8-10.2')	011 SBDAY-08 (8-10.4')
Aluminum	SB	33000	NA	7940	5990	4900	4340	11900
Antimony	SB	NA	NA	U NJ	U NJ	U NJ	U NJ	U NJ
Arsenic	7.5 or SB	3-12	16	7.3	10.8	5.3 J	3.3 J	8
Barium	300 or SB	15-600	400	51.9	19.4 BJ	35 BJ	40.3	285
Beryllium	0.16 or SB	0-1.75	72	0.42 BJ	0.34 BJ	0.35 BJ	0.24 BJ	0.67 BJ
Cadmium	1 or SB (10)	0.1-1	4.3	U	U	U	U	U
Calcium	SB	130-35000	NA	U	U	U	45800	U
Chromium	10 or SB (50)	1.5-40	180	20.1	8.4	7.7	6.4	14.7
Cobalt	30 or SB	2.5-60	NA	4.9 BJ	6.7 BJ	5.4 BJ	3.7 BJ	13.3
Copper	25 or SB	1-50	270	16.5	11.5	7.1	11.3	4.2 BJ
Iron	2,000 or SB	2000-550000	NA	15200 *	11900 *	12000 *	9970 *	24800 *
Lead	SB	200-500**	400	23.5	8.5	34.2	5.4	17.9
Magnesium	SB	100-5000	NA	U *	U *	U *	U *	U *
Manganese	SB	50-5000	2000	374 *	166 *	309 *	545 *	**4060** *
Mercury	0.1	0.001-0.2	0.81	0.072 BJ	U	U	U	U
Nickel	13 or SB	0.5-25	310	13.4	15.2	9.7	7.6	16.8
Potassium	SB	8500-43000	NA	1010 BJ	820 BJ	659 BJ	683 BJ	1120 BJ
Selenium	2 or SB	0.1-3.9	180	U NJ	U NJ	U NJ	U NJ	U NJ
Silver	SB	NA	180	4 *	U *	0.44 B*J	U *	9 *
Sodium	SB	6000-8000	NA	U	U	U	U	U
Thallium	SB	NA	NA	1.7 BJ	0.82 BJ	1.2 BJ	0.55 BJ	4.3
Vanadium	150 or SB	1-300	NA	16	11.8 BJ	13.1	10.8	22.3
Zinc	20 or SB	9-50	10000	85.5 *	54.2 *	50.3 *	23.7 *	123 *
Cyanide	NA	NA	27	0.38 B	U	3.1	U	0.35 B

** = Average lead background levels in metropolitan or suburban areas or near highways.

SB = Site background.

1) = Recommended soil cleanup objective (RSCO) as referenced in NYSDEC TAGM 4046 dated January 24, 1994.
Cadmium results also compared to RSCO of 10 ppm listed in the 1995 “proposed” TAGM 4046.
Chromium results also compared to RSCO of 50 ppm listed in the 1995 “proposed” TAGM 4046.

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

(3) = Brownfield Cleanup Program soil cleanup objective (BCP SCO) for Track 2 (restricted residential use) as referenced in 6 NYCRR Part 375 Environmental Remediation Programs dated December 14, 2006.

0.89 = Exceeds SCO

E = Reported value estimated due to interference

B= Reported value less than contract required detection limit, but greater than instrument detection limit

N = Spiked sample recovery not within control limits

* = Duplicate analysis not within control limits

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

R = Rejected based on lack of recovery in associated matrix spike QA/QC sample

Table 8 (Page 3 of 3)
185 Mt. Hope Avenue, Rochester, New York
NYSDEC Site #C828124

Summary of Target Analyte List Metals and Cyanide
in mg/Kg or Parts Per Million (ppm)

Soil Samples

Detected Analyte	RSCO (1)	Typical Background Range (2)	SCO (3)	012 SBDAY-01B (12-14')		013 SBDAY-05A (16-18')		014 SBDAY-11 (10-12')	
Aluminum	SB	33000	NA	3850		2910		3020	
Antimony	SB	NA	NA	1.8	BNJ	1.7	BNJ	2.8	BNJ
Arsenic	7.5 or SB	3-12	16	0.44	B	1.2	B	5.3	
Barium	300 or SB	15-600	400	21.2	BEJ	38	EJ	21.6	BEJ
Beryllium	0.16 or SB	0-1.75	72	0.22	B	0.2	B	0.23	B
Cadmium	1 or SB (10)	0.1-1	4.3	1.1		1.1		2.4	
Calcium	SB	130-35000	NA	40100		38600		42400	
Chromium	10 or SB (50)	1.5-40	180	5.3	EJ	5.4	EJ	7.3	EJ
Cobalt	30 or SB	2.5-60	NA	2.9	B	2.5	B	2.9	B
Copper	25 or SB	1-50	270	7.4		7.2		14.1	
Iron	2,000 or SB	2000-550000	NA	7090	EJ	6920	EJ	13900	EJ
Lead	SB	200-500**	400	2.5	N*J	4.7	N*J	5.7	N*J
Magnesium	SB	100-5000	NA	11300	EJ	10500	EJ	13300	EJ
Manganese	SB	50-5000	2000	306	EJ	298	EJ	327	EJ
Mercury	0.1	0.001-0.2	0.81	U		U		U	
Nickel	13 or SB	0.5-25	310	6.6		5.5	B	6.8	B
Potassium	SB	8500-43000	NA	744	B	655	B	704	B
Selenium	2 or SB	0.1-3.9	180		R		R		R
Silver	SB	NA	180	U	NJ	U	NJ	U	NJ
Sodium	SB	6000-8000	NA	221	B	165	B	153	B
Thallium	SB	NA	NA	0.49	B	0.81	B	0.56	B
Vanadium	150 or SB	1-300	NA	9.2	EJ	8.9	BEJ	7.8	BEJ
Zinc	20 or SB	9-50	10000	21.6		16.6		56.4	
Cyanide	NA	NA	27	0.12	B	U		U	

** = Average lead background levels in metropolitan or suburban areas or near highways.

SB = Site background.

1) = Recommended soil cleanup objective (RSCO) as referenced in NYSDEC TAGM 4046 dated January 24, 1994.
Cadmium results also compared to RSCO of 10 ppm listed in the 1995 “proposed” TAGM 4046.
Chromium results also compared to RSCO of 50 ppm listed in the 1995 “proposed” TAGM 4046.

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

(3) = Brownfield Cleanup Program soil cleanup objective (BCP SCO) for Track 2 (restricted residential use) as referenced in 6 NYCRR Part 375 Environmental Remediation Programs dated December 14, 2006.

E = Reported value estimated due to interference

B= Reported value less than contract required detection limit, but greater than instrument detection limit

N = Spiked sample recovery not within control limits

* = Duplicate analysis not within control limits

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

R = Rejected based on lack of recovery in associated matrix spike QA/QC sample

Table 9 (Page 1 of 2)
185 Mt. Hope Avenue, Rochester, New York
NYSDEC Site #C828124

Summary of PCBs and Pesticides
in mg/Kg or Parts Per Million (ppm)

Soil Samples

Detected Compound	RSCO (1)	SCO (2)	001 SSDAY-01 (0-2")	002 SSDAY-02 (0-2")	004 SBDAY-02 (4-8')	005 SBDAY-03 (8-9.2')	006 SBDAY-04 (4-8')	007 SBDAY-06 (8-10.3')	008 SBDAY-07 (12-15.9')
Heptachlor epoxide	0.02	NA	0.0049 PJN	U J	U J	U J	U J	U J	U J
4,4-DDE	2.1	8.9	0.006 PJ	0.011 PJ	U J	U J	0.0027 J	U J	U J
Endosulfan II	0.9	24	U	0.0023 J	U J	U J	U J	U J	U J
Endosulfan Sulfate	1	24	U	U J	0.0056 J	U J	0.004 J	U J	U J
4,4-DDT	2.1	7.9	0.007	0.024 PJ	U J	U J	U J	U J	U J
Methoxychlor	10	NA	U	0.018 J	U J	U J	0.025 J	U J	U J
Endrin ketone	NA	NA	U	U J	U J	U J	0.0062 PJN	U J	U J
Endrin aldehyde	NA	NA	U	0.0037 PJN	U J	U J	U J	U J	U J
gamma-Chlordane	0.54	NA	0.02 PJ	U J	U J	U J	U J	U J	U J
PCB (Aroclor-1260)	1/10*	1	0.05 J	0.1 PJN	U J	U J	0.11 PJ	U J	U J

NA = Not available N = Spike recoveries not met J = Estimated Value

(1) = Recommended soil cleanup objective (RSCO) as referenced in NYSDEC TAGM 4046 dated January 24, 1994 as amended by the NYSDEC's supplemental Tables dated August 22, 2001

(2) = Brownfield Cleanup Program soil cleanup objective (BCP SCO) for Track 2 (restricted residential use) as referenced in 6 NYCRR Part 375 Environmental Remediation Programs dated December 14, 2006.

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

P = Greater than 25% difference in detection between two GC columns used for primary and confirmation analyses. The lower of the two values is reported.

* = RSCO for surface soil is 1 ppm / RSCO for subsurface soil is 10 ppm

Table 9 (Page 2 of 2)
185 Mt. Hope Avenue, Rochester, New York
NYSDEC Site #C828124

Summary of PCBs and Pesticides
in mg/Kg or Parts Per Million (ppm)

Soil Samples

Detected Compound	RSCO (1)	SCO (2)	009 SBDAY-09 (8-12')	010 SBDAY-10 (8-10.2')	011 SBDAY-08 (8-10.4')	012 SBDAY-01B (12-14')	013 SBDAY-05A (16-18')	014 SBDAY-11 (10-12')
Heptachlor epoxide	0.02	NA	U	U	U	U	U	U
4,4-DDE	2.1	8.9	U	U	U	U	U	U
Endosulfan II	0.9	24	U	U	U	U	U	U
Endosulfan Sulfate	1	24	U	U	U	U	U	U
4,4-DDT	2.1	7.9	U	U	U	U	U	U
Methoxychlor	10	NA	U	U	U	U	U	U
Endrin ketone	NA	NA	U	U	U	U	U	U
Endrin aldehyde	NA	NA	U	U	U	U	U	U
gamma-Chlordane	0.54	NA	U	U	U	U	U	U
PCB (Aroclor-1260)	1/10*	1	U	U	U	U	U	U

NA = Not available N = Spike recoveries not met J = Estimated Value

(1) = Recommended soil cleanup objective (RSCO) as referenced in NYSDEC TAGM 4046 dated January 24, 1994 as amended by the NYSDEC's supplemental Tables dated August 22, 2001

(2) = Brownfield Cleanup Program soil cleanup objective (BCP SCO) for Track 2 (restircted residential use) as referenced in 6 NYCRR Part 375 Environmental Remediation Programs dated December 14, 2006.

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

P = Greater than 25% difference in detection between two GC columns used for primary and confirmation analyses. The lower of the two values is reported.

* = RSCO for surface soil is 1 ppm / RSCO for subsurface soil is 10 ppm

Table 10 (Page 1 of 2)
185 Mt. Hope Avenue, Rochester, New York
NYSDEC Site #C828124

Summary of Detected Volatile Organic Compounds (VOCs)
in ug/L or Parts per Billion (ppb)

Groundwater Samples

Detected Compound	Groundwater Standard or Guidance Value (1)	016 MWDAY-01 (03/29/05)	017 MWDAY-02 (03/29/05)	018 MW-3 (03/29/05)	019 MWURS-3 (03/30/05)	020 MWURS-4 (03/30/05)
Cyclohexane	NA	7 J	U	520 D	U	U
Methylcyclohexane	NA	9 J	U	310 D	U	U
Benzene	1	U	U	**540** D	U	U
1,2-Dichloroethane	0.6	U	U	**13**	U	U
Toluene	5	U	U	**210** D	U	U
Ethylbenzene	5	U	U	**700** D	U	U
Xylene (total)	5	**6** J	U	**2600** D	U	U
Isopropylbenzene	5	U	U	**92**	U	U
TOTAL VOCS*	NA	22 J	U	4985 JD	U	U
TOTAL TICS*	NA	22 J	U	5942 NJ	U	U
TOTAL VOCS AND TICS*	NA	44 J	U	10927 NJD	U	U

NA = Not available J = Estimated value TIC = Tentatively Identified Compound

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

13 = Exceeds groundwater standard or guidance value N = Spiked sample recovery not within control limits

D = Compound identified in an analysis at a secondary dilution factor

U = Not detected at concentrations above reported analytical laboratory detection limits

* = Does not include constituents that were detected in associated blank as well as in the sample

B = Constituent detected in Blank Analysis

Table 10 (Page 2 of 2)
185 Mt. Hope Avenue, Rochester, New York
NYSDEC Site #C828124

Summary of Detected Volatile Organic Compounds (VOCs)
in ug/L or Parts per Billion (ppb)

Groundwater Samples

Detected Compound	Groundwater Standard or Guidance Value (1)	023 MWDAY-01 (09/08/05)	024 MWDAY-02 (09/08/05)	025 MW-3 (09/08/05)	026 MWURS-3 (09/08/05)	027 MWURS-4 (09/08/05)
Cyclohexane	NA	7 J	U	420 D	U	U
Methylcyclohexane	NA	11	U	170	U J	U
Benzene	1	U	U	**650** D	U	U
1,2-Dichloroethane	0.6	U	U	U	U	U
Toluene	5	U	U	**140** B	U	U
Ethylbenzene	5	U	U	**690** D	U	U
Xylene (total)	5	**5** J	U	**1500** D	U	U
Isopropylbenzene	5	U	U	**110**	U	U
TOTAL VOCS*	NA	23 J	U	3540 D	U J	U
TOTAL TICS*	NA	40 NJ	56 NJ	6396 NJD	U	U
TOTAL VOCS AND TICS*	NA	63 NJ	56 NJ	9936 NJD	U J	U

NA = Not available J = Estimated value TIC = Tentatively Identified Compound

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

5 = Exceeds groundwater standard or guidance value

D = Compound identified in an analysis at a secondary dilution factor

U = Not detected at concentrations above reported analytical laboratory detection limits

* = Does not include constituents that were detected in associated blank as well as in the sample

B = Constituent detected in Blank Analysis

Table 11 (Page 1 of 2)
185 Mt. Hope Avenue, Rochester, New York
NYSDEC Site #C828124

Summary of Detected Semi-Volatile Organic Compounds (SVOCs)
in ug/L or Parts per Billion (ppb)

Groundwater Samples

Detected Compound	Groundwater Standard or Guidance Value (1)	016 MWDAY-01 (03/29/05)	017 MWDAY-02 (03/29/05)	018 MW-3 (03/29/05)	019 MWURS-3 (03/30/05)	020 MWURS-4 (03/30/05)
Phenol	1	U	U	**8** J	U	U
2-Methylphenol	NA	U	U	3 J	U	U
2,4-Dimethylphenol	50	U	U	9 J	U	U
Naphthalene	10	U	U	**210** D	U	U
Caprolactam	NA	U	U	U	U	U
2-Methylnaphthalene	NA	U	U	40	U	U
Carbazole	NA	U	U	2 J	U	U
TOTAL SVOCS*	NA	U	U	272 JD	U	U
TOTAL TICS*	NA	25 NJ	10 J	1584 NJD	U	U
TOTAL SVOCS AND TICS*	NA	25 NJ	10 J	1856 NJD	U	U

NA = Not available J = Estimated value TIC = Tentatively Identified Compound

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

8 = Exceeds groundwater standard or guidance value

U = Not detected at concentrations above reported analytical laboratory detection limits

* = Does not include constituents that were detected in associated blank as well as in the sample

Table 11 (Page 2 of 2)
185 Mt. Hope Avenue, Rochester, New York
NYSDEC Site #C828124

Summary of Detected Semi-Volatile Organic Compounds (SVOCs)
in ug/L or Parts per Billion (ppb)

Groundwater Samples

Detected Compound	Groundwater Standard or Guidance Value (1)	023 MWDAY-01 (09/08/05)	024 MWDAY-02 (09/08/05)	025 MW-3 (09/08/05)	026 MWURS-3 (09/08/05)	027 MWURS-4 (09/08/05)
Phenol	1	U	U	**5** J	U	U
2-Methylphenol	NA	U	U	U	U	U
2,4-Dimethylphenol	50	U	U	U J	U J	U
Naphthalene	10	U	U	**250** D	U	U
Caprolactam	NA	34	17	U	11	57
2-Methylnaphthalene	NA	U	U	23 J	U	U
Carbazole	NA	U	U	2 J	U	U
TOTAL SVOCS*	NA	34	17	280 DJ	11	57
TOTAL TICS*	NA	22 NJ	12 NJ	2100 NJD	10 NJ	21 J
TOTAL SVOCS AND TICS*	NA	56 NJ	29 NJ	2380 NJD	21 NJ	78 J

NA = Not available J = Estimated value TIC = Tentatively Identified Compound

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

8 = Exceeds groundwater standard or guidance value N = Spiked sample recovery not within control limits

U = Not detected at concentrations above reported analytical laboratory detection limits

* = Does not include constituents that were detected in associated blank as well as in the sample

Table 12
185 Mt. Hope Avenue, Rochester, New York
NYSDEC Site #C828124

Summary of Target Analyte List Metals and Cyanide
in ug/L or Parts per Billion (ppb)

Groundwater Samples

Detected Analyte	Groundwater Standard or Guidance Value (1)	016 MWDAY-01 (03/29/05)	017 MWDAY-02 (03/29/05)	018 MW-3 (03/29/05)	019 MWURS-3 (03/30/05)	020 MWURS-4 (03/30/05)
Aluminum	NA	176 B	15.7 B	24.5 B	U	1240
Antimony	3	2.7 B	**3.2** B	U	U	U
Arsenic	25	10.7	4.6 B	9.8 B	4.4 B	19.6
Barium	1000	715 EJ	65.4 BEJ	547 EJ	633 EJ	**1260** EJ
Beryllium	3	U	U	U	U	U
Cadmium	5	U	U	U	U	U
Calcium	NA	362000	404000	197000	330000	659000
Chromium	50	U	U	U	U	U
Cobalt	NA	11 B	8 B	U	U	0.57 B
Copper	200	5.2 B	3 B	3.3 B	1.3 B	5.2 B
Iron	300	**16300** E	**14700** E	**11000** E	**11500** E	**52300** E
Lead	25	U	U	U	U	4.4
Magnesium	35000	**70100** EJ	32600 EJ	**100000** EJ	**73500** EJ	**85800** EJ
Manganese	300	**729**	**1280**	65.6	**435**	**6900**
Mercury	0.7	U	U	U	U	U
Nickel	100	6.3 B	6.9 B	U	U	0.84 B
Potassium	NA	17800	22800	13400	12100	10600
Selenium	10	R	R	R	R	R
Silver	50	R	R	R	R	R
Sodium	20000	**657000**	**307000**	**80300**	**462000**	**516000**
Thallium	0.5	U	U	U	U	**5.4** B
Vanadium	NA	0.56 B	U	1.7 B	U	2.7 B
Zinc	2000	16 B	26.8	4.4 B	U	9.3 B
Cyanide	200	U	11.7	**280**	U	4 B

** = Average lead background levels in metropolitan or suburban areas or near highways.

SB = Site background.

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

1280 = Exceeds groundwater standard or guidance value

E = Reported value estimated due to interference

B= Reported value less than contract required detection limit, but greater than instrument detection limit

N = Spiked sample recovery not within control limits

* = Duplicate analysis not within control limits

U = Not detected at concentrations above reported analytical laboratory detection limits

J= Estimated Value

R = Rejected based on lack of recovery in associated matrix spike QA/QC sample.

Table 13
185 Mt. Hope Avenue, Rochester, New York
NYSDEC Site #C828124

Summary of PCBs and Pesticides
in ug/L or Parts per Billion (ppb)

Groundwater Samples

Detected Compound	Groundwater Standard or Guidance Value (1)	016 MWDAY-01 (03/29/05)	017 MWDAY-02 (03/29/05)	018 MW-3 (03/29/05)	019 MWURS-3 (03/30/05)	020 MWURS-4 (03/30/05)
gamma-BHC (Lindane)	0.05	U	0.029 JP	U	U	U
gamma-Chlordane	0.05	U	**0.073** JP	U	U	U
Total Aroclors (PCBs)	0.09	U	U	U	U	U

NA = Not available

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

U = Not detected at concentrations above reported analytical laboratory detection limits

0.073 = Exceeds groundwater standard or guidance value

J = Estimated value

P = greater than 25% difference for detected concentration between the two GC columns. The lower concentration is reported.

Table 14
185 Mt. Hope Avenue, Rochester, New York
NYSDEC Site #C828124

Summary of Detected Volatile Organic Compounds (VOCs)
in ug/L or Parts Per Billion (ppb)

QA/QC Samples

Detected Compound	003 FB020405	015 FB022405	021 FB032905	022 TB033005	028 FB090805	029 TB090805
Chloromethane	U	U	U	U	2 J	U
Methylene Chloride	U	U	U	U	3 J	3 J
Toluene	U	U	U	U	1 JB	1 JB
TOTAL VOCS	U	U	U	U	6 JB	4 JB
TOTAL TICS	U	U	U	U	U	U
TOTAL VOCS AND TICS	U	U	U	U	6 JB	4 JB

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

TIC = Tentatively identified compound

Table 15
185 Mt. Hope Avenue, Rochester, New York
NYSDEC Site #C828124

Summary of Detected Semi-Volatile Organic Compounds (SVOCs)
in ug/L or Parts Per Billion (ppb)

QA/QC Samples

Detected Compound	003 FB020405	015 FB022405	021 FB032905	028 FB090805
TOTAL SVOCS	U J	U J	U	U
TOTAL TICS	U J	U J	U	37 NJ
TOTAL SVOCS AND TICS	U J	U J	U	37 NJ

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

TIC = Tentatively identified compound

Table 16
185 Mt. Hope Avenue, Rochester, New York
NYSDEC Site #C828124

Summary of Target Analyte List Metals and Cyanide
in ug/L or Parts Per Billion (ppb)

QA/QC Samples

Detected Analyte	003 FB020405	015 FB022405	021 FB032905
Aluminum	29.3 BJ	35.3 B	U
Antimony	U	3 B	U
Arsenic	U	U	U
Barium	25.2 BJ	6 B	U E
Beryllium	U	U	U
Cadmium	U	U	U
Calcium	36200	6520 EJ	U
Chromium	0.67 BJ	U	U
Cobalt	U	0.63 B	U
Copper	0.73 BJ	8.3 B	U
Iron	57.5 BJ	52.4 B	15.6 BE
Lead	U	U	U
Magnesium	18200	148 B	8.3 BE
Manganese	1.3 BJ	3.5 B	1.9 BE
Mercury	U	U	U
Nickel	U	0.9 B	U
Potassium	1150 BJ	U	68 B
Selenium	U	U	U N
Silver	U	U	0.81 BN
Sodium	9650	941 B	42.9 B
Thallium	U	U	U
Vanadium	U	U	U
Zinc	4.6 BJ	12 B	2.6 B
Cyanide	2.5 BJ	4.4 B	2.4 B

E = Reported value estimated due to interference

B= Reported value less than contract required detection limit, but greater than instrument detection limit

N = Spiked sample recovery not within control limits

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

Table 17
185 Mt. Hope Avenue, Rochester, New York
NYSDEC Site #C828124

Summary of PCBs and Pesticides
in ug/L or Parts Per Billion (ppb)

QA/QC Samples

Detected Compound	003 FB020405	015 FB022405	021 FB032905
Pesticides	U J	U J	U
PCBs	U J	U J	U

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

TABLE 18

Nature and Extent of Contamination

185 Mt. Hope Avenue, Rochester, New York
Samples Collected February 2005 through December 2005

SOIL	Contaminants of Concern	Concentration Range Detected (ppm)[a]	SCG[c] (ppm)[a]	Frequency of Exceeding SCG
Volatile Organic Compounds (VOCs)	Ethylbenzene	ND – 110	41	1 of 13
	Xylene	ND – 380	100	1 of 13
Semi-Volatile Organic Compounds (SVOCs)	Benzo(a)anthracene	ND – 1.4	1	1 of 13
	Benzo(b)fluoranthene	ND – 2	1	1 of 13
	Benzo(a)pyrene	ND – 1.3	1	1 of 13
Inorganics	Manganese	166 – 4,060	2,000	1 of 13
	Mercury	ND – 0.89	0.81	1 of 13

GROUNDWATER	Contaminants of Concern	Concentration Range Detected (ppb)[b]	SCG[c] (ppb)[b]	Frequency of Exceeding SCG
VOCs	Benzene	ND – 650	1	2 of 10
	Ethylbenzene	ND – 700	5	2 of 10
	Isopropylbenzene	ND – 110	5	2 of 10
	Toluene	ND – 210	5	2 of 10
	Total Xylenes	ND – 2,600	5	4 of 10
	1,2-Dichloroethane	ND – 13	5	1 of 10
SVOCs	Naphthalene	ND – 250	10	2 of 10
	Phenol	ND – 8	1	2 of 10
Inorganics	Antimony	ND – 3.2	3	1 of 5
	Barium	65.4 – 1,260	1,000	1 of 5
	Iron	11,000 – 52,300	300	5 of 5
	Magnesium	32,600 – 100,000	35,000	4 of 5
	Manganese	65.6 – 6,900	300	4 of 5
	Sodium	80,300 – 657,000	20,000	5 of 5
	Thallium	ND – 5.4	0.5	1 of 5
	Cyanide	ND – 280	200	1 of 5
Pesticides	Gamma Chlordane	ND – 0.073	0.05	1 of 5

[a] ppm = parts per million, which is equivalent to milligrams per kilogram (mg/Kg) in soil

[b] ppb = parts per billion, which is equivalent to micrograms per liter (ug/L) in water

[c] SCG = standards, criteria and guidance: NYSDEC Track 2 (Restricted Residential Use) SCOs for soil; NYSDEC TOGS 1.1.1 standards and guidance values for groundwater

ND = Not detected above reported analytical laboratory detection limit

APPENDIX B

Geophysical Survey Report and TP-1 Test Pit Log

90 B John Muir Drive
Amherst, New York 14228
(716) 565-0624 • Fax (716) 565-0625

GEOMATRIX

April 14, 2005

Jeffrey Danzinger
Day Environmental, Inc.
40 Commercial Street
Rochester, New York 14614-1008

Dear Mr. Danzinger:

Subject: Geophysical Survey Results – 185 Mount Hope Blvd., Rochester, NY

1.0 INTRODUCTION

This report presents the results of a geophysical investigation performed at a site located at 185 Mt. Hope Blvd in Rochester, NY. Historical information compiled by others indicates a potential for underground storage tanks (USTs) to exist beneath the site. An apartment building and parking lot currently occupies the property. Vehicles were moved from the lot prior to the geophysical survey.

A geophysical survey was performed by Geomatrix Consultants, Inc. (Geomatrix) to map the distribution of buried metals in an attempt to locate anomalies indicative of underground metallic objects. The survey was performed on April 7, 2005 utilizing electromagnetic techniques.

The geophysical results presented herein are intended to serve as a guide to focus any future intrusive investigations, if warranted. Additional collaborative data are generally necessary to confirm geophysical anomalies.

2.0 METHODOLOGY

A reference grid was installed to facilitate data acquisition along lines spaced three feet apart. The grid was marked with orange and yellow spray paint. Grid north was taken as the direction perpendicular to the sidewalk along Mt Hope Blvd.

The site was geophysically surveyed using the Geonics EM61. The EM61 unit is a high sensitivity, high resolution time domain electromagnetic (TDEM) metal detector that can detect both ferrous and nonferrous metallic objects. It has an approximate investigation depth of 10 feet. The processing console is contained in a backpack worn by the operator which is interfaced to a digital data logger. The transmitter and two receiver coils are located on a two-wheeled cart that is pulled by the operator.

The device's transmitter coil generates a pulsed primary EM field at a rate of 150 pulses per second, inducing eddy currents into the subsurface. The decay rates of these eddy currents are measured by two, 3.28 foot by 1.64 foot (1 meter by ½ meter) rectangular receiver coils. By taking the measurements at a relatively long time frame after termination of the primary pulse, the response is practically independent of the survey area's terrain conductivity. Specifically, the decay rates of the eddy currents are much longer for metals than for normal soils allowing the discrimination of the two.

EM61 in use at the site

Data are collected from the EM61's two receiver coils. One of the receiver coils is located coincident to the transmitter coil. The other receiver coil is located 1.31 feet (0.4 meters) above the transmitter coil. Data from the top receiver coil are stored on Channel 1 of a digital data logger. Data from the bottom receiver coil are stored on Channel 2 of the data logger. Channel 1 and Channel 2 data are simultaneously recorded at each station location. The instrument responses are recorded in units of milliVolts (mV). Data were recorded digitally by a data logger at a rate of approximately 2 measurements per foot along the survey lines which were spaced 3 feet apart.

3.0 RESULTS

The EM61 data for this Site are presented in Figure 1. A base map provided by Day is overlain on the geophysical figure. The color bar to the right of the map indicates the colors associated with the respective measured values. Areas suspected to be free of buried metals are shown as color shades of light blue. All areas exhibiting a response greater than background (0 to 45 mVolts) likely contain buried metals. These areas are depicted in shades of dark blue through yellow on the figure.

Anomaly A is comprised of two buried metal anomalies located in the southeast portion of the study area. The base map has notations, presumably interpreted from Sanborn maps, showing gas tanks ("G.T." on the figure) in this area. It is possible that Anomaly A is related to two USTs. It is possible that any of the additional above background responses may be related to a UST; however, it is more likely that they are associated with minor amounts of buried metals.

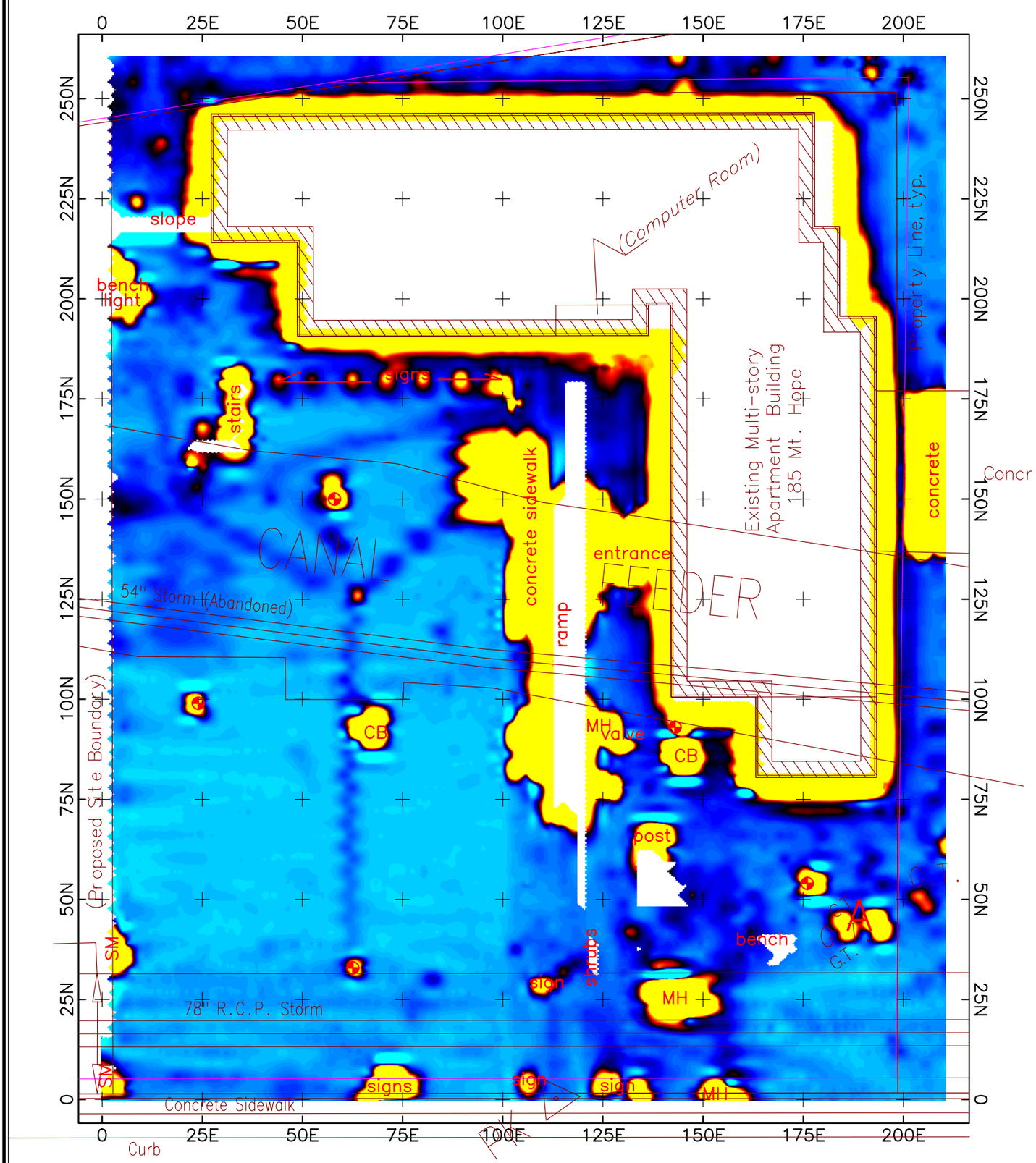
4.0 LIMITATIONS

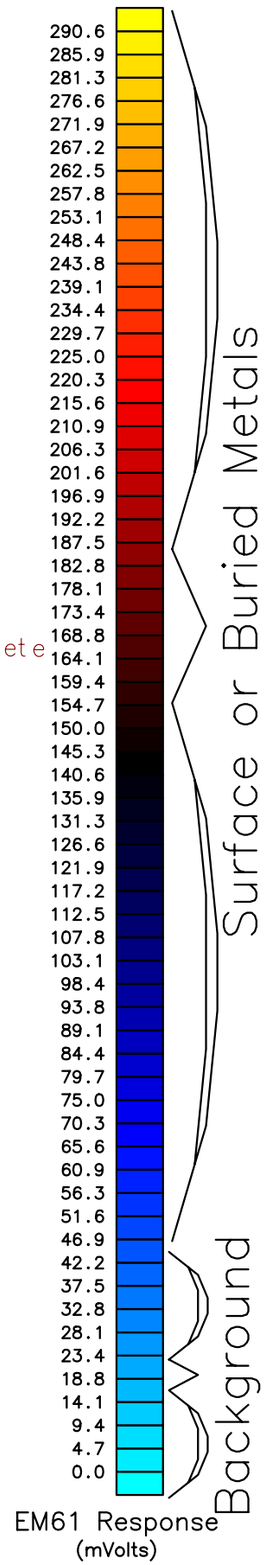
The geophysical methods used during this survey are established, indirect techniques for non-invasive subsurface reconnaissance exploration. As these instruments utilize indirect methods, they are subject to inherent limitations and ambiguities. All geophysical methods utilize interpretative techniques which can be significantly impacted by varying site conditions. Anomalies can only be identified if they show recognizable patterns against data representative of background or natural conditions. Therefore, where possible, confirmation of any geophysical anomalies identified or interpreted should be sought through the use of historical aerial photography, test pit and/or borehole information.

We trust the information contained in this report is sufficient for your present needs. Please do not hesitate to contact us if you have any questions or require additional information.

Sincerely yours,
GEOMATRIX CONSULTANTS, INC.

John Luttinger
Senior Geophysicist





A Geophysical Anomaly discussed in report

Monitoring well observed during survey.

MH manhole

CB catch basin

SM surface metal

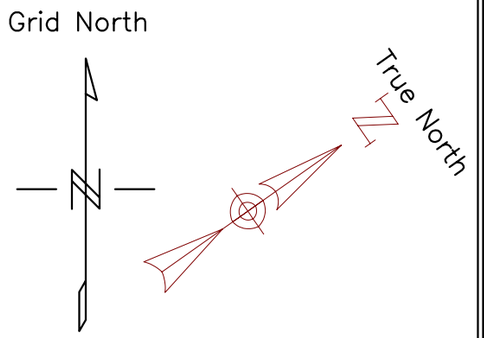


Figure 1

Geophysical Survey Results
Color Contours of EM61 Data
(mVolts)

185 Mount Hope Blvd
Rochester, NY
Day Environmental, Inc.

Geomatrix (716) 565-0624

day
DAY ENVIRONMENTAL, INC.
ENVIRONMENTAL CONSULTANTS
AN AFFILIATE OF DAY ENGINEERING, P.C.

Project #:	3618S-05		
Project Address:	185 Mt. Hope Avenue		
	Rochester, New York	Date:	8/5/2005
DAY Representative:	C. Davidson	Test Pit Depth:	10.0'
Contractor:	Arrow Contracting, Inc.	Depth to Water:	Approximately 7.0'
Equipment:	Kubota KX121-3 Mini-Excavator		

TEST PIT TP-1

Depth (ft)	PID Reading (ppm)	Samples Collected	PID Headspace (ppm)	Sample Description	Notes
1-	0.0			Brown Sand and Gravel, trace asphalt, brick, rebar, glass (FILL), moist.	Encountered steel beam set in 3' x 3' concrete pier approximately 0.5 foot below grade. Pier extends to depth up to approximately 5'
2-	0.0				
3-	0.0				
4-	50				Petroleum-type odors first encountered
5-					
6-				Black-stained Silty SAND, trace Gravel, moist	
7-	1,500				Petroleum impact greatest along east side of test pit
8-	514				
9-					
10-	75				
11-				Terminated at 10.0' (extent of mini-excavator reach)	
12-					
13-					
14-					
15-					
16-					

Notes: 1) Water levels were made at the times and under conditions stated. Fluctuations of groundwater levels may occur due to seasonal factors and other conditions.
2) Stratification lines represent approximate boundaries. Transitions may be gradual.
3) PID readings are referenced to a benzene standard measured in the headspace above the sample using a MiniRae 2000 equipped with a 10.6 eV lamp.
4) NA = Not Available or Not Applicable

TEST PIT TP- 1

40 COMMERCIAL STREET
ROCHESTER, NEW YORK 14614-1008
(585) 454-0210
FAX (585) 454-0825
www.dayenvironmental.com
60 EAST 42nd STREET, SUITE 1641
NEW YORK, NEW YORK 10165-1617
(212) 986-8645
FAX (212) 986-8657

APPENDIX C

Test Boring Logs and Monitoring Well Logs

Day Environmental, Inc.
40 Commercial Street
Rochester, New York 14614-1008
(585) 454-0210

BORING NUMBER: SBDAY-01

Project: 185 Mt. Hope Ave., Rochester, NY
Project No: 3618S-05
DAY Representative: J. Scherer
Boring Location: See Site Plan
Drilling Contractor: SLC Environmental Services
Ground Surface Elevation: NA
Datum: NA
Drilling Rig: Geoprobe 54LT
Start Date: 2/03/05
Completion Date: 2/03/05
Sampling Method: Direct Push
Borehole Diameter: 2.25"
Borehole Depth: 10.5'
Completion Method: Grouted
Water Level: Not Encountered

Depth (feet)	Blows per 0.5'	Number	Depth (feet)	% Recovery	N-Value or RQD %	Peak PID Reading (ppm)	Well Installation Log	Sample Description
1						0.0		TOPSOIL Brown medium to coarse Sand with Gravel, Brick, Cinders, Roots (FILL)
2	NA	S-1	0-4	50	NA	0.0		
3						0.0 (HS)		... concrete fragments
4								Brown Silty fine SAND, damp
5						0.0		
6	NA	S-2	4-8	90	NA	0.0		Brown fine to medium SAND, some Silt, damp ... moist
7						0.0		
8						0.0 (HS)		
9	NA	S-3	8-10.5	75	NA	0.0 0.0 0.5		Brown medium to coarse SAND with Gravel, moist
10						1.5 (HS)		... petroleum-type odor
11								Refusal at 10.5'
12								
13								
14								
15								
16								
17								
18								
19								
20								

File: 3501b1.log

Day Environmental, Inc.
40 Commercial Street
Rochester, New York 14614-1008
(585) 454-0210

BORING NUMBER: SBDAY-01A

Project: 185 Mt. Hope Ave., Rochester, NY
Project No: 3618S-05
DAY Representative: J. Scherer
Boring Location: See Site Plan
Drilling Contractor: SLC Environmental Services
Ground Surface Elevation: NA
Datum: NA
Drilling Rig: Simco Earthprobe 200
Start Date: 2/04/05
Completion Date: 2/04/05
Sampling Method: Direct Push
Borehole Diameter: 2.25"
Borehole Depth: 10.0'
Completion Method: Grouted
Water Level: 10.0'

Depth (feet)	Blows per 0.5'	Number	Depth (feet)	% Recovery	N-Value or RQD %	Peak PID Reading (ppm)	Well Installation Log	Sample Description
1						0.0		TOPSOIL
								... Roots
2						0.0		... Gravel
	NA	S-1	0-4	90	NA			Brown fine to medium Sand, trace Silt, Roots, Cinders (FILL)
3						0.0		
4						(No HS)		
						0.0		Brown fine to medium SAND, moist
5						0.0		
6	NA	S-2	4-8	90	NA			
7						0.0		
8						(0.0 HS)		
						0.0		
9	NA	S-3	8-10	30	NA	0.0		... trace Silt and Gravel
10						(No HS)		... wet
								Refusal at 10.0'
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

File: 3501b1a.log

Day Environmental, Inc.
40 Commercial Street
Rochester, New York 14614-1008
(585) 454-0210

BORING NUMBER: SBDAY-02

Project: 185 Mt. Hope Ave., Rochester, NY
Project No: 3618S-05
DAY Representative: J. Scherer
Boring Location: See Site Plan
Drilling Contractor: SLC Environmental Services
Ground Surface Elevation: NA
Datum: NA
Drilling Rig: Geoprobe 54LT
Start Date: 2/03/05
Completion Date: 2/03/05
Sampling Method: Direct Push
Borehole Diameter: 2.25"
Borehole Depth: 14.8'
Completion Method: Grouted
Water Level: 14.5'

Depth (feet)	Blows per 0.5'	Number	Depth (feet)	% Recovery	N-Value or RQD %	Peak PID Reading (ppm)	Well Installation Log	Sample Description
1						0.0		Asphalt
2	NA	S-1	0-4	50	NA	0.0		Brown mediun to coarse Sand, with Gravel, Brick, Cinders and Ash (FILL)
3						0.0		
4						0.0 (HS)		
5						0.0		
6	NA	S-2	4-8	40	NA	0.0		
7						0.0		
8						0.0 (HS)		Black Silt and Cinders (FILL)
9						0.0		Green to Gray fine Sandy SILT, moist
10	NA	S-3	8-12	95	NA	0.0		
11						0.0		
12						0.0 (HS)		
13	NA	S-4	12-14.8	90	NA	0.0		Dark brown Silty fine SAND, moist
14						0.0		Red-brown find Sandy SILT, moist
15						0.0 (HS)		Reddish-brown Silty fine SAND, Gravel, wet
16								Refusal at 14.8'
17								
18								
19								
20								

File: 3501b2.log

Day Environmental, Inc.
40 Commercial Street
Rochester, New York 14614-1008
(585) 454-0210

BORING NUMBER: SBDAY-03

Project: 185 Mt. Hope Ave., Rochester, NY
Project No: 3618S-05
DAY Representative: J. Scherer
Boring Location: See Site Plan
Drilling Contractor: SLC Environmental Services
Ground Surface Elevation: NA
Datum: NA
Drilling Rig: Geoprobe 54LT
Start Date: 2/03/05
Completion Date: 2/03/05
Sampling Method: Direct Push
Borehole Diameter: 2.25"
Borehole Depth: 9.2'
Completion Method: Grouted
Water Level: Not Encountered

Depth (feet)	Blows per 0.5'	Number	Depth (feet)	% Recovery	N-Value or RQD %	Peak PID Reading (ppm)	Well Installation Log	Sample Description
1	NA	S-1	0-4	85	NA	0.0 0.0 0.0 (2.2 HS)		Asphalt Brown medium to coarse SAND, some Gravel, damp Brown/Green Silty fine SAND, trace Clay, damp
5	NA	S-2	4-8	100	NA	0.0 4.7 5.7 7.2 (13.1 HS)		... some Clay Brown fine to medium SAND, some Gravel, moist
9	NA	S-3	8-9.2	10	NA	254 (No HS)		... petroleum-type odor Refusal at 9.2'

File: 3501b3.log

Day Environmental, Inc.
40 Commercial Street
Rochester, New York 14614-1008
(585) 454-0210

BORING NUMBER: SBDAY-04

Project: 185 Mt. Hope Ave., Rochester, NY
Project No: 3618S-05
DAY Representative: J. Scherer
Boring Location: See Site Plan
Drilling Contractor: SLC Environmental Services
Ground Surface Elevation: NA
Datum: NA
Drilling Rig: Simco Earthprobe 200
Start Date: 2/04/05
Completion Date: 2/04/05
Sampling Method: Direct Push
Borehole Diameter: 2.25"
Borehole Depth: 17.3'
Completion Method: Grouted
Water Level: 13.0'

Depth (feet)	Blows per 0.5'	Number	Depth (feet)	% Recovery	N-Value or RQD %	Peak PID Reading (ppm)	Well Installation Log	Sample Description
1						0.0		TOPSOIL
2	NA	S-1	0-4	100	NA	0.0		Brown to black medium to coarse Sand, Cinders and Gravel (FILL)
3						0.0		
4						(0.0 HS)		... trace Brick and Ash
5						0.0		... Brown
6	NA	S-2	4-8	60	NA	0.0		
7						0.0		
8						(0.0 HS)		
9						0.0		... Sandstone fragments
10	NA	S-3	8-12	5	NA	0.0		... moist
11						(No HS)		
12								
13						0.0		Green fine to medium SAND, some Silt, trace Gravel, wet
14	NA	S-4	12-16	10	NA	0.0		
15						(No HS)		
16								
17	NA	S-5	16-17.3	50	NA	0.0 0.0 (0.0 HS)		.... trace Silt
18								Refusal at 17.3'
19								
20								

File: 3501b4.log

Day Environmental, Inc.
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(585) 454-0210

BORING NUMBER: SBDAY-05

Project: 185 Mt. Hope Ave., Rochester, NY
Project No: 3618S-05
DAY Representative: J. Scherer
Boring Location: See Site Plan
Drilling Contractor: SLC Environmental Services
Ground Surface Elevation: NA
Datum: NA
Drilling Rig: Simco Earthprobe 200
Start Date: 2/04/05
Completion Date: 2/04/05
Sampling Method: Direct Push
Borehole Diameter: 2.25"
Borehole Depth: 13.2'
Completion Method: Grouted
Water Level: Not Encountered

Depth (feet)	Blows per 0.5'	Number	Depth (feet)	% Recovery	N-Value or RQD %	Peak PID Reading (ppm)	Well Installation Log	Sample Description
1						0.0		CONCRETE
2	NA	S-1	0-4	50	NA	0.0		Brown medium to coarse Sand with Cinders and Ash (FILL)
3						0.0		
4						(0.0 HS)		
5						0.0		
6	NA	S-2	4-8	50	NA	0.0		
7						0.0		
8						(0.0 HS)		... 2" lens of Wood
9						0.0		
10	NA	S-3	8-12	60	NA	0.0		Green fine Sandy SILT, moist
11						0.0		
12						(0.0 HS)		
13	NA	S-4	12-13.2	15	NA	0.0 0.0 (0.0 HS)		Refusal at 13.2'
14								
15								
16								
17								
18								
19								
20								

File: 3501b5.log

Day Environmental, Inc.
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(585) 454-0210

BORING NUMBER: SBDAY-06

Project: 185 Mt. Hope Ave., Rochester, NY
Project No: 3618S-05
DAY Representative: J. Scherer
Boring Location: See Site Plan
Drilling Contractor: SLC Environmental Services
Ground Surface Elevation: NA
Datum: NA
Drilling Rig: Geoprobe 54LT
Start Date: 2/03/05
Completion Date: 2/03/05
Sampling Method: Direct Push
Borehole Diameter: 2.25"
Borehole Depth: 10.3'
Completion Method: Grouted
Water Level: Not Encountered

Depth (feet)	Blows per 0.5'	Number	Depth (feet)	% Recovery	N-Value or RQD %	Peak PID Reading (ppm)	Well Installation Log	Sample Description
1						0.0		ASPHALT
						0.0		... black medium to coarse Sand and Gravel (FILL)
2	NA	S-1	0-4	85	NA			... Gravel and Concrete (FILL)
						0.0		Tan medium to coarse SAND and GRAVEL, damp
3								
						0.0		Green fine SAND, some Clay and Silt, damp
4						(0.0 HS)		
						0.0		
5								
						0.0		Brown fine to medium SAND, some Silt, damp
6	NA	S-2	4-8	90	NA			
						0.0		Brown Silty fine SAND, trace Gravel, moist
7								
						0.0		
8						(0.0 HS)		... trace coarse Sand
						5.3		
9	NA	S-3	8-10.3	75	NA	2.2		
						101		
10						(34.5 HS)		... Gray staining, petroleum-type odor
								Refusal at 10.3'
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

File: 3618b6.log

Day Environmental, Inc.
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BORING NUMBER: SBDAY-07

Project: 185 Mt. Hope Ave., Rochester, NY
Project No: 3618S-05
DAY Representative: J. Scherer
Boring Location: See Site Plan
Drilling Contractor: SLC Environmental Services
Ground Surface Elevation: NA
Datum: NA
Drilling Rig: Geoprobe 54LT
Start Date: 2/03/05
Completion Date: 2/03/05
Sampling Method: Direct Push
Borehole Diameter: 2.25"
Borehole Depth: 16.7'
Completion Method: Grouted
Water Level: 8.0'

Depth (feet)	Blows per 0.5'	Number	Depth (feet)	% Recovery	N-Value or RQD %	Peak PID Reading (ppm)	Well Installation Log	Sample Description
1	NA	S-1	0-4	60	NA	0.0 0.0 0.0 (0.0 HS)		TOPSOIL Brown coarse SAND and GRAVEL, damp Dark brown Silty fine SAND, damp Brown Silty fine SAND, trace Clay, damp
5	NA	S-2	4-8	100	NA	0.0 0.0 0.0 0.0 (0.0 HS)		Brown Silty fine SAND, some Clay, moist
9	NA	S-3	8-12	100	NA	0.0 0.0 0.0 (0.0 HS)		Green Silty fine SAND, wet
13	NA	S-4	12-15.9	100	NA	0.0 0.0 0.0 (0.0 HS)		Gray fine to medium SAND, some Silt, wet ... Gravel
16	NA	S-5	15.9-16.7	100	NA	0.0 (0.0 HS)		Refusal at 16.7'
17								
18								
19								
20								

File: 3618b7.log

Day Environmental, Inc.
40 Commercial Street
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(585) 454-0210

BORING NUMBER: SBDAY-08

Project: 185 Mt. Hope Ave., Rochester, NY
Project No: 3618S-05
DAY Representative: J. Scherer
Boring Location: See Site Plan
Drilling Contractor: SLC Environmental Services
Ground Surface Elevation: NA
Datum: NA
Drilling Rig: Simco Earthprobe 200
Start Date: 2/04/05
Completion Date: 2/04/05
Sampling Method: Direct Push
Borehole Diameter: 2.25"
Borehole Depth: 10.4'
Completion Method: Grouted
Water Level: Not Encountered

Depth (feet)	Blows per 0.5'	Number	Depth (feet)	% Recovery	N-Value or RQD %	Peak PID Reading (ppm)	Well Installation Log	Sample Description
1						0.0		TOPSOIL
2	NA	S-1	0-4	85	NA	0.0		Brown medium to coarse Sand with Gravel with Brick and Cinders (FILL)
3						5.3		
4						(5.3 HS)		Green SILT, some Sand and Clay, petroleum-type odor, damp
5						2.4		
6	NA	S-2	4-8	90	NA	17.4		
7						21.4		... black staining, petroleum-type odor, moist
8						(46.0 HS)		
9	NA	S-3	8-10.4	25	NA	19.8		
10						520		
11						(41.0 HS)		Refusal at 10.4'
12								
13								
14								
15								
16								
17								
18								
19								
20								

File: 3501b8.log

Day Environmental, Inc.
40 Commercial Street
Rochester, New York 14614-1008
(585) 454-0210

BORING NUMBER: SBDAY-09

Project: 185 Mt. Hope Ave., Rochester, NY
Project No: 3618S-05
DAY Representative: J. Scherer
Boring Location: See Site Plan
Drilling Contractor: SLC Environmental Services
Ground Surface Elevation: NA
Datum: NA
Drilling Rig: Simco Earthprobe 200
Start Date: 2/04/05
Completion Date: 2/04/05
Sampling Method: Direct Push
Borehole Diameter: 2.25"
Borehole Depth: 14.3'
Completion Method: Grouted
Water Level: 13.2'

Depth (feet)	Blows per 0.5'	Number	Depth (feet)	% Recovery	N-Value or RQD %	Peak PID Reading (ppm)	Well Installation Log	Sample Description
1						0.0		TOPSOIL
2	NA	S-1	0-4	100	NA	0.0		Brown medium to coarse Sand, Cinders, Ash, damp (FILL)
3						0.0		... 3" thick lens of Brick
4						(No HS)		
5						0.0		
6	NA	S-2	4-8	70	NA	0.0		Ash layer, trace Cinders (FILL)
7						0.0		
8						(1.2 HS)		
9						0.0		Black SILT, staining, damp
10	NA	S-3	8-12	100	NA	0.0		
11						1,505		Red medium to coarse Sand and Gravel, petroleum-type odor, moist
12						802		Brown Silty fine SAND, petroleum-type odor, moist
13	NA	S-4	12-14.3	70	NA	(1,305 HS) 105		... wet
14						1,141 1,222 (1,230 HS)		
15								Refusal at 14.3'
16								
17								
18								
19								
20								

File: 3501b9.log

Day Environmental, Inc.
40 Commercial Street
Rochester, New York 14614-1008
(585) 454-0210

BORING NUMBER: SBDAY-10

Project: 185 Mt. Hope Ave., Rochester, NY
Project No: 3618S-05
DAY Representative: J. Scherer
Boring Location: See Site Plan
Drilling Contractor: SLC Environmental Services
Ground Surface Elevation: NA
Datum: NA
Drilling Rig: Simco Earthprobe 200
Start Date: 2/04/05
Completion Date: 2/04/05
Sampling Method: Direct Push
Borehole Diameter: 2.25"
Borehole Depth: 10.2'
Completion Method: Grouted
Water Level: Not Encountered

Depth (feet)	Blows per 0.5'	Number	Depth (feet)	% Recovery	N-Value or RQD %	Peak PID Reading (ppm)	Well Installation Log	Sample Description
1						0.0		TOPSOIL
2	NA	S-1	0-4	100	NA	0.0		Brown medium to coarse Sand, Gravel and Brick (FILL)
3						0.0		
4						(0.0 HS)		
5						6.8		
6	NA	S-2	4-8	30	NA	30.7		Black stained medium to coarse SAND, trace Silt, petroleum-type odor, moist
7						(No HS)		
8								... Sandstone fragments
9	NA	S-3	8-10.2	15	NA	177 381		Green Silty fine SAND, trace Gravel, petroleum-type odor
10						(125 HS)		
11								Refusal at 10.2'
12								
13								
14								
15								
16								
17								
18								
19								
20								

File: 3501b10.log

Day Environmental, Inc.
40 Commercial Street
Rochester, New York 14614
(585) 454-0210

BORING NUMBER: SBDAY-01B

Project: 185 Mt. Hope Avenue, Rochester, NY
Project No: 3618S-05
DAY Representative: D. Peck
Boring Location: See Site Plan
Drilling Contractor: SLC Environmental Services
Ground Surface Elevation: NA
Datum: NA
Drilling Rig: CME-75
Start Date: 2/24/05
Completion Date: 2/24/05
Sampling Method: 2" Split Spoon, 4 1/4 HSA
Borehole Diameter: 8"
Borehole Depth: 22.0'
Completion Method: Backfilled with cement grout
Water Level: 8.0'

Depth (feet)	Blows per 0.5'	Number	Depth (feet)	% Recovery	N-Value or RQD %	Peak PID Reading (ppm)	Well Installation Log	Sample Description
1	2 3 14 27	S-1	0-2	20	17	0.0 No HS		TOPSOIL Moist Brown reworked Silty Sand (FILL)
2								
3	26 10 9 13	S-2	2-4	10	19	0.0 No HS		Reworked Silt, Sand and Gravel (FILL), moist
4								
5	9 6 6 5	S-3	4-6	5	12	0.0 No HS		Moist Brown Silty SAND
6								
7	5 5 5 5	S-4	6-8	20	10	0.0 No HS		
8								
9	6 11 13 20	S-5	8-10	60	24	0.0 0.0 HS		... medium SAND, wet
10								
11	13 20 50 50	S-6	10-12	20	70	0.0 No HS		
12								
13	30 18 24 30	S-7	12-14	70	42	0.0 1.0 HS		... fine to medium SAND, little Gravel, damp
14								
15	18 20 50-5 -	S-8	14-16	30	NA	0.0 0.0 HS		Brown fine SAND, little fine Gravel, moist/wet
16								
17	30 18 27 30	S-9	16-18	70	45	0.0 0.3 HS		
18								
19	16 20 30 35	S-10	18-20	70	50	0.0 No HS		
20								
21	15 20 25 30	S-11	20-22	70	45	0.0 No HS		
22								
23								BOH @ 22.0'

File: 3618b1.log

Day Environmental, Inc.
40 Commercial Street
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(585) 454-0210

BORING NUMBER: SBDAY-05A (MWDAY-02)

Project: 185 Mt. Hope Avenue, Rochester, NY
Project No: 3618S-04
DAY Representative: D. Peck
Boring Location: See Site Plan
Drilling Contractor: SLC Environmental Services
Ground Surface Elevation: 101.10'
Datum: 100.00' (assumed)
Drilling Rig: CME-75
Start Date: 2/25/05
Completion Date: 2/25/05
Sampling Method: 2" Split Spoon, 4 1/4 HSA
Borehole Diameter: 8"
Borehole Depth: 22.0'
Completion Method: 2" PVC Well
Water Level: 17.0' (2/25/05)

Depth (feet)	Blows per 0.5'	Number	Depth (feet)	% Recovery	N-Value or RQD %	Peak PID Reading (ppm)	Well Installation Log	Sample Description
1	- - 3 10	S-1	0-2	20	NA	0.0 No HS		4" Concrete Sidewalk stone-soil sub-base Brown reworked Silt and Gravel with Black Ash (FILL), damp
3	10 5 3 3	S-2	2-4	40	8	0.0 No HS		
5	7 3 3 3	S-3	4-6	40	6	0.0 No HS		
7	3 5 3 3	S-4	6-8	30	8	0.0 No HS		... Piece of Wood, moist
9	3 2 3 3	S-5	8-10	40	5	0.0 No HS		... Black ash and cinders
11	1 1 1 1	S-6	10-12	30	2	0.0 No HS		Gray Black Silty CLAY, swampy odor, moist
13	3 5 8 10	S-7	12-14	80	13	0.2 No HS		Gray fine SAND, some Silt, trace Gravel, wet
15	12 15 18 25	S-8	14-16	70	33	6.4 108 HS		... petroleum-type odor
17	22 40 50-5 -	S-9	16-18	50	NA	24.4 551 HS		... petroleum-type odor
19	22 26 35 42	S-10	18-20	80	61	0.5 3.8 HS		
21	20 40 50-5 -	S-11	20-22	60	NA	0.0 3.0 HS		
23								BOH @ 22.0'

File: 3618b5a.log

Day Environmental, Inc.
40 Commercial Street
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(585) 454-0210

BORING NUMBER: SBDAY-11 (MWDAY-01)

Project: 185 Mt. Hope Avenue, Rochester, NY
Project No: 3618S-05
DAY Representative: D. Peck
Boring Location: See Site Plan
Drilling Contractor: SLC Environmental Services
Ground Surface Elevation: 97.38'
Datum: 100.00' (assumed)
Drilling Rig: CME-75
Start Date: 2/24/05
Completion Date: 2/24/05
Sampling Method: 2" Split Spoon, 4 1/4 HSA
Borehole Diameter: 8"
Borehole Depth: 18.1'
Completion Method: 2" PVC Well
Water Level: 11.8' (2/25/05)

Depth (feet)	Blows per 0.5'	Number	Depth (feet)	% Recovery	N-Value or RQD %	Peak PID Reading (ppm)	Well Installation Log	Sample Description
1	60 55 33 18	S-1	0-2	50	88	0.0 HS 0.0		Asphalt and Stone Gray reworked Sand and Gravel (FILL)
2								
3	6 5 4 4	S-2	2-4	40	9	0.0 HS 0.0		Brown Silt, trace Wood and Ash (FILL)
4								
5	4 3 2 2	S-3	4-6	20	5	0.0 No HS		Gray fine SAND and SILT, damp
6								
7	4 6 9 9	S-4	6-8	50	15	0.5 HS 1.8		... possible petroleum-type odor
8								
9	12 14 14 5	S-5	8-10	50	28	3.0 HS 1.0		Silty SAND, little Gravel, moist ... petroleum-type odor
10								
11	10 8 15 15	S-6	10-12	50	23	16.2 HS 14.1		SAND and GRAVEL, petroleum-type odor
12								
13	15 18 33 30	S-7	12-14	50	51	1.0 HS 4.3		Reddish-brown Silty SAND, little Gravel, moist
14								
15	13 27 39 50	S-8	14-16	70	65	0.0 HS 0.0		... wet
16	60 50-4	S-9	16-16.9	10	NA	0.0 No HS		
17	NA	NA	16.9-18	NA	NA	NA		
18	50-1	S-10	18-18.1	0	NA	0.0 No HS		Refusal @ 18.1'

File: 3618b11.log

APPENDIX D

Well Development Logs and Well Sampling Logs

WELL DEVELOPMENT DATA
MWDAY-01

SITE LOCATION: 185 Mount Hope Avenue, Rochester, NY JOB#: 3618S-04

DATE/ TIME	3/11/05 08:50	3/11/05 09:10	3/11/05 09:23	3/11/05 09:30	3/11/05 09:35	3/11/05 09:40		
EVACUATION METHOD	None	Disposable Bailer	Disposable Bailer	Disposable Bailer	Disposable Bailer	Disposable Bailer		
PID/FID (PPM)	297	NC	NC	NC	NC	NC		
DEPTH OF WELL (FT)	16.73	NC	NC	NC	NC	17.11		
STATIC WATER LEVEL (SWL) FT	11.59	NC	NC	NC	NC	15.95		
VOLUME EVACUATED (GAL)	0	0	1.0	1.0	1.0	1.0		
TOTAL VOLUME EVACUATED (GAL)	0	0	1.0	2.0	3.0	4.0		
TEMPERATURE (^{O}C)	NC	10.8	10.6	10.5	10.7	10.2		
pH	NC	6.6	7.7	7.8	7.8	7.9		
ORP (mV)	NC	-31	-36	-45	-46	-45		
CONDUCTIVITY (µs/cm)	NC	28	25	26	26	26		
TURBIDITY (NTU)	NC	> 999	> 999	> 999	> 999	> 999		
VISUAL OBSERVATION	NC	Red-Brown Opaque	Red-Brown Opaque	Red-Brown Opaque	Red-Brown Opaque	Red-Brown Opaque		

LEGEND: NC = Not Collected
ND = Not Detected
*= Not Measurable

Day Environmental, Inc.
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WELL DEVELOPMENT DATA
MWDAY-02

SITE LOCATION: 185 Mount Hope Avenue, Rochester, NY JOB#: 3618S-04

DATE/ TIME	3/11/05 08:55	3/11/05 10:04	3/11/05 10:09	3/11/05 10:14	3/11/05 10:20	3/11/05 13:10	3/11/05 13:15	3/11/05 13:20
EVACUATION METHOD	None	Disposable Bailer	Disposable Bailer	Disposable Bailer	Disposable Bailer	Disposable Bailer	Disposable Bailer	Disposable Bailer
PID/FID (PPM)	44.4	NC	NC	NC	NC	NC	NC	NC
DEPTH OF WELL (FT)	19.40	NC	NC	NC	19.34	19.39	NC	19.39
STATIC WATER LEVEL (SWL) FT	14.18	NC	NC	NC	18.43 (DRY)	15.03	NC	18.48 (DRY)
VOLUME EVACUATED (GAL)	0	0	1.0	1.0	0.5	0	1.0	0.5
TOTAL VOLUME EVACUATED (GAL)	0	0	1.0	2.0	2.5	2.5	3.5	4.0
TEMPERATURE (^{O}C)	NC	11.4	12.4	11.9	11.2	NC	12.5	11.8
pH	NC	6.7	6.7	7.1	7.3	NC	6.6	7.2
ORP (mV)	NC	28	14	-10	-22	NC	-18	-10
CONDUCTIVITY (µs/cm)	NC	15	17	20	19	NC	18	20
TURBIDITY (NTU)	NC	609	> 999	> 999	> 999	NC	> 999	> 999
VISUAL OBSERVATION	NC	Cloudy	Cloudy and Tan	Cloudy and Tan	Cloudy and Tan	NC	Cloudy and Tan	Cloudy and Tan

LEGEND: NC = Not Collected
ND = Not Detected
*= Not Measurable

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

DAY ENVIRONMENTAL, INC.

LOW-FLOW GROUNDWATER PURGING AND SAMPLING LOG

WELL MWDAY-01

SECTION 1 - SITE AND WELL INFORMATION

SITE LOCATION 185 Mt. Hope Avenue, Rochester, NY **JOB #** 3618S-05

PROJECT NAME: Remedial Investigation **DATE:** 3/29/05

SAMPLE COLLECTOR(S): Chris Davidson **WEATHER:** ~ 35° F, cloudy

PID READING IN WELL HEADSPACE (PPM): 34.3 **MEASURING POINT:** T.O.C.

CASING TYPE: PVC **WELL DIAMETER (INCHES):** 2.0”

SCREENED INTERVAL [FT]: 7.0 – 17.0’ **WATER LEVEL (SWL) [FT]:** 11.67’

WELL DEPTH [FT]: 16.73’ **DEPTH OF PUMP INTAKE [FT]:** ~14.16’

(Do NOT Measure Well depth Prior To Purging And Sampling)

LNAPL: -- **DNAPL:** -- **OTHER OBSERVATIONS:** None

SECTION 2 – SAMPLING EQUIPMENT

CONTROL BOX: QED Well Wizard **TUBING TYPE:** HDPE

WATER QUALITY METER: Horiba U-22 **WATER LEVEL METER:** Solinst ¼” mini-101

PUMP TYPE: ¾” Bladder **PURGE GAS:** Air

CONTROL BOX DISCHARGE RATE: 1.5 sec **CONTROL BOX REFILL RATE:** 5.5 sec

STABILIZED PUMP RATE (mL/min): 125 **STABILIZED DRAWDOWN WATER LEVEL [FT]:** 11.67

SECTION 3 – WATER QUALITY DATA MONITORING

Time	Pumping Rate (mL/min)	Water Level (ft)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Conductivity (mS/cm)	pH	Temp. (C^0)	Total Vol. Pumped (mL)
0926	125	11.67	2.3	-38	419	23	6.8	8.8	0
0930	125	11.67	0.0	-56	221	23	6.9	8.8	125
0934	125	11.67	0.0	-63	220	22	7.0	8.9	250
0938	125	11.67	0.0	-67	220	22	7.0	8.9	375
0942	125	11.67	0.0	-68	219	22	7.0	8.9	500

SECTION 4 - SAMPLE IDENTIFICATION AND ANALYTICAL LABORATORY PARAMETERS

SAMPLE ID #	DATE / TIME	SAMPLING METHOD	ANALYTICAL SCAN(S)
MW-DAY-01	3/29/05 / 1030	Bladder Pump	Full TCL/TAL + Cn (OLM 04.2 + ILM 04.1)

DAY ENVIRONMENTAL, INC.

LOW-FLOW GROUNDWATER PURGING AND SAMPLING LOG

WELL MWDAY-02

SECTION 1 - SITE AND WELL INFORMATION

SITE LOCATION 185 Mt. Hope Avenue, Rochester, NY **JOB #** 3618S-05

PROJECT NAME: Remedial Investigation **DATE:** 3/29/05

SAMPLE COLLECTOR(S): Chris Davidson **WEATHER:** ~ 35° F, sunny

PID READING IN WELL HEADSPACE (PPM): 15.7 **MEASURING POINT:** T.O.C.

CASING TYPE: PVC **WELL DIAMETER (INCHES):** 2.0”

SCREENED INTERVAL [FT]: 10.0 – 20.0’ **WATER LEVEL (SWL) [FT]:** 14.33’

WELL DEPTH [FT]: 19.40’ **DEPTH OF PUMP INTAKE [FT]:** ~16.79’

(Do NOT Measure Well depth Prior To Purging And Sampling)

LNAPL: -- **DNAPL:** -- **OTHER OBSERVATIONS:** None

SECTION 2 – SAMPLING EQUIPMENT

CONTROL BOX: QED Well Wizard **TUBING TYPE:** HDPE

WATER QUALITY METER: Horiba U-22 **WATER LEVEL METER:** Solinst ¼” mini-101

PUMP TYPE: ¾” Bladder **PURGE GAS:** Air

CONTROL BOX DISCHARGE RATE: 1.5 sec **CONTROL BOX REFILL RATE:** 4.5 sec

STABILIZED PUMP RATE (mL/min): 175 **STABILIZED DRAWDOWN WATER LEVEL [FT]:** 14.33

SECTION 3 – WATER QUALITY DATA MONITORING

Time	Pumping Rate (mL/min)	Water Level (ft)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Conductivity (mS/cm)	pH	Temp. (C^0)	Total Vol. Pumped (mL)
1116	175	14.33	3.3	117	315	15	5.7	11.1	0
1120	175	14.33	2.2	76	122	15	6.0	11.2	175
1124	175	14.33	1.5	68	120	15	6.1	11.3	350
1128	175	14.33	1.2	64	118	15	6.1	11.3	525
1132	175	14.33	1.1	62	116	15	6.1	11.3	700

SECTION 4 - SAMPLE IDENTIFICATION AND ANALYTICAL LABORATORY PARAMETERS

SAMPLE ID #	DATE / TIME	SAMPLING METHOD	ANALYTICAL SCAN(S)
MW-DAY-02	3/29/05 / 1300	Bladder Pump	Full TCL/TAL + Cn (OLM 04.2 + ILM 04.1)

DAY ENVIRONMENTAL, INC.

LOW-FLOW GROUNDWATER PURGING AND SAMPLING LOG

WELL MW-3

SECTION 1 - SITE AND WELL INFORMATION

SITE LOCATION 185 Mt. Hope Avenue, Rochester, NY **JOB #** 3618S-05

PROJECT NAME: Remedial Investigation **DATE:** 3/29/05

SAMPLE COLLECTOR(S): Chris Davidson **WEATHER:** ~ 40° F, cloudy

PID READING IN WELL HEADSPACE (PPM): 1120 **MEASURING POINT:** T.O.C.

CASING TYPE: PVC **WELL DIAMETER (INCHES):** 2.0”

SCREENED INTERVAL [FT]: 10.0 – 20.0’ **WATER LEVEL (SWL) [FT]:** 14.46’

WELL DEPTH [FT]: 19.69’ **DEPTH OF PUMP INTAKE [FT]:** ~17.0’

(Do NOT Measure Well depth Prior To Purging And Sampling)

LNAPL: -- **DNAPL:** -- **OTHER OBSERVATIONS:** Petroleum-type odor

SECTION 2 – SAMPLING EQUIPMENT

CONTROL BOX: QED Well Wizard **TUBING TYPE:** HDPE

WATER QUALITY METER: Horiba U-22 **WATER LEVEL METER:** Solinst ¼” mini-101

PUMP TYPE: ¾” Bladder **PURGE GAS:** Air

CONTROL BOX DISCHARGE RATE: 1.5 sec **CONTROL BOX REFILL RATE:** 2.5 sec

STABILIZED PUMP RATE (mL/min): 200 **STABILIZED DRAWDOWN WATER LEVEL [FT]:** 14.46

SECTION 3 – WATER QUALITY DATA MONITORING

Time	Pumping Rate (mL/min)	Water Level (ft)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Conductivity (mS/cm)	pH	Temp. (C^0)	Total Vol. Pumped (mL)
1346	200	14.46	2.7	-106	372	7.6	7.5	10.6	0
1350	200	14.46	1.2	-118	241	7.6	7.7	10.6	200
1354	200	14.46	0.0	-124	81	7.5	7.7	10.6	400
1358	200	14.46	0.0	-127	80	7.6	7.7	10.6	800
1402	200	14.46	0.0	-128	80	7.5	7.7	10.6	800

SECTION 4 - SAMPLE IDENTIFICATION AND ANALYTICAL LABORATORY PARAMETERS

SAMPLE ID #	DATE / TIME	SAMPLING METHOD	ANALYTICAL SCAN(S)
MW-3	3/29/05 / 1438	Bladder Pump	Full TCL/TAL + Cn (OLM 04.2 + ILM 04.1)

DAY ENVIRONMENTAL, INC.

LOW-FLOW GROUNDWATER PURGING AND SAMPLING LOG

WELL MW-URS3

SECTION 1 - SITE AND WELL INFORMATION

SITE LOCATION 185 Mt. Hope Avenue, Rochester, NY **JOB #** 3618S-05

PROJECT NAME: Remedial Investigation **DATE:** 3/30/05

SAMPLE COLLECTOR(S): Chris Davidson **WEATHER:** ~ 40° F, sunny

PID READING IN WELL HEADSPACE (PPM): 0.0 **MEASURING POINT:** T.O.C.

CASING TYPE: PVC **WELL DIAMETER (INCHES):** 2.0”

SCREENED INTERVAL [FT]: 9.5 – 19.5’ **WATER LEVEL (SWL) [FT]:** 13.22’

WELL DEPTH [FT]: 19.77’ **DEPTH OF PUMP INTAKE [FT]:** ~16.6’

(Do NOT Measure Well depth Prior To Purging And Sampling)

LNAPL: -- **DNAPL:** -- **OTHER OBSERVATIONS:** None

SECTION 2 – SAMPLING EQUIPMENT

CONTROL BOX: QED Well Wizard **TUBING TYPE:** HDPE

WATER QUALITY METER: Horiba U-22 **WATER LEVEL METER:** Solinst ¼” mini-101

PUMP TYPE: ¾” Bladder **PURGE GAS:** Air

CONTROL BOX DISCHARGE RATE: 1.0 sec **CONTROL BOX REFILL RATE:** 2.0 sec

STABILIZED PUMP RATE (mL/min): 250 **STABILIZED DRAWDOWN WATER LEVEL [FT]:** 13.22

SECTION 3 – WATER QUALITY DATA MONITORING

Time	Pumping Rate (mL/min)	Water Level (ft)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Conductivity (mS/cm)	pH	Temp. (C^0)	Total Vol. Pumped (mL)
0836	250	13.22	3.7	32	118	14	6.2	10.5	0
0840	250	13.22	0.0	0	98	14	6.5	10.6	250
0844	250	13.22	0.0	-38	47	16	6.8	10.8	500
0848	250	13.22	0.0	-46	45	16	6.9	10.8	750
0852	250	13.22	0.0	-47	45	16	6.9	10.9	1000

SECTION 4 - SAMPLE IDENTIFICATION AND ANALYTICAL LABORATORY PARAMETERS

SAMPLE ID #	DATE / TIME	SAMPLING METHOD	ANALYTICAL SCAN(S)
URS-3	3/30/05 / 0915	Bladder Pump	Full TCL/TAL + Cn (OLM 04.2 + ILM 04.1)

DAY ENVIRONMENTAL, INC.

LOW-FLOW GROUNDWATER PURGING AND SAMPLING LOG

WELL MW-URS4

SECTION 1 - SITE AND WELL INFORMATION

SITE LOCATION 185 Mt. Hope Avenue, Rochester, NY **JOB #** 3618S-05

PROJECT NAME: Remedial Investigation **DATE:** 3/30/05

SAMPLE COLLECTOR(S): Chris Davidson **WEATHER:** ~ 50° F, sunny

PID READING IN WELL HEADSPACE (PPM): 0.0 **MEASURING POINT:** T.O.C.

CASING TYPE: PVC **WELL DIAMETER (INCHES):** 2.0”

SCREENED INTERVAL [FT]: 6.0 – 16.0’ **WATER LEVEL (SWL) [FT]:** 6.57’

WELL DEPTH [FT]: 15.85’ **DEPTH OF PUMP INTAKE [FT]:** ~11.25’

(Do NOT Measure Well depth Prior To Purging And Sampling)

LNAPL: -- **DNAPL:** -- **OTHER OBSERVATIONS:** None

SECTION 2 – SAMPLING EQUIPMENT

CONTROL BOX: QED Well Wizard **TUBING TYPE:** HDPE

WATER QUALITY METER: Horiba U-22 **WATER LEVEL METER:** Solinst ¼” mini-101

PUMP TYPE: ¾” Bladder **PURGE GAS:** Air

CONTROL BOX DISCHARGE RATE: 1.0 sec **CONTROL BOX REFILL RATE:** 3.5 sec

STABILIZED PUMP RATE (mL/min): 200 **STABILIZED DRAWDOWN WATER LEVEL [FT]:** 6.57

SECTION 3 – WATER QUALITY DATA MONITORING

Time	Pumping Rate (mL/min)	Water Level (ft)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Conductivity (mS/cm)	pH	Temp. (C^0)	Total Vol. Pumped (mL)
0952	200	6.57	3.9	-83	222	28	7.3	10.9	0
0956	200	6.57	3.8	-84	157	28	7.4	10.5	200
1000	200	6.57	4.0	-83	131	28	7.4	10.3	400
1004	200	6.57	3.9	-84	128	28	7.4	10.3	600
1008	200	6.57	3.9	-83	127	28	7.4	10.3	800

SECTION 4 - SAMPLE IDENTIFICATION AND ANALYTICAL LABORATORY PARAMETERS

SAMPLE ID #	DATE / TIME	SAMPLING METHOD	ANALYTICAL SCAN(S)
URS-4	3/30/05 / 1035	Bladder Pump	Full TCL/TAL + Cn (OLM 04.2 + ILM 04.1)

DAY ENVIRONMENTAL, INC.

LOW-FLOW GROUNDWATER PURGING AND SAMPLING LOG

WELL MWDAY-01

SECTION 1 - SITE AND WELL INFORMATION

SITE LOCATION 185 Mt. Hope Avenue, Rochester, NY **JOB #** 3618S-05

PROJECT NAME: Remedial Investigation **DATE:** 09/08/05

SAMPLE COLLECTOR(S): C. Davidson, T. DiNardo **WEATHER:** ~70 degrees F, cloudy

PID READING IN WELL HEADSPACE (PPM): NC **MEASURING POINT:** T.O.C.

CASING TYPE: PVC **WELL DIAMETER (INCHES):** 2.0"

SCREENED INTERVAL [FT]: 7-17.0 **WATER LEVEL (SWL) [FT]:** 13.10

WELL DEPTH [FT]: 16.73 **DEPTH OF PUMP INTAKE [FT]:** ~15.0'

(Do NOT Measure Well depth Prior To Purging And Sampling)

LNAPL: -- **DNAPL:** -- **OTHER OBSERVATIONS:** None

SECTION 2 – SAMPLING EQUIPMENT

CONTROL BOX: QED, MP-10 **TUBING TYPE:** 1/4" Water , 1/8" Air

WATER QUALITY METER: Horiba U-22 **WATER LEVEL METER:** Solinst ¼' Mini 101

PUMP TYPE: ¾" Bladder **PURGE GAS:** Air

CONTROL BOX DISCHARGE RATE: 1.5 **CONTROL BOX REFILL RATE:** 5.5

STABILIZED PUMP RATE (ml/min): 125 **STABILIZED DRAWDOWN WATER LEVEL [FT]:** 13.10

SECTION 3 – WATER QUALITY DATA MONITORING

Time	Pumping Rate (ml/min)	Water Level (ft)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Conductivity (mS/cm)	pH	Temp. (C^0)	Total Vol. Pumped (ml)
0849	125	13.10	8.01	-97	5.6	5.13	6.96	18.3	0
0853	125	13.10	5.66	-102	4.2	5.13	6.92	18.1	125
0857	125	13.10	3.96	-108	3.8	5.12	6.92	18.0	250
0901	125	13.10	3.38	-110	3.9	5.12	6.93	18.0	375
0905	125	13.10	2.99	-112	2.7	5.14	6.94	18.0	500
0909	125	13.10	2.83	-112	2.4	5.16	6.95	18.0	625
0913	125	13.10	2.68	-113	2.4	5.16	6.95	17.9	750

SAMPLE OBSERVATIONS: clear

SECTION 4 - SAMPLE IDENTIFICATION AND ANALYTICAL LABORATORY PARAMETERS

SAMPLE ID #	DATE / TIME	SAMPLING METHOD	ANALYTICAL SCAN(S)
023 / MW-DAY-01	09-08-05 / 0915	Bladder Pump	TCL VOCS & SVOCS

DAY ENVIRONMENTAL, INC.

LOW-FLOW GROUNDWATER PURGING AND SAMPLING LOG

WELL MWDAY-02

SECTION 1 - SITE AND WELL INFORMATION

SITE LOCATION 185 Mt. Hope Avenue, Rochester, NY **JOB #** 3618S-05

PROJECT NAME: Remedial Investigation **DATE:** 09/08/05

SAMPLE COLLECTOR(S): C. Davidson, T. DiNardo **WEATHER:** ~70 degrees F, cloudy

PID READING IN WELL HEADSPACE (PPM): NC **MEASURING POINT:** T.O.C.

CASING TYPE: PVC **WELL DIAMETER (INCHES):** 2.0"

SCREENED INTERVAL [FT]: 10.0-20.0 **WATER LEVEL (SWL) [FT]:** 16.33

WELL DEPTH [FT]: 19.40 **DEPTH OF PUMP INTAKE [FT]:** 18.0'

(Do NOT Measure Well depth Prior To Purging And Sampling)

LNAPL: -- **DNAPL:** -- **OTHER OBSERVATIONS:** None

SECTION 2 – SAMPLING EQUIPMENT

CONTROL BOX: QED, MP-10 **TUBING TYPE:** 1/4" Water , 1/8" Air

WATER QUALITY METER: Horiba U-22 **WATER LEVEL METER:** Solinst ¼" mini 101

PUMP TYPE: ¾" Bladder **PURGE GAS:** Air

CONTROL BOX DISCHARGE RATE: 1.5 **CONTROL BOX REFILL RATE:** 4.5

STABILIZED PUMP RATE (ml/min): 175 **STABILIZED DRAWDOWN WATER LEVEL [FT]:** 16.33

SECTION 3 – WATER QUALITY DATA MONITORING

Time	Pumping Rate (ml/min)	Water Level (ft)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Conductivity (mS/cm)	pH	Temp. (C^0)	Total Vol. Pumped (ml)
1339	175	16.33	12.28	-52	27.0	4.63	6.91	18.1	0
1343	175	16.33	6.94	-59	15.1	4.50	6.82	17.6	175
1347	175	16.33	4.96	-64	11.1	4.46	6.80	17.3	350
1351	175	16.33	3.63	-70	6.5	4.37	6.86	17.3	525
1355	175	16.33	2.97	-74	4.0	4.34	6.79	17.2	700
1359	175	16.33	2.81	-75	3.7	4.33	6.79	17.3	875
1403	175	16.33	2.68	-76	3.3	4.35	6.79	17.1	1050

SAMPLE OBSERVATIONS: clear

SECTION 4 - SAMPLE IDENTIFICATION AND ANALYTICAL LABORATORY PARAMETERS

SAMPLE ID #	DATE / TIME	SAMPLING METHOD	ANALYTICAL SCAN(S)
024 / MW-DAY-02	09-08-05 / 1405	Bladder Pump	TCL VOCS & SVOCS

DAY ENVIRONMENTAL, INC.

LOW-FLOW GROUNDWATER PURGING AND SAMPLING LOG

WELL MW-3

SECTION 1 - SITE AND WELL INFORMATION

SITE LOCATION 185 Mt. Hope Avenue, Rochester, NY **JOB #** 3618S-05

PROJECT NAME: Remedial Investigation **DATE:** 09/08/05

SAMPLE COLLECTOR(S): C. Davidson, T. DiNardo **WEATHER:** ~70 degrees F, cloudy

PID READING IN WELL HEADSPACE (PPM): NC **MEASURING POINT:** T.O.C.

CASING TYPE: PVC **WELL DIAMETER (INCHES):** 2.0"

SCREENED INTERVAL [FT]: 10.0-20.0 **WATER LEVEL (SWL) [FT]:** 16.92

WELL DEPTH [FT]: 19.69 **DEPTH OF PUMP INTAKE [FT]:** 18.0'

(Do NOT Measure Well depth Prior To Purging And Sampling)

LNAPL: -- **DNAPL:** -- **OTHER OBSERVATIONS:** None

SECTION 2 – SAMPLING EQUIPMENT

CONTROL BOX: QED, MP-10 **TUBING TYPE:** 1/4" Water , 1/8" Air

WATER QUALITY METER: Horiba U-22 **WATER LEVEL METER:** Solinst ¼" mini 101

PUMP TYPE: ¾" Bladder **PURGE GAS:** Air

CONTROL BOX DISCHARGE RATE: 1.5 **CONTROL BOX REFILL RATE:** 2.5

STABILIZED PUMP RATE (ml/min): 200 **STABILIZED DRAWDOWN WATER LEVEL [FT]:** 16.92

SECTION 3 – WATER QUALITY DATA MONITORING

Time	Pumping Rate (ml/min)	Water Level (ft)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Conductivity (mS/cm)	pH	Temp. (C^0)	Total Vol. Pumped (ml)
1426	200	16.92	9.79	-81	5.7	2.04	7.11	16.8	0
1430	200	16.92	5.29	-90	4.2	1.96	7.09	16.3	200
1434	200	16.92	3.84	-95	2.7	1.91	7.10	16.3	400
1438	200	16.92	2.98	-99	2.2	1.89	7.12	16.3	600
1442	200	16.92	2.72	-101	2.0	1.89	7.12	16.4	800

SAMPLE OBSERVATIONS: clear, sheen, petroleum odor

SECTION 4 - SAMPLE IDENTIFICATION AND ANALYTICAL LABORATORY PARAMETERS

SAMPLE ID #	DATE / TIME	SAMPLING METHOD	ANALYTICAL SCAN(S)
025 / MW-3	09-08-05 / 1455	Bladder Pump	TCL VOCS & SVOCS

DAY ENVIRONMENTAL, INC.

LOW-FLOW GROUNDWATER PURGING AND SAMPLING LOG

WELL MW-URS3

SECTION 1 - SITE AND WELL INFORMATION

SITE LOCATION 185 Mt. Hope Avenue, Rochester, NY **JOB #** 3618S-05

PROJECT NAME: Remedial Investigation **DATE:** 09/08/05

SAMPLE COLLECTOR(S): C. Davidson, T. DiNardo **WEATHER:** ~70 degrees F, cloudy

PID READING IN WELL HEADSPACE (PPM): NC **MEASURING POINT:** T.O.C.

CASING TYPE: PVC **WELL DIAMETER (INCHES):** 2.0"

SCREENED INTERVAL [FT]: 9.5-19.5 **WATER LEVEL (SWL) [FT]:** 14.09

WELL DEPTH [FT]: 19.77 **DEPTH OF PUMP INTAKE [FT]:** 16.5

(Do NOT Measure Well depth Prior To Purging And Sampling)

LNAPL: -- **DNAPL:** -- **OTHER OBSERVATIONS:** None

SECTION 2 – SAMPLING EQUIPMENT

CONTROL BOX: QED, MP-10 **TUBING TYPE:** 1/4" Water , 1/8" Air

WATER QUALITY METER: Horiba U-22 **WATER LEVEL METER:** Solinst ¼" mini 101

PUMP TYPE: ¾" Bladder **PURGE GAS:** Air

CONTROL BOX DISCHARGE RATE: 1.5 **CONTROL BOX REFILL RATE:** 2.0

STABILIZED PUMP RATE (ml/min): 250 **STABILIZED DRAWDOWN WATER LEVEL [FT]:** 14.09'

SECTION 3 – WATER QUALITY DATA MONITORING

Time	Pumping Rate (ml/min)	Water Level (ft)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Conductivity (mS/cm)	pH	Temp. (C^0)	Total Vol. Pumped (ml)
11:00	250	14.09	10.34	-59	10.9	4.69	7.11	18.1	250
11:04	250	14.09	6.88	-64	9.2	4.72	7.07	17.8	500
11:08	250	14.09	4.66	-69	6.0	4.21	7.03	18.0	750
11:12	250	14.09	3.7	-71	4.1	4.77	7.01	17.6	1000
11:16	250	14.09	3.26	-72	3.7	4.79	7.00	17.5	1250
11:20	250	14.09	2.65	-75	3.7	4.72	7.00	18.7	1500
11:24	250	14.09	2.70	-75	4.2	4.82	6.99	17.7	1750
11:28	250	14.09	2.57	-76	4.9	4.82	6.98	17.6	2000

SAMPLE OBSERVATIONS: clear

SECTION 4 - SAMPLE IDENTIFICATION AND ANALYTICAL LABORATORY PARAMETERS

SAMPLE ID #	DATE / TIME	SAMPLING METHOD	ANALYTICAL SCAN(S)
026 / URS-3	09-08-05 / 11:35 AM	Bladder Pump	TCL VOCS & SVOCS; MS/MSD

DAY ENVIRONMENTAL, INC.

LOW-FLOW GROUNDWATER PURGING AND SAMPLING LOG

WELL MW-URS4

SECTION 1 - SITE AND WELL INFORMATION

SITE LOCATION 185 Mt. Hope Avenue, Rochester, NY **JOB #** 3618S-05

PROJECT NAME: Remedial Investigation **DATE:** 09/08/05

SAMPLE COLLECTOR(S): C. Davidson, T. DiNardo **WEATHER:** ~70 degrees F, cloudy

PID READING IN WELL HEADSPACE (PPM): NC **MEASURING POINT:** T.O.C.

CASING TYPE: PVC **WELL DIAMETER (INCHES):** 2.0"

SCREENED INTERVAL [FT]: 6.0-16.0 **WATER LEVEL (SWL) [FT]:** 9.52'

WELL DEPTH [FT]: 15.85 **DEPTH OF PUMP INTAKE [FT]:** ~11.0'

(Do NOT Measure Well depth Prior To Purging And Sampling)

LNAPL: -- **DNAPL:** -- **OTHER OBSERVATIONS:** None

SECTION 2 – SAMPLING EQUIPMENT

CONTROL BOX: QED, MP-10 **TUBING TYPE:** 1/4" Water , 1/8" Air

WATER QUALITY METER: Horiba U-22 **WATER LEVEL METER:** 9.52

PUMP TYPE: ¾" Bladder **PURGE GAS:** Air

CONTROL BOX DISCHARGE RATE: 1.0 **CONTROL BOX REFILL RATE:** 6.5

STABILIZED PUMP RATE (ml/min): 115 **STABILIZED DRAWDOWN WATER LEVEL [FT]:** 9.52'

SECTION 3 – WATER QUALITY DATA MONITORING

Time	Pumping Rate (ml/min)	Water Level (ft)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Conductivity (mS/cm)	pH	Temp. (C^0)	Total Vol. Pumped (ml)
1006	115	9.52	10.12	-89	4.1	4.72	7.1	17.8	0
1010	115	9.52	5.93	-93	2.0	4.71	6.95	17.7	115
1014	115	9.52	4.44	-97	1.2	4.67	6.94	17.6	230
1018	115	9.52	3.56	-101	1.2	4.60	6.93	17.4	345
1022	115	9.52	3.15	-103	1.1	4.57	6.93	17.4	460
1026	115	9.52	2.97	-104	1.0	4.53	6.93	17.4	575

SAMPLE OBSERVATIONS: clear

SECTION 4 - SAMPLE IDENTIFICATION AND ANALYTICAL LABORATORY PARAMETERS

SAMPLE ID #	DATE / TIME	SAMPLING METHOD	ANALYTICAL SCAN(S)
027 / URS-4	09-08-05 / 1030	Bladder Pump	TCL VOCS & SVOCS

APPENDIX E

Vapor Intrusion Evaluation Documents

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Jay Scherer Date/Time Prepared February 23 2005 / 1640

Preparer's Affiliation Day Environmental, Inc. Phone No. (585) 454-0210

Purpose of Investigation Evaluating the Potential for Vapor Intrusion

1. OCCUPANT:

Interviewed: Y (N)

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

Number of Occupants/persons at this location _____ Age of Occupants _____

2. OWNER OR LANDLORD: (Check if same as occupant ___)

Interviewed: (Y) / N

Last Name: Handelman First Name: Allen

Address: Project Director, Conifer Hamilton LLC, 183 E. Main St., 6th Floor Rochester, NY 14604

County: Monroe

Home Phone: NA Office Phone: (585) 324-0512

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

(Residential) School Commercial/Multi-use
Industrial Church Other: _____

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	(Apartment House)	Townhouses/Condos
Modular	Log Home	Other:_____

If multiple units, how many? 202

If the property is commercial, type?

Business Type(s) _____

Does it include residences (i.e., multi-use)? Y / N If yes, how many? _____

Other characteristics:

Number of floors 13 Building age 30

Is the building insulated? (Y) / N How air tight? Tight (Average) / Not Tight

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

NA

Airflow near source

01 → Sample Location @ Resource Room → No flow direction noted using smoke
02 → Sample Location @ Transformer Room → No flow direction noted using smoke

Outdoor air infiltration

01 → Resource Room - No outdoor air infiltration noted at windows using smoke
02 → Transformer Room - No outdoor air infiltration noted at metal exterior wall using smoke.

Infiltration into air ducts

NA

5. **BASEMENT AND CONSTRUCTION CHARACTERISTICS** (Circle all that apply)

a. Above grade construction:	wood frame	(concrete)	stone	brick
b. Basement type:	full	crawlspace	(slab)	other _____
c. Basement floor: NA	concrete	dirt	stone	other _____
d. Basement floor: NA	uncovered	covered	covered with _____	
e. Concrete floor:	unsealed	sealed	sealed with _____	
f. Foundation walls:	(poured)	block	stone	other _____
g. Foundation walls:	unsealed	sealed	sealed with _____	
h. The basement is: NA	wet	damp	dry	moldy
i. The basement is: NA	finished	unfinished	partially finished	
j. Sump present?	Y (N)			
k. Water in sump?	Y / N / (not applicable)			

Basement/Lowest level depth below grade: — (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

No obvious cracks, utility ports or drains noted in area of samples.

6. **HEATING, VENTING and AIR CONDITIONING** (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation	Heat pump	Hot water baseboard	
Space Heaters	Stream radiation	Radiant floor	
(Electric baseboard)	Wood stove	Outdoor wood boiler	Other _____

The primary type of fuel used is:

Natural Gas	Fuel Oil	Kerosene
(Electric)	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: Natural Gas

Boiler/furnace located in: Basement Outdoors (Main Floor) Other_____

Air conditioning: Central Air (Window units) Open Windows None

Are there air distribution ducts present? Y (N)

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

7. OCCUPANCY

Is basement/lowest level occupied? Full-time Occasionally Seldom Almost Never

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	NA
1st Floor	Community / Office / Maintenance / Transformer Room / Utility Rooms
2nd Floor to 13th Floor	Residential
3rd Floor	
4th Floor	

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? Y (N)

b. Does the garage have a separate heating unit? Y / N (NA)

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) Y / N (NA) Please specify_____

d. Has the building ever had a fire? Y (N) When?_____

e. Is a kerosene or unvented gas space heater present? Y (N) Where?_____

f. Is there a workshop or hobby/craft area? (Y) N Where & Type? Main Floor (1st Floor)

g. Is there smoking in the building? (Y) N How frequently? Tenant Apartments

h. Have cleaning products been used recently? (Y) N When & Type? Household - Regular Basis However, no knowledge of (recent) use in proximity to sample locations

i. Have cosmetic products been used recently? (Y) / N When & Type? Common / Tenant spaces However, no knowledge of recent use in proximity to sample locations

j. Has painting/staining been done in the last 6 months? (Y) / N Where & When? Apartment Turnover

k. Is there new carpet, drapes or other textiles? (Y) / N Where & When? Apartment Turnover

l. Have air fresheners been used recently? Y / N When & Type? Unknown

m. Is there a kitchen exhaust fan? (Y) / N If yes, where vented? Roof

n. Is there a bathroom exhaust fan? (Y) / N If yes, where vented? Roof

o. Is there a clothes dryer? (Y) / N If yes, is it vented outside? (Y) / N

p. Has there been a pesticide application? Y / N When & Type? Unknown

Are there odors in the building? (Y) / N
If yes, please describe: General Residential

Do any of the building occupants use solvents at work? (Y) / N
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? Common Building Maintenance

If yes, are their clothes washed at work? Y (N)

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly)
Yes, use dry-cleaning infrequently (monthly or less)
Yes, work at a dry-cleaning service
No
(Unknown)

Is there a radon mitigation system for the building/structure? Y (N) Date of Installation: _____
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply:	(Public Water)	Drilled Well	Driven Well	Dug Well	Other: _____
Sewage Disposal:	(Public Sewer)	Septic Tank	Leach Field	Dry Well	Other: _____

10. RELOCATION INFORMATION (for oil spill residential emergency) NA

a. Provide reasons why relocation is recommended: _____

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

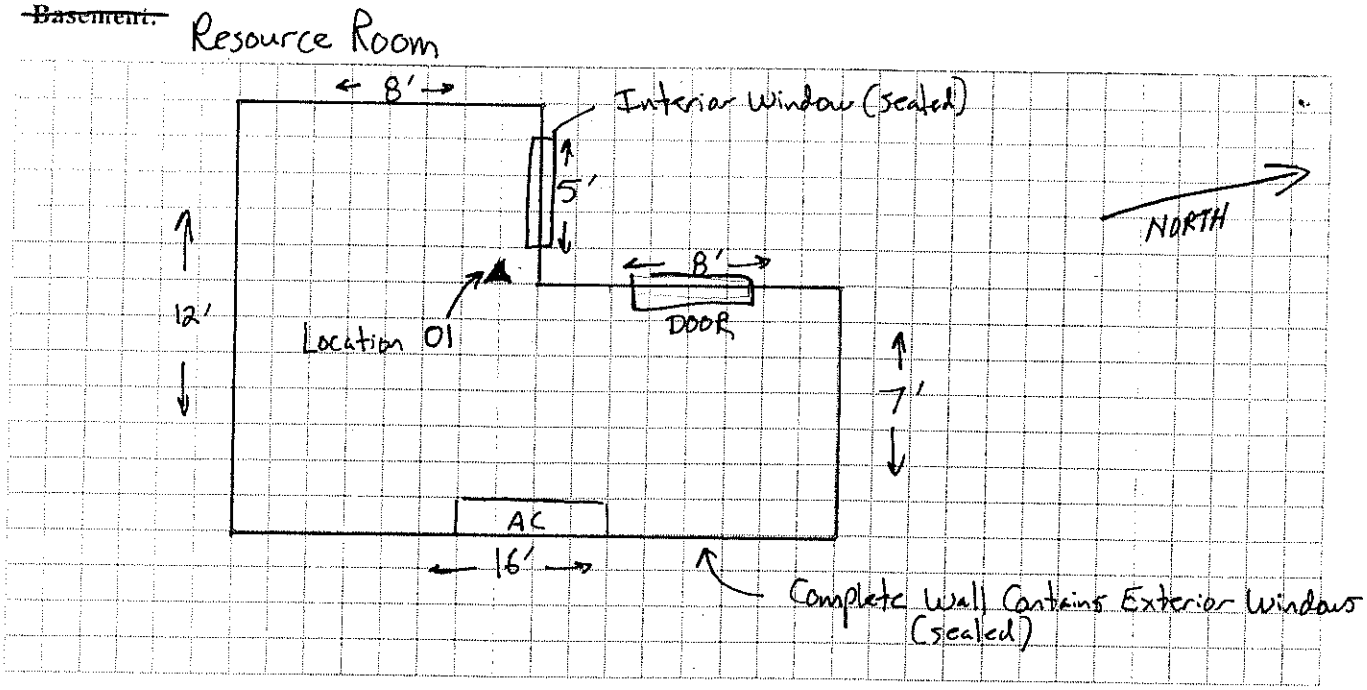
c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

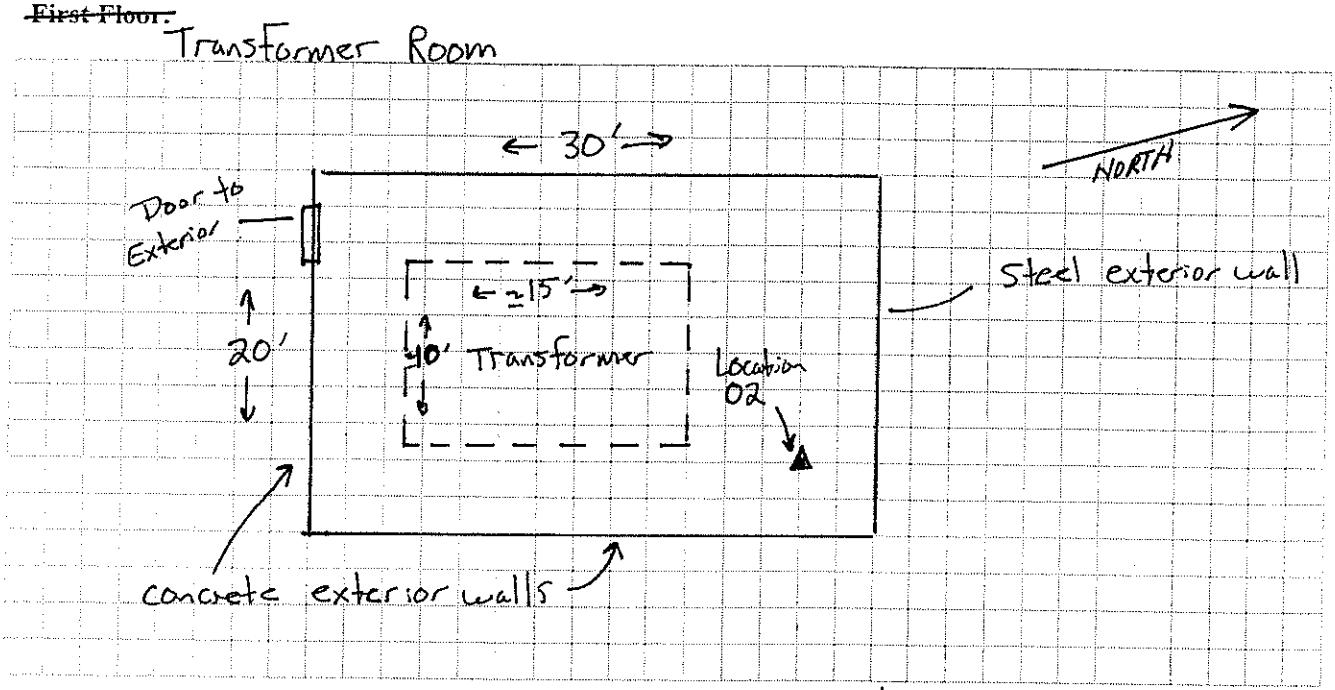
11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

~~Basement:~~



~~First Floor:~~



Indoor air sample IA-01 and Sub-Slab air sample SLB-01 collected at location 01

Indoor air sample IA-02 and Sub-Slab air sample SLB-02 collected at location 02

12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, 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 topographic map.

Refer to attached Figure VI-1.

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: Mini Rae 2000 PID

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo** Y / N
(1) R.R.	Elmers Glue-All	4 Fluid Oz.	U	Not Listed	0.0 ppm	Y
(2) R.R.	Aroma Therapy Air Freshener	12 oz.	U	Not Listed	0.0 ppm	Y
(3) R.R.	Tile Grout Cleaner	22 Fluid Oz.	U	Not Listed	0.0 ppm	Y
(4) R.R.	Windex	32 Fluid Oz.	U	Not Listed	0.0 ppm	Y
(5) R.R.	Champion Spray Disinfectant	16.5 Oz.	U	Ethanol, Ammonium Chloride	0.0 ppm	Y
(6) T.R.	Acid Batteries	4.5 gal	U	Acid	0.0 ppm	Y

* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**

** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

R.R. - Resource Room

T.R - Transformer Room

Brownfield Cleanup Program
NYSDEC Site ID C828124
185 Mt. Hope Avenue, Rochester, New York

Photographs
February 2005 Building Inventory

Inventoried Material #1 – Resource Room

Inventoried Material #2 – Resource Room

Inventoried Materials #3 & #4 – Resource Room

Inventoried Material #5 – Resource Room

Inventoried Material #6 – Transformer Room

Table VI-1

Vapor Intrusion Sample Test Results

185 Mt. Hope Avenue, Rochester, New York
Summary of Detected Volatile Organic Compounds Reported in ug/m^3

Air Samples Collected February 23, 2005

Detected Constituent	NYSDOH Indoor (ug/m^3)[1]	NYSDOH Outdoor (ug/m^3) [2]	Background Air Sample BKG-01	Indoor Air Sample IA-01	Sub-Slab Air Sample SLB-01	Indoor Air Sample IA-02	Sub-Slab Air Sample SLB-02
Acetone	9.9 – 52	3.4 – 14	ND (<7.6)	9.3	19	ND (<7.7)	ND (<7.3)
Benzene	1.1 - 5.9	0.6 - 2.2	ND (<1.5)	ND (<1.5)	1.4	ND (<1.5)	ND (<1.5)
Methylene Chloride [3]	0.3 - 6.6	<0.25 – 0.7	ND (<1.5)	ND (<1.5)	2.2	ND (<1.5)	ND (<1.5)
2-Butanone (MEK)	1.4 - 7.3	0.8 - 2.6	ND (<1.5)	ND (<1.5)	3.0	2.0	ND (<1.5)
Trichloroethene [4]	<0.25 - <0.25	<0.25 - <0.25	ND (<1.5)	ND (<1.5)	ND (<1.3)	ND (<1.5)	3.9
Trichlorofluoromethane	1.1 - 5.4	<0.25 - 2.2	ND (<1.5)	3.7	3.4	ND (<1.5)	ND (<1.5)
Toluene	3.5 – 25	0.6 - 2.4	ND (<1.5)	5.0	5.3	3.9	2.8
m,p-Xylenes	0.5 - 4.6	<0.25 - 0.5	ND (<1.5)	2.0	2.1	ND (<1.5)	ND (<1.5)

ND = Not detected at concentration above reported analytical laboratory detection limit noted in parentheses.

[1] 25th to 75th percentile range of indoor levels of volatile organic compounds (VOCs) listed in Table C1 (NYSDOH 2003: Study of Volatile Organic Chemicals in Air of Fuel Oil Heated Homes) of the NYSDOH document titled "Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York" dated October 2006 (Used to compare sample ID: IA-01, IA-02, SLB-02 and SLB-02).

[2] 25th to 75th percentile range of outdoor levels of VOCs listed in Table C1 (NYSDOH 2003: Study of Volatile Organic Chemicals in Air of Fuel Oil Heated Homes) of the NYSDOH document titled "Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York" dated October 2006 (Used to compare sample ID: BKG-01).

[3] The NYSDOH Draft document titled "Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York" dated October 2006 lists an air guidance value of 60 ug/m^3 for Methylene Chloride.

[4] The NYSDOH Draft document titled "Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York" dated October 2006 lists an air guidance value of 5 ug/m3 for Trichloroethene (TCE).

2665 Park Center Drive, Suite D Simi Valley, California 93065 (805) 526-7161 ph (805) 526-7270 fax

Columbia Analytical Services INC.
An Employee - Owned Company

LABORATORY REPORT

Client:	Paradigm Environmental Services, Inc.	Date of Report:	03/16/05
Address:	179 Lake Avenue	Date Received:	03/03/05
	Rochester, NY 14608	CAS Project No:	P2500433
Contact:	Ms. Jane Daloia	Purchase Order:	Verbal
		New York Lab ID:	11221

Five (5) Stainless Steel Summa Canisters labeled:

"05-0681-3157" "05-0681-3158" "05-0681-3159" "05-0681-3160" "05-0681-3161"

The samples were received at the laboratory under chain of custody on March 03, 2005. The client requested and received five day rush results. The samples were received intact. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time that they were received at the laboratory.

Volatile Organic Compound Analysis

The samples were analyzed by combined gas chromatography/mass spectrometry (GC/MS) for volatile organic compounds. The analyses were performed according to the methodology outlined in EPA Method TO-15. The analyses were performed by gas chromatography/mass spectrometry, utilizing a direct cryogenic trapping technique. The analytical system used was comprised of a Hewlett Packard Model 5973 GC/MS/DS interfaced to a Tekmar AutoCan Elite whole air inlet system/cryogenic concentrator. A 100% Dimethylpolysiloxane capillary column (RT_x-1, Restek Corporation, Bellefonte, PA) was used to achieve chromatographic separation.

The results of analyses are given on the attached data sheets. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for utilization of less than the complete report.

Reviewed and Approved:

Rusty Bravo
Analytical Chemist
Air Quality Laboratory

Reviewed and Approved:

Chris Parnell
GCMS-VOA Team Leader
Air Quality Laboratory

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Paradigm Environmental Services, Inc.**
Client Sample ID: **05-0681-3157**

CAS Project ID: P2500433
CAS Sample ID: P2500433-001

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/HP5973/HP6890/MS3
Analyst: Rusty Bravo
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00199

Date Collected: 2/23/05
Date Received: 3/3/05
Date(s) Analyzed: 3/5/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi 1 = -1.0 Pf 1 = 3.5

D.F. = 1.33

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
74-87-3	Chloromethane	ND	1.3	ND	0.64	
75-01-4	Vinyl Chloride	ND	1.3	ND	0.52	
74-83-9	Bromomethane	ND	1.3	ND	0.34	
75-00-3	Chloroethane	ND	1.3	ND	0.50	
67-64-1	Acetone	**19**	6.7	**7.8**	2.8	**M**
75-69-4	Trichlorofluoromethane	**3.4**	1.3	**0.60**	0.24	
75-35-4	1,1-Dichloroethene	ND	1.3	ND	0.34	
75-09-2	Methylene chloride	**2.2**	1.3	**0.64**	0.38	
76-13-1	Trichlorotrifluoroethane	ND	1.3	ND	0.17	
75-15-0	Carbon Disulfide	ND	1.3	ND	0.43	
156-60-5	trans-1,2-Dichloroethene	ND	1.3	ND	0.34	
75-34-3	1,1-Dichloroethane	ND	1.3	ND	0.33	
1634-04-4	Methyl tert-Butyl Ether	ND	1.3	ND	0.37	
108-05-4	Vinyl Acetate	ND	1.3	ND	0.38	
78-93-3	2-Butanone (MEK)	**3.0**	1.3	**1.0**	0.45	
156-59-2	cis-1,2-Dichloroethene	ND	1.3	ND	0.34	
67-66-3	Chloroform	ND	1.3	ND	0.27	
107-06-2	1,2-Dichloroethane	ND	1.3	ND	0.33	
71-55-6	1,1,1-Trichloroethane	ND	1.3	ND	0.24	
71-43-2	Benzene	**1.4**	1.3	**0.43**	0.42	
56-23-5	Carbon Tetrachloride	ND	1.3	ND	0.21	
78-87-5	1,2-Dichloropropane	ND	1.3	ND	0.29	

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.

2

Verified By: KMH Date: 03/10/05

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Paradigm Environmental Services, Inc.**
Client Sample ID: **05-0681-3157**

CAS Project ID: P2500433
CAS Sample ID: P2500433-001

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/HP5973/HP6890/MS3
Analyst: Rusty Bravo
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00199

Date Collected: 2/23/05
Date Received: 3/3/05
Date(s) Analyzed: 3/5/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi 1 = -1.0 Pf 1 = 3.5

D.F. = 1.33

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	1.3	ND	0.20	
79-01-6	Trichloroethene	ND	1.3	ND	0.25	
10061-01-5	cis-1,3-Dichloropropene	ND	1.3	ND	0.29	
108-10-1	4-Methyl-2-pentanone	ND	1.3	ND	0.32	
10061-02-6	trans-1,3-Dichloropropene	ND	1.3	ND	0.29	
79-00-5	1,1,2-Trichloroethane	ND	1.3	ND	0.24	
108-88-3	Toluene	**5.3**	1.3	**1.4**	0.35	
591-78-6	2-Hexanone	ND	1.3	ND	0.32	
124-48-1	Dibromochloromethane	ND	1.3	ND	0.16	
106-93-4	1,2-Dibromoethane	ND	1.3	ND	0.17	
127-18-4	Tetrachloroethene	ND	1.3	ND	0.20	
108-90-7	Chlorobenzene	ND	1.3	ND	0.29	
100-41-4	Ethylbenzene	ND	1.3	ND	0.31	
136777-61-2	*m,p* -Xylenes	**2.1**	1.3	**0.49**	0.31	
75-25-2	Bromoform	ND	1.3	ND	0.13	
100-42-5	Styrene	ND	1.3	ND	0.31	
95-47-6	o-Xylene	ND	1.3	ND	0.31	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.3	ND	0.19	
541-73-1	1,3-Dichlorobenzene	ND	1.3	ND	0.22	
106-46-7	1,4-Dichlorobenzene	ND	1.3	ND	0.22	
95-50-1	1,2-Dichlorobenzene	ND	1.3	ND	0.22	

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: KuH Date: 03/10/05

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Paradigm Environmental Services, Inc.**
Client Sample ID: **05-0681-3158**

CAS Project ID: P2500433
CAS Sample ID: P2500433-002

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/HP5973/HP6890/MS3
Analyst: Rusty Bravo
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00066

Date Collected: 2/23/05
Date Received: 3/3/05
Date(s) Analyzed: 3/5/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi 1 = -2.2 Pf 1 = 3.5

D.F. = 1.46

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
74-87-3	Chloromethane	ND	1.5	ND	0.71	
75-01-4	Vinyl Chloride	ND	1.5	ND	0.57	
74-83-9	Bromomethane	ND	1.5	ND	0.38	
75-00-3	Chloroethane	ND	1.5	ND	0.55	
67-64-1	Acetone	ND	7.3	ND	3.1	
75-69-4	Trichlorofluoromethane	ND	1.5	ND	0.26	
75-35-4	1,1-Dichloroethene	ND	1.5	ND	0.37	
75-09-2	Methylene chloride	ND	1.5	ND	0.42	
76-13-1	Trichlorotrifluoroethane	ND	1.5	ND	0.19	
75-15-0	Carbon Disulfide	ND	1.5	ND	0.47	
156-60-5	trans-1,2-Dichloroethene	ND	1.5	ND	0.37	
75-34-3	1,1-Dichloroethane	ND	1.5	ND	0.36	
1634-04-4	Methyl tert-Butyl Ether	ND	1.5	ND	0.41	
108-05-4	Vinyl Acetate	ND	1.5	ND	0.41	
78-93-3	2-Butanone (MEK)	ND	1.5	ND	0.50	
156-59-2	cis-1,2-Dichloroethene	ND	1.5	ND	0.37	
67-66-3	Chloroform	ND	1.5	ND	0.30	
107-06-2	1,2-Dichloroethane	ND	1.5	ND	0.36	
71-55-6	1,1,1-Trichloroethane	ND	1.5	ND	0.27	
71-43-2	Benzene	ND	1.5	ND	0.46	
56-23-5	Carbon Tetrachloride	ND	1.5	ND	0.23	
78-87-5	1,2-Dichloropropane	ND	1.5	ND	0.32	

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: KLH Date: 03/10/05

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Paradigm Environmental Services, Inc.**
Client Sample ID: **05-0681-3158**

CAS Project ID: P2500433
CAS Sample ID: P2500433-002

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/HP5973/HP6890/MS3
Analyst: Rusty Bravo
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00066

Date Collected: 2/23/05
Date Received: 3/3/05
Date(s) Analyzed: 3/5/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi 1 = -2.2 Pf 1 = 3.5

D.F. = 1.46

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	1.5	ND	0.22	
79-01-6	Trichloroethene	**3.9**	1.5	**0.73**	0.27	
10061-01-5	cis-1,3-Dichloropropene	ND	1.5	ND	0.32	
108-10-1	4-Methyl-2-pentanone	ND	1.5	ND	0.36	
10061-02-6	trans-1,3-Dichloropropene	ND	1.5	ND	0.32	
79-00-5	1,1,2-Trichloroethane	ND	1.5	ND	0.27	
108-88-3	Toluene	**2.8**	1.5	**0.75**	0.39	
591-78-6	2-Hexanone	ND	1.5	ND	0.36	
124-48-1	Dibromochloromethane	ND	1.5	ND	0.17	
106-93-4	1,2-Dibromoethane	ND	1.5	ND	0.19	
127-18-4	Tetrachloroethene	ND	1.5	ND	0.22	
108-90-7	Chlorobenzene	ND	1.5	ND	0.32	
100-41-4	Ethylbenzene	ND	1.5	ND	0.34	
136777-61-2	*m,p* -Xylenes	ND	1.5	ND	0.34	
75-25-2	Bromoform	ND	1.5	ND	0.14	
100-42-5	Styrene	ND	1.5	ND	0.34	
95-47-6	o-Xylene	ND	1.5	ND	0.34	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.5	ND	0.21	
541-73-1	1,3-Dichlorobenzene	ND	1.5	ND	0.24	
106-46-7	1,4-Dichlorobenzene	ND	1.5	ND	0.24	
95-50-1	1,2-Dichlorobenzene	ND	1.5	ND	0.24	

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: kuH Date: 03/10/05

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Paradigm Environmental Services, Inc.**
Client Sample ID: **05-0681-3159**

CAS Project ID: P2500433
CAS Sample ID: P2500433-003

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/HP5973/HP6890/MS3
Analyst: Rusty Bravo
Sampling Media: Summa Canister
Test Notes:
Container ID: AC00050

Date Collected: 2/23/05
Date Received: 3/3/05
Date(s) Analyzed: 3/5/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi 1 = -2.9 Pf 1 = 3.5

D.F. = 1.54

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
74-87-3	Chloromethane	ND	1.5	ND	0.75	
75-01-4	Vinyl Chloride	ND	1.5	ND	0.60	
74-83-9	Bromomethane	ND	1.5	ND	0.40	
75-00-3	Chloroethane	ND	1.5	ND	0.58	
67-64-1	Acetone	**9.3**	7.7	**3.9**	3.2	**M**
75-69-4	Trichlorofluoromethane	**3.7**	1.5	**0.66**	0.27	
75-35-4	1,1-Dichloroethene	ND	1.5	ND	0.39	
75-09-2	Methylene chloride	ND	1.5	ND	0.44	
76-13-1	Trichlorotrifluoroethane	ND	1.5	ND	0.20	
75-15-0	Carbon Disulfide	ND	1.5	ND	0.49	
156-60-5	trans-1,2-Dichloroethene	ND	1.5	ND	0.39	
75-34-3	1,1-Dichloroethane	ND	1.5	ND	0.38	
1634-04-4	Methyl tert-Butyl Ether	ND	1.5	ND	0.43	
108-05-4	Vinyl Acetate	ND	1.5	ND	0.44	
78-93-3	2-Butanone (MEK)	ND	1.5	ND	0.52	
156-59-2	cis-1,2-Dichloroethene	ND	1.5	ND	0.39	
67-66-3	Chloroform	ND	1.5	ND	0.32	
107-06-2	1,2-Dichloroethane	ND	1.5	ND	0.38	
71-55-6	1,1,1-Trichloroethane	ND	1.5	ND	0.28	
71-43-2	Benzene	ND	1.5	ND	0.48	
56-23-5	Carbon Tetrachloride	ND	1.5	ND	0.24	
78-87-5	1,2-Dichloropropane	ND	1.5	ND	0.33	

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: Kurt Date: 03/10/05

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Paradigm Environmental Services, Inc.**
Client Sample ID: **05-0681-3159**

CAS Project ID: P2500433
CAS Sample ID: P2500433-003

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/HP5973/HP6890/MS3
Analyst: Rusty Bravo
Sampling Media: Summa Canister
Test Notes:
Container ID: AC00050

Date Collected: 2/23/05
Date Received: 3/3/05
Date(s) Analyzed: 3/5/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi 1 = -2.9 Pf 1 = 3.5

D.F. = 1.54

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	1.5	ND	0.23	
79-01-6	Trichloroethene	ND	1.5	ND	0.29	
10061-01-5	cis-1,3-Dichloropropene	ND	1.5	ND	0.34	
108-10-1	4-Methyl-2-pentanone	ND	1.5	ND	0.38	
10061-02-6	trans-1,3-Dichloropropene	ND	1.5	ND	0.34	
79-00-5	1,1,2-Trichloroethane	ND	1.5	ND	0.28	
108-88-3	Toluene	**5.0**	1.5	**1.3**	0.41	
591-78-6	2-Hexanone	ND	1.5	ND	0.38	
124-48-1	Dibromochloromethane	ND	1.5	ND	0.18	
106-93-4	1,2-Dibromoethane	ND	1.5	ND	0.20	
127-18-4	Tetrachloroethene	ND	1.5	ND	0.23	
108-90-7	Chlorobenzene	ND	1.5	ND	0.33	
100-41-4	Ethylbenzene	ND	1.5	ND	0.35	
136777-61-2	*m,p* -Xylenes	**2.0**	1.5	**0.47**	0.35	
75-25-2	Bromoform	ND	1.5	ND	0.15	
100-42-5	Styrene	ND	1.5	ND	0.36	
95-47-6	o-Xylene	ND	1.5	ND	0.35	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.5	ND	0.22	
541-73-1	1,3-Dichlorobenzene	ND	1.5	ND	0.26	
106-46-7	1,4-Dichlorobenzene	ND	1.5	ND	0.26	
95-50-1	1,2-Dichlorobenzene	ND	1.5	ND	0.26	

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: KLH Date: 03/10/05

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Paradigm Environmental Services, Inc.**
Client Sample ID: **05-0681-3160**

CAS Project ID: P2500433
CAS Sample ID: P2500433-004

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/HP5973/HP6890/MS3
Analyst: Rusty Bravo
Sampling Media: Summa Canister
Test Notes:
Container ID: AC00740

Date Collected: 2/23/05
Date Received: 3/3/05
Date(s) Analyzed: 3/5/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi 1 = -2.8 Pf 1 = 3.5

D.F. = 1.53

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
74-87-3	Chloromethane	ND	1.5	ND	0.74	
75-01-4	Vinyl Chloride	ND	1.5	ND	0.60	
74-83-9	Bromomethane	ND	1.5	ND	0.39	
75-00-3	Chloroethane	ND	1.5	ND	0.58	
67-64-1	Acetone	ND	7.7	ND	3.2	
75-69-4	Trichlorofluoromethane	ND	1.5	ND	0.27	
75-35-4	1,1-Dichloroethene	ND	1.5	ND	0.39	
75-09-2	Methylene chloride	ND	1.5	ND	0.44	
76-13-1	Trichlorotrifluoroethane	ND	1.5	ND	0.20	
75-15-0	Carbon Disulfide	ND	1.5	ND	0.49	
156-60-5	trans-1,2-Dichloroethene	ND	1.5	ND	0.39	
75-34-3	1,1-Dichloroethane	ND	1.5	ND	0.38	
1634-04-4	Methyl tert-Butyl Ether	ND	1.5	ND	0.42	
108-05-4	Vinyl Acetate	ND	1.5	ND	0.43	
78-93-3	2-Butanone (MEK)	**2.0**	1.5	**0.69**	0.52	
156-59-2	cis-1,2-Dichloroethene	ND	1.5	ND	0.39	
67-66-3	Chloroform	ND	1.5	ND	0.31	
107-06-2	1,2-Dichloroethane	ND	1.5	ND	0.38	
71-55-6	1,1,1-Trichloroethane	ND	1.5	ND	0.28	
71-43-2	Benzene	ND	1.5	ND	0.48	
56-23-5	Carbon Tetrachloride	ND	1.5	ND	0.24	
78-87-5	1,2-Dichloropropane	ND	1.5	ND	0.33	

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: 03/10/05

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Paradigm Environmental Services, Inc.**
Client Sample ID: **05-0681-3160**

CAS Project ID: P2500433
CAS Sample ID: P2500433-004

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/HP5973/HP6890/MS3
Analyst: Rusty Bravo
Sampling Media: Summa Canister
Test Notes:
Container ID: AC00740

Date Collected: 2/23/05
Date Received: 3/3/05
Date(s) Analyzed: 3/5/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi 1 = -2.8 Pf 1 = 3.5

D.F. = 1.53

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	1.5	ND	0.23	
79-01-6	Trichloroethene	ND	1.5	ND	0.28	
10061-01-5	cis-1,3-Dichloropropene	ND	1.5	ND	0.34	
108-10-1	4-Methyl-2-pentanone	ND	1.5	ND	0.37	
10061-02-6	trans-1,3-Dichloropropene	ND	1.5	ND	0.34	
79-00-5	1,1,2-Trichloroethane	ND	1.5	ND	0.28	
108-88-3	Toluene	**3.9**	1.5	**1.0**	0.41	
591-78-6	2-Hexanone	ND	1.5	ND	0.37	
124-48-1	Dibromochloromethane	ND	1.5	ND	0.18	
106-93-4	1,2-Dibromoethane	ND	1.5	ND	0.20	
127-18-4	Tetrachloroethene	ND	1.5	ND	0.23	
108-90-7	Chlorobenzene	ND	1.5	ND	0.33	
100-41-4	Ethylbenzene	ND	1.5	ND	0.35	
136777-61-2	*m,p* -Xylenes	ND	1.5	ND	0.35	
75-25-2	Bromoform	ND	1.5	ND	0.15	
100-42-5	Styrene	ND	1.5	ND	0.36	
95-47-6	o-Xylene	ND	1.5	ND	0.35	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.5	ND	0.22	
541-73-1	1,3-Dichlorobenzene	ND	1.5	ND	0.25	
106-46-7	1,4-Dichlorobenzene	ND	1.5	ND	0.25	
95-50-1	1,2-Dichlorobenzene	ND	1.5	ND	0.25	

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: KuH Date: 03/10/05

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Paradigm Environmental Services, Inc.**
Client Sample ID: **05-0681-3161**

CAS Project ID: P2500433
CAS Sample ID: P2500433-005

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/HP5973/HP6890/MS3
Analyst: Rusty Bravo
Sampling Media: Summa Canister
Test Notes:
Container ID: AC00569

Date Collected: 2/23/05
Date Received: 3/3/05
Date(s) Analyzed: 3/5/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi 1 = -2.7 Pf 1 = 3.5

D.F. = 1.52

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
74-87-3	Chloromethane	ND	1.5	ND	0.74	
75-01-4	Vinyl Chloride	ND	1.5	ND	0.59	
74-83-9	Bromomethane	ND	1.5	ND	0.39	
75-00-3	Chloroethane	ND	1.5	ND	0.58	
67-64-1	Acetone	ND	7.6	ND	3.2	
75-69-4	Trichlorofluoromethane	ND	1.5	ND	0.27	
75-35-4	1,1-Dichloroethene	ND	1.5	ND	0.38	
75-09-2	Methylene chloride	ND	1.5	ND	0.44	
76-13-1	Trichlorotrifluoroethane	ND	1.5	ND	0.20	
75-15-0	Carbon Disulfide	ND	1.5	ND	0.49	
156-60-5	trans-1,2-Dichloroethene	ND	1.5	ND	0.38	
75-34-3	1,1-Dichloroethane	ND	1.5	ND	0.38	
1634-04-4	Methyl tert-Butyl Ether	ND	1.5	ND	0.42	
108-05-4	Vinyl Acetate	ND	1.5	ND	0.43	
78-93-3	2-Butanone (MEK)	ND	1.5	ND	0.52	
156-59-2	cis-1,2-Dichloroethene	ND	1.5	ND	0.38	
67-66-3	Chloroform	ND	1.5	ND	0.31	
107-06-2	1,2-Dichloroethane	ND	1.5	ND	0.38	
71-55-6	1,1,1-Trichloroethane	ND	1.5	ND	0.28	
71-43-2	Benzene	ND	1.5	ND	0.48	
56-23-5	Carbon Tetrachloride	ND	1.5	ND	0.24	
78-87-5	1,2-Dichloropropane	ND	1.5	ND	0.33	

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: KH Date: 03/10/05

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Paradigm Environmental Services, Inc.**
Client Sample ID: **05-0681-3161**

CAS Project ID: P2500433
CAS Sample ID: P2500433-005

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/HP5973/HP6890/MS3
Analyst: Rusty Bravo
Sampling Media: Summa Canister
Test Notes:
Container ID: AC00569

Date Collected: 2/23/05
Date Received: 3/3/05
Date(s) Analyzed: 3/5/05
Volume(s) Analyzed: 1.00 Liter(s)

Pi 1 = -2.7 Pf 1 = 3.5

D.F. = 1.52

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	1.5	ND	0.23	
79-01-6	Trichloroethene	ND	1.5	ND	0.28	
10061-01-5	cis-1,3-Dichloropropene	ND	1.5	ND	0.34	
108-10-1	4-Methyl-2-pentanone	ND	1.5	ND	0.37	
10061-02-6	trans-1,3-Dichloropropene	ND	1.5	ND	0.34	
79-00-5	1,1,2-Trichloroethane	ND	1.5	ND	0.28	
108-88-3	Toluene	ND	1.5	ND	0.40	
591-78-6	2-Hexanone	ND	1.5	ND	0.37	
124-48-1	Dibromochloromethane	ND	1.5	ND	0.18	
106-93-4	1,2-Dibromoethane	ND	1.5	ND	0.20	
127-18-4	Tetrachloroethene	ND	1.5	ND	0.22	
108-90-7	Chlorobenzene	ND	1.5	ND	0.33	
100-41-4	Ethylbenzene	ND	1.5	ND	0.35	
136777-61-2	*m,p* -Xylenes	ND	1.5	ND	0.35	
75-25-2	Bromoform	ND	1.5	ND	0.15	
100-42-5	Styrene	ND	1.5	ND	0.36	
95-47-6	o-Xylene	ND	1.5	ND	0.35	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.5	ND	0.22	
541-73-1	1,3-Dichlorobenzene	ND	1.5	ND	0.25	
106-46-7	1,4-Dichlorobenzene	ND	1.5	ND	0.25	
95-50-1	1,2-Dichlorobenzene	ND	1.5	ND	0.25	

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: KMH Date: 03/10/05

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Paradigm Environmental Services, Inc.**
Client Sample ID: **Method Blank**

CAS Project ID: P2500433
CAS Sample ID: P050304-MB

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/HP5973/HP6890/MS3
Analyst: Rusty Bravo
Sampling Media: Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date(s) Analyzed: 3/4/05
Volume(s) Analyzed: 1.00 Liter(s)

D.F. = 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
74-87-3	Chloromethane	ND	1.0	ND	0.48	
75-01-4	Vinyl Chloride	ND	1.0	ND	0.39	
74-83-9	Bromomethane	ND	1.0	ND	0.26	
75-00-3	Chloroethane	ND	1.0	ND	0.38	
67-64-1	Acetone	ND	5.0	ND	2.1	
75-69-4	Trichlorofluoromethane	ND	1.0	ND	0.18	
75-35-4	1,1-Dichloroethene	ND	1.0	ND	0.25	
75-09-2	Methylene chloride	ND	1.0	ND	0.29	
76-13-1	Trichlorotrifluoroethane	ND	1.0	ND	0.13	
75-15-0	Carbon Disulfide	ND	1.0	ND	0.32	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ND	0.25	
75-34-3	1,1-Dichloroethane	ND	1.0	ND	0.25	
1634-04-4	Methyl tert-Butyl Ether	ND	1.0	ND	0.28	
108-05-4	Vinyl Acetate	ND	1.0	ND	0.28	
78-93-3	2-Butanone (MEK)	ND	1.0	ND	0.34	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ND	0.25	
67-66-3	Chloroform	ND	1.0	ND	0.20	
107-06-2	1,2-Dichloroethane	ND	1.0	ND	0.25	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ND	0.18	
71-43-2	Benzene	ND	1.0	ND	0.31	
56-23-5	Carbon Tetrachloride	ND	1.0	ND	0.16	
78-87-5	1,2-Dichloropropane	ND	1.0	ND	0.22	

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: KWH Date: 03/10/05

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Paradigm Environmental Services, Inc.**
Client Sample ID: **Method Blank**

CAS Project ID: P2500433
CAS Sample ID: P050304-MB

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/HP5973/HP6890/MS3
Analyst: Rusty Bravo
Sampling Media: Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date(s) Analyzed: 3/4/05
Volume(s) Analyzed: 1.00 Liter(s)

D.F. = 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-27-4	Bromodichloromethane	ND	1.0	ND	0.15	
79-01-6	Trichloroethene	ND	1.0	ND	0.19	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ND	0.22	
108-10-1	4-Methyl-2-pentanone	ND	1.0	ND	0.24	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ND	0.22	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ND	0.18	
108-88-3	Toluene	ND	1.0	ND	0.27	
591-78-6	2-Hexanone	ND	1.0	ND	0.24	
124-48-1	Dibromochloromethane	ND	1.0	ND	0.12	
106-93-4	1,2-Dibromoethane	ND	1.0	ND	0.13	
127-18-4	Tetrachloroethene	ND	1.0	ND	0.15	
108-90-7	Chlorobenzene	ND	1.0	ND	0.22	
100-41-4	Ethylbenzene	ND	1.0	ND	0.23	
136777-61-2	*m,p* -Xylenes	ND	1.0	ND	0.23	
75-25-2	Bromoform	ND	1.0	ND	0.097	
100-42-5	Styrene	ND	1.0	ND	0.23	
95-47-6	o-Xylene	ND	1.0	ND	0.23	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ND	0.15	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ND	0.17	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ND	0.17	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ND	0.17	

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: KH Date: 03/10/05

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Paradigm Environmental Services, Inc.**

CAS Project ID: P2500433

Surrogate Spike Recovery Results

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/HP5973/HP6890/MS3
Analyst: Rusty Bravo
Sampling Media: Summa Canister(s)
Test Notes:

Date Collected: 2/23/05
Date Received: 3/3/05
Date Analyzed: 3/4 - 3/5/05

Client Sample ID	CAS Sample ID	1,2-Dichloroethane-d4		Toluene-d8		Bromofluorobenzene		Data Qualifier
		% Recovered	Acceptance Limits	% Recovered	Acceptance Limits	% Recovered	Acceptance Limits	
Method Blank	P050304-MB	**101**	70-140	**100**	70-140	**94**	70-140	
Lab Control Sample	P050304-LCS	**98**	70-140	**99**	70-140	**96**	70-140	
05-0681-3157	P2500433-001	**97**	70-140	**100**	70-140	**95**	70-140	
05-0681-3158	P2500433-002	**99**	70-140	**99**	70-140	**95**	70-140	
05-0681-3159	P2500433-003	**98**	70-140	**99**	70-140	**94**	70-140	
05-0681-3160	P2500433-004	**97**	70-140	**100**	70-140	**96**	70-140	
05-0681-3161	P2500433-005	**97**	70-140	**100**	70-140	**95**	70-140	

Verified By: KeH Date: 03/10/05

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Paradigm Environmental Services, Inc.**
Client Sample ID: **Lab Control Sample**

CAS Project ID: P2500433
CAS Sample ID: P050304-LCS

Laboratory Control Sample (LCS) Summary

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/HP5973/HP6890/MS3
Analyst: Rusty Bravo
Sampling Media: Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 3/4/05
Volume(s) Analyzed: NA Liter

CAS #	Compound	Amount Spiked ng	Amount Recovered ng	% Recovery	CAS Acceptance Limits	Data Qualifier
74-87-3	Chloromethane	25.50	19.17	**75**	73-122	
75-01-4	Vinyl Chloride	25.50	22.85	**90**	74-134	
74-83-9	Bromomethane	25.75	21.31	**83**	74-127	
75-00-3	Chloroethane	25.50	22.13	**87**	77-132	
67-64-1	Acetone	26.25	19.75	**75**	70-116	
75-69-4	Trichlorofluoromethane	25.75	22.80	**89**	77-134	
75-35-4	1,1-Dichloroethene	26.25	22.25	**85**	78-133	
75-09-2	Methylene chloride	26.00	20.97	**81**	73-124	
76-13-1	Trichlorotrifluoroethane	26.00	20.75	**80**	80-128	
75-15-0	Carbon Disulfide	25.00	20.98	**84**	70-128	
156-60-5	trans-1,2-Dichloroethene	26.50	22.93	**87**	78-133	
75-34-3	1,1-Dichloroethane	26.25	22.22	**85**	77-129	
1634-04-4	Methyl tert-Butyl Ether	26.25	21.95	**84**	80-124	
108-05-4	Vinyl Acetate	26.75	24.13	**90**	47-148	
78-93-3	2-Butanone (MEK)	26.25	23.22	**88**	80-131	
156-59-2	cis-1,2-Dichloroethene	26.00	22.33	**86**	79-132	
67-66-3	Chloroform	26.00	21.47	**83**	75-132	
107-06-2	1,2-Dichloroethane	26.00	22.12	**85**	79-131	
71-55-6	1,1,1-Trichloroethane	26.00	21.53	**83**	81-130	
71-43-2	Benzene	26.00	21.00	**81**	77-124	
56-23-5	Carbon Tetrachloride	26.00	21.84	**84**	81-133	
78-87-5	1,2-Dichloropropane	26.00	21.52	**83**	81-131	

Verified By: KH Date: 03/10/05

Client: **Paradigm Environmental Services, Inc.**
Client Sample ID: **Lab Control Sample**

CAS Project ID: P2500433
CAS Sample ID: P050304-LCS

Laboratory Control Sample (LCS) Summary

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/HP5973/HP6890/MS3
Analyst: Rusty Bravo
Sampling Media: Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 3/4/05
Volume(s) Analyzed: NA Liter

CAS #	Compound	Amount Spiked ng	Amount Recovered ng	% Recovery	CAS Acceptance Limits	Data Qualifier
75-27-4	Bromodichloromethane	26.50	23.15	**87**	83-139	
79-01-6	Trichloroethene	26.00	21.54	**83**	80-134	
10061-01-5	cis-1,3-Dichloropropene	25.50	22.01	**86**	84-135	
108-10-1	4-Methyl-2-Pentanone	26.25	22.96	**87**	71-146	
10061-02-6	trans-1,3-Dichloropropene	27.50	23.86	**87**	82-134	
79-00-5	1,1,2-Trichloroethane	26.25	22.34	**85**	82-134	
108-88-3	Toluene	26.00	21.87	**84**	78-130	
591-78-6	2-Hexanone	26.25	22.74	**87**	58-156	
124-48-1	Dibromochloromethane	26.25	24.06	**92**	81-143	
106-93-4	1,2-Dibromoethane	26.00	22.78	**88**	80-134	
127-18-4	Tetrachloroethene	26.00	22.53	**87**	81-130	
108-90-7	Chlorobenzene	26.00	22.20	**85**	80-128	
100-41-4	Ethylbenzene	26.00	22.20	**85**	80-129	
136777-61-2	*m,p* -Xylenes	52.00	42.18	**81**	76-126	
75-25-2	Bromoform	26.25	24.66	**94**	80-153	
100-42-5	Styrene	26.00	21.54	**83**	75-136	
95-47-6	o-Xylene	26.25	21.75	**83**	78-127	
79-34-5	1,1,2,2-Tetrachloroethane	26.25	22.90	**87**	82-130	
541-73-1	1,3-Dichlorobenzene	26.00	21.45	**83**	77-129	
106-46-7	1,4-Dichlorobenzene	26.00	20.72	**80**	69-128	
95-50-1	1,2-Dichlorobenzene	26.00	21.50	**83**	74-129	

Verified By: KUH Date: 03/10/05

Columbia Analytical Services, Inc.
Sample Acceptance Check Form

Client: Paradigm Environmental Services, Inc. Work order: P2500433

Project:

Sample(s) received on: 3/3/05 Date opened: 3/3/05 by: SM

Note: This form is used for all samples received by CAS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client or as required by the method/SOP.

		Yes	No	N/A
1	Were **custody seals** on outside of cooler/Box?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
	Were custody seals on outside of sample container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
2	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
3	Did **sample containers** arrive in good condition?	☒	☐	☐
4	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
5	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
6	Was **sample volume** received adequate for analysis?	☒	☐	☐
7	Are samples within specified holding times?	☒	☐	☐
8	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
	Cooler Temperature NA °C			
	Blank Temperature NA °C			
9	Is pH (acid) **preservation** necessary, according to method/SOP or Client specified information?	☐	☒	☐
	Is there a client indication that the submitted samples are **pH** (acid) preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
	Do they contain moisture?	☐	☐	☒
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Required pH	pH (as received, if required)	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2500433-001			NA	
P2500433-002			NA	
P2500433-003			NA	
P2500433-004			NA	
P2500433-005			NA	

Explain any discrepancies: (include lab sample ID numbers):

PARADIGM ENVIRONMENTAL SERVICES, INC.

179 Lake Avenue
Rochester, NY 14608
(585) 647-2530 • (800) 724-1997
FAX: (585) 647-3311

CHAIN OF CUSTODY

Columbia

REPORT TO:	INVOICE TO:
COMPANY:	COMPANY:
ADDRESS:	ADDRESS:
CITY: STATE: ZIP:	CITY: STATE: ZIP:
PHONE: FAX:	PHONE: FAX:
ATTN: Jane Daloia	ATTN:

LAB PROJECT #: | CLIENT PROJECT #:

PROJECT NAME/SITE NAME:

TURNAROUND TIME: (WORKING DAYS) STD OTH ☐1 ☐2 ☐3 ☐5 ☐

COMMENTS: Tier II QC forms, email results

REQUESTED ANALYSIS

	DATE	TIME	COMPOSITE	GRAB	SAMPLE LOCATION/FIELD ID	MATRIX	NUMBER CONTAINERS	TO-15	REMARKS	PARADIGM LAB SAMPLE NUMBER
									due: 3/10/05	
1	12/23/05				05-0681-3157	A	1	X		
2					3158			X	AVG00095	
3					3159			X	FC00105	
4					3160			X	FC003163	
5					3161			X	FC00389	
6									FC00452	
7									FC00102	
8										
9										
10										

LAB USE ONLY BELOW THIS LINE

Sample Condition: Per NELAC/ELAP 210/241/242/243/244

Receipt Parameter	NELAC Compliance	
Container Type:	Y ☐	N ☐
Comments:		
Preservation:	Y ☐	N ☐
Comments:		
Holding Time:	Y ☐	N ☐
Comments:		
Temperature:	Y ☐	N ☐
Comments:		

18

Sampled By: Client — Date/Time: Kelly Crandall 2/24/05 1604

Relinquished By: — Date/Time:

Received By: — Date/Time:

Received @ Lab By: Sharon Malone 3/3/05 1140 — Date/Time:

Total Cost:

P.I.F.

Columbia Analytical Services INC
An Employee - Owned Company

Air Quality Laboratory
2665 Park Center Drive, Suite D
Simi Valley, California 93065
Phone (805) 526-7161
Fax (805) 526-7270

Chain of Custody Record & Analytical Service Request

Requested Turnaround Time by Close of Business Day (Surcharges) Please Circle:
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (15%) (10 Day-Standard)

CAS Project No. 05-0681

CAS Contact:

Reporting Information (Company Name & Address)
Day Environmental, Inc
40 Commercial St
Rochester NY 14614

Attention: Jeff Danzinger

Phone 585/454 0210x114 Fax 585/454 0825

Email Address for Result Reporting
jdanzinger@daymail.net

P.O. # / Billing Information
36185-05

Project Name
185 Mt Hope Ave

Project Number
36185-05

Sampler (Print & Sign)
Jerome Scherer

Analysis Method and/or Analytes

Client Sample ID	Date Collected	Time Collected	Lab Sample No.	Sample Type (Air/Liquid /Solid/Tube)	Canister ID (Bar Code#)	Flow Controller (Bar Code #)	Sample Volume	TO-15				Comments e.g. Preservative or specific instructions
SLB-01	2/23/05	1625	3157	AIR	SC00199	FC00102		X				Sub Slab Resource Room
SLB-02	2/23/05	1634	3158	AIR	SC00066	FC00105		X				Sub Slab Transform Room
IA-01	2/23/05	1624	3159	AIR	AC00050	FC00363		X				Indoor Air Resource Room
IA-02	2/23/05	1635	3160	AIR	AC00740	FC00369		X				Indoor Air Transform Room
BKG-01	2/23/05	1616	3161	AIR	AC00569	FC00452		X				Background - outside

Report Tier Levels - please select
Tier I - (default if not specified) ____
Tier II (QC forms) X
Tier III (QC, Raw Data, Spectra) 10% Surcharge ____
Other ____

EDD required (Yes) / No
Type: Excel

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
(DAY)	2/23/05	1700			
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	2/23/05	1700			
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
			Kelly Crandall	2/24/05	839

Cooler / Blank Temperature N/A °C

APPENDIX F

Soil Vapor Evaluation Documents

Table SV-1

Soil Vapor Study Air Sample Results

185 Mount Hope Avenue, Rochester, New York
Summary of Detected Volatile Organic Compounds Reported in ug/m^3

Air Samples Collected December 21, 2005

Detected Constituent	NYSDOH Indoor (ug/m^3)[1]	NYSDOH Outdoor (ug/m^3)[2]	Sample Location			
			SV-1	SV-2	SV-3	B-1
Acetone	9.9 - 52	3.4 - 14	19	ND (<0.4)	ND (<0.4)	6.9
Benzene	1.1 - 5.9	0.6 - 2.2	2.6	2	**8.2**	0.9
1,3 - Butadiene	NA	NA	ND (<0.4)	ND (<0.4)	30	ND (<0.4)
2-Butanone (MEK)	1.4 - 7.3	0.8 - 2.6	2.7	2	2.7	0.9
Carbon Disulfide	NA	NA	2	2	0.9	ND (<0.5)
Chloromethane	<0.25 - 1.8	<0.25 - 1.8	0.7	1	**12**	1.3
Cyclohexane	<0.25 - 2.6	<0.25 - 0.4	**6.9**	**8**	**120**	ND (<0.6)
Dichlorodifluoromethane	<0.25 - 4.1	<0.25 - 4.2	**6200**	**90**	**190**	2.5
Ethanol	27 - 540	3.3 - 16	6.6	5.1	15	4.3
Ethylbenzene	0.4 - 2.8	<0.25 - 0.5	2.5	1	**3**	ND (<0.7)
4-Ethyl Toluene	NA	NA	1.9	ND (<0.8)	1.7	ND (<0.8)
n-Heptane	1.0 - 7.6	<0.25 - 1.9	4.5	**140**	**22**	ND (<0.7)
Hexane	0.6 - 5.9	<0.25 - 1	**10**	**590**	**260**	ND (<0.6)
Isopropanol	NA	NA	4	1.8	4.3	1.8
Methyl tert-Butyl Ether (MTBE)	<0.25 - 5.6	<0.25 - 0.9	ND (<0.6)	ND (<0.6)	0.9	ND (<0.6)
Methylene Chloride[3]	0.3 - 6.6	<0.25 - 0.7	ND (<1)	1	1	**1.1**
Propene	NA	NA	ND (<0.3)	ND (<0.3)	380	ND (<0.3)
Toluene	3.5 - 25	0.6 - 2.4	18	8.6	23	**3.7**
Trichloroethylene[4]	<0.25 - <0.25	<0.25 - <0.25	**0.59**	0.16	**0.32**	0.11
Trichlorofluoromethane	1.1 - 5.4	<0.25 - 2.2	1.4	1.3	1.3	1.5
1,2,4 - Trimethylbenzene	0.7 - 4.3	<0.25 - 0.8	**7.1**	1.8	**5**	**1.5**
1,3,5 - Trimethylbenzene	0.3 - 1.7	<0.25 - 0.3	**1.9**	ND (<0.8)	1.7	ND (<0.8)
Vinyl Acetate	NA	NA	2.9	36	53	ND (<0.6)
m/p-Xylene	0.5 - 4.6	<0.25 - 0.5	**14**	3.7	**15**	**1.2**
o-Xylene	0.4 - 3.1	<0.25 - 0.6	**4.4**	1.2	**4.4**	ND (<0.7)

ND = Not detected at concentration above analytical laboratory reporting limit noted in parentheses.

NA = Not Available

[1] 25th to 75th percentile range of indoor levels of volatile organic compounds (VOCs) listed in Table C1 (NYSDOH 2003: Study of Volatile Organic Chemicals in Air of Fuel Oil Heated Homes) of the NYSDOH document titled "Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York" dated October 2006 (Used to compare soil vapor sample ID: SV-1, SV-2 and SV-3).

[2] 25th to 75th percentile range of outdoor levels of VOCs listed in Table C1 (NYSDOH 2003: Study of Volatile Organic Chemicals in Air of Fuel Oil Heated Homes) of the NYSDOH document titled "Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York" dated October 2006 (Used to compare outdoor air background sample ID: B-1).

[3] The NYSDOH Draft document titled "Guidance for Evaluating Soil Vapor Intrusion in the State of New York" dated October 2006 lists an air guidance value of 60 ug/m^3 for Methylene Chloride.

[4] The NYSDOH Draft document titled "Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York" dated October 2006 lists an air guidance value of 5 ug/m^3 for Trichloroethene (TCE).

12 = exceeds 75th percentile of corresponding indoor or outdoor VOC levels listed in Table C1 (NYSDOH 2003: Study of Volatile Organic Chemicals in Air of Fuel Oil Heated Homes) of the NYSDOH document titled "Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York" dated October 2006

con-test®
ANALYTICAL LABORATORY

39 Spruce Street ° East Longmeadow, MA 01028 ° FAX 413/525-6405 ° TEL. 413/525-2332

REPORT DATE 1/4/2006

DAY ENVIRONMENTAL, INC.
40 COMMERCIAL STREET
ROCHESTER, NY 14614
ATTN: JEFF DANZINGER

CONTRACT NUMBER:
PURCHASE ORDER NUMBER: 36185-05

PROJECT NUMBER:

ANALYTICAL SUMMARY

LIMS BAT #: LIMS-94195
JOB NUMBER: 36185-05

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: 185 MT. HOPE AVE. ROCHESTER, NY

FIELD SAMPLE #	LAB ID	MATRIX	SAMPLE DESCRIPTION	TEST
B-1	05B49982	AIR	(CT-1348) CT53 S. EXTERIOR	to-15 ppbv
B-1	05B49982	AIR	(CT-1348) CT53 S. EXTERIOR	to-15 ug/m3
SV-1	05B49979	AIR	(CT-1834) CT29	to-15 ppbv
SV-1	05B49979	AIR	(CT-1834) CT29	to-15 ug/m3
SV-2	05B49980	AIR	(CT-3302) CT28	to-15 ppbv
SV-2	05B49980	AIR	(CT-3302) CT28	to-15 ug/m3
SV-3	05B49981	AIR	(CT-1327) CT69	to-15 ppbv
SV-3	05B49981	AIR	(CT-1327) CT69	to-15 ug/m3

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations :

AIHA 100033	AIHA ELLAP (LEAD) 100033	
MASSACHUSETTS MA0100	NEW HAMPSHIRE NELAP 2516	NEW JERSEY NELAP NJ MA007 (AIR)
CONNECTICUT PH-0567	VERMONT DOH (LEAD) No. LL015036	ARIZONA AZ0648
NEW YORK ELAP/NELAP 10899	RHODE ISLAND (LIC. No. 112)	ARIZONA AZ0654 (AIR)

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Edward Denson 1/5/06

SIGNATURE DATE

Tod Kopyscinski
Director of Operations

Sondra L. Slesinski
Quality Control Coordinator

Edward Denson
Technical Director

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ANALYTICAL LABORATORY

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JEFF DANZINGER
DAY ENVIRONMENTAL, INC.
40 COMMERCIAL STREET
ROCHESTER, NY 14614

1/4/2006

Purchase Order No.: 36185-05

Project Location: 185 MT. HOPE AVE. ROCHESTER, NY
Date Received: 12/23/2005
Field Sample # : B-1

LIMS-BAT #: LIMS-94195
Job Number: 36185-05

Sample ID : 05B49982

Sampled : 12/21/2005
(CT-1348) CT53 S. EXTERIOR

Sample Matrix: AIR

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/F
Acetone	PPBv	2.9	12/31/05	TPH	0.2			
Benzene	PPBv	0.3	12/31/05	TPH	0.2			
Benzyl Chloride	PPBv	ND	12/31/05	TPH	0.2			
Bromodichloromethane	PPBv	ND	12/31/05	TPH	0.2			
Bromomethane	PPBv	ND	12/31/05	TPH	0.2			
1,3-Butadiene	PPBv	ND	12/31/05	TPH	0.2			
2-Butanone (MEK)	PPBv	0.3	12/31/05	TPH	0.2			
Carbon Disulfide	PPBv	ND	12/31/05	TPH	0.2			
Carbon Tetrachloride	PPBv	ND	12/31/05	TPH	0.2			
Chlorobenzene	PPBv	ND	12/31/05	TPH	0.2			
Chlorodibromomethane	PPBv	ND	12/31/05	TPH	0.2			
Chloroethane	PPBv	ND	12/31/05	TPH	0.2			
Chloroform	PPBv	ND	12/31/05	TPH	0.2			
Chloromethane	PPBv	0.6	12/31/05	TPH	0.2			
Cyclohexane	PPBv	ND	12/31/05	TPH	0.2			
1,2-Dibromoethane	PPBv	ND	12/31/05	TPH	0.2			
1,2-Dichlorobenzene	PPBv	ND	12/31/05	TPH	0.2			
1,3-Dichlorobenzene	PPBv	ND	12/31/05	TPH	0.2			
1,4-Dichlorobenzene	PPBv	ND	12/31/05	TPH	0.2			
Dichlorodifluoromethane	PPBv	0.5	12/31/05	TPH	0.2			
1,1-Dichloroethane	PPBv	ND	12/31/05	TPH	0.2			
1,2-Dichloroethane	PPBv	ND	12/31/05	TPH	0.2			
1,1-Dichloroethylene	PPBv	ND	12/31/05	TPH	0.2			
cis-1,2-Dichloroethylene	PPBv	ND	12/31/05	TPH	0.2			
t-1,2-Dichloroethylene	PPBv	ND	12/31/05	TPH	0.2			
1,2-Dichloropropane	PPBv	ND	12/31/05	TPH	0.2			
cis-1,3-Dichloropropene	PPBv	ND	12/31/05	TPH	0.2			
trans-1,3-Dichloropropene	PPBv	ND	12/31/05	TPH	0.2			
1,2-Dichlorotetrafluoroethane (114)	PPBv	ND	12/31/05	TPH	0.2			

RL = Reporting Limit

ND = Not Detected at or above the Reporting Limit

NM = Not Measured

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

* = See end of report for comments and notes applying to this sample

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JEFF DANZINGER
DAY ENVIRONMENTAL, INC.
40 COMMERCIAL STREET
ROCHESTER, NY 14614

1/4/2006

Purchase Order No.: 36185-05

Project Location: 185 MT. HOPE AVE. ROCHESTER, NY
Date Received: 12/23/2005
Field Sample # : B-1

LIMS-BAT #: LIMS-94195
Job Number: 36185-05

Sample ID : 05B49982
Sampled : 12/21/2005
(CT-1348) CT53 S. EXTERIOR

Sample Matrix: AIR

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/F
Ethanol	PPBv	2.3	12/31/05	TPH	0.2			
Ethyl Acetate	PPBv	ND	12/31/05	TPH	0.2			
Ethylbenzene	PPBv	ND	12/31/05	TPH	0.2			
4-Ethyl Toluene	PPBv	ND	12/31/05	TPH	0.2			
n-Heptane	PPBv	ND	12/31/05	TPH	0.2			
Hexachlorobutadiene	PPBv	ND	12/31/05	TPH	0.2			
Hexane	PPBv	ND	12/31/05	TPH	0.2			
2-Hexanone	PPBv	ND	12/31/05	TPH	0.2			
Isopropanol	PPBv	0.7	12/31/05	TPH	0.2			
Methyl tert-Butyl Ether (MTBE)	PPBv	ND	12/31/05	TPH	0.2			
Methylene Chloride	PPBv	0.3	12/31/05	TPH	0.3			
4-Methyl-2-Pentanone (MIBK)	PPBv	ND	12/31/05	TPH	0.2			
Propene	PPBv	ND	12/31/05	TPH	0.2			
Styrene	PPBv	ND	12/31/05	TPH	0.2			
1,1,2,2-Tetrachloroethane	PPBv	ND	12/31/05	TPH	0.2			
Tetrachloroethylene	PPBv	ND	12/31/05	TPH	0.2			
Tetrahydrofuran	PPBv	ND	12/31/05	TPH	0.2			
Toluene	PPBv	1.0	12/31/05	TPH	0.2			
1,2,4-Trichlorobenzene	PPBv	ND	12/31/05	TPH	0.2			
1,1,1-Trichloroethane	PPBv	ND	12/31/05	TPH	0.2			
1,1,2-Trichloroethane	PPBv	ND	12/31/05	TPH	0.2			
Trichloroethylene	PPBv	ND	12/31/05	TPH	0.2			
Trichlorofluoromethane (Freon 11)	PPBv	0.3	12/31/05	TPH	0.2			
1,1,2-Trichloro-1,2,2-Trifluoroethane	PPBv	ND	12/31/05	TPH	0.2			
1,2,4-Trimethylbenzene	PPBv	0.3	12/31/05	TPH	0.2			
1,3,5-Trimethylbenzene	PPBv	ND	12/31/05	TPH	0.2			
Vinyl Acetate	PPBv	ND	12/31/05	TPH	0.2			
Vinyl Chloride	PPBv	ND	12/31/05	TPH	0.2			
m/p-Xylene	PPBv	0.3	12/31/05	TPH	0.2			

RL = Reporting Limit

ND = Not Detected at or above the Reporting Limit

NM = Not Measured

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

* = See end of report for comments and notes applying to this sample

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JEFF DANZINGER
DAY ENVIRONMENTAL, INC.
40 COMMERCIAL STREET
ROCHESTER, NY 14614

1/4/2006

Purchase Order No.: 36185-05

Project Location: 185 MT. HOPE AVE. ROCHESTER, NY
Date Received: 12/23/2005
Field Sample # : **B-1**

LIMS-BAT #: LIMS-94195
Job Number: 36185-05

Sample ID : **05B49982**
Sampled : 12/21/2005
(CT-1348) CT53 S. EXTERIOR

Sample Matrix: AIR

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
o-Xylene	PPBv	ND	12/31/05	TPH	0.2			

Analytical Method:
EPA TO-15
SAMPLES ARE TAKEN IN SUMMA CANISTERS AND ANALYZED BY GAS CHROMATOGRAPHY WITH MASS SPECTROMETRY DETECTION. (GC/MS)

RL = Reporting Limit

ND = Not Detected at or above the Reporting Limit

NM = Not Measured

* = See end of report for comments and notes applying to this sample

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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40 COMMERCIAL STREET
ROCHESTER, NY 14614

1/4/2006

Purchase Order No.: 36185-05

Project Location: 185 MT. HOPE AVE. ROCHESTER, NY
Date Received: 12/23/2005
Field Sample # : SV-1

LIMS-BAT #: LIMS-94195
Job Number: 36185-05

Sample ID : 05B49979
Sampled : 12/21/2005
(CT-1834) CT29

Sample Matrix: AIR

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/F
Acetone	PPBv	7.9	12/31/05	TPH	0.2			
Benzene	PPBv	0.8	12/31/05	TPH	0.2			
Benzyl Chloride	PPBv	ND	12/31/05	TPH	0.2			
Bromodichloromethane	PPBv	ND	12/31/05	TPH	0.2			
Bromomethane	PPBv	ND	12/31/05	TPH	0.2			
1,3-Butadiene	PPBv	ND	12/31/05	TPH	0.2			
2-Butanone (MEK)	PPBv	0.9	12/31/05	TPH	0.2			
Carbon Disulfide	PPBv	0.6	12/31/05	TPH	0.2			
Carbon Tetrachloride	PPBv	ND	12/31/05	TPH	0.2			
Chlorobenzene	PPBv	ND	12/31/05	TPH	0.2			
Chlorodibromomethane	PPBv	ND	12/31/05	TPH	0.2			
Chloroethane	PPBv	ND	12/31/05	TPH	0.2			
Chloroform	PPBv	ND	12/31/05	TPH	0.2			
Chloromethane	PPBv	0.3	12/31/05	TPH	0.2			
Cyclohexane	PPBv	2.0	12/31/05	TPH	0.2			
1,2-Dibromoethane	PPBv	ND	12/31/05	TPH	0.2			
1,2-Dichlorobenzene	PPBv	ND	12/31/05	TPH	0.2			
1,3-Dichlorobenzene	PPBv	ND	12/31/05	TPH	0.2			
1,4-Dichlorobenzene	PPBv	ND	12/31/05	TPH	0.2			
Dichlorodifluoromethane	PPBv	1200	12/31/05	TPH	0.2			
1,1-Dichloroethane	PPBv	ND	12/31/05	TPH	0.2			
1,2-Dichloroethane	PPBv	ND	12/31/05	TPH	0.2			
1,1-Dichloroethylene	PPBv	ND	12/31/05	TPH	0.2			
cis-1,2-Dichloroethylene	PPBv	ND	12/31/05	TPH	0.2			
t-1,2-Dichloroethylene	PPBv	ND	12/31/05	TPH	0.2			
1,2-Dichloropropane	PPBv	ND	12/31/05	TPH	0.2			
cis-1,3-Dichloropropene	PPBv	ND	12/31/05	TPH	0.2			
trans-1,3-Dichloropropene	PPBv	ND	12/31/05	TPH	0.2			
1,2-Dichlorotetrafluoroethane (114)	PPBv	ND	12/31/05	TPH	0.2			

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* = See end of report for comments and notes applying to this sample

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ANALYTICAL LABORATORY

39 Spruce Street ° East Longmeadow, MA 01028 ° FAX 413/525-6405 ° TEL. 413/525-2332

JEFF DANZINGER
DAY ENVIRONMENTAL, INC.
40 COMMERCIAL STREET
ROCHESTER, NY 14614

1/4/2006

Purchase Order No.: 36185-05

Project Location: 185 MT. HOPE AVE. ROCHESTER, NY
Date Received: 12/23/2005
Field Sample # : SV-1

LIMS-BAT #: LIMS-94195
Job Number: 36185-05

Sample ID : 05B49979
Sampled : 12/21/2005
(CT-1834) CT29

Sample Matrix: AIR

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/F
Ethanol	PPBv	3.5	12/31/05	TPH	0.2			
Ethyl Acetate	PPBv	ND	12/31/05	TPH	0.2			
Ethylbenzene	PPBv	0.6	12/31/05	TPH	0.2			
4-Ethyl Toluene	PPBv	0.4	12/31/05	TPH	0.2			
n-Heptane	PPBv	1.1	12/31/05	TPH	0.2			
Hexachlorobutadiene	PPBv	ND	12/31/05	TPH	0.2			
Hexane	PPBv	3.0	12/31/05	TPH	0.2			
2-Hexanone	PPBv	ND	12/31/05	TPH	0.2			
Isopropanol	PPBv	1.6	12/31/05	TPH	0.2			
Methyl tert-Butyl Ether (MTBE)	PPBv	ND	12/31/05	TPH	0.2			
Methylene Chloride	PPBv	ND	12/31/05	TPH	0.3			
4-Methyl-2-Pentanone (MIBK)	PPBv	ND	12/31/05	TPH	0.2			
Propene	PPBv	ND	12/31/05	TPH	0.2			
Styrene	PPBv	ND	12/31/05	TPH	0.2			
1,1,2,2-Tetrachloroethane	PPBv	ND	12/31/05	TPH	0.2			
Tetrachloroethylene	PPBv	ND	12/31/05	TPH	0.2			
Tetrahydrofuran	PPBv	ND	12/31/05	TPH	0.2			
Toluene	PPBv	4.8	12/31/05	TPH	0.2			
1,2,4-Trichlorobenzene	PPBv	ND	12/31/05	TPH	0.2			
1,1,1-Trichloroethane	PPBv	ND	12/31/05	TPH	0.2			
1,1,2-Trichloroethane	PPBv	ND	12/31/05	TPH	0.2			
Trichloroethylene	PPBv	ND	12/31/05	TPH	0.2			
Trichlorofluoromethane (Freon 11)	PPBv	0.2	12/31/05	TPH	0.2			
1,1,2-Trichloro-1,2,2-Trifluoroethane	PPBv	ND	12/31/05	TPH	0.2			
1,2,4-Trimethylbenzene	PPBv	1.4	12/31/05	TPH	0.2			
1,3,5-Trimethylbenzene	PPBv	0.4	12/31/05	TPH	0.2			
Vinyl Acetate	PPBv	0.8	12/31/05	TPH	0.2			
Vinyl Chloride	PPBv	ND	12/31/05	TPH	0.2			
m/p-Xylene	PPBv	3.3	12/31/05	TPH	0.2			

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ROCHESTER, NY 14614

1/4/2006

Purchase Order No.: 36185-05

Project Location: 185 MT. HOPE AVE. ROCHESTER, NY
Date Received: 12/23/2005
Field Sample # : SV-1

LIMS-BAT #: LIMS-94195
Job Number: 36185-05

Sample ID : 05B49979
Sampled : 12/21/2005
(CT-1834) CT29

Sample Matrix: AIR

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
o-Xylene	PPBv	1.0	12/31/05	TPH	0.2			

Analytical Method:
EPA TO-15
SAMPLES ARE TAKEN IN SUMMA CANISTERS AND ANALYZED BY GAS CHROMATOGRAPHY WITH MASS SPECTROMETRY DETECTION. (GC/MS)

RL = Reporting Limit

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ROCHESTER, NY 14614

1/4/2006

Purchase Order No.: 36185-05

Project Location: 185 MT. HOPE AVE. ROCHESTER, NY
Date Received: 12/23/2005
Field Sample # : SV-2

LIMS-BAT #: LIMS-94195
Job Number: 36185-05

Sample ID : 05B49980
Sampled : 12/21/2005
(CT-3302) CT28

Sample Matrix: AIR

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Acetone	PPBv	ND	12/31/05	TPH	0.2			
Benzene	PPBv	0.6	12/31/05	TPH	0.2			
Benzyl Chloride	PPBv	ND	12/31/05	TPH	0.2			
Bromodichloromethane	PPBv	ND	12/31/05	TPH	0.2			
Bromomethane	PPBv	ND	12/31/05	TPH	0.2			
1,3-Butadiene	PPBv	ND	12/31/05	TPH	0.2			
2-Butanone (MEK)	PPBv	0.7	12/31/05	TPH	0.2			
Carbon Disulfide	PPBv	0.6	12/31/05	TPH	0.2			
Carbon Tetrachloride	PPBv	ND	12/31/05	TPH	0.2			
Chlorobenzene	PPBv	ND	12/31/05	TPH	0.2			
Chlorodibromomethane	PPBv	ND	12/31/05	TPH	0.2			
Chloroethane	PPBv	ND	12/31/05	TPH	0.2			
Chloroform	PPBv	ND	12/31/05	TPH	0.2			
Chloromethane	PPBv	0.5	12/31/05	TPH	0.2			
Cyclohexane	PPBv	2.3	12/31/05	TPH	0.2			
1,2-Dibromoethane	PPBv	ND	12/31/05	TPH	0.2			
1,2-Dichlorobenzene	PPBv	ND	12/31/05	TPH	0.2			
1,3-Dichlorobenzene	PPBv	ND	12/31/05	TPH	0.2			
1,4-Dichlorobenzene	PPBv	ND	12/31/05	TPH	0.2			
Dichlorodifluoromethane	PPBv	18.	12/31/05	TPH	0.2			
1,1-Dichloroethane	PPBv	ND	12/31/05	TPH	0.2			
1,2-Dichloroethane	PPBv	ND	12/31/05	TPH	0.2			
1,1-Dichloroethylene	PPBv	ND	12/31/05	TPH	0.2			
cis-1,2-Dichloroethylene	PPBv	ND	12/31/05	TPH	0.2			
t-1,2-Dichloroethylene	PPBv	ND	12/31/05	TPH	0.2			
1,2-Dichloropropane	PPBv	ND	12/31/05	TPH	0.2			
cis-1,3-Dichloropropene	PPBv	ND	12/31/05	TPH	0.2			
trans-1,3-Dichloropropene	PPBv	ND	12/31/05	TPH	0.2			
1,2-Dichlorotetrafluoroethane (114)	PPBv	ND	12/31/05	TPH	0.2			

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ROCHESTER, NY 14614

1/4/2006

Purchase Order No.: 36185-05

Project Location: 185 MT. HOPE AVE. ROCHESTER, NY
Date Received: 12/23/2005
Field Sample # : SV-2

LIMS-BAT #: LIMS-94195
Job Number: 36185-05

Sample ID : 05B49980

Sampled : 12/21/2005
(CT-3302) CT28

Sample Matrix: AIR

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/F
Ethanol	PPBv	2.7	12/31/05	TPH	0.2			
Ethyl Acetate	PPBv	ND	12/31/05	TPH	0.2			
Ethylbenzene	PPBv	0.2	12/31/05	TPH	0.2			
4-Ethyl Toluene	PPBv	ND	12/31/05	TPH	0.2			
n-Heptane	PPBv	34.	12/31/05	TPH	0.2			
Hexachlorobutadiene	PPBv	ND	12/31/05	TPH	0.2			
Hexane	PPBv	170	12/31/05	TPH	0.2			
2-Hexanone	PPBv	ND	12/31/05	TPH	0.2			
Isopropanol	PPBv	0.7	12/31/05	TPH	0.2			
Methyl tert-Butyl Ether (MTBE)	PPBv	ND	12/31/05	TPH	0.2			
Methylene Chloride	PPBv	0.3	12/31/05	TPH	0.3			
4-Methyl-2-Pentanone (MIBK)	PPBv	ND	12/31/05	TPH	0.2			
Propene	PPBv	ND	12/31/05	TPH	0.2			
Styrene	PPBv	ND	12/31/05	TPH	0.2			
1,1,2,2-Tetrachloroethane	PPBv	ND	12/31/05	TPH	0.2			
Tetrachloroethylene	PPBv	ND	12/31/05	TPH	0.2			
Tetrahydrofuran	PPBv	ND	12/31/05	TPH	0.2			
Toluene	PPBv	2.3	12/31/05	TPH	0.2			
1,2,4-Trichlorobenzene	PPBv	ND	12/31/05	TPH	0.2			
1,1,1-Trichloroethane	PPBv	ND	12/31/05	TPH	0.2			
1,1,2-Trichloroethane	PPBv	ND	12/31/05	TPH	0.2			
Trichloroethylene	PPBv	ND	12/31/05	TPH	0.2			
Trichlorofluoromethane (Freon 11)	PPBv	0.2	12/31/05	TPH	0.2			
1,1,2-Trichloro-1,2,2-Trifluoroethane	PPBv	ND	12/31/05	TPH	0.2			
1,2,4-Trimethylbenzene	PPBv	0.4	12/31/05	TPH	0.2			
1,3,5-Trimethylbenzene	PPBv	ND	12/31/05	TPH	0.2			
Vinyl Acetate	PPBv	10.	12/31/05	TPH	0.2			
Vinyl Chloride	PPBv	ND	12/31/05	TPH	0.2			
m/p-Xylene	PPBv	0.8	12/31/05	TPH	0.2			

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ROCHESTER, NY 14614

1/4/2006

Purchase Order No.: 36185-05

Project Location: 185 MT. HOPE AVE. ROCHESTER, NY
Date Received: 12/23/2005
Field Sample # : **SV-2**

LIMS-BAT #: LIMS-94195
Job Number: 36185-05

Sample ID : **05B49980**
Sampled : 12/21/2005
(CT-3302) CT28

Sample Matrix: AIR

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
o-Xylene	PPBv	0.3	12/31/05	TPH	0.2			

Analytical Method:
EPA TO-15
SAMPLES ARE TAKEN IN SUMMA CANISTERS AND ANALYZED BY GAS CHROMATOGRAPHY WITH MASS SPECTROMETRY DETECTION. (GC/MS)

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ROCHESTER, NY 14614

1/4/2006

Purchase Order No.: 36185-05

Project Location: 185 MT. HOPE AVE. ROCHESTER, NY
Date Received: 12/23/2005
Field Sample # : SV-3

LIMS-BAT #: LIMS-94195
Job Number: 36185-05

Sample ID : 05B49981
Sampled : 12/21/2005
(CT-1327) CT69

Sample Matrix: AIR

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/F
Acetone	PPBv	ND	12/31/05	TPH	0.2			
Benzene	PPBv	2.6	12/31/05	TPH	0.2			
Benzyl Chloride	PPBv	ND	12/31/05	TPH	0.2			
Bromodichloromethane	PPBv	ND	12/31/05	TPH	0.2			
Bromomethane	PPBv	ND	12/31/05	TPH	0.2			
1,3-Butadiene	PPBv	13.	12/31/05	TPH	0.2			
2-Butanone (MEK)	PPBv	0.9	12/31/05	TPH	0.2			
Carbon Disulfide	PPBv	0.3	12/31/05	TPH	0.2			
Carbon Tetrachloride	PPBv	ND	12/31/05	TPH	0.2			
Chlorobenzene	PPBv	ND	12/31/05	TPH	0.2			
Chlorodibromomethane	PPBv	ND	12/31/05	TPH	0.2			
Chloroethane	PPBv	ND	12/31/05	TPH	0.2			
Chloroform	PPBv	ND	12/31/05	TPH	0.2			
Chloromethane	PPBv	5.9	12/31/05	TPH	0.2			
Cyclohexane	PPBv	34.	12/31/05	TPH	0.2			
1,2-Dibromoethane	PPBv	ND	12/31/05	TPH	0.2			
1,2-Dichlorobenzene	PPBv	ND	12/31/05	TPH	0.2			
1,3-Dichlorobenzene	PPBv	ND	12/31/05	TPH	0.2			
1,4-Dichlorobenzene	PPBv	ND	12/31/05	TPH	0.2			
Dichlorodifluoromethane	PPBv	38.	12/31/05	TPH	0.2			
1,1-Dichloroethane	PPBv	ND	12/31/05	TPH	0.2			
1,2-Dichloroethane	PPBv	ND	12/31/05	TPH	0.2			
1,1-Dichloroethylene	PPBv	ND	12/31/05	TPH	0.2			
cis-1,2-Dichloroethylene	PPBv	ND	12/31/05	TPH	0.2			
t-1,2-Dichloroethylene	PPBv	ND	12/31/05	TPH	0.2			
1,2-Dichloropropane	PPBv	ND	12/31/05	TPH	0.2			
cis-1,3-Dichloropropene	PPBv	ND	12/31/05	TPH	0.2			
trans-1,3-Dichloropropene	PPBv	ND	12/31/05	TPH	0.2			
1,2-Dichlorotetrafluoroethane (114)	PPBv	ND	12/31/05	TPH	0.2			

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1/4/2006

Purchase Order No.: 36185-05

Project Location: 185 MT. HOPE AVE. ROCHESTER, NY
Date Received: 12/23/2005
Field Sample # : SV-3

LIMS-BAT #: LIMS-94195
Job Number: 36185-05

Sample ID : 05B49981
Sampled : 12/21/2005
(CT-1327) CT69

Sample Matrix: AIR

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/F
Ethanol	PPBv	7.8	12/31/05	TPH	0.2			
Ethyl Acetate	PPBv	ND	12/31/05	TPH	0.2			
Ethylbenzene	PPBv	0.7	12/31/05	TPH	0.2			
4-Ethyl Toluene	PPBv	0.4	12/31/05	TPH	0.2			
n-Heptane	PPBv	5.3	12/31/05	TPH	0.2			
Hexachlorobutadiene	PPBv	ND	12/31/05	TPH	0.2			
Hexane	PPBv	73.	12/31/05	TPH	0.2			
2-Hexanone	PPBv	ND	12/31/05	TPH	0.2			
Isopropanol	PPBv	1.7	12/31/05	TPH	0.2			
Methyl tert-Butyl Ether (MTBE)	PPBv	0.2	12/31/05	TPH	0.2			
Methylene Chloride	PPBv	0.3	12/31/05	TPH	0.3			
4-Methyl-2-Pentanone (MIBK)	PPBv	ND	12/31/05	TPH	0.2			
Propene	PPBv	220	12/31/05	TPH	0.2			
Styrene	PPBv	ND	12/31/05	TPH	0.2			
1,1,2,2-Tetrachloroethane	PPBv	ND	12/31/05	TPH	0.2			
Tetrachloroethylene	PPBv	ND	12/31/05	TPH	0.2			
Tetrahydrofuran	PPBv	ND	12/31/05	TPH	0.2			
Toluene	PPBv	6.2	12/31/05	TPH	0.2			
1,2,4-Trichlorobenzene	PPBv	ND	12/31/05	TPH	0.2			
1,1,1-Trichloroethane	PPBv	ND	12/31/05	TPH	0.2			
1,1,2-Trichloroethane	PPBv	ND	12/31/05	TPH	0.2			
Trichloroethylene	PPBv	ND	12/31/05	TPH	0.2			
Trichlorofluoromethane (Freon 11)	PPBv	0.2	12/31/05	TPH	0.2			
1,1,2-Trichloro-1,2,2-Trifluoroethane	PPBv	ND	12/31/05	TPH	0.2			
1,2,4-Trimethylbenzene	PPBv	1.0	12/31/05	TPH	0.2			
1,3,5-Trimethylbenzene	PPBv	0.4	12/31/05	TPH	0.2			
Vinyl Acetate	PPBv	15.	12/31/05	TPH	0.2			
Vinyl Chloride	PPBv	ND	12/31/05	TPH	0.2			
m/p-Xylene	PPBv	3.4	12/31/05	TPH	0.2			

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ROCHESTER, NY 14614

1/4/2006

Purchase Order No.: 36185-05

Project Location: 185 MT. HOPE AVE. ROCHESTER, NY
Date Received: 12/23/2005
Field Sample # : SV-3

LIMS-BAT #: LIMS-94195
Job Number: 36185-05

Sample ID : 05B49981
Sampled : 12/21/2005
(CT-1327) CT69

Sample Matrix: AIR

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
o-Xylene	PPBv	1.0	12/31/05	TPH	0.2			

Analytical Method:
EPA TO-15
SAMPLES ARE TAKEN IN SUMMA CANISTERS AND ANALYZED BY GAS CHROMATOGRAPHY WITH MASS SPECTROMETRY DETECTION. (GC/MS)

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Purchase Order No.: 36185-05

Project Location: 185 MT. HOPE AVE. ROCHESTER, NY
Date Received: 12/23/2005
Field Sample # : **B-1**

LIMS-BAT #: LIMS-94195
Job Number: 36185-05

Sample ID : ***05B49982**

Sampled : 12/21/2005
(CT-1348) CT53 S. EXTERIOR

Sample Matrix: AIR

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/F
Acetone	ug/m3	6.9	12/31/05	TPH	0.4			
Benzene	ug/m3	0.9	12/31/05	TPH	0.5			
Benzyl Chloride	ug/m3	ND	12/31/05	TPH	0.8			
Bromodichloromethane	ug/m3	ND	12/31/05	TPH	1.1			
Bromomethane	ug/m3	ND	12/31/05	TPH	0.6			
1,3-Butadiene	ug/m3	ND	12/31/05	TPH	0.4			
2-Butanone (MEK)	ug/m3	0.9	12/31/05	TPH	0.4			
Carbon Disulfide	ug/m3	ND	12/31/05	TPH	0.5			
Carbon Tetrachloride	ug/m3	ND	12/31/05	TPH	1.0			
Chlorobenzene	ug/m3	ND	12/31/05	TPH	0.7			
Chlorodibromomethane	ug/m3	ND	12/31/05	TPH	1.3			
Chloroethane	ug/m3	ND	12/31/05	TPH	0.4			
Chloroform	ug/m3	ND	12/31/05	TPH	0.8			
Chloromethane	ug/m3	1.3	12/31/05	TPH	0.4			
Cyclohexane	ug/m3	ND	12/31/05	TPH	0.6			
1,2-Dibromoethane	ug/m3	ND	12/31/05	TPH	1.2			
1,2-Dichlorobenzene	ug/m3	ND	12/31/05	TPH	0.9			
1,3-Dichlorobenzene	ug/m3	ND	12/31/05	TPH	0.9			
1,4-Dichlorobenzene	ug/m3	ND	12/31/05	TPH	0.9			
Dichlorodifluoromethane	ug/m3	2.5	12/31/05	TPH	0.7			
1,1-Dichloroethane	ug/m3	ND	12/31/05	TPH	0.7			
1,2-Dichloroethane	ug/m3	ND	12/31/05	TPH	0.7			
1,1-Dichloroethylene	ug/m3	ND	12/31/05	TPH	0.6			
cis-1,2-Dichloroethylene	ug/m3	ND	12/31/05	TPH	0.6			
t-1,2-Dichloroethylene	ug/m3	ND	12/31/05	TPH	0.6			
1,2-Dichloropropane	ug/m3	ND	12/31/05	TPH	0.7			
cis-1,3-Dichloropropene	ug/m3	ND	12/31/05	TPH	0.7			
trans-1,3-Dichloropropene	ug/m3	ND	12/31/05	TPH	0.7			
1,2-Dichlorotetrafluoroethane (114)	ug/m3	ND	12/31/05	TPH	1.1			

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JEFF DANZINGER
DAY ENVIRONMENTAL, INC.
40 COMMERCIAL STREET
ROCHESTER, NY 14614

Purchase Order No.: 36185-05

Project Location: 185 MT. HOPE AVE. ROCHESTER, NY
Date Received: 12/23/2005
Field Sample # : **B-1**

LIMS-BAT #: LIMS-94195
Job Number: 36185-05

Sample ID : ***05B49982**
Sampled : 12/21/2005
(CT-1348) CT53 S. EXTERIOR

Sample Matrix: AIR

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/F
Ethanol	ug/m3	4.3	12/31/05	TPH	0.3			
Ethyl Acetate	ug/m3	ND	12/31/05	TPH	0.6			
Ethylbenzene	ug/m3	ND	12/31/05	TPH	0.7			
4-Ethyl Toluene	ug/m3	ND	12/31/05	TPH	0.8			
n-Heptane	ug/m3	ND	12/31/05	TPH	0.7			
Hexachlorobutadiene	ug/m3	ND	12/31/05	TPH	5.4			
Hexane	ug/m3	ND	12/31/05	TPH	0.6			
2-Hexanone	ug/m3	ND	12/31/05	TPH	0.7			
Isopropanol	ug/m3	1.8	12/31/05	TPH	0.4			
Methyl tert-Butyl Ether (MTBE)	ug/m3	ND	12/31/05	TPH	0.6			
Methylene Chloride	ug/m3	1.1	12/31/05	TPH	1.0			
4-Methyl-2-Pentanone (MIBK)	ug/m3	ND	12/31/05	TPH	0.7			
Propene	ug/m3	ND	12/31/05	TPH	0.3			
Styrene	ug/m3	ND	12/31/05	TPH	0.7			
1,1,2,2-Tetrachloroethane	ug/m3	ND	12/31/05	TPH	3.5			
Tetrachloroethylene	ug/m3	ND	12/31/05	TPH	1.1			
Tetrahydrofuran	ug/m3	ND	12/31/05	TPH	0.5			
Toluene	ug/m3	3.7	12/31/05	TPH	0.6			
1,2,4-Trichlorobenzene	ug/m3	ND	12/31/05	TPH	3.8			
1,1,1-Trichloroethane	ug/m3	ND	12/31/05	TPH	0.9			
1,1,2-Trichloroethane	ug/m3	ND	12/31/05	TPH	0.9			
Trichloroethylene	ug/m3	ND	12/31/05	TPH	0.9			
Trichlorofluoromethane	ug/m3	1.5	12/31/05	TPH	0.9			
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/m3	ND	12/31/05	TPH	1.2			
1,2,4-Trimethylbenzene	ug/m3	1.5	12/31/05	TPH	0.7			
1,3,5-Trimethylbenzene	ug/m3	ND	12/31/05	TPH	0.8			
Vinyl Acetate	ug/m3	ND	12/31/05	TPH	0.6			
Vinyl Chloride	ug/m3	ND	12/31/05	TPH	0.4			
m/p-Xylene	ug/m3	1.2	12/31/05	TPH	0.6			

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ROCHESTER, NY 14614

1/4/2006

Purchase Order No.: 36185-05

Project Location: 185 MT. HOPE AVE. ROCHESTER, NY
Date Received: 12/23/2005
Field Sample # : **B-1**

LIMS-BAT #: LIMS-94195
Job Number: 36185-05

Sample ID : ***05B49982**

Sampled : 12/21/2005
(CT-1348) CT53 S. EXTERIOR

Sample Matrix: AIR

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/F
o-Xylene	ug/m3	ND	12/31/05	TPH	0.7			

Analytical Method:
EPA TO-15
SAMPLES ARE TAKEN IN SUMMA CANISTERS AND ANALYZED BY GAS CHROMATOGRAPHY WITH MASS SPECTROMETRY DETECTION. (GC/MS)

RL = Reporting Limit

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SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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1/4/2006

Purchase Order No.: 36185-05

Project Location: 185 MT. HOPE AVE. ROCHESTER, NY
Date Received: 12/23/2005
Field Sample # : **SV-1**

LIMS-BAT #: LIMS-94195
Job Number: 36185-05

Sample ID : ***05B49979**

Sampled : 12/21/2005
(CT-1834) CT29

Sample Matrix: AIR

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/F
Acetone	ug/m3	19.	12/31/05	TPH	0.4			
Benzene	ug/m3	2.6	12/31/05	TPH	0.5			
Benzyl Chloride	ug/m3	ND	12/31/05	TPH	0.8			
Bromodichloromethane	ug/m3	ND	12/31/05	TPH	1.1			
Bromomethane	ug/m3	ND	12/31/05	TPH	0.6			
1,3-Butadiene	ug/m3	ND	12/31/05	TPH	0.4			
2-Butanone (MEK)	ug/m3	2.7	12/31/05	TPH	0.4			
Carbon Disulfide	ug/m3	2.0	12/31/05	TPH	0.5			
Carbon Tetrachloride	ug/m3	ND	12/31/05	TPH	1.0			
Chlorobenzene	ug/m3	ND	12/31/05	TPH	0.7			
Chlorodibromomethane	ug/m3	ND	12/31/05	TPH	1.3			
Chloroethane	ug/m3	ND	12/31/05	TPH	0.4			
Chloroform	ug/m3	ND	12/31/05	TPH	0.8			
Chloromethane	ug/m3	0.7	12/31/05	TPH	0.4			
Cyclohexane	ug/m3	6.9	12/31/05	TPH	0.5			
1,2-Dibromoethane	ug/m3	ND	12/31/05	TPH	1.2			
1,2-Dichlorobenzene	ug/m3	ND	12/31/05	TPH	0.9			
1,3-Dichlorobenzene	ug/m3	ND	12/31/05	TPH	0.9			
1,4-Dichlorobenzene	ug/m3	ND	12/31/05	TPH	0.9			
Dichlorodifluoromethane	ug/m3	6200	12/31/05	TPH	0.7			
1,1-Dichloroethane	ug/m3	ND	12/31/05	TPH	0.7			
1,2-Dichloroethane	ug/m3	ND	12/31/05	TPH	0.7			
1,1-Dichloroethylene	ug/m3	ND	12/31/05	TPH	0.6			
cis-1,2-Dichloroethylene	ug/m3	ND	12/31/05	TPH	0.6			
t-1,2-Dichloroethylene	ug/m3	ND	12/31/05	TPH	0.6			
1,2-Dichloropropane	ug/m3	ND	12/31/05	TPH	0.7			
cis-1,3-Dichloropropene	ug/m3	ND	12/31/05	TPH	0.7			
trans-1,3-Dichloropropene	ug/m3	ND	12/31/05	TPH	0.7			
1,2-Dichlorotetrafluoroethane (114)	ug/m3	ND	12/31/05	TPH	1.1			

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1/4/2006

Purchase Order No.: 36185-05

Project Location: 185 MT. HOPE AVE. ROCHESTER, NY
Date Received: 12/23/2005
Field Sample # : SV-1

LIMS-BAT #: LIMS-94195
Job Number: 36185-05

Sample ID : *05B49979
Sampled : 12/21/2005
(CT-1834) CT29

Sample Matrix: AIR

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/F
Ethanol	ug/m3	6.6	12/31/05	TPH	0.3			
Ethyl Acetate	ug/m3	ND	12/31/05	TPH	0.6			
Ethylbenzene	ug/m3	2.5	12/31/05	TPH	0.6			
4-Ethyl Toluene	ug/m3	1.9	12/31/05	TPH	0.7			
n-Heptane	ug/m3	4.5	12/31/05	TPH	0.6			
Hexachlorobutadiene	ug/m3	ND	12/31/05	TPH	5.4			
Hexane	ug/m3	10.	12/31/05	TPH	0.5			
2-Hexanone	ug/m3	ND	12/31/05	TPH	0.7			
Isopropanol	ug/m3	4.0	12/31/05	TPH	0.4			
Methyl tert-Butyl Ether (MTBE)	ug/m3	ND	12/31/05	TPH	0.6			
Methylene Chloride	ug/m3	ND	12/31/05	TPH	1.0			
4-Methyl-2-Pentanone (MIBK)	ug/m3	ND	12/31/05	TPH	0.7			
Propene	ug/m3	ND	12/31/05	TPH	0.3			
Styrene	ug/m3	ND	12/31/05	TPH	0.7			
1,1,2,2-Tetrachloroethane	ug/m3	ND	12/31/05	TPH	3.5			
Tetrachloroethylene	ug/m3	ND	12/31/05	TPH	1.1			
Tetrahydrofuran	ug/m3	ND	12/31/05	TPH	0.5			
Toluene	ug/m3	18.	12/31/05	TPH	0.6			
1,2,4-Trichlorobenzene	ug/m3	ND	12/31/05	TPH	3.8			
1,1,1-Trichloroethane	ug/m3	ND	12/31/05	TPH	0.9			
1,1,2-Trichloroethane	ug/m3	ND	12/31/05	TPH	0.9			
Trichloroethylene	ug/m3	ND	12/31/05	TPH	0.9			
Trichlorofluoromethane	ug/m3	1.4	12/31/05	TPH	0.9			
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/m3	ND	12/31/05	TPH	1.2			
1,2,4-Trimethylbenzene	ug/m3	7.1	12/31/05	TPH	0.7			
1,3,5-Trimethylbenzene	ug/m3	1.9	12/31/05	TPH	0.7			
Vinyl Acetate	ug/m3	2.9	12/31/05	TPH	0.5			
Vinyl Chloride	ug/m3	ND	12/31/05	TPH	0.4			
m/p-Xylene	ug/m3	14.	12/31/05	TPH	0.6			

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1/4/2006

Purchase Order No.: 36185-05

Project Location: 185 MT. HOPE AVE. ROCHESTER, NY
Date Received: 12/23/2005
Field Sample # : SV-1

LIMS-BAT #: LIMS-94195
Job Number: 36185-05

Sample ID : *05B49979
Sampled : 12/21/2005
(CT-1834) CT29

Sample Matrix: AIR

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
o-Xylene	ug/m3	4.4	12/31/05	TPH	0.6			

Analytical Method:
EPA TO-15
SAMPLES ARE TAKEN IN SUMMA CANISTERS AND ANALYZED BY GAS CHROMATOGRAPHY WITH MASS SPECTROMETRY DETECTION. (GC/MS)

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1/4/2006

Purchase Order No.: 36185-05

Project Location: 185 MT. HOPE AVE. ROCHESTER, NY
Date Received: 12/23/2005
Field Sample # : SV-2

LIMS-BAT #: LIMS-94195
Job Number: 36185-05

Sample ID : *05B49980
Sampled : 12/21/2005
(CT-3302) CT28

Sample Matrix: AIR

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/F
Acetone	ug/m3	ND	12/31/05	TPH	0.4			
Benzene	ug/m3	2.0	12/31/05	TPH	0.5			
Benzyl Chloride	ug/m3	ND	12/31/05	TPH	0.8			
Bromodichloromethane	ug/m3	ND	12/31/05	TPH	1.1			
Bromomethane	ug/m3	ND	12/31/05	TPH	0.6			
1,3-Butadiene	ug/m3	ND	12/31/05	TPH	0.4			
2-Butanone (MEK)	ug/m3	2.0	12/31/05	TPH	0.4			
Carbon Disulfide	ug/m3	2.0	12/31/05	TPH	0.5			
Carbon Tetrachloride	ug/m3	ND	12/31/05	TPH	1.0			
Chlorobenzene	ug/m3	ND	12/31/05	TPH	0.7			
Chlorodibromomethane	ug/m3	ND	12/31/05	TPH	1.3			
Chloroethane	ug/m3	ND	12/31/05	TPH	0.4			
Chloroform	ug/m3	ND	12/31/05	TPH	0.8			
Chloromethane	ug/m3	1.0	12/31/05	TPH	0.4			
Cyclohexane	ug/m3	8.0	12/31/05	TPH	0.5			
1,2-Dibromoethane	ug/m3	ND	12/31/05	TPH	1.2			
1,2-Dichlorobenzene	ug/m3	ND	12/31/05	TPH	0.9			
1,3-Dichlorobenzene	ug/m3	ND	12/31/05	TPH	0.9			
1,4-Dichlorobenzene	ug/m3	ND	12/31/05	TPH	0.9			
Dichlorodifluoromethane	ug/m3	90.	12/31/05	TPH	0.7			
1,1-Dichloroethane	ug/m3	ND	12/31/05	TPH	0.7			
1,2-Dichloroethane	ug/m3	ND	12/31/05	TPH	0.7			
1,1-Dichloroethylene	ug/m3	ND	12/31/05	TPH	0.6			
cis-1,2-Dichloroethylene	ug/m3	ND	12/31/05	TPH	0.6			
t-1,2-Dichloroethylene	ug/m3	ND	12/31/05	TPH	0.6			
1,2-Dichloropropane	ug/m3	ND	12/31/05	TPH	0.7			
cis-1,3-Dichloropropene	ug/m3	ND	12/31/05	TPH	0.7			
trans-1,3-Dichloropropene	ug/m3	ND	12/31/05	TPH	0.7			
1,2-Dichlorotetrafluoroethane (114)	ug/m3	ND	12/31/05	TPH	1.1			

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Purchase Order No.: 36185-05

Project Location: 185 MT. HOPE AVE. ROCHESTER, NY
Date Received: 12/23/2005
Field Sample # : **SV-2**
Sample ID : ***05B49980**
Sampled : 12/21/2005
(CT-3302) CT28
Sample Matrix: AIR

LIMS-BAT #: LIMS-94195
Job Number: 36185-05

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/F
Ethanol	ug/m3	5.1	12/31/05	TPH	0.3			
Ethyl Acetate	ug/m3	ND	12/31/05	TPH	0.6			
Ethylbenzene	ug/m3	1.0	12/31/05	TPH	0.6			
4-Ethyl Toluene	ug/m3	ND	12/31/05	TPH	0.8			
n-Heptane	ug/m3	140	12/31/05	TPH	0.6			
Hexachlorobutadiene	ug/m3	ND	12/31/05	TPH	5.4			
Hexane	ug/m3	590	12/31/05	TPH	0.5			
2-Hexanone	ug/m3	ND	12/31/05	TPH	0.7			
Isopropanol	ug/m3	1.8	12/31/05	TPH	0.4			
Methyl tert-Butyl Ether (MTBE)	ug/m3	ND	12/31/05	TPH	0.6			
Methylene Chloride	ug/m3	1.0	12/31/05	TPH	1.0			
4-Methyl-2-Pentanone (MIBK)	ug/m3	ND	12/31/05	TPH	0.7			
Propene	ug/m3	ND	12/31/05	TPH	0.3			
Styrene	ug/m3	ND	12/31/05	TPH	0.7			
1,1,2,2-Tetrachloroethane	ug/m3	ND	12/31/05	TPH	3.5			
Tetrachloroethylene	ug/m3	ND	12/31/05	TPH	1.1			
Tetrahydrofuran	ug/m3	ND	12/31/05	TPH	0.5			
Toluene	ug/m3	8.6	12/31/05	TPH	0.6			
1,2,4-Trichlorobenzene	ug/m3	ND	12/31/05	TPH	3.8			
1,1,1-Trichloroethane	ug/m3	ND	12/31/05	TPH	0.9			
1,1,2-Trichloroethane	ug/m3	ND	12/31/05	TPH	0.9			
Trichloroethylene	ug/m3	ND	12/31/05	TPH	0.9			
Trichlorofluoromethane	ug/m3	1.3	12/31/05	TPH	0.9			
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/m3	ND	12/31/05	TPH	1.2			
1,2,4-Trimethylbenzene	ug/m3	1.8	12/31/05	TPH	0.7			
1,3,5-Trimethylbenzene	ug/m3	ND	12/31/05	TPH	0.8			
Vinyl Acetate	ug/m3	36.	12/31/05	TPH	0.5			
Vinyl Chloride	ug/m3	ND	12/31/05	TPH	0.4			
m/p-Xylene	ug/m3	3.7	12/31/05	TPH	0.6			

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Purchase Order No.: 36185-05

Project Location: 185 MT. HOPE AVE. ROCHESTER, NY
Date Received: 12/23/2005
Field Sample # : **SV-2**

LIMS-BAT #: LIMS-94195
Job Number: 36185-05

Sample ID : ***05B49980**
Sampled : 12/21/2005
(CT-3302) CT28

Sample Matrix: AIR

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/F
o-Xylene	ug/m3	1.2	12/31/05	TPH	0.6			

Analytical Method:
EPA TO-15
SAMPLES ARE TAKEN IN SUMMA CANISTERS AND ANALYZED BY GAS CHROMATOGRAPHY WITH MASS SPECTROMETRY DETECTION. (GC/MS)

RL = Reporting Limit
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1/4/2006

Purchase Order No.: 36185-05

Project Location: 185 MT. HOPE AVE. ROCHESTER, NY
Date Received: 12/23/2005
Field Sample # : SV-3

LIMS-BAT #: LIMS-94195
Job Number: 36185-05

Sample ID : *05B49981
Sampled : 12/21/2005
(CT-1327) CT69

Sample Matrix: AIR

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Acetone	ug/m3	ND	12/31/05	TPH	0.4			
Benzene	ug/m3	8.2	12/31/05	TPH	0.5			
Benzyl Chloride	ug/m3	ND	12/31/05	TPH	0.8			
Bromodichloromethane	ug/m3	ND	12/31/05	TPH	1.1			
Bromomethane	ug/m3	ND	12/31/05	TPH	0.6			
1,3-Butadiene	ug/m3	30.	12/31/05	TPH	0.3			
2-Butanone (MEK)	ug/m3	2.7	12/31/05	TPH	0.4			
Carbon Disulfide	ug/m3	0.9	12/31/05	TPH	0.5			
Carbon Tetrachloride	ug/m3	ND	12/31/05	TPH	1.0			
Chlorobenzene	ug/m3	ND	12/31/05	TPH	0.7			
Chlorodibromomethane	ug/m3	ND	12/31/05	TPH	1.3			
Chloroethane	ug/m3	ND	12/31/05	TPH	0.4			
Chloroform	ug/m3	ND	12/31/05	TPH	0.8			
Chloromethane	ug/m3	12.	12/31/05	TPH	0.4			
Cyclohexane	ug/m3	120	12/31/05	TPH	0.5			
1,2-Dibromoethane	ug/m3	ND	12/31/05	TPH	1.2			
1,2-Dichlorobenzene	ug/m3	ND	12/31/05	TPH	0.9			
1,3-Dichlorobenzene	ug/m3	ND	12/31/05	TPH	0.9			
1,4-Dichlorobenzene	ug/m3	ND	12/31/05	TPH	0.9			
Dichlorodifluoromethane	ug/m3	190	12/31/05	TPH	0.7			
1,1-Dichloroethane	ug/m3	ND	12/31/05	TPH	0.7			
1,2-Dichloroethane	ug/m3	ND	12/31/05	TPH	0.7			
1,1-Dichloroethylene	ug/m3	ND	12/31/05	TPH	0.6			
cis-1,2-Dichloroethylene	ug/m3	ND	12/31/05	TPH	0.6			
t-1,2-Dichloroethylene	ug/m3	ND	12/31/05	TPH	0.6			
1,2-Dichloropropane	ug/m3	ND	12/31/05	TPH	0.7			
cis-1,3-Dichloropropene	ug/m3	ND	12/31/05	TPH	0.7			
trans-1,3-Dichloropropene	ug/m3	ND	12/31/05	TPH	0.7			
1,2-Dichlorotetrafluoroethane (114)	ug/m3	ND	12/31/05	TPH	1.1			

RL = Reporting Limit

ND = Not Detected at or above the Reporting Limit

NM = Not Measured

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

* = See end of report for comments and notes applying to this sample

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ANALYTICAL LABORATORY
39 Spruce Street ° East Longmeadow, MA 01028 ° FAX 413/525-6405 ° TEL. 413/525-2332

JEFF DANZINGER
DAY ENVIRONMENTAL, INC.
40 COMMERCIAL STREET
ROCHESTER, NY 14614

Purchase Order No.: 36185-05

Project Location: 185 MT. HOPE AVE. ROCHESTER, NY
Date Received: 12/23/2005
Field Sample # : SV-3
Sample ID : *05B49981
Sampled : 12/21/2005
(CT-1327) CT69
Sample Matrix: AIR

LIMS-BAT #: LIMS-94195
Job Number: 36185-05

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/F
Ethanol	ug/m3	15.	12/31/05	TPH	0.3			
Ethyl Acetate	ug/m3	ND	12/31/05	TPH	0.6			
Ethylbenzene	ug/m3	3.0	12/31/05	TPH	0.6			
4-Ethyl Toluene	ug/m3	1.7	12/31/05	TPH	0.7			
n-Heptane	ug/m3	22.	12/31/05	TPH	0.6			
Hexachlorobutadiene	ug/m3	ND	12/31/05	TPH	5.4			
Hexane	ug/m3	260	12/31/05	TPH	0.5			
2-Hexanone	ug/m3	ND	12/31/05	TPH	0.7			
Isopropanol	ug/m3	4.3	12/31/05	TPH	0.4			
Methyl tert-Butyl Ether (MTBE)	ug/m3	0.9	12/31/05	TPH	0.5			
Methylene Chloride	ug/m3	1.0	12/31/05	TPH	1.0			
4-Methyl-2-Pentanone (MIBK)	ug/m3	ND	12/31/05	TPH	0.7			
Propene	ug/m3	380	12/31/05	TPH	0.3			
Styrene	ug/m3	ND	12/31/05	TPH	0.7			
1,1,2,2-Tetrachloroethane	ug/m3	ND	12/31/05	TPH	3.5			
Tetrachloroethylene	ug/m3	ND	12/31/05	TPH	1.1			
Tetrahydrofuran	ug/m3	ND	12/31/05	TPH	0.5			
Toluene	ug/m3	23.	12/31/05	TPH	0.6			
1,2,4-Trichlorobenzene	ug/m3	ND	12/31/05	TPH	3.8			
1,1,1-Trichloroethane	ug/m3	ND	12/31/05	TPH	0.9			
1,1,2-Trichloroethane	ug/m3	ND	12/31/05	TPH	0.9			
Trichloroethylene	ug/m3	ND	12/31/05	TPH	0.9			
Trichlorofluoromethane	ug/m3	1.3	12/31/05	TPH	0.9			
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/m3	ND	12/31/05	TPH	1.2			
1,2,4-Trimethylbenzene	ug/m3	5.0	12/31/05	TPH	0.7			
1,3,5-Trimethylbenzene	ug/m3	1.7	12/31/05	TPH	0.7			
Vinyl Acetate	ug/m3	53.	12/31/05	TPH	0.5			
Vinyl Chloride	ug/m3	ND	12/31/05	TPH	0.4			
m/p-Xylene	ug/m3	15.	12/31/05	TPH	0.6			

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JEFF DANZINGER
DAY ENVIRONMENTAL, INC.
40 COMMERCIAL STREET
ROCHESTER, NY 14614

1/4/2006

Purchase Order No.: 36185-05

Project Location: 185 MT. HOPE AVE. ROCHESTER, NY
Date Received: 12/23/2005
Field Sample # : **SV-3**

LIMS-BAT #: LIMS-94195
Job Number: 36185-05

Sample ID : ***05B49981**
Sampled : 12/21/2005
(CT-1327) CT69

Sample Matrix: AIR

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/F
o-Xylene	ug/m3	4.4	12/31/05	TPH	0.6			

Analytical Method:
EPA TO-15
SAMPLES ARE TAKEN IN SUMMA CANISTERS AND ANALYZED BY GAS CHROMATOGRAPHY WITH MASS SPECTROMETRY DETECTION. (GC/MS)

RL = Reporting Limit
ND = Not Detected at or above the Reporting Limit
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SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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40 COMMERCIAL STREET
ROCHESTER, NY 14614

Purchase Order No.: 36185-05

Project Location: 185 MT. HOPE AVE. ROCHESTER, NY
Date Received: 12/23/2005

LIMS-BAT #: LIMS-94195
Job Number: 36185-05

The following notes were attached to the reported analysis :

Sample ID: * 05B49979
Analysis: Hexachlorobutadiene

REPORTED RESULT IS ESTIMATED. EITHER INITIAL OR CONTINUING CALIBRATION DID NOT MEET REQUIRED CRITERIA.

Sample ID: * 05B49979
Analysis: 1,1,2,2-Tetrachloroethane

REPORTED RESULT IS ESTIMATED. EITHER INITIAL OR CONTINUING CALIBRATION DID NOT MEET REQUIRED CRITERIA.

Sample ID: * 05B49979
Analysis: 1,2,4-Trichlorobenzene

REPORTED RESULT IS ESTIMATED. EITHER INITIAL OR CONTINUING CALIBRATION DID NOT MEET REQUIRED CRITERIA.

Sample ID: * 05B49979
Analysis: Trichloroethylene

ESTIMATED RESULT	MDL (UG/M3)
0.59	0.11

Sample ID: * 05B49980
Analysis: Hexachlorobutadiene

REPORTED RESULT IS ESTIMATED. EITHER INITIAL OR CONTINUING CALIBRATION DID NOT MEET REQUIRED CRITERIA.

Sample ID: * 05B49980
Analysis: 1,1,2,2-Tetrachloroethane

REPORTED RESULT IS ESTIMATED. EITHER INITIAL OR CONTINUING CALIBRATION DID NOT MEET REQUIRED CRITERIA.

Sample ID: * 05B49980
Analysis: 1,2,4-Trichlorobenzene

REPORTED RESULT IS ESTIMATED. EITHER INITIAL OR CONTINUING CALIBRATION DID NOT MEET REQUIRED CRITERIA.

RL = Reporting Limit

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NM = Not Measured

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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JEFF DANZINGER
DAY ENVIRONMENTAL, INC.
40 COMMERCIAL STREET
ROCHESTER, NY 14614

Purchase Order No.: 36185-05

Project Location: 185 MT. HOPE AVE. ROCHESTER, NY
Date Received: 12/23/2005

LIMS-BAT #: LIMS-94195
Job Number: 36185-05

Sample ID: * 05B49980
Analysis: Trichloroethylene

ESTIMATED RESULT	MDL (UG/M3)
0.16	0.11

Sample ID: * 05B49981
Analysis: Hexachlorobutadiene

REPORTED RESULT IS ESTIMATED. EITHER INITIAL OR CONTINUING CALIBRATION DID NOT MEET REQUIRED CRITERIA.

Sample ID: * 05B49981
Analysis: 1,1,2,2-Tetrachloroethane

REPORTED RESULT IS ESTIMATED. EITHER INITIAL OR CONTINUING CALIBRATION DID NOT MEET REQUIRED CRITERIA.

Sample ID: * 05B49981
Analysis: 1,2,4-Trichlorobenzene

REPORTED RESULT IS ESTIMATED. EITHER INITIAL OR CONTINUING CALIBRATION DID NOT MEET REQUIRED CRITERIA.

Sample ID: * 05B49981
Analysis: Trichloroethylene

ESTIMATED RESULT	MDL (UG/M3)
0.32	0.11

Sample ID: * 05B49982
Analysis: Hexachlorobutadiene

REPORTED RESULT IS ESTIMATED. EITHER INITIAL OR CONTINUING CALIBRATION DID NOT MEET REQUIRED CRITERIA.

Sample ID: * 05B49982
Analysis: 1,1,2,2-Tetrachloroethane

REPORTED RESULT IS ESTIMATED. EITHER INITIAL OR CONTINUING CALIBRATION DID NOT MEET REQUIRED CRITERIA.

RL = Reporting Limit

ND = Not Detected at or above the Reporting Limit

NM = Not Measured

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

* = See end of report for comments and notes applying to this sample

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JEFF DANZINGER
DAY ENVIRONMENTAL, INC.
40 COMMERCIAL STREET
ROCHESTER, NY 14614

Purchase Order No.: 36185-05

Project Location: 185 MT. HOPE AVE. ROCHESTER, NY
Date Received: 12/23/2005

LIMS-BAT #: LIMS-94195
Job Number: 36185-05

Sample ID: * 05B49982
Analysis: 1,2,4-Trichlorobenzene

REPORTED RESULT IS ESTIMATED. EITHER INITIAL OR CONTINUING CALIBRATION DID NOT MEET REQUIRED CRITERIA.

Sample ID: * 05B49982
Analysis: Trichloroethylene

ESTIMATED RESULT	MDL (UG/M3)
0.11	0.11

** END OF REPORT **

RL = Reporting Limit

ND = Not Detected at or above the Reporting Limit

NM = Not Measured

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SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates.
Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab fortified Blanks and Duplicates
Standard Reference Materials and Duplicates
Method Blanks

Report Date: 1/4/2006 Lims Bat # : LIMS-94195

QC Batch Number: BATCH-10314

Sample Id	Analysis	QC Analysis	Values	Units	Limits
05B49979					
	4-Bromofluorobenzene	Surrogate Recovery	106.0	%	70-130
05B49980					
	4-Bromofluorobenzene	Surrogate Recovery	100.1	%	70-130
05B49981					
	4-Bromofluorobenzene	Surrogate Recovery	106.0	%	70-130
05B49982					
	4-Bromofluorobenzene	Surrogate Recovery	103.5	%	70-130
BLANK-82750					
	Acetone	Blank	1.0	ug/m3	
	Benzene	Blank	<0.5	ug/m3	
	Carbon Tetrachloride	Blank	<1.0	ug/m3	
	Chloroform	Blank	<0.8	ug/m3	
	1,2-Dichloroethane	Blank	<0.7	ug/m3	
	1,4-Dichlorobenzene	Blank	<0.9	ug/m3	
	Ethyl Acetate	Blank	<0.6	ug/m3	
	Ethylbenzene	Blank	<0.7	ug/m3	
	Hexane	Blank	<0.6	ug/m3	
	Isopropanol	Blank	<0.4	ug/m3	
	2-Butanone (MEK)	Blank	<0.5	ug/m3	
	4-Methyl-2-Pentanone (MIBK)	Blank	<0.7	ug/m3	
	Styrene	Blank	<0.7	ug/m3	
	Tetrachloroethylene	Blank	<1.1	ug/m3	
	Toluene	Blank	<0.6	ug/m3	
	1,1,1-Trichloroethane	Blank	<0.9	ug/m3	
	Trichloroethylene	Blank	<0.9	ug/m3	
	1,1,2-Trichloro-1,2,2-Trifluoroethane	Blank	<1.2	ug/m3	
	Trichlorofluoromethane	Blank	<0.9	ug/m3	
	o-Xylene	Blank	<0.7	ug/m3	
	m/p-Xylene	Blank	<0.7	ug/m3	
	1,2-Dichlorobenzene	Blank	<0.9	ug/m3	
	1,3-Dichlorobenzene	Blank	<0.9	ug/m3	
	1,1-Dichloroethane	Blank	<0.7	ug/m3	
	1,1-Dichloroethylene	Blank	<0.6	ug/m3	
	Ethanol	Blank	0.4	ug/m3	
	4-Ethyl Toluene	Blank	<0.8	ug/m3	
	Methyl tert-Butyl Ether (MTBE)	Blank	<0.6	ug/m3	
	t-1,2-Dichloroethylene	Blank	<0.6	ug/m3	
	Vinyl Chloride	Blank	<0.4	ug/m3	
	Methylene Chloride	Blank	<1.0	ug/m3	
	Chlorobenzene	Blank	<0.7	ug/m3	
	Chloromethane	Blank	<0.4	ug/m3	
	Bromomethane	Blank	<0.6	ug/m3	
	Chloroethane	Blank	<0.4	ug/m3	

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QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates.
Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab fortified Blanks and Duplicates
Standard Reference Materials and Duplicates
Method Blanks

QC Batch Number: BATCH-10314

Sample Id	Analysis	QC Analysis	Values	Units	Limits
BLANK-82750					
	cis-1,3-Dichloropropene	Blank	<0.7	ug/m3	
	trans-1,3-Dichloropropene	Blank	<0.7	ug/m3	
	Chlorodibromomethane	Blank	<1.3	ug/m3	
	1,1,2-Trichloroethane	Blank	<0.9	ug/m3	
	1,1,2,2-Tetrachloroethane	Blank	<3.5	ug/m3	
	Hexachlorobutadiene	Blank	<5.4	ug/m3	
	1,2,4-Trichlorobenzene	Blank	<3.8	ug/m3	
	1,2,4-Trimethylbenzene	Blank	<0.8	ug/m3	
	1,3,5-Trimethylbenzene	Blank	<0.8	ug/m3	
	Cyclohexane	Blank	<0.6	ug/m3	
	cis-1,2-Dichloroethylene	Blank	<0.6	ug/m3	
	1,2-Dichloropropane	Blank	<0.7	ug/m3	
	Dichlorodifluoromethane	Blank	<0.8	ug/m3	
	Benzyl Chloride	Blank	<0.8	ug/m3	
	Carbon Disulfide	Blank	2.4	ug/m3	
	Vinyl Acetate	Blank	<0.6	ug/m3	
	2-Hexanone	Blank	<0.7	ug/m3	
	Bromodichloromethane	Blank	<1.1	ug/m3	
	1,2-Dibromoethane	Blank	<1.2	ug/m3	
	n-Heptane	Blank	<0.7	ug/m3	
	1,2-Dichlorotetrafluoroethane (114)	Blank	<1.1	ug/m3	
	Tetrahydrofuran	Blank	<0.5	ug/m3	
	Propene	Blank	<0.3	ug/m3	
	1,3-Butadiene	Blank	<0.4	ug/m3	

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QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates.
Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab fortified Blanks and Duplicates
Standard Reference Materials and Duplicates
Method Blanks

NOTES:

QC Batch No. : BATCH-10314
Sample ID : BLANK-82750
Analysis : 1,1,2,2-Tetrachloroethane

REPORTED RESULT IS ESTIMATED. EITHER INITIAL OR CONTINUING CALIBRATION DID NOT MEET REQUIRED CRITERIA.

QC Batch No. : BATCH-10314
Sample ID : BLANK-82750
Analysis : 1,2,4-Trichlorobenzene

REPORTED RESULT IS ESTIMATED. EITHER INITIAL OR CONTINUING CALIBRATION DID NOT MEET REQUIRED CRITERIA.

QC Batch No. : BATCH-10314
Sample ID : BLANK-82750
Analysis : Hexachlorobutadiene

REPORTED RESULT IS ESTIMATED. EITHER INITIAL OR CONTINUING CALIBRATION DID NOT MEET REQUIRED CRITERIA.

QC Batch No. : BATCH-10314
Sample ID : BLANK-82750
Analysis : Trichloroethylene

ESTIMATED RESULT	MDL (UG/M3)
ND	0.11

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QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates.
Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab fortified Blanks and Duplicates
Standard Reference Materials and Duplicates
Method Blanks

QUALITY CONTROL DEFINITIONS AND ABBREVIATIONS

QC BATCH NUMBER	This is the number assigned to all samples analyzed together that would be subject to comparison with a particular set of Quality Control Data.
LIMITS	Upper and Lower Control Limits for the QC ANALYSIS Reported. All values normally would fall within these statistically determined limits, unless there is an unusual circumstance that would be documented in a NOTE appearing on the last page of the QC SUMMARY REPORT. Not all QC results will have Limits defined.
Sample Amount	Amount of analyte found in a sample.
Blank	Method Blank that has been taken though all the steps of the analysis.
LFBLANK	Laboratory Fortified Blank (a control sample)
STDADD	Standard Added (a laboratory control sample)
Matrix Spk Amt Added	Amount of analyte spiked into a sample
MS Amt Measured	Amount of analyte found including amount that was spiked
Matrix Spike % Rec.	% Recovery of spiked amount in sample.
Duplicate Value	The result from the Duplicate analysis of the sample.
Duplicate RPD	The Relative Percent Difference between two Duplicate Analyses.
Surrogate Recovery	The % Recovery for non-environmental compounds (surrogates) spiked into samples to determine the performance of the analytical methods.
Sur. Recovery (ELCD)	Surrogate Recovery on the Electrolytic Conductivity Detector.
Sur. Recovery (PID)	Surrogate Recovery on the Photoionization Detector.
Standard Measured	Amount measured for a laboratory control sample
Standard Amt Added	Known value for a laboratory control sample
Standard % Recovery	% recovered for a laboratory control sample with a known value.
Lab Fort Blank Amt	Laboratory Fortified Blank Amount Added
Lab Fort Blk. Found	Laboratory Fortified Blank Amount Found
Lab Fort Blk % Rec	Laboratory Fortified Blank % Recovered
Dup Lab Fort Bl Amt	Duplicate Laboratory Fortified Blank Amount Added
Dup Lab Fort Bl Fnd	Duplicate Laboratory Fortified Blank Amount Found
Dup Lab Fort Bl % Rec	Duplicate Laboratory Fortified Blank % Recovery
Lab Fort Blank Range	Laboratory Fortified Blank Range (Absolute value of difference between recoveries for Lab Fortified Blank and Lab Fortified Blank Duplicate).
Lab Fort Bl. Av. Rec.	Laboratory Fortified Blank Average Recovery
Duplicate Sample Amt	Sample Value for Duplicate used with Matrix Spike Duplicate
MSD Amount Added	Matrix Spike Duplicate Amount Added (Spiked)
MSD Amt Measured	Matrix Spike Duplicate Amount Measured
MSD % Recovery	Matrix Spike Duplicate % Recovery
MSD Range	Absolute difference between Matrix Spike and Matrix Spike Duplicate Recoveries

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Email: info@contestlabs.com
www.contestlabs.com

CHAIN OF CUSTODY RECORD

39 SPRUCE ST
EAST LONGMEADOW, MA 01028

Company Name: DAY ENVIRONMENTAL INC.
Address: 40 Commercial Street
Rochester NY 14614
Attention: Jeff Danzinger
Project Location: 185 MT. HOPE AVE, Rochester NY
Sampled By: C. DAVIDSON; J. DANZINGER
M. Dickinson

Telephone: (585) 454-0210
Project # 36185-05
Client PO # 36185-05

DATA DELIVERY (check one):
☐ FAX ☒ EMAIL ☐ WEBSITE CLIENT
Fax #:
Email: jdanzinger@daymail.net
Format: ☒ EXCEL ☒ PDF ☐ GIS KEY
☐ OTHER

Proposal Provided? (For Billing purposes)
☒ yes 1205-29 proposal date

State Form Required?
☐ yes ☒ no

Field ID	Sample Description		Lab # 6KB	Date Sampled Start Date/Time	Stop Date/Time	Composite	Grab	*Matrix Code	1	S	ANALYSIS REQUESTED
SV-1	SV-1	CT1834 CT29	49979	12/21/05 1129	12/21/05 1729		X	A		X	
SV-2	SV-2	CT3362 CT28	49980	12/21/05 1130	12/21/05 1730		X	A		X	
SV-3	SV-3	CT1327 CT69	49981	12/21/05 1127	12/21/05 1727		X	A		X	
B-1	B-1 - South exterior	CT1348 CT53	49982	12/21/05 1128	12/21/05 1728		X	A		X	

12/22/05

Laboratory Comments:

~Cont. Code:
A=amber glass
G=glass
P=plastic
ST=sterile
V=vial
S=summa can
T=tedlar bag
O=Other

Client Comments: Report Trichloroethene if detected at concentrations below the RL and above the MDL of 0.11 ug/m3

Relinquished by: (signature)	Date/Time:
Matthew Dickinson	12/22/05 10:15AM
Received by: (signature)	Date/Time:
Thomas Montalbo	12/23/05 13:30
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Turnaround **
☒ 7-Day
☐ 10-Day
☐ Other
RUSH *
☐ *24-Hr ☐ *48-Hr
☐ *72-Hr ☐ *4-Day
* Require lab approval

Detection Limit Requirements
Regulations?
Data Enhancement Project/RCP? ☐ Y ☐ N
Special Requirements or DL's: See Client Comments

***Matrix Code:**
GW= groundwater
WW= wastewater
DW= drinking water
A = air
S = soil/solid
SL = sludge
O = other

****Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium bisulfate
O = Other
X = Na hydroxide
T = Na thiosulfate

**Turnaround time begins at 9:00 a.m. the day after sample receipt (unless received before 2:00 p.m.)

Con-Test Laboratory is the ONLY independent laboratory in all of New England with both prestigious AIHA and NELAC Certifications and WBE/DBE Certified!

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East Longmeadow, MA
Phone: 1-413-525-2332
Fax: 1-413-525-6405

SAMPLE RECEIPT CHECKLIST

CLIENT NAME: Day Environ Mental

RECEIVED BY: TMH DATE: 12-23-05

1. Was chain of custody relinquished and signed? (YES) NO
2. Does Chain agree with samples? (YES) NO

If not, explain:

3. All Samples in good condition? (YES) NO

If not, explain:

4. Were samples received in compliance with Temperature 0-6 degrees C? YES NO Degrees: NA
5. Are there any on hold samples? YES (NO)
6. Laboratory analysts notified? (YES) NO

Who_____ Time_____ Date_____

7. Location where samples are stored: AIR LAB

CONTAINERS SENT IN TO CON-TEST	# of containers	CONTAINERS SENT TO CON-TEST	# of containers
1 liter amber		Air Cassettes	
500 ml amber		8 oz clear jar	
250 ml amber (8oz. Amber)		4 oz clear jar	
1 liter plastic		2 oz clear jar	
500 ml plastic		Plastic bag	
250 ml plastic		Encore	
40 ml vial		Brass Sleeves	
Colisure bottle		Tubes	
Dissolved oxygen bottle		Summa cans 5	5
Flashpoint bottle		Other Regs	5

Laboratory comments:

con-test®
ANALYTICAL LABORATORY

39 Spruce Street • 2nd Floor • East Longmeadow, MA 01028 • FAX 413/525-6405 • TEL. 413/525-2332

January 25, 2006

Day Environmental, Inc.
Attn: Jeff Danzinger
40 Commercial Street
Rochester, New York 14614-1008
Dear Jeff,

All canisters for the 185 Mt. Hope Project were Batch Certified.

Tod Kopyscinski

Sincerely,
Tod Kopyscinski
Air Lab Director

APPENDIX G

Analytical Laboratory Reports and Chain-of-Custody Documentation for Soil, Groundwater and QA/QC Samples

APPENDIX H

Data Usability Summary Report (Text Only)

Data Validation Services

120 Cobble Creek Road P. O. Box 208
North Creek, N. Y. 12853
Phone 518-251-4429
Facsimile 518-251-4428

January 2, 2006

Jeff Danzinger
Day Environmental
40 Commercial St.
Rochester, NY 14614

RE: Data Usability Summary Report for185 Mt Hope Avenue site
Mitkem SDG Nos. D0120, D0224, D0368, and D1059

Dear Mr. Danzinger:

Review has been completed for the data packages generated by Mitkem Laboratories that pertain to samples collected 2/03/05 through 9/8/05 at the Mt. Hope Avenue site. Thirteen soil samples and five aqueous samples were processed for TCL volatiles, TCL semivolatiles, TCL pesticide/PCBs, and TAL metals/CN. Five aqueous samples were analyzed for TCL volatiles and TCL semivolatiles. Methodologies utilized are those of the NYSDEC ASP CLP. Sample matrix spikes, and equipment and trip blanks were also processed.

The data packages submitted contained full deliverables for validation, but this usability report is generated from review of the summary form information, with review of sample raw data, and limited review of associated QC raw data. Full validation has not been performed. However, the reported summary forms 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
* Case Narratives
* 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
* Calibration/CRI/CRA Standards
* ICP Interference Check Standards
* ICP Serial Dilution Correlations

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, samples were primarily processed in compliance with protocol, and most results are usable as reported, with edit, and/or with qualification. The exceptions are:

- Selenium results are not usable in three soil samples due to apparent matrix effect
- Selenium and silver results are not usable in five aqueous samples due to apparent matrix effect
- Some pesticide detections are edited to reflect non-detection
- Most detections of calcium, magnesium, and sodium in ten soil samples are suspect as external contamination due to field blank consitutency

Copies of the NYSDEC Sample Identification and Analytical Requirement Summary Forms and laboratory case narratives are attached to this text, and should be reviewed in conjunction with this report. Included with this report are red-ink edited sample report forms that represent final qualified samples results.

The following text discusses quality issues of concern.

General

Soil samples collected in February 2005 were received by the laboratory more than two days after collection (up to seven days) due to delays prior to shipment. Although samples were processed within the ASP holding time from VTSR, the technical holding time from collection have been exceeded for volatiles in eight samples, and for semivolatiles and pesticide/PCBs in five soil samples. These are discussed below.

The field blank of 2/04/05 reports elevated concentrations of elements calcium, magnesium, and sodium. Therefore, all the detections reported for those minerals in the eleven soil samples reported in SDG D0120 must be considered as external contamination, and have been edited to reflect non-detection ("U") at the originally reported concentrations (elevated reporting limits).

TCL Volatiles by ASP CLP

All results for the soil samples with the prefixes 002/, 004/, 005/, 006/, 007/. 008/, 009/, and 010/ are qualified as being estimated in value ("UJ"/"J"), with a low bias due to outlying technical holding time (13 to 15 days from collection). Initial analyses are to be used. There is an extra consideration as estimated for detected compounds in 005/, 008/, 009/, and 010/ due to elevated surrogate or internal standard responses for those samples.

Due to a matrix effect on internal standard responses in the low level analysis (<10%), results for 011/SBDA-08(8-10.4) are to be derived from the dilution analysis (without qualification).

Results for seventeen analytes associated with internal standard d5-chlorobenzene are qualified as estimated in 001/SSDAY-01 due to low response of that standard.

Due to presence in associated method, trip, or rinse blanks, specific detections of methylene chloride and toluene in the samples in D1059 are considered external contamination, and edited to nondetection ("U") at either the CRDL, or the originally reported concentration, whichever is greater.

Results for sample analytes initially reported with the "E" flag are to be derived from the dilution ("-DL") analyses of the samples. All other results can be derived from the initial analyses.

Calibrations standards showed responses not significantly adversely affecting reported results, with the exception of the following, results for which are qualified estimated ("UJ" or "J"):

- dichlorodifluoromethane, 2-hexanone, and 1,2-dibromo-3-chloropropane in the samples in D0224
- 2-butanone, methylcyclohexanone, 4-methyl-2-pentanone in 026/URS-3
- carbon disulfide in samples in D0120

Low level soil matrix spikes of 03105A-1618 and 002/SSDAY-02, and aqueous matrix spikes of 026/URS-3 and 017/MW02, show acceptable accuracy and precision.

Tentatively Identified Compounds (TICs) flagged as "B" by the laboratory, or identified as carbon dioxide or system artifacts, are considered external contamination (indicated by presence in associated blanks), and results should be rejected as sample components.

TCL Semivolatile Analyses by ASP CLP

All results for samples with the prefixes 002/, 004/, 005/, 007/ and 008/ are qualified as being estimated in value ("UJ"/"J"), with a low bias due to outlying technical holding time (13 days from collection).

Due to outlying holding time for extraction, results for FB022405 are qualified as estimated, with a low bias.

Results for sample analytes initially reported with the "E" flag are to be derived from the dilution ("-DL") analyses of the samples. All other results can be derived from the initial analyses.

Results for all phenolic detections and for all detections derived from the initial analysis of 025/MW-3 are to be qualified as estimated due to outlying surrogate and internal standard responses.

The analyses of sample 03105A-1618 and its matrix spikes show elevated internal standard responses. Reported sample results are unaffected as they show no detection.

Calibrations standards showed acceptable responses, or slightly outlying responses not affecting the usaility of the sample results, with the following exceptions, results for which are qualified as estimated ("UJ") in the indicated samples:

2,4-dimethylphenol and hexachlorocyclopentadiene samples reported in D0224
2,4-dinitrophenol in samples reported in D0368
4-nitroaniline in samples reported in D0120
3,3-dichlorobenzidine in samples reported in D0120 and analyzed on 2/22/05

Soil matrix spikes of 03105A-1618 and 002/SSDAY-02, and aqueous matrix spikes of 017/MW02 produced acceptable accuracy and precision.

Due to presence in associated method or equipment blanks, specific detections of bis(2-ethyl-hexyl)phthalate in the samples in D1059, and for di-n-butylphthalate in the samples in D0224 are considered external contamination, and edited to nondetection ("U") at either the CRDL, or the originally reported concentration, whichever is greater.

Tentatively Identified Compounds (TICs) flagged as "B" or "A" by the laboratory are considered external contamination (indicated by presence in associated blanks), and results should be rejected as sample components.

TCL Pesticide/PCB Analyses by ASP CLP

All results for samples with the prefixes 002/, 004/, 005/, 007/ and 008/ are qualified as being estimated in value ("UJ"/"J"), with a low bias due to outlying technical holding time (13 to 14 days from collection).

Due to outlying holding time for extraction, results for FB022405 are qualified as estimated, with a low bias.

The result for Aroclor 1260 in 002/SSDAY-02 is qualified as tentative in identification and estimated in value ("NJ") due to poor pattern match (congener proportions).

Matrix spikes of pesticides in soil samples 03105A-1618 and 002/SSDAY-02, and aqueous sample 017/MW02, produced acceptable recoveries and duplicate correlations,

Due to elevated dual column quantitative correlation, results for g-BHC and g-chlordane in 017/MW02 are qualified as estimated. Many of the soil samples in D120 also show elevated correlations, indicating interferences and possible false positive identifications. These have been either qualified as estimated ("J"), tentative in identification ("NJ"), or edit to nondetection ("U"--for correlations above 100%D) on the provided results forms.

Due to limited integration output provided, and to noncompliant scaling of chromatograms, it is not possible with independent review to confirm all reported nondetected pesticide results. Detections can be confirmed. Full validation would require resubmission of some of the pesticide chromatograms and unedited integration reports for review.

A properly scaled chromatogram was requested and provided by the laboratory to confirm that TCX did recover (although unresolved) in 009/SBDAY-09(8-12).

TAL Metals/CN by CLP

Due to lack of recovery of selenium in the matrix spike of 03105A-1618, and the lack of recoveries of selenium and silver in 017/MW-2, results for selenium in the three samples reported in D0224, and those for selenium and silver in the five samples in D0368, are not usable ("R").

The following additional validation action outliers were observed in soil matrix spike recoveries and laboratory duplicate correlations. Results for the indicated analytes are qualified estimated in all samples associated with the spike and duplicate:

Sample Spiked	Analyte	Rec Outlier	Dup Outlier	Associated Samples
03105A-1618	antimony	58%		D0224
	lead	26		"
	silver	66		"
002/SBDAY-02	antimony	40		D0120
	selenium	62		"

ICP serial dilution correlations were performed on 03105A-1618, 017/MW02, and 002/SSDAY-02. Results for the following sample analyte detections are qualified estimated due to outlying correlations:

- barium, chromium, iron, magnesium, manganese,vanadium in samples reported in D0224
- calcium in FB022405
- barium and magnesium in samples reported in D0368

The CRI standards associated with the soil samples reported in D0120 all show consistent elevated responses (128% to 168%). Therefore, all detections of ICP elements in those samples that are less than five times the CRDL have been qualified as being estimated in value. No corrective action was required of the laboratory.

Please do not hesitate to contact me if you have comments or questions regarding this report.

Very truly yours,

Judy Harry

Att

VALIDATION QUALIFIER DEFINITIONS

DATA QUALIFIER DEFINITIONS

The following definitions provide brief explanations of the national qualifiers assigned to results in the data review process. If the Regions choose to use additional qualifiers, a complete explanation of those qualifiers should accompany the data review.

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

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

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

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

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

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

LABORATORY SAMPLE IDs AND CASE NARRATIVES

APPENDIX I

Transport and Disposal Documentation for Investigation-Derived Wastes

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Doc. No. 0 4 4 0 6 | 2. Page 1 of 1

3. Generator's Name and Mailing Address
Conifer Hamilton, LLC
183 East Main Street
Rochester, NY 14604
Att: Allen Handelman

185 Mt. Hope Ave.
Rochester NY 14620

4. Generator's Phone (5 8 5) 3 2 4 - 0 5 1 2

5. Transporter 1 Company Name: Hazmat Environmental Group Inc.
6. US EPA ID Number: N Y D 9 8 0 7 6 9 9 4 7
A. Transporter's Phone: 716 827-7200

7. Transporter 2 Company Name
8. US EPA ID Number
B. Transporter's Phone

9. Designated Facility Name and Site Address
Chemtron Corporation
35850 Schneider Court
Avon OH 44011
10. US EPA ID Number: O H D 0 6 6 0 6 0 6 0 9
C. Facility's Phone: 440 937-6348

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. USDOT Non-regulated Decon/Groundwater	2	DM	4.00	P
b. USDOT Non-regulated soil and debris	4	DM	2.000	P
c.				
d.				

D. Additional Descriptions for Materials Listed Above
a) (L) Non-haz Decon/Groundwater b) (S) Non-haz soil and debris

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
a) b)
WTS PO# 20250

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	Signature	Month	Day	Year
James K. Mulfaylse Maint. Director		04	04	06

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Jeff Butler		04	04	06

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

Printed by J. J. KELLER & ASSOCIATES, INC.
Neenah, WI 54957-0368

GENERATOR'S COPY

HAZMAT

ENVIRONMENTAL GROUP, INC
60 Commerce Drive, Buffalo, NY 14218
www.hazmatinc.com

FAX (716) 827-7217
(716) 827-7200

HAZMAT

NYDEC #9A-278
EPA ID# NYD980769947

DATE / /

338087

PICK UP

SHIPPER

NAME CONIFER HAMILTON LLC

STREET 185 MT HOPE AVE

CITY ROCHESTER STATE NY ZIP CODE 14601

CONTACT NAME 585-454-0210 PHONE

SCHEDULED TIME 4/4/2006

DELIVERY

CONSIGNEE

NAME CHEMTRON Corp.

STREET

CITY AVON STATE OH ZIP CODE

CONTACT NAME PHONE

ADDITIONAL INFORMATION / EQUIPMENT DAMAGE
If damaged at pickup site, did you send in Equipment Damage Report (EDR) via Qualcomm? Y N Explain damage below.

Pursuant to 6NYCRR 372.2 (b) (2) (iii) HazMat certifies that it is Authorized to deliver this shipment of manifested waste to the TSDF listed on this Bill of Lading. Shipment valuation limits apply from HazMat Rules Publication 101, item 848.

ADDITIONAL INFORMATION / EQUIPMENT DAMAGE
If damaged at delivery site, did you send in Equipment Damage Report (EDR) via Qualcomm? Y N Explain damage below.

PURCHASE ORDER NO.	WORK ORDER NUMBER	MANIFEST NUMBER	H.M. NUMBER
			60705

LOAD NUMBER	TRACTOR 337	TRAILER P11	ROLL OFF BOX	DRIVER NUMBER	DRIVER'S NAME

EQUIPMENT	MATERIAL DESCRIPTION/MANIFEST NUMBER	QUANTITY
EQUIPMENT TYPE VAN	NON-HAZARDOUS WASTE	6 DM
UNIT# DROPPED		
UNIT# PICKED UP		
CONDITION REPORT		

Product unloading station and/or tank approved by:

CONSIGNEE'S SIGNATURE

Compressor used YES ____ NO ____

In-Transit Heat used: YES ____ NO ____

Analysis/C of A: YES ____ NO ____

PICK UP

PICK UP DATE

ARRIVAL TIME ____ AM PM RELEASE TIME ____ AM PM

DAY #2 DATE

ARRIVAL TIME ____ AM PM RELEASE TIME ____ AM PM

TRAILER EMPTY UPON ARRIVAL ☐ YES
(if not, explain below—)

DIP MEASUREMENT (Tankers Only) ____ INCHES

COMMENTS: (EXPLAIN ALL DELAYS)

HAZMAT MATERIALS USED (ex. overpacks, etc.): ☐ YES ☐ NO

IF YES EXPLAIN:

I, THE UNDERSIGNED, CERTIFY THAT THE ABOVE INFORMATION IS TRUE AND COMPLETE.

4/4/06

SHIPPER'S SIGNATURE Date

DELIVERY

DRIVER ____ DAY #1 DATE ____

ARRIVAL TIME ____ AM PM RELEASE TIME ____ AM PM

DAY #2 DATE ____ ARRIVAL TIME ____ AM PM RELEASE TIME ____ AM PM

DAY #3 DATE ____ ARRIVAL TIME ____ AM PM RELEASE TIME ____ AM PM

TRAILER CLEAN AND EMPTY UPON DEPARTURE ☐ YES ☐ NO
(if not, explain below—)

COMMENTS: (Explain all delays or discrepancies))

IF YES EXPLAIN:

I, THE UNDERSIGNED, CERTIFY THAT THE ABOVE INFORMATION IS TRUE AND COMPLETE.

CONSIGNEE'S SIGNATURE Date

APPENDIX J

Completed Fish and Wildlife Resources Impact Analysis Decision Key

Fish and Wildlife Resources Impact Analysis Decision Key
185 Mt. Hope Avenue, Rochester, New York

		If YES, go to:	If NO, go to:
1.	Is the Site or area of concern a discharge or spill event?	13.	(2.)
2.	Is the Site or area of concern a point source of contamination to the groundwater which will be prevented from discharging to surface water? Soil contamination is not widespread, or if widespread, is confined under buildings and paved areas.	(13.)	3.
3.	Is the Site and all adjacent property a developed area with buildings, paved surfaces, and little or no vegetation?	4.	9.
4.	Does the Site contain habitat of an endangered, threatened or special concern species?	Section 3.10.1	5.
5.	Has the contamination gone off-site?	6.	14.
6.	Is there any discharge or erosion of contamination to surface water or the potential for discharge or erosion of contamination?	7.	14.
7.	Are the Site contaminants PCBs, pesticides or other persistent, bioaccumulable substances?	Section 3.10.1	8.
8.	Does contamination exist at concentrations that could exceed SCGs or be toxic to aquatic life if discharged to surface water?	Section 3.10.1	14.
9.	Does the Site or any adjacent or downgradient property contain any of the following resources? a. Any endangered, threatened or special concern species or rare plants or their habitat b. Any NYSDEC designated significant habitats or rare NYS Ecological Communities c. Tidal or freshwater wetlands d. Stream, creek or river e. Pond, lake, lagoon f. Drainage ditch or channel g. Other surface water feature h. Other marine or freshwater habitat i. Forest j. Grassland or grassy field k. Parkland or woodland l. Shrubby area m. Urban wildlife habitat n. Other terrestrial habitat	11.	10.
10.	Is the lack of resources due to the contamination?	Section 3.10.1	14.
11.	Is the contamination a localized source which has not migrated and will not migrate from the source to impact any on-site or off-site resources?	14.	12.
12.	Does the Site have widespread soil contamination that is not confined under and around buildings or paved areas?	Section 3.10.1	13.
13.	Does the contamination at the Site or area of concern have the potential to migrate to, erode into or otherwise impact any on-site or off-site habitat of endangered, threatened or special concern species or other fish and wildlife resource? (See #9 for list of potential resources. Contact NYSDEC for information regarding endangered species.)	Section 3.10.1	(14.)
14.	No Fish and Wildlife Resources Impact Analysis needed.		

APPENDIX K

Remedial Alternatives Tables

TABLE A

185 MT. HOPE AVENUE
ROCHESTER, NEW YORK

COMPARISON OF REMEDIAL ALTERNATIVES

Remediation Criteria	Remedial Alternative #1	Remedial Alternative #2	Remedial Alternative #3	Remedial Alternative #4
Protection of Human Health and Environment	NO	YES	YES	YES
Compliance with SCGs	NO	Some	Some	YES
Long-Term Effectiveness and Permanence	NO	YES	YES	YES
Reduction of Toxicity, Mobility, and Volume	Little	Little	Some	YES
Short-Term Impacts and Effectiveness	Impacts - NO Effectiveness - NO	Impacts - NO Effectiveness - NO	Impacts - NO Effectiveness - YES	Impacts - YES Effectiveness - YES
Implementability	YES	YES	YES	NO
Acceptable for Planned Future Use	NO	YES	YES	YES
Total Present Worth Cost	$0.00	$151,456	$255,758	$1,632,194

TABLE B

185 MT. HOPE AVENUE
ROCHESTER, NEW YORK

Opinion of Cost
Alternative #1 - No Action

This alternative assumes no action will be taken at a cost of $0.00

TABLE C

185 MT. HOPE AVENUE
ROCHESTER, NEW YORK

Opinion of Cost

Alternative #2 - Monitored Natural Attenuation and Institutional Controls

Capital/Initial Costs	
Design, Work Plans, HASP	$14,000
Institutional Controls	$10,000
Install Two New Wells	$5,500
20% Contingency	$5,900
Total Capital/Initial Costs	**$35,400**
Operation/Maintenance/Annual Costs (refer to attached breakdown)	
Years 1-2 Groundwater Monitoring ($17,306 X 2 yrs)	$34,612
Years 3-10 Groundwater Monitoring ($8,653 X 8 yrs)	$69,224
Total Operation/Maintenance/Annual Costs	**$103,836**
Closeout Costs	
Reports	$45,000
20% Contingency	$9,000
Total Closeout Costs	**$54,000**
Present Worth Cost	
Capital/Initial Costs	$35,400
Years 1-2 Groundwater Monitoring Present Worth (F=1.8594)	$32,179
Years 3-10 Groundwater Monitoring Present Worth (F=7.7217-1.8594)	$50,726
Closeout Costs (F= 0.6139)	$33,151
Total Present Worth Cost	**$151,456**

Assumptions:

- Project Duration is 10 Years at 5% discount factor
- Develop detailed work plan for Site
- Develop and implement institutional controls
- F = Discount Factor of 5% at the n^{th} year of the project
- Conduct monitored natural attenuation groundwater monitoring for 10 years (biannually for 7 wells for yrs 1-2, annually for 7 wells for yrs 3-10)
- Develop and submit necessary reports to document work completed

TABLE D

185 MT. HOPE AVENUE
ROCHESTER, NEW YORK

Opinion of Cost

Alternative #3 - Limited In-Situ Remediation, Institutional Controls, and Groundwater Monitoring

Capital/Initial Costs	
Design, Work Plans, HASP	$20,000
Institutional Controls	$10,000
Install Two New Wells	$5,500
Limited In-Situ Remediation	
Baseline Sampling and Analysis	$6,729
Inject RegenOx tm	$112,328
Performance Sampling and Analysis	$5,343
20% Contingency	$31,980
Total	**$191,880**
Operation/Maintenance/Annual Costs	
Years 1-2 Groundwater Monitoring ($14,566 X 2 yrs)	$29,132
Years 3-5 Groundwater Monitoring ($7,283 X 3 yrs)	$21,849
Total Operation/Maintenance/Annual Costs	**$50,981**
Closeout Costs	
Reports	$20,000
20% Contingency	$4,000
Total Closeout Costs	**$24,000**
Present Worth Cost	
Capital/Initial Costs	$191,880
Years 1-2 Groundwater Monitoring Present Worth (F=1.8594)	$27,084
Years 3-5 Groundwater Monitoring Present Worth (F=4.3295-1.8594)	$17,990
Closeout Costs (F= 0.7835)	$18,804
Total Present Worth Cost	**$255,758**

Assumptions

- 5 years at 5% discount factor
- Develop detailed remedial work plan for Site
- Develop and implement institutional controls
- F = Discount Factor of 5% at the n^{th} year of the project
- Conduct long-term groundwater monitoring for 5 years (biannually for 7 wells for yrs 1-2, annually for 7 wells for yrs 3-5)
- Develop and submit necessary reports to document work completed
- Limited in-situ remediation includes injecting a total of 10,020 pounds of RegenOx^{tm} at 54 injection points (One Application)

TABLE E

185 MT. HOPE AVENUE
ROCHESTER, NEW YORK

Opinion of Cost

Alternative #4 - Full Excavation, In-Situ Remediation, and Groundwater Monitoring

Capital/Initial Costs	
Design, Work Plans, HASP	$25,000
Design Phase Investigation and Report	$50,000
Remediation	
Soil removal, disposal, confirmatory sampling/analysis, backfilling	$934,845
Decommission Monitoring Wells (4 rotary drilled wells)	$3,000
Replace Monitoring Wells (4 rotary drilled wells)	$8,000
In-Situ Remediation	
Baseline Sampling	$5,094
Inject RegenOx^{tm} (Most contaminated Area)	$108,876
Inject ORC Advanced^{tm} (Less Contaminated Area)	$122,872
Performance Monitoring	$8,206
Paving	$25,000
20% Contingency	$258,179
Total Capital/Initial Costs	**$1,549,072**
Operation/Maintenance/Annual Costs	
Years 1-2 Groundwater Monitoring ($11,670 X 2 yrs)	$23,340
Years 3-5 Groundwater Monitoring ($5,835 X 3 yrs)	$17,505
Total Operation/Maintenance/Annual Costs	**$40,845**
Closeout Costs	
Reports	$50,000
20% Contingency	$10,000
Total Closeout Costs	**$60,000**
Present Worth Cost	
Capital/Initial Costs	$1,549,072
Years 1-2 Groundwater Monitoring Present Worth (F=1.8594)	$21,699
Years 3-5 Groundwater Monitoring Present Worth (F=4.3295-1.859)	$14,413
Closeout Costs (F= 0.7835)	$47,010
Total Present Worth Cost	**$1,632,194**

Assumptions:

- 5 Years at 5% discount factor
- Develop detailed remedial work plan for Site
- Develop and implement environmental engineering controls
- Excavate all soils above SCG
- F = Discount Factor of 5% at the nth year of the project
- Conduct long-term groundwater monitoring for 5 years (biannually for 5 wells for yrs 1-2, annually for 5 wells for yrs 3-5)
- Develop and submit necessary reports to document work completed
- In-Situ remediation of most contaminated area includes injection a total of 10,020 lbs of RegenOxtm at 54 injection points for one application
- In-Situ remediation of less contaminated area includes injection a total of 2,475 lbs of ORC-Advancedtm at 117 injection points for one application
- Impacted soil is up to 22 feet below land surface
- 1 yd^3 = 1.65 ton
- 200 tons of contaminated soil can be removed per day from the site on average
- Assume 10,000 square feet of paving at $2.50/square foot