

# **REMEDIAL INVESTIGATION REPORT**

**for**

**RICK'S AUTO REDEVELOPMENT  
136 – 138 East Genesee Street  
Village of Baldwinsville, Onondaga County, New York  
Brownfield Cleanup Program No. B7-0652-04-01  
DEC BCP Site No. C734085**

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## **EXECUTIVE SUMMARY**

A 2.2-acre Brownfield redevelopment site, associated with the former Rick's Auto and located at 136–138 East Genesee Street in the Village of Baldwinsville, Onondaga County, New York, has been investigated and substantially remediated. This commercial redevelopment site (Site) is comprised of portions of three previously separate parcels that formerly spanned across the municipal borders of the Town of Lysander and the Village of Baldwinsville. These three parcels were incorporated into the Village of Baldwinsville in 2004.

In 2003, the three parcels, the former Rick's Auto, a single residence and undeveloped woodland, were acquired and rezoned into the 2.2-acre commercial parcel (Site) and a 5.3-acre residential parcel by CL Development, L.L.C. (Volunteer). The Site entirely contains the former Rick's Auto parcel (approximately 0.5 acres). Prior to its purchase by the Volunteer, this parcel was shown to contain petroleum compounds in the soils and groundwater to the west of the former Rick's Auto building. The petroleum compounds were associated with historical underground storage and dispensing of gasoline and with automotive repair activities over a 30+ year period.

As a result of the known Site contamination at the time of purchase, the Volunteer entered into a Brownfield Cleanup Agreement (BCA) with the New York State Department of Environmental Conservation (DEC) for the 2.2-acre commercial redevelopment parcel.

This report summarizes the BCA Site Investigation and six interim remedial measures (IRMs) completed. This investigation has significantly improved the environmental status of the Site by removing the remaining petroleum affected media associated with the:

- former gasoline storage tanks and dispenser island (contaminated soils and groundwater removed);
- hydraulic lifts and floor drains within the building (contaminated soils removed);

- underground sanitary septic system (contaminated soils removed); and
- alignment pit within the building and a 500-gallon underground storage tank (UST) outside the building (contaminated soil and groundwater removed).

These IRM actions significantly reduced petroleum source areas of impacted soils at concentrations above the DEC recommended soil cleanup levels. This investigation also confirmed that affected groundwater contamination remains as a Site issue. The investigation established the nature and extent of site contamination, and included an evaluation of potential human, fish and wildlife exposure to the contaminants of concern (COCs). The primary and secondary COCs identified in the DEC-approved investigation work plan include both halogenated and non-halogenated volatile organic compounds (VOCs), petroleum and non-petroleum semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs) and metals. The site investigation and IRM scope included soil borings, test pits, monitoring well installation and replacement, surface and subsurface soil removal, and soil, soil vapor and groundwater sampling. A vacant commercial building currently exists on the Site. In addition to soil borings and test pits in and around the commercial building, soil vapor sampling was conducted inside the commercial building and across the 2.2-acre Site to assess the potential indoor air quality impact for future Site building uses.

### **Investigation and Assessment Conclusions**

The Site soils consist of fine sands and silts with some clay. Depth to groundwater is shallow across the Site (approximately 2 to 6 feet below ground surface). Subsurface soil contamination associated with automotive activities was remediated at discrete locations. Groundwater flow direction across the Site is toward the west-northwest, generally following local topography.

Based on the actions completed, the following conclusions were reached.

- The areas of significant impact to soils from the petroleum tanks and dispenser island have been reduced to concentrations below DEC cleanup guidance values in all but three



of 26 post-excavation soil samples (one compound exceeded the DEC soil guidance value in each of these three samples).

- Post-IRM soil sampling of the hydraulic lifts, sanitary soils and from beneath a 500-gallon UST (removed as part of an IRM) indicate soil constituents for VOCs, SVOCs, RCRA metals and PCBs were all below the DEC recommended soil cleanup levels, except for one sanitary soil sample which displayed an elevated lead concentration.
- Post-IRM soil sampling of the floor drains indicate soil constituents for VOCs, SVOCs, RCRA metals and PCBs were all below the DEC recommended soil cleanup levels, except for three of six samples which displayed an elevated mercury concentration.
- Five surface soil samples were collected from areas identified as likely receptors of contaminants of concern. These samples were analyzed for SVOCs, RCRA metals and PCBs. One sample displayed two SVOC compounds and one sample displayed mercury at concentrations slightly above the DEC recommended soil cleanup levels. One sample displayed concentrations of lead well above the DEC recommended soil cleanup levels. An additional round of five samples were collected from the surface soil around this sample and analyzed for lead. These samples displayed greatly reduced concentrations of lead below the DEC recommended soil cleanup levels.
- Petroleum products in concentrations above the State groundwater standards currently impact groundwater. The sandy silts and clayey silts underlying the Site inhibit the contaminant migration rate.
- Soil vapor sampling results indicate air quality in the future Site buildings will not be significantly impacted, however, good engineering judgment dictates that the subsurface vapors should be controlled until future soil vapor sampling indicates site conditions have improved. A sub-slab ventilation system will be installed under the commercial building as a precautionary measure to inhibit intrusion of any soil vapors.

- A second round of off-site soil vapor sampling was conducted. These soil vapor sampling results indicate air quality in the off-site buildings will not be significantly impacted.

The following remedial action is recommended:

- ***Surface/Subsurface Soil:*** Existing and landscaping cover.  
Natural attenuation.
- ***Groundwater:*** Natural attenuation.  
Quarterly groundwater monitoring for contaminants of concern.
- ***Soil Vapor:*** Active sub-slab venting system.  
Natural attenuation.

## **1.0 INTRODUCTION**

### **1.1 General Site Definition and Project Purpose**

This project addressed a 2.2-acre commercially zoned redevelopment site (Site), recently formed by combining the former Rick's Auto parcel, a portion of an adjacent residential property and the northernmost portion of an undeveloped property, all located in the Village of Baldwinsville, Onondaga County, New York. CL Development, L.L.C. (Volunteer) acquired the former Rick's Auto in 2003, with the intent of redeveloping this and adjacent land under the Brownfield Cleanup Program. Refer to Figures 1 and 2 of the Remedial Investigation Work Plan, dated September 2004.

This report summarizes the investigation of the 136-138 East Genesee Street Parcel (the recently created 2.2-acre commercial development), which is subject to a Brownfield Cleanup Agreement (BCA) with the New York State Department of Environmental Conservation (DEC). The components of the newly created Site are described below.

- The Rick's Auto property, located at 138 East Genesee Street, was approximately 0.5 acres in size, approximately 150 feet wide along East Genesee Street and about 145 feet deep (Tax Map Parcel No. 058-06-02.0). Based on Onondaga County Department of Finance information, this parcel was undeveloped prior to 1955, when the current building was constructed. The developer purchased this parcel in September 2003 from Richard and Harold Tetrault. The parcel was utilized as a fueling station/automobile repair facility from its construction in 1955 until 1985, and then used for automobile and/or small engine repair. This parcel contained one commercial building and one detached storage building.
- The residential property at 136 East Genesee Street was bisected by the Town of Lysander/Village of Baldwinsville boundary line prior to its annexation (Tax Map Parcel Nos. 058-06-01.0 and 006-04-25.0) by the Village of Baldwinsville. The developer

purchased this approximately 0.72-acre parcel in September 2003 from Jean Girard. It measures approximately 100 feet wide along East Genesee Street and is about 300 feet deep. Based on Onondaga County Department of Finance information, the residential structure on this parcel was constructed in 1902 on undeveloped land. The northern portion of this property is included in the Site. This parcel contained one residential building and a detached garage. The Volunteer petitioned the Village of Baldwinsville Planning Board to subdivide this parcel into a commercial zone for approximately 75 to 80% of the northern portion of this parcel, with the southern portion remaining residentially zoned.

- The northern portion (approximately 15 to 20%) of an undeveloped parcel (Tax Map Parcel No. 073-01-01.0) east and south of Rick's Auto comprises the remainder of the Site. The Volunteer purchased this land in September 2003 from Gary Bell. This former 6.3-acre undeveloped parcel extended from the east side of Rick's Auto to the south of both the residential and Rick's Auto parcels.

As previously stated, the Village of Baldwinsville has annexed this land, creating one contiguous parcel of approximately 7.52 acres. The land was subdivided into 24 residential parcels and one commercial parcel, extending south from East Genesee Street. The new commercial parcel (BCA Site) is a 2.2-acre trapezoidal-shape bordering East Genesee Street, measuring approximately 400 feet on its eastern side, 280 feet on its southern side, 230 feet on its western side and 350 feet on its northern side.

## **1.2 Historical Information**

A review of historical information revealed the following (refer to the Work Plan for additional details and documentation):

- Property deeds indicate the former Rick's Auto parcel was developed as an automotive repair and refueling facility in 1955. Automotive repair and refueling operations ceased

in 1985. The petroleum storage and dispensing facilities were removed in 1999. The building contained hydraulic lifts and floor drains in the work area, however, no record was found indicating the building floor drains or sanitary system had been connected to municipal service. As a result, an on-site septic system was presumed to exist. There were no as-built drawings available for review of additional site features.

- Property deeds indicate the residential property at 136 East Genesee Street was developed in 1902. As no record was found indicating the sanitary system had been connected to the municipal service, it was concluded that an on-site septic system exists. No as-built drawings could be located for review of additional site features.

### **1.3 Previous Environmental Work**

Environmental assessment work (unrelated to this project) was completed at the 138 East Genesee Street parcel in 1999, 2002 and 2003. This earlier work provided preliminary information regarding subsurface conditions. This information was discussed and documented in the Remedial Investigation Work Plan.<sup>1</sup> Previously documented information relating to the former Rick's Auto parcel is briefly summarized in the following paragraphs.

The gasoline dispensing operations at the former Rick's Auto facility ceased in about 1985 and the USTs were removed in 1999. A small amount of petroleum-contaminated soil was excavated and disposed at the time of the UST removals. In addition to the soil excavation activities, seventeen soil borings and two groundwater monitoring wells (MW-1 and MW-2) were installed at the site. Petroleum contamination was discovered in the tank and dispenser island areas, the DEC was notified and Spill No. 0101174 was assigned. Additional information regarding this phase of the site investigation work was unavailable for review.

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<sup>1</sup>*Remedial Investigation Work Plan*, prepared by Plumley Engineering, P.C., approved September 2004.

The DEC assumed responsibility for the investigation and delineation of the site contamination in 2002. Subsequent soil and groundwater investigations by Nature's Way Environmental Consultants and Contractors, Inc. (Nature's Way) for the DEC revealed the presence of gasoline contamination in soil and groundwater on the Rick's Auto property and the adjacent residential parcel at 136 East Genesee Street. The subsurface environmental site assessment work completed by Nature's Way in August/September 2002, November 2002 and April 2003 included the following:

- A preliminary subsurface investigation consisting of five soil borings (B-1 through B-5) and seven groundwater monitoring wells (MW-3 through MW-9) was conducted in August 2002.<sup>2</sup>
- An additional subsurface investigation consisting of four soil borings (B-6 through B-9) and four groundwater monitoring wells (MW-10 through MW-13) was completed in September 2002.<sup>3</sup>
- Soil sampling was conducted during the August and September 2002 soil boring and groundwater monitoring well installation activities. Only those samples collected during the August 2002 sampling event were analyzed.
- Groundwater sampling for laboratory analysis was conducted on June 17 and 24, 2002, September 3, 2002, November 20, 2002 and April 4, 2003.<sup>4</sup>

A discussion of the results of these investigations is presented below.

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<sup>2</sup>*Preliminary Subsurface Investigation Report*, prepared by Nature's Way Environmental Consultants and Contractors, Inc., dated August 6, 2002.

<sup>3</sup>*Supplemental Subsurface Investigation Report*, prepared by Nature's Way Environmental Consultants and Contractors, Inc., dated September 17, 2002.

<sup>4</sup>*April 2003 Quarterly Groundwater Monitoring Report/Remedial Options*, prepared by Nature's Way Environmental Consultants and Contractors, Inc., dated May 21, 2003.

### **1.3.1 Site Hydrogeology**

Nature's Way collected soil samples from borings advanced to depths of 8 to 12 feet. The predominant soil reported is a fine-grained soil comprised primarily of silt and silty clay with some fine to medium gravel.

Site topographic information and groundwater elevation data from groundwater sampling events indicate the water table slopes to the west-northwest at a gradient of approximately 6%. Depth to the water table is shallow, ranging from less than 1 foot to about 5 feet, depending on location, local site grade conditions and season.

### **1.3.2 Nature and Extent of Soil Contamination**

Field screening of the soil boring samples using a photoionization detection (PID) meter suggested volatile organic compound (VOC) contamination at some boring locations. PID concentrations ranged from less than 10 to about 2,500 parts per million (ppm). Soil samples from the interval exhibiting the highest instrument response were collected and submitted for laboratory analysis.

A soil sample was collected from boring B-3 (4 to 6-foot interval) and analyzed for STARS list<sup>5</sup> VOC content using EPA Method 8260 with methyl-tertiary-butyl ether (MTBE) and tertiary-butyl alcohol (TBA). Additional soil samples were collected from borings B-6 through B-9 (from within the capillary zone or beneath the groundwater table). These samples were analyzed for TAGM list<sup>6</sup> VOC content using EPA Method 8260. VOCs were not detected in any of these samples.

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<sup>5</sup>DEC Spill Technology and Remediation Series (STARS) Memo #1 – *Petroleum-Contaminated Soil Guidance Policy*, dated August 1992.

<sup>6</sup>DEC Technical and Administrative Guidance Memorandum (TAGM) No. 4046, *Determination of Soil Cleanup Objectives and Cleanup Levels*, dated January 24, 1994 and revised April 10, 2001.

### **1.3.3 Nature and Extent of Groundwater Contamination**

Groundwater samples collected from the nine monitoring wells (MW-1 through MW-9) by Nature's Way in June 2002 indicated groundwater contamination at concentrations greater than State groundwater standards.<sup>7</sup> EPA Method 8260 (STARS list) and TBA analyses for petroleum VOCs indicated total compound concentrations ranged from non-detect at MW-2, MW-6 and MW-9 to over 16,000 micrograms per liter (µg/L) at MW-7. Specifically, groundwater was found to contain benzene, toluene, ethylbenzene and xylenes (BTEX), naphthalene, 1,3,5-trimethyl-benzene, 1,2,4-trimethylbenzene, n-propylbenzene, isopropylbenzene and MTBE. Analyses for semi-volatile organic compounds (SVOCs), using EPA Method 8270, indicated SVOC compounds were not present in groundwater from the former gasoline tank area. Subsequent Nature's Way groundwater sampling events (September 3, 2002, November 20, 2002 and April 4, 2003) confirmed the presence of petroleum contamination in groundwater.

A review of the historical groundwater data revealed the presence of VOC contamination consistent with a subsurface gasoline release. The VOC plume contamination extended from the former UST location at Rick's Auto to the northwest and across the northern property border at 136 East Genesee Street. The greatest concentration of groundwater contamination was in MW-7, located in the northeast corner of 136 East Genesee Street.

## **1.4 Report Organization**

This report follows the outline presented in Appendix F of the Work Plan. Section 2 presents a summary of the field investigation activities, including contaminant source investigations and interim remedial measures. Section 3 presents the results of the site characterization, including a discussion of the contaminant sources and media. Section 4 presents a discussion of the contaminant fate and transport for the site-specific contaminants of concern identified during the

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<sup>7</sup>DEC Technical and Operational Guidance Series (TOGS) No. 1.1.1, *Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations*, dated October 22, 1993 and revised June 1998.



site characterization. Section 5 presents the results of the exposure assessment work and recommendations. Section 6 presents a summary and conclusions of the site work performed.

## **2.0 INVESTIGATIVE ACTIVITIES**

### **2.1 General Approach**

Previous site investigations and preliminary site reconnaissance identified the presence of petroleum-affected soils in specific portions of the former Rick's Auto facility. The following features were identified from the previous site investigations and/or site reconnaissance, and therefore defined the areas of prime interest. Many of these features were approached with the intent to implement interim remedial measures (IRMs) if observed conditions warranted them.

- Hydraulic Lifts.
- Floor drains.
- On-site sanitary wastewater system.
- Surface areas.
- Former underground storage tank area soils.
- Groundwater monitoring wells.
- Soil vapor associated with known groundwater contamination.

Information obtained from previous site investigations at the former Rick's Auto facility was used to plan drilling and sampling locations for this investigation.

### **2.2 Contaminant Source Investigation**

A subsurface investigation program (Figure 4A) was designed to obtain environmental and geological information from the investigation area, where contamination related to the former USTs was known to exist, and where the potential for contamination from other sources (i.e.,

floor drains) was considered potentially significant. The investigation program was designed in general concurrence with the site investigation procedures outlined in the DEC's Draft DER-10 Technical Guidance for Site Investigation and Remediation document and the New York State Department of Health (DOH) Draft Guidance for Evaluating Soil Vapor Intrusion in the State of New York document.

A backhoe was used to excavate and to remove obvious signs of contamination (i.e., visibly stained soils). Source investigations were conducted at the former Rick's Auto facility in the following areas:

- ***Hydraulic Lifts:*** to remove six hydraulic lifts and investigate adjacent soil conditions;
- ***Floor Drains:*** to remove the floor drains and investigate adjacent soil conditions;
- ***Alignment Pit:*** to investigate the alignment pit located within the building (encountered during the demolition of portions of the former Rick's Auto facility);
- ***On-Site Septic System:*** to investigate soil conditions associated with the on-site sanitary wastewater system located adjacent to the southwest corner of the former facility; and
- ***UST:*** to investigate the 500-gallon UST located adjacent to the southwest facility corner (identified during the septic system investigation).

Based on subsurface conditions encountered during the investigation of the above source areas, each area required an interim remedial measure (IRM).

### **2.3 Interim Remedial Measures**

The following investigations lead to implementation of IRM actions to mitigate contamination uncovered during these source area investigations.

### **2.3.1 Former UST and Dispenser Island**

Petroleum affected soils in the vicinity of the former dispenser island and UST areas were documented by earlier site investigations. An IRM was implemented to remove this known source. The purpose of this work was to remove affected soil from the site during the initial stages of site investigation to speed site closure.

IRM activities commenced on August 13, 2004 with the excavation of affected soil from the former dispenser island area. IRM excavation activities continued for approximately two weeks, ending on September 2, 2004. The IRM excavation covered approximately 8,120 square feet and extended to a depth of approximately 8 feet below ground surface (bgs). Approximately 2,400 cubic yards of affected soil were excavated during this IRM action.

Post-excavation soil sampling was conducted in accordance with the Work Plan and DEC's Draft DER-10 Technical Guidance for Site Investigation and Remediation. A total of 26 soil samples (RE-1 through RE-26) were collected during the course of the initial IRM excavation. Refer to *Figure 3 – Soil Sampling Locations* for sample locations. All IRM soil samples were submitted for analysis of Target Compound List (TCL) VOCs by EPA Method 8260 and TCL SVOCs by EPA Method 8270. At the request of the DEC, two of these soil samples (RE-25 and RE-26) were submitted for Resource Conservation and Recovery Act (RCRA) metals analysis by EPA Method 6010. The post excavation soil results are summarized in Tables 1A through 1D.

As a result of residual petroleum detected in two of the 26 confirmation soil samples, a second phase of the IRM action was implemented on November 30, 2004. This IRM excavation covered approximately 400 square feet and extended to a depth of approximately 12 feet bgs. Approximately 12 cubic yards of affected soil was excavated. Two additional soil samples (RE-22R and RE-23R) were collected during the course of the secondary IRM action and submitted for analysis of VOCs by EPA Method 8260 and SVOCs by EPA Method 8270.

During the course of all IRM actions, excavated soils were placed into two temporary soil storage cells that were constructed on the southwestern portion of the Site. A total of 4,478 tons of soil were transported to the Seneca Meadows Landfill for disposal in March 2005.

Shallow groundwater conditions and rainfall events were encountered during IRM actions, resulting in the presence of significant quantities of water in the excavations. Approximately 7,000 gallons of water were removed from the excavation and properly disposed of by Paragon Environmental Construction, Inc. over the course of six recovery events during IRM excavation activities. Refer to *Appendix A – Waste Disposal Tickets* for additional information.

### **2.3.2 Hydraulic Lifts**

Each lift was first removed from the floor, and the adjacent soils were assessed for the presence of contaminated soils (i.e., odor, staining, sheen). Six hydraulic lifts were removed and approximately 169 cubic yards of contaminated soil excavated from around the lift structures.

One sample was collected from each hydraulic lift excavation in accordance with the Work Plan. The first three hydraulic lift samples (TP-1 through TP-3) were submitted for analysis of base/neutral SVOCs by EPA Method 8270 and PCBs by EPA Method 8082 in accordance with the March 2004 edition of the Work Plan. Soil samples from the other three lifts (TP-4 through TP-6) were submitted for analysis of VOCs by EPA Method 8260, SVOCs by EPA Method 8270 and PCBs by EPA Method 8082 in accordance with the final approved version of the revised Work Plan (July 2004). The results are summarized in Tables 2A through 2D. Refer to *Figure 3 - Soil Sampling Locations* and *Appendix B - Test Pits Logs* for additional information.

### **2.3.3 Floor Drains**

The floor drains were located directly beneath the concrete floor of the former Rick's Auto facility. The clay tile within each floor drain was removed and the adjacent soils assessed for obvious signs of contamination (i.e., odor, staining). Approximately 120 feet of floor drain legs were uncovered and approximately 21 cubic yards of contaminated soil excavated from the eastern and southern floor drains during this activity. No discharge structure for these floor drains was observed and it is believed they were designed to leach into the soil.

Six post-excavation soil samples were collected from beneath the floor drains. The first two floor drain samples (Floor Drain East [FD-1] and Floor Drain West [FD-2]) were submitted for analysis of VOCs by EPA Method 8260, base/neutral SVOCs by EPA Method 8270 and PCBs by EPA Method 8082 in accordance with the Work Plan. The remaining four soil samples (FD-3 through FD-6) were submitted for analysis of VOCs by EPA Method 8260, SVOCs by EPA Method 8270, PCBs by EPA Method 8082 and RCRA Metals by EPA Method 6010 in accordance with the Work Plan. The results are summarized in Tables 3A through 3E. Refer to *Figure 3 - Soil Sampling Locations* for additional information.

### **2.3.4 Alignment Pit**

A 10-foot by 10-foot square area of concrete rimmed in metal was observed at the former Rick's Auto facility during the site reconnaissance. This site feature was investigated and found to be a shallow (<3 feet deep) concrete box with a concrete lid. Based upon anecdotal evidence, this site feature was identified as an alignment pit. Miscellaneous automotive repair components (i.e., wheel ramps) and concrete blocks were observed in the pit. The pit was observed to be full of water exhibiting a slight sheen. Approximately 450 gallons of groundwater were removed from the pit and properly disposed of by Paragon Environmental Construction, Inc. on October 12, 2004. Refer to

*Appendix A – Waste Disposal Tickets* for additional information. This site structure was not removed.

### **2.3.5 On-Site Sanitary System**

There was no documentation that the former Rick's Auto facility had been connected to the municipal wastewater system. To investigate the potential for contamination associated with the generation and disposal of wastewater, test pits were dug adjacent to the western side of the former Rick's Auto structure. A clay tile line typically associated with sanitary wastewater systems was located and traced. This line was removed during the tracing process, and terminated in the vicinity of a trio of PVC leaching lines. The PVC lines were traced but not removed. A total of approximately 70 feet of on-site sanitary lines were encountered during the investigation and approximately 38 cubic yards of stained soil was excavated from around the clay tile line.

Five soil samples (STP-1 through STP-5) were collected from beneath the sanitary drain lines. The soil samples were submitted for analysis of TCL VOCs by EPA Method 8260, TCL SVOCs by EPA Method 8270, PCBs by EPA Method 8082 and RCRA Metals by EPA Method 6010. The results are summarized in Tables 4A through 4E. Refer to *Figure 3 - Soil Sampling Locations* for additional information.

### **2.3.6 500-Gallon UST**

A single UST was encountered during the investigation of the on-site sanitary system. No piping leading to or away from this tank was observed. This tank, measuring 72 inches long by 48 inches in diameter, had a capacity of 500 gallons and was observed to be full of oily water and sludge. The tank was in good condition, with no holes and little pitting. Approximately 450 gallons of tank bottom fluids were removed from the tank on October 12, 2004 by Paragon Environmental Construction, Inc. Paragon properly disposed of the tank on October 28, 2004. Refer to *Appendix A – Waste Disposal Tickets* for additional information.

One post-excavation soil sample (UST-1) was collected from beneath the UST. The soil sample was submitted for analysis of TCL VOCs by EPA Method 8260, TCL SVOCs by EPA Method 8270, PCBs by EPA Method 8082 and RCRA Metals by EPA Method 6010. The results are summarized in Tables 4A through 4E. Refer to *Figure 3 – Soil Sampling Locations* for additional information.

## **2.4 Surface Soil Investigation**

The surface soil sampling program objective was to investigate the potential contaminants to be present in the surface soils at specific Site locations. Five surface samples were collected and submitted for analysis of SVOCs by EPA Method 8270, PCBs by EPA Method 8082, and RCRA Metals by EPA Method 6010. The surface soil sampling involved the following main tasks:

- Surface soil sample SS-1 was collected from near the shed located at the former Rick's Auto facility. The sample location was selected based on the unknown history of the on-site shed and contained no observable indications of potential contamination.
- Surface soil samples SS-2, SS-3 and SS-4 were collected from gravel parking areas to the west of the former Rick's Auto facility. The sample locations were selected based on the history of the automobile repair conducted on this parcel of the Site. The sample locations contained no observable indications of potential contamination.
- Surface soil sample SS-5 was collected from a random location on the residential parcel of the Site. The sample location contained no observable indications of potential contamination.
- An additional five surface soil samples (SS-2A through SS-2E) were collected in the vicinity of surface soil sample SS-2 to delineate the elevated lead detected at this location. These sample locations contained no visual indications of potential contamination.

The results of these sampling events are summarized in Tables 5A through 5D. Refer to *Figure 3 – Soil Sampling Locations* for additional information.

## **2.5 Groundwater Investigation**

### **2.5.1 Monitoring Well Installation**

The purpose of the groundwater investigation was to characterize the site hydrogeology and to evaluate the nature and extent of groundwater contamination at the Site. Previous site investigations identified the presence and types of petroleum compounds in Site groundwater. A total of thirteen groundwater monitoring wells (MW-1 through MW-13) were installed during the course of these prior investigations.

A review of the analytical data from these investigations revealed the presence of a groundwater contaminant plume extending from the former UST and dispenser areas at the former Rick's Auto facility to the west along East Genesee Street. Due to the presence and potential distribution of groundwater impacts at the site, four additional groundwater monitoring wells (MW-14, MW-15, MW-16 and MW-17) were installed in accordance with the Work Plan and DEC-approved location modifications. General tasks involving the completion of monitoring well installations consisted of the following:

- Parratt-Wolff, Inc. provided a truck-mounted rotary drill rig with hollow stem auguring tools and a direct percussion soil sampler by GeoProbe, and mobilized to the site on November 15, 2004 (MW-14 through MW-16) and October 18, 2005 (MW-17). The drilling work was inspected and the soil conditions logged by the project geologists. Evidence of any visual or olfactory indicators of contamination was noted in the logs.
- Two soil borings (MW-14 and MW-15) were completed hydraulically upgradient of the former Rick's Auto facility building. One soil boring (MW-16) was



completed hydraulically cross-gradient, adjacent to the east side of the garage located on the former 136 East Genesee Street parcel. One soil boring (MW-17) was completed hydraulically downgradient of the former Rick's Auto, on the north side of East Genesee Street.

- Soil samples were collected using 24-inch long, 2-inch diameter split spoon samplers, in general conformance with American Society for Testing and Materials (ASTM) Standard D-1586 for standard penetration testing. No soil samples were collected for laboratory analysis from borings MW-14, MW-15 or MW-17. One soil sample was collected from 0 to 2 feet below grade at boring MW-16 due to the presence of ash and coal fragments. This sample was submitted for analysis of VOCs by EPA Method 8260, SVOCs by EPA Method 8270 and RCRA Metals by EPA Method 6010. The results are summarized in Tables 4B, 4C, and 4D. Refer to *Figure 3 – Soil Sampling Locations* for additional information.
- Four groundwater monitoring wells (MW-14, MW-15, MW-16 and MW-17) were installed in the borings. Monitoring wells were constructed using 2-inch diameter PVC well construction materials. Refer to *Appendix C – Monitoring Well Installation Logs* for additional information.

Due to uncertainty regarding the finished grade of the Site, each boring was completed such that a minimum of 5 feet of screen would be in the groundwater table. Groundwater was encountered at less than 0.5 feet bgs at MW-14, at approximately 4 feet bgs at MW-15 and at approximately 6 feet bgs at MW-16.

Two of these wells (MW-14 and MW-15) were subsequently destroyed during construction activities. An additional three groundwater monitoring wells (MW-3, MW-6 and MW-10) were destroyed during site development and winter snow clearing activities. Parratt-Wolff reported to the site on April 15, 2005 to replace these five destroyed wells.

Another groundwater monitoring well, MW-11, was observed to have been damaged during site development and winter snow clearing activities. This well was destroyed during site development activities shortly after the April 26, 2005 groundwater sampling event and was not replaced. Refer to *Figure 4 – Groundwater Sampling Locations* and *Appendix C – Monitoring Well Installation Logs* for additional information.

## **2.5.2 Groundwater Monitoring and Sampling**

A groundwater monitoring and sampling event was conducted on April 26, 2005. Groundwater levels were measured in all wells at the beginning of the sampling round using an electronic water level indicator. Purging and sampling were conducted at all wells using dedicated polyethylene bailers according to standard groundwater sampling procedures outlined in the Work Plan. All equipment was decontaminated prior to placement in each well.

Three well volumes were removed during purging. When purging was complete, the volatile and semi-volatile samples were immediately collected and were submitted for analysis of TCL VOCs per EPA Method 8260 and TCL SVOCs per EPA Method 8270.

A second limited groundwater monitoring and sampling event was conducted on November 8, 2005. Groundwater levels were measured in all wells at the beginning of the sampling round using an electronic water level indicator. Purging and sampling were conducted at wells MW-4, MW-5, MW-7, MW-10, MW-12 and MW-17 using a peristaltic pump with dedicated tubing and dedicated polyethylene bailers according to standard groundwater sampling procedures outlined in the Work Plan. All equipment was decontaminated prior to placement in each well.

When purging was complete, the volatile and semi-volatile samples were immediately collected and were submitted for analysis of TCL VOCs per EPA Method 8260 and TCL SVOCs per EPA Method 8270. The results are summarized in Table 6A through 6D.

Refer to *Figure 4A – April 26, 2005 Groundwater Sampling Locations* and *Figure 4B – November 8, 2005 Groundwater Sampling Locations* for additional information.

## **2.6 Soil Vapor Investigation**

A soil vapor sampling program was implemented to determine if significant levels of VOCs are present in the soil vapor at the Site. Soil vapor sampling was performed in general accordance with procedures outlined in the DOH Draft Guidance for Evaluating Soil Vapor Intrusion in the State of New York, February 2005. Thirteen soil vapor samples were collected for analysis. Initially, nine soil vapor points (SV-1 through SV-9) were sampled on April 29, 2005. All soil vapor samples were submitted for analysis of VOCs using EPA Method TO-15.

At the request of the DEC and DOH, an additional four soil vapor points (SV-10 through SV-13) were installed and sampled from off-site locations in an effort to further define the qualitative risk of soil vapor migration. These samples were submitted for analysis of VOCs using EPA Method TO-15. The results of these sampling events are summarized in Table 7. Refer to *Figure 5 – Soil Vapor Sampling Locations* for additional information.

## **3.0 NATURE AND EXTENT OF CONTAMINATION**

### **3.1 Site Characterization Results**

#### **3.1.1 Hydrogeology**

The Site is underlain to a depth of 8 to 10 feet by fine sandy silt and dense silts and some clay interspersed with small gravel. In general, Site sediments are fining downward. These sediments are of moderate to very low permeability. The groundwater table is relatively shallow at the Site, ranging in depth from 0.75 to 7 feet bgs. Groundwater flows to the southwest and is governed by the Site topography. This groundwater flow

pattern is consistent with the historical groundwater flow pattern at the Site. Refer to *Appendix D - Historical Groundwater Flows* for additional information.

### 3.1.2 Standards, Criteria and Guidance (SCGs)

The following guidance or regulatory criteria were used to evaluate the analytical results obtained from the investigation activities.

Groundwater .....DEC Division of Water Technical and Operational Guidance Series (TOGS) (1.1.1), *Ambient Water Quality Standards and Guidance Values*, dated June 1998.

Soil .....DEC Technical and Administrative Guidance Memorandum (TAGM) No. 4046, *Determination of Soil Cleanup Objectives and Cleanup Levels*, dated January 1994 and revised April 10, 2001.

Soil Vapor .....Determined in consultation with the DOH and the DOH Draft Guidance for Evaluating Soil Vapor Intrusion in the State of New York, February 2005.

The specific standards and guidance values for each of the contaminants of concern (COCs) are provided on the appropriate analytical summary tables for the various media.

### 3.1.3 Laboratory Analysis

All soil and groundwater samples were shipped to Adirondack Environmental Services, Inc. (Lab ID 10709) for laboratory analysis per the Work Plan. The soil vapor samples collected on April 29, 2005 were subcontracted by Adirondack to Pace Analytical Services (Lab ID 11647). The soil vapor samples collected on November 4, 2005 were submitted to Centek Laboratories, LLC (Lab ID 11830) for analysis. In accordance with

the BCA, these laboratories are approved by the DOH under the Environmental Laboratory Approved Program (ELAP), including approval for Analytical Services Protocol (ASP) and Contract Laboratory Protocol (CLP) tier certification for the planned analyses.

Selected samples were submitted for laboratory analysis of VOCs, SVOCs, PCBs and RCRA Metals, as outlined in Table 7 of the Remedial Investigation Work Plan. All sampling was performed using the DEC ASP – Category A or B deliverables.

The majority of the analytical data was submitted to an independent data validator for review. The data validator prepared a Data Usability Summary Report (DUSR), which summarizes the data validation findings in accordance with DEC guidelines. The findings presented in the DUSR have been incorporated into all laboratory analytical data discussions and tables presented in this report. The findings of this report are discussed in Section 3.2 – Data Validation. This report is included as *Appendix E – Data Usability Summary Report (DUSR)*.

### **3.1.4 Source Areas**

#### **3.1.4.1 Former UST/Dispenser Island**

An IRM was implemented to remove known petroleum contaminated soils from the area of the former gasoline dispenser island and former USTs. In excess of 2,400 cubic yards of petroleum-affected soils were removed during this IRM.

A total of 29 subsurface soil confirmation samples were collected during this IRM action. Confirmation soil samples from the excavation bottom and sidewalls were submitted for laboratory analysis of the expanded lists of TCL VOCs and SVOCs per EPA Method 8260 and EPA Method 8270, respectively. Two samples, RE-25 and RE-26, were also submitted for analysis of RCRA Metals per EPA Method 6010. The analytical results are summarized as follows:

- *RE-1/RE-2 (excavation floor, 8 feet bgs):* The VOCs ethyl benzene and m/p-xylene were detected at concentrations below State recommended soil cleanup guidance values.<sup>8</sup> No other VOCs were detected at concentrations exceeding the laboratory analytical method detection limits. No SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *RE-3/RE-4 (excavation east wall, 6 feet bgs):* There were no VOCs or SVOCs detected at concentrations exceeding the laboratory analytical method detection limits.
- *RE-5 (excavation south wall, 5 feet bgs):* The VOCs BTEX and isopropylbenzene were detected at concentrations below State recommended soil cleanup guidance values. The VOC methylcyclohexane was detected at a concentration of 0.110 milligrams per kilogram (mg/kg), but has no State recommended soil cleanup guidance value. The SVOCs naphthalene and 2-methylnaphthalene were detected at concentrations below State recommended soil cleanup guidance values. No other VOCs or SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *RE-6 (excavation north wall, 5 feet bgs):* The VOCs m/p-xylene and isopropylbenzene were detected at concentrations below State recommended soil cleanup guidance values. The VOC methylcyclohexane was detected at a concentration of 0.080 mg/kg, but has no State recommended soil cleanup guidance value. No other VOCs were detected at concentrations exceeding the laboratory analytical method detection limits. Multiple SVOCs were detected at concentrations below State recommended soil cleanup guidance values.

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<sup>8</sup>DEC Technical Administration Guidance Memorandum (TAGM) No. 4046, *Determination of Soil Cleanup Objectives and Cleanup Levels*, dated January 24, 1994 and revised April 10, 2001.

- *RE-7/RE-8 (excavation floor, 8 feet bgs):* Acetone was detected at a concentration below State recommended soil cleanup guidance values. No other VOCs were detected at concentrations exceeding the laboratory analytical method detection limits. There were no SVOCs detected at concentrations exceeding the laboratory analytical method detection limits.
- *RE-9 (excavation east wall, 7.5 feet bgs):* No other VOCs or SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *RE-10 (excavation floor, 8 feet bgs):* Multiple VOCs were detected at concentrations below State recommended soil cleanup guidance values. The VOC methylcyclohexane was detected at a concentration of 0.048 mg/kg, but has no State recommended soil cleanup guidance value. MTBE was detected at a concentration of 0.410 mg/kg, exceeding the State recommended soil cleanup guidance value of 0.120 mg/kg. The SVOCs naphthalene, 2-methylnaphthalene, and bis(2-ethylhexyl)phthalate were detected at concentrations below State recommended soil cleanup guidance values. No other VOCs or SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *RE-11 (excavation west wall, 7.5 feet bgs):* Multiple VOCs were detected at concentrations below State recommended soil cleanup guidance values. MTBE was detected at a concentration of 0.460 mg/kg, exceeding the State recommended soil cleanup guidance value of 0.120 mg/kg. There were no SVOCs detected at concentrations exceeding the laboratory analytical method detection limits.
- *RE-12 (excavation south wall, 7.5 feet bgs):* There were no VOCs detected at concentrations exceeding the laboratory analytical method

detection limits. The SVOC bis(2-ethylhexyl)phthalate was detected at a concentration below the State recommended soil cleanup guidance values. No other SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.

- *RE-13 (excavation floor, 8 feet bgs):* Benzene was detected at a concentration below the State recommended soil cleanup guidance value. The SVOC bis(2-ethylhexyl)phthalate was detected at a concentration below the State recommended soil cleanup guidance value. No other VOCs or SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *RE-14 (excavation north wall, 6 feet bgs):* The VOCs toluene, ethyl benzene, and isopropylbenzene were detected at concentrations below State recommended soil cleanup guidance values. The VOC methylcyclohexane was detected at a concentration of 0.79 mg/kg, but has no State recommended soil cleanup guidance value. The VOC m/p-xylene was detected at a concentration of 3.60 mg/kg, and o-xylene was detected at a concentration of 0.400 mg/kg, exceeding the State recommended soil cleanup guidance value of 1.20 mg/kg for total xylene concentration. The SVOCs naphthalene and 2-methylnaphthalene were detected at concentrations below State recommended soil cleanup guidance values. No other SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *RE-15 (excavation south wall, 8 feet bgs):* There were no VOCs or SVOCs detected at concentrations exceeding the laboratory analytical method detection limits.
- *RE-16 (excavation floor, 8 feet bgs):* Benzene was detected at a concentration below the State recommended soil cleanup guidance value.



The SVOCs naphthalene and 2-methylnaphthalene were detected at concentrations below State recommended soil cleanup guidance values. No other VOCs or SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.

- *RE-17 (excavation north wall, 8 feet bgs):* The VOCs 2-butanone and BTEX were detected at concentrations below State recommended soil cleanup guidance values. No other VOCs were detected at concentrations exceeding the laboratory analytical method detection limits. There were no SVOCs detected at concentrations exceeding the laboratory analytical method detection limits.
- *RE-18 (excavation west wall, 8 feet bgs):* The VOCs benzene, ethyl benzene and m/p-xylene were detected at concentrations below State recommended soil cleanup guidance values. No other VOCs were detected at concentrations exceeding the laboratory analytical method detection limits. No SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *RE-19 (excavation west wall, 8 feet bgs):* Benzene was detected at a concentration below the State recommended soil cleanup guidance value. No other VOCs were detected at concentrations exceeding the laboratory analytical method detection limits. No SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *RE-20 (excavation north wall, 8 feet bgs):* Multiple VOCs were detected at concentrations below State recommended soil cleanup guidance values. There were no SVOCs detected at concentrations exceeding the laboratory analytical method detection limits.
- *RE-21 (excavation floor, 8 feet bgs):* The VOCs 2-butanone and ethyl benzene were detected at concentrations below State recommended soil

cleanup guidance values. No other VOCs were detected at concentrations exceeding the laboratory analytical method detection limits. There were no SVOCs detected at concentrations exceeding the laboratory analytical method detection limits.

- *RE-22 (excavation east wall, 8 feet bgs):* Toluene was detected at a concentration below the State recommended soil cleanup guidance value. The VOC methylcyclohexane was detected at a concentration of 22.0 mg/kg, but has no State recommended soil cleanup guidance value. Ethylbenzene was detected at a concentration of 36.00 mg/kg, exceeding the State recommended soil cleanup guidance value of 5.50 mg/kg. M/p-xylene was detected at a concentration of 150.00 mg/kg, and o-xylene was detected at a concentration of 37.00 mg/kg, exceeding the State recommended soil cleanup guidance value of 1.20 mg/kg for total xylene concentration. Isopropylbenzene was detected at a concentration of 7.50 mg/kg, exceeding the State recommended soil cleanup guidance value of 2.30 mg/kg. A total VOC concentration of 253.00 mg/kg was detected, exceeding the State recommended soil cleanup guidance value of 10.00 mg/kg. The SVOCs naphthalene and 2-methylnaphthalene were detected at concentrations below State recommended soil cleanup guidance values. No other SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *RE-23 (excavation west wall, 8 feet bgs):* Multiple VOCs were detected at concentrations below State recommended soil cleanup guidance values. The VOC methylcyclohexane was detected at a concentration of 2.90 mg/kg, but has no State recommended soil cleanup guidance value. M/p-xylene was detected at a concentration of 5.70 mg/kg, and o-xylene was detected at a concentration of 0.240 mg/kg, exceeding the State recommended soil cleanup guidance value of 1.20 mg/kg for total xylene concentration. A total VOC concentration of 11.80 mg/kg was detected,

exceeding the State recommended soil cleanup guidance value of 10.00 mg/kg. The SVOCs naphthalene and 2-methylnaphthalene were detected at concentrations below State recommended soil cleanup guidance values. No other SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.

- *RE-24 (excavation floor, 12 feet bgs):* Multiple VOCs were detected at concentrations below State recommended soil cleanup guidance values. The VOC methylcyclohexane was detected at a concentration of 0.013 mg/kg, but has no State recommended soil cleanup guidance value. The SVOCs naphthalene and 2-methylnaphthalene were detected at concentrations below State recommended soil cleanup guidance values. No other SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *RE-25 (excavation east wall, 6 feet bgs):* The VOC toluene was detected at a concentration below State recommended soil cleanup guidance values. No other VOCs were detected at concentrations exceeding the laboratory analytical method detection limits. There were no SVOCs detected at concentrations exceeding the laboratory analytical method detection limits. The metals barium, chromium and mercury were detected at concentrations below State recommended soil cleanup guidance values.
- *RE-26 (excavation south wall, 6 feet bgs):* No VOCs or SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits. The metals barium and chromium were detected at concentrations below State recommended soil cleanup guidance values.
- *RE-TP-1 (test pit excavated south of MW-12, 6 feet bgs):* No VOCs or SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.

Due to the presence of contamination at concentrations exceeding the SCGs remaining at sample locations RE-22 and RE-23, a second round of IRM excavation was conducted at these locations on November 30, 2004. Approximately 12 cubic yards of petroleum-affected soils were removed. Two additional subsurface soil samples were collected at the end of the secondary IRM action. Adirondack Environmental Services, Inc. analyzed these confirmation soil samples for TCL VOCs and TCL SVOCs. The analytical results are summarized as follows:

- *RE-22R (excavation floor, 12 feet bgs):* The VOCs ethylbenzene, m/p-xylene and o-xylene were detected at concentrations below State recommended soil cleanup guidance values. The SVOCs naphthalene, 2-methylnaphthalene and bis(2-ethylhexyl)phthalate were detected at concentrations below State recommended soil cleanup guidance values. No other VOCs or SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *RE-23R (excavation floor, 12 feet bgs):* No VOCs were detected at concentrations exceeding the laboratory analytical method detection limits. The SVOCs fluoranthene, pyrene, and bis(2-ethylhexyl)phthalate were detected at concentrations below State recommended soil cleanup guidance values. No other SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.

Refer to Tables 1A through 1D for a summary of the analytical results, which incorporate the data validator's comments. Refer to *Figure 3 – Soil Sampling Locations* for additional information.

#### **3.1.4.2 Hydraulic Lifts**

A total of six subsurface confirmation soil samples were collected after removal of the six hydraulic lifts and excavation of surrounding soils. Confirmation soil

samples TP-1 through TP-3 were submitted for analysis of base neutral (BN) SVOCs per EPA Method 8270 and PCBs per EPA Method 8082 in accordance with the March 2004 Work Plan. The remaining confirmation soil samples, TP-4 through TP-6, were submitted for analysis of TCL VOCs per EPA Method 8260 and TCL SVOCs per EPA Method 8270. These samples were also submitted for analysis of PCBs per EPA Method 8082 in accordance with the revised Work Plan (July 2004). The analytical results are summarized as follows:

- *TP-1 (hydraulic lift excavation, 4 feet bgs):* Neither BN SVOCs nor PCBs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *TP-2 (hydraulic lift excavation, 10 feet bgs):* Neither BN SVOCs nor PCBs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *TP-3 (hydraulic lift excavation, 6 feet bgs):* The SVOCs fluoranthene, pyrene, benzo(a)anthracene and chrysene were detected at concentrations below their respective State recommended soil cleanup guidance values. The PCB Aroclor 1254 was detected at a concentration below the State recommended soil cleanup guidance value for PCB.
- *TP-4 (hydraulic lift excavation, 8 feet bgs):* No VOCs, SVOCs or PCBs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *TP-5 (hydraulic lift excavation, 10 feet bgs):* The VOC toluene was detected at a concentration below the State recommended soil cleanup guidance value. No SVOCs or PCBs were detected at concentrations exceeding the laboratory analytical method detection limits.

- *TP-6 (hydraulic lift excavation, 8 feet bgs):* No VOCs, SVOCs or PCBs were detected at concentrations exceeding the laboratory analytical method detection limits.

Refer to Tables 2A through 2D for a summary of the analytical results, which incorporate the data validator's comments. Refer to *Figure 3 – Soil Sampling Locations* for additional information.

### **3.1.4.3 Floor Drains**

After excavation of the floor drain system and removal of contaminated soils, a total of six subsurface confirmation soil samples were collected. Confirmation soil samples FD-1 and FD-2 were submitted for analysis of TCL VOCs per EPA Method 8260, BN SVOCs per EPA Method 8270, RCRA Metals per EPA Method 6010 and PCBs per EPA Method 8082 in accordance with the March 2004 Work Plan. Confirmation soil samples FD-3 through FD-6 were submitted for analysis of TCL VOCs per EPA Method 8260, TCL SVOCs per EPA Method 8270, PCBs per EPA Method 8082 and RCRA Metals per EPA Method 6010 per the revised Work Plan (July 2004). The analytical results are summarized as follows:

- *FD-1 (floor drain excavation, 1 foot bgs):* No VOCs or SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits. The metals arsenic, barium and chromium were detected at concentrations below State recommended soil cleanup guidance values. No PCBs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *FD-2 (floor drain excavation, 1 foot bgs):* The VOC methylene chloride was detected at a concentration below the State recommended soil cleanup guidance value. No other VOCs were detected at concentrations

exceeding the laboratory analytical method detection limits. Multiple SVOCs were detected at concentrations below State recommended soil cleanup guidance values. The metals barium, lead and mercury were detected at concentrations below State recommended soil cleanup guidance values. Chromium was detected at a concentration of 11.7 mg/kg, exceeding the State recommended soil cleanup guidance value of 10.0 mg/kg. No PCBs were detected at concentrations exceeding the laboratory analytical method detection limits.

- *FD-3 (floor drain excavation, 1 foot bgs):* The VOC toluene was detected at a concentration below the State recommended soil cleanup guidance value. No other VOCs were detected at concentrations exceeding the laboratory analytical method detection limits. Multiple SVOCs were detected at concentrations below State recommended soil cleanup guidance values. The metal barium was detected at a concentration below State recommended soil cleanup guidance values. Chromium was detected at a concentration of 11.5 mg/kg, exceeding the State recommended soil cleanup guidance value of 10.0 mg/kg. Mercury was detected at a concentration of 0.390 mg/kg, exceeding the State recommended soil cleanup guidance value of 0.100 mg/kg. No PCBs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *FD-4 (floor drain excavation, 1 foot bgs):* No VOCs or SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits. The metals barium and chromium were detected at concentrations below State recommended soil cleanup guidance values. No PCBs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *FD-5 (floor drain excavation, 1 foot bgs):* No VOCs were detected at concentrations exceeding the laboratory analytical method detection

limits. Multiple SVOCs were detected at concentrations below the State recommended soil cleanup guidance values. The metal barium was detected at a concentration below State recommended soil cleanup guidance values. Chromium was detected at a concentration of 11.1 mg/kg, exceeding the State recommended soil cleanup guidance value of 10.0 mg/kg. Mercury was detected at a concentration of 0.420 mg/kg, exceeding the State recommended soil cleanup guidance value of 0.100 mg/kg. No PCBs were detected at concentrations exceeding the laboratory analytical method detection limits.

- *FD-6 (floor drain excavation, 1 foot bgs):* No VOCs or SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits. The metals barium and chromium were detected at concentrations below State recommended soil cleanup guidance values. Mercury was detected at a concentration of 0.120 mg/kg, exceeding the State recommended soil cleanup guidance value of 0.100 mg/kg. No PCBs were detected at concentrations exceeding the laboratory analytical method detection limits.

Refer to Tables 3A through 3E for a summary of the analytical results, which incorporate the data validator's comments. Refer to *Figure 3 – Soil Sampling Locations* for additional information.

#### **3.1.4.4 Alignment Pit**

This structure was a concrete pit, approximately 10 feet by 10 feet by 3 feet deep. Approximately 450 gallons of oily liquid was pumped from this sump and properly disposed of. No recognized environmental conditions were identified with this site feature. No sampling of this structure was completed due to its proximity to other previously sampled structures. Refer to *Appendix A - Waste Disposal Tickets* for additional information regarding the disposal of the recovered fluids.



### 3.1.4.5 Sanitary System

After investigation of the on-site septic system and removal of contaminated soils, a total of five subsurface confirmation soil samples were collected from locations throughout the sanitary system distribution piping. Soil samples from beneath the piping legs were submitted for analysis of TCL VOCs per EPA Method 8260, TCL SVOCs per EPA Method 8270, PCBs per EPA Method 8082 and RCRA Metals per EPA Method 6010 per the revised Work Plan (July 2004). The analytical results are summarized as follows:

- *STP-1 (sanitary piping excavation, 4 feet bgs):* Multiple VOCs were detected at concentrations below the State recommended soil cleanup guidance values. Multiple SVOCs were detected at concentrations below State recommended soil cleanup guidance values. The metals barium and lead were detected at concentrations below State recommended soil cleanup guidance values. Chromium was detected at a concentration of 11.1 mg/kg, exceeding the State recommended soil cleanup guidance value of 10.0 mg/kg. The PCB Aroclor 1260 was detected at a concentration below State recommended soil cleanup guidance values. No other PCBs or metals were detected at concentrations exceeding the laboratory analytical method detection limits.
- *STP-2 (sanitary piping excavation, 4 feet bgs):* No VOCs were detected at concentrations exceeding the laboratory analytical method detection limits. The SVOCs phenanthrene, pyrene and benzo(a)anthracene were detected at concentrations below State recommended soil cleanup guidance values. The metals barium, chromium and lead were detected at concentrations below State recommended soil cleanup guidance values. The PCB Aroclor 1260 was detected at a concentration below State recommended soil cleanup guidance values. No other SVOCs, PCBs or metals were detected at concentrations exceeding the laboratory analytical method detection limits.

- *STP-3 (sanitary piping excavation, 4 feet bgs):* Multiple VOCs were detected at concentrations below the State recommended soil cleanup guidance values. Multiple SVOCs were detected at concentrations below State recommended soil cleanup guidance values. The metals barium, chromium and lead were detected at concentrations below State recommended soil cleanup guidance values. No other metals were detected at concentrations exceeding the laboratory analytical method detection limits. No PCBs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *STP-4 (sanitary piping excavation, 4 feet bgs):* No VOCs or SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits. The metals barium and chromium were detected at concentrations below State recommended soil cleanup guidance values. No other metals were detected at concentrations exceeding the laboratory analytical method detection limits. No PCBs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *STP-5 (sanitary piping excavation, 4 feet bgs):* The VOCs toluene was detected at a concentration below the State recommended soil cleanup guidance value. The VOC methylcyclohexane was detected at a concentration of 0.002 mg/kg, but has no State recommended soil cleanup guidance value. No other VOCs were detected at concentrations exceeding the laboratory analytical method detection limits. The SVOC pyrene was detected at a concentration below the State recommended soil cleanup guidance values. No other SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits. The metals barium, chromium and lead were detected at concentrations below State recommended soil cleanup guidance values. No other metals were detected at concentrations exceeding the laboratory analytical method

detection limits. No PCBs were detected at concentrations exceeding the laboratory analytical method detection limits.

Refer to Tables 4A through 4E for a summary of the analytical results, which incorporate the data validator's comments. Refer to *Figure 3 – Soil Sampling Locations* for additional information.

#### **3.1.4.6 UST**

One subsurface soil sample was collected from the bottom of the excavation after removal of the UST. This confirmation soil sample was submitted for analysis of TCL VOCs per EPA Method 8260 and TCL SVOCs per EPA Method 8270. This sample was also submitted for analysis of PCBs per EPA Method 8082 and RCRA metals per EPA Method 6010. The analytical results are summarized as follows:

- *UST-1 (soil beneath UST, 7 feet bgs):* The VOCs vinyl chloride and cis-1,2-dichloroethane were detected at concentrations below the State recommended soil cleanup guidance values. No other VOCs were detected at concentrations exceeding the laboratory analytical method detection limits. No SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits. The metals barium and chromium were detected at concentrations below State recommended soil cleanup guidance values. No other metals were detected at concentrations exceeding the laboratory analytical method detection limits. No PCBs were detected at concentrations exceeding the laboratory analytical method detection limits.

Refer to Tables 4A through 4E for a summary of the analytical results, which incorporate the data validator's comments. Refer to *Figure 3 – Soil Sampling Locations* for additional information.

#### **3.1.4.7 Soil Boring MW-16**

One subsurface soil sample was collected from the soils recovered during the installation of MW-16. This confirmation soil sample was submitted for analysis of TCL VOCs per EPA Method 8260 and TCL SVOCs per EPA Method 8270. This sample was also submitted for analysis of RCRA Metals per EPA Method 6010. The analytical results are summarized as follows:

- *MW-16 (soil at well location, 0-2 feet bgs):* No VOCs were detected at concentrations exceeding the laboratory analytical method detection limits. The SVOC bis(2-ethylhexyl)phthalate was detected at a concentration below State recommended soil cleanup guidance values. The metals barium and chromium were detected at concentrations below State recommended soil cleanup guidance values. No other SVOCs or metals were detected at concentrations exceeding the laboratory analytical method detection limits. No PCBs were detected at concentrations exceeding the laboratory analytical method detection limits.

Refer to Tables 4B through 4D for a summary of the analytical results, which incorporate the data validator's comments. Refer to *Figure 3 – Soil Sampling Locations* for additional information.

#### **3.1.4.8 Surface Soils**

A total of five investigative samples were collected during the surface soil investigation activities on September 28, October 12 and October 13, 2005. The surface soil samples were submitted for analysis of TCL SVOCs per EPA Method 8270, PCBs per EPA Method 8082 and RCRA Metals per EPA Method 6010. The analytical results are summarized as follows:

- *SS-1 (former Rick's Auto shed area, 0.5 feet bgs):* The SVOCs fluoranthene and pyrene were detected at concentrations below the State recommended soil cleanup guidance values. No other SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits. The metals barium and chromium were detected at concentrations below State recommended soil cleanup guidance values. Mercury was detected at a concentration of 0.110 mg/kg, exceeding the State recommended soil cleanup guidance value of 0.100 mg/kg. No other metals were detected at concentrations exceeding the laboratory analytical method detection limits. No PCBs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *SS-2 (former Rick's Auto parking area, 0.5 feet bgs):* Multiple SVOCs were detected at concentrations below the State recommended soil cleanup guidance values. The SVOC benzo(a)anthracene was detected at a concentration of 0.440 mg/kg, exceeding the State recommended soil cleanup guidance value of 0.240 mg/kg. The SVOC chrysene was detected at a concentration of 0.450 mg/kg, exceeding the State recommended soil cleanup guidance value of 0.400 mg/kg. The metals barium, cadmium and chromium were detected at concentrations below State recommended soil cleanup guidance values. The metal lead was detected at a concentration of 935 mg/kg, exceeding the average metropolitan background value of 500 mg/kg. The PCBs Aroclor 1254 and Aroclor 1260 were detected at concentrations below the State recommended soil cleanup guidance values. No other PCBs or metals were detected at concentrations exceeding the laboratory analytical method detection limits.
- *SS-3 (former Rick's Auto parking area, 0.5 feet bgs):* Multiple SVOCs were detected at concentrations below the State recommended soil

cleanup guidance values. The metals barium and lead were detected at concentrations below State recommended soil cleanup guidance values. Chromium was detected at a concentration of 10.7 mg/kg, exceeding the State recommended soil cleanup guidance value of 10 mg/kg. The PCBs Aroclor 1254 and Aroclor 1260 were detected at concentrations below the State recommended soil cleanup guidance values. No other PCBs or metals were detected at concentrations exceeding the laboratory analytical method detection limits.

- *SS-4 (former Rick's Auto parking area, 0.5 feet bgs):* The SVOCs 4-methylphenol, fluoranthene and pyrene were detected at concentrations below the State recommended soil cleanup guidance values. No other SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits. The metals barium and lead were detected at concentrations below State recommended soil cleanup guidance values. Chromium was detected at a concentration of 10.5 mg/kg, exceeding the State recommended soil cleanup guidance value of 10 mg/kg. The PCB Aroclor 1260 was detected at a concentration below the State recommended soil cleanup guidance values. No other PCBs or metals were detected at concentrations exceeding the laboratory analytical method detection limits.
- *SS-5 (lawn area behind former residential garage, 0.5 feet bgs):* No SVOCs or PCBs were detected at concentrations exceeding the laboratory analytical method detection limits. The metals barium and lead were detected at concentrations below State recommended soil cleanup guidance values. Chromium was detected at a concentration of 11.2 mg/kg, exceeding the State recommended soil cleanup guidance value of 10 mg/kg. No other metals were detected at concentrations exceeding the laboratory analytical method detection limits. No PCBs were detected at concentrations exceeding the laboratory analytical method detection limits.

Due to the presence of lead contamination at a concentration exceeding the background for metropolitan areas at sample location SS-2, a second round of surface soil sampling was conducted around this location on August 19, 2005.

- Five additional surface soil samples, SS-2A through SS-2E, were collected around location SS-2 and submitted for analysis for the presence of lead. Lead detected in these samples ranged from 34.2 mg/kg to 99.7 mg/kg, well below the background for metropolitan areas.

Refer to Tables 5A through 5D for a summary of the analytical results. Refer to *Figure 3 – Soil Sampling Locations* for additional information.

### **3.1.5 Soils**

Historical subsurface investigations reported site soil as silt and silty clay with some fine to medium gravel. These soils would be expected to have low permeability, resulting in a slow plume migration rate. The on-site soil conditions encountered during the IRM activities can generally be described as follows:

- |              |   |
|--------------|---|
| 0 to 8 feet  | Red-brown to tan moist Silt and fine Sand with some fine to medium gravel, trace clays, medium stiff. |
| 8 to 12 feet | Brown to tan moist Silt with fine Sand and some fine to medium gravel, trace clays, very stiff.       |

These soils tended to exhibit distinct zones of contamination, as denoted by strong odor and PID field readings. The soil contamination appeared to be limited to depths less than 10 feet, as established by field indicators and verified by analytical sample results. Soil conditions encountered during the contaminant source investigation and monitoring well installation activities were consistent with those encountered during the IRM activities.

### 3.1.6 Groundwater

A total of sixteen samples were collected during the groundwater investigation activities conducted on April 26, 2005. The groundwater samples were submitted for analysis of TCL VOCs per EPA Method 8260 and TCL SVOCs per EPA Method 8270. The analytical results were compared to the State Class GA groundwater standards and are summarized as follows:

- *MW-1 (source area well, former UST grave):* No VOCs or SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *MW-2 (hydraulically cross- and downgradient well):* No VOCs or SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *MW-3R (hydraulically downgradient well):* No VOCs were detected at concentrations exceeding the laboratory analytical method detection limits. The SVOC fluoranthene was detected at a concentration below the groundwater standard. No other SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *MW-4 (hydraulically downgradient well):* The VOCs benzene, ethylbenzene and m/p-xylene were detected at concentrations of 73, 51 and 41 µg/L, respectively. All exceeded their groundwater standards. The VOC 2-butanone was detected at a concentration below the groundwater standard. The VOCs cyclohexane and methylcyclohexane were detected at concentrations of 28 and 22 µg/L, respectively, but have no groundwater standards. The SVOCs phenol and 2-methylnaphthalene were detected at concentrations below the groundwater standards. The SVOC naphthalene was detected at a concentration of 36 µg/L, exceeding the groundwater standard of 10 µg/L. No other VOCs or SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.



- *MW-5 (dispenser island area well):* The VOC m/p-xylene was detected at a concentration below the groundwater standard. The VOC ethylbenzene was detected at a concentration of 6 µg/L, exceeding the groundwater standard of 5 µg/L. No other VOCs were detected at concentrations exceeding the laboratory analytical method detection limits. No SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *MW-6 (hydraulically upgradient well to dispenser island area):* No VOCs or SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *MW-7 (hydraulically downgradient well):* The VOCs ethylbenzene and m/p-xylene were detected at concentrations of 610, and 2,600 µg/L, respectively, exceeding their groundwater standard of 5 µg/L. The SVOC 2-methylnaphthalene was detected at a concentration below the groundwater standard. The SVOC naphthalene was detected at a concentration of 240 µg/L, exceeding the groundwater standard of 10 µg/L. No other VOCs or SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *MW-8 (hydraulically cross- and downgradient well):* No VOCs or SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *MW-9 (hydraulically cross-gradient well):* No VOCs or SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *MW-10R (source area well, former UST location):* The VOC vinyl chloride was detected at a concentration of 380 µg/L, exceeding the groundwater standard of 2 µg/L. The VOC cis-1,2-dichloroethene was detected at a concentration of

770 µg/L, exceeding the groundwater standard of 5 µg/L. No other VOCs were detected at concentrations exceeding the laboratory analytical method detection limits. The SVOCs di-n-butylphthalate, fluoranthene and bis(2-ethylhexyl) phthalate were detected at concentrations below their groundwater standards. No other SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.

- *MW-11 (hydraulically downgradient well):* No VOCs were detected at concentrations exceeding the laboratory analytical method detection limits. No SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *MW-12 (hydraulically downgradient well):* The VOCs ethylbenzene, m/p-xylene and isopropylbenzene were detected at concentrations of 960, 3,200 and 95 µg/L, respectively. All exceeded their groundwater standard of 5 µg/L. The SVOC 2-methylnaphthalene was detected at a concentration below the groundwater standard. The SVOC naphthalene was detected at a concentration of 250 µg/L, exceeding the groundwater standard of 10 µg/L. No other VOCs or SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *MW-13 (hydraulically cross- and downgradient well):* No VOCs or SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *MW-14 (hydraulically upgradient well):* No VOCs were detected at concentrations exceeding the laboratory analytical method detection limits. The SVOCs dimethylphthalate and fluoranthene were detected at concentrations below their groundwater standards. No other SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.

- *MW-15 (hydraulically upgradient well):* No VOCs or SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *MW-16 (hydraulically cross- and downgradient well):* No VOCs or SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.

A second, limited round of groundwater sampling was conducted on November 8, 2005 in order to reevaluate the downgradient portion of the groundwater contaminant plume. A total of six samples were collected during this round of groundwater investigation activities. The groundwater samples were submitted for analysis of TCL VOCs per EPA Method 8260 and TCL SVOCs per EPA Method 8270. The analytical results are summarized as follows:

- *MW-4 (hydraulically downgradient well):* The VOCs methylene chloride, acetone, 1,2-dichloroethane, benzene, toluene, ethylbenzene, m/p-xylene, o-xylene and isopropylbenzene were detected at concentrations exceeding their respective groundwater standards. The VOCs cyclohexane and methylcyclohexane were detected at concentrations of 89 and 32 µg/L, respectively, but have no groundwater standards. The VOCs methylene chloride and acetone were detected in the associated trip and/or method blanks for this sample. The SVOCs naphthalene and di-n-butylphthalate were detected at concentrations below the groundwater standards. The SVOC carbazole was detected at a concentration of 1 µg/L, but has no groundwater standard. The SVOC phenol was detected at a concentration of 3 µg/L, exceeding the groundwater standard of 1 µg/L. The SVOC bis(2-ethylhexyl)phthalate was detected at a concentration of 10 µg/L, exceeding the groundwater standard of 5 µg/L. This compound was also detected in the associated method blank for this sample. No other VOCs or SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.

- *MW-5 (dispenser island area well):* The VOC acetone was detected at a concentration below its groundwater standard. The VOC methylene chloride was detected at a concentration equal to its groundwater standard. These compounds were also detected in the associated trip and/or method blanks for this sample. No other VOCs were detected at concentrations exceeding the laboratory analytical method detection limits. The SVOCs naphthalene, di-n-butylphthalate, butylbenzylphthalate and benzo(g,h,i)perylene were detected at concentrations below the groundwater standards. The SVOC bis(2-ethylhexyl)phthalate was detected at a concentration of 19 µg/L, exceeding the groundwater standard of 5 µg/L, but this compound was also detected in the associated method blank for this sample. No other SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *MW-7 (hydraulically downgradient well):* The VOCs methylene chloride, acetone, 2-butanone, ethylbenzene, m/p-xylene, o-xylene and isopropylbenzene were detected at concentrations exceeding their respective groundwater standards. The VOC methylcyclohexane was detected at a concentration of 110 µg/L, but has no groundwater standard. The VOCs methylene chloride and acetone were also detected in the associated trip and/or method blanks for this sample. The SVOC 2-methylnaphthalene was detected at a concentration of 110 µg/L, but has no groundwater standard. The SVOC naphthalene was detected at a concentration of 300 µg/L, exceeding the groundwater standard of 10 µg/L. No other VOCs or SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *MW-10R (source area well, former UST location):* The VOC acetone was detected at a concentration below its groundwater standard. Acetone was also detected in the associated trip blank for this sample. The VOC vinyl chloride was detected at a concentration of 18 µg/L, exceeding the groundwater standard of 2 µg/L. The VOC cis-1,2-dichloroethene was detected at a concentration of 130

µg/L, exceeding the groundwater standard of 5 µg/L. The VOC benzene was detected at a concentration of 8 µg/L, exceeding the groundwater standard of 1 µg/L. The SVOCs naphthalene and di-n-butylphthalate were detected at concentrations below their groundwater standards. The SVOC 2-methylnaphthalene was detected at a concentration of 1 µg/L, but has no groundwater standard. The SVOC bis(2-ethylhexyl)phthalate was detected at a concentration of 9 µg/L, exceeding the groundwater standard of 5 µg/L, but was also detected in the associated method blank for this sample. No other VOCs or SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.

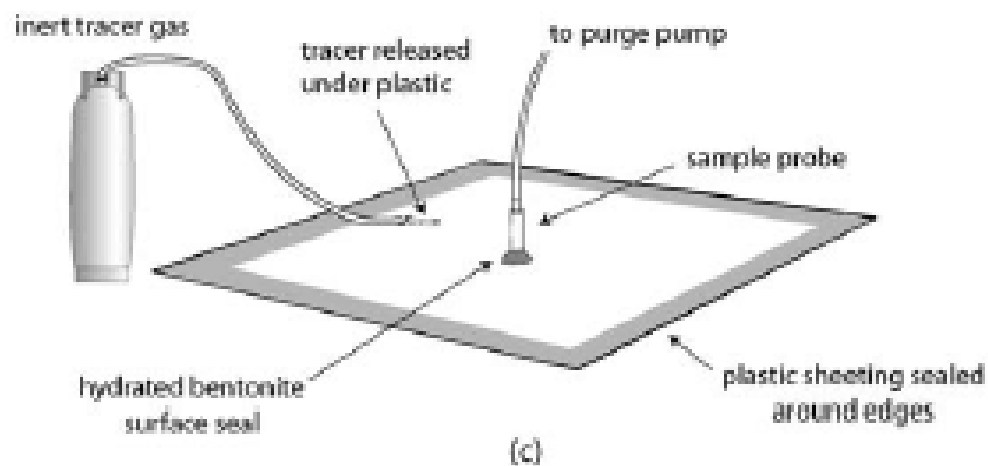
- *MW-12 (hydraulically downgradient well):* The VOCs methylene chloride, ethylbenzene, m/p-xylene, o-xylene and isopropylbenzene were detected at concentrations exceeding their respective groundwater standards. The VOC methylene chloride was also detected in the associated method blank for this sample. The SVOC 2-methylnaphthalene was detected at a concentration of 67 µg/L, but has no groundwater standard. The SVOC hexachloroethane was detected at a concentration of 19 µg/L, exceeding the groundwater standard of 5 µg/L. The SVOC naphthalene was detected at a concentration of 250 µg/L, exceeding the groundwater standard of 10 µg/L. The SVOC bis(2-ethylhexyl) phthalate was detected at a concentration of 5 µg/L, equaling the groundwater standard of 5 µg/L, but was also detected in the associated method blank for this sample. No other VOCs or SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.
- *MW-17 (hydraulically downgradient well, across roadway):* No VOCs were detected at concentrations exceeding the laboratory analytical method detection limits. The SVOC 2-methylnaphthalene was detected at a concentration of 1 µg/L, but has no groundwater standard. The SVOC naphthalene was detected at a concentration below its groundwater standard. The SVOC bis(2-ethylhexyl)

phthalate was detected at a concentration of 27 µg/L, exceeding the groundwater standard of 5 µg/L, but was also detected in the associated method blank for this sample. No other SVOCs were detected at concentrations exceeding the laboratory analytical method detection limits.

Refer to Tables 6A through 6D for a summary of the groundwater elevation data and analytical results. Refer to *Figure 4A – April 26, 2005 Groundwater Sampling Locations* and *Figure 4B – November 8, 2005 Groundwater Sampling Locations* for additional information.

### 3.1.7 Soil Vapor

The construction of the soil vapor sampling points differed from the soil vapor sampling plan outlined in our approved remedial investigation work plan. The approved plan was modified to comply with the Draft DOH February 2005 Guidance Policy for Evaluating Soil Vapor Intrusion in the State of New York and the shallow groundwater conditions at the site. A schematic of a common soil vapor sampling point construction and a photo of the field-constructed sampling point appear below:





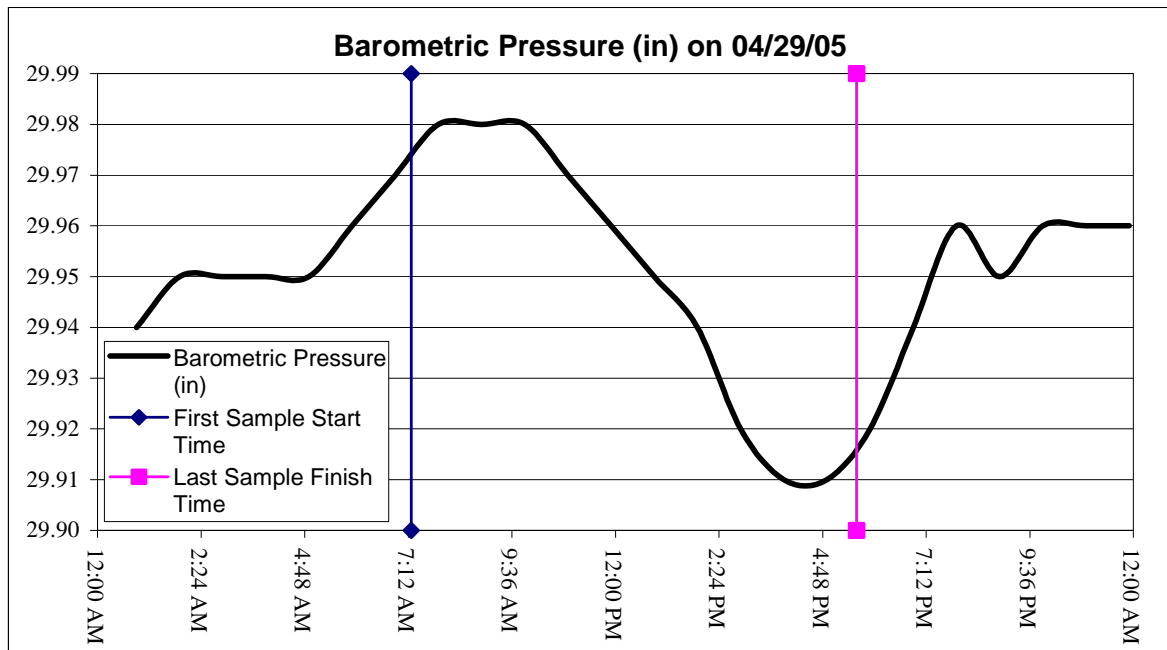
Depth to groundwater readings were obtained from the soil vapor sampling points immediately prior to sampling. The following table summarizes those observations.

<u>Sampling Location</u>	<u>DTW (feet bgs)</u>	<u>Sampling Location</u>	<u>DTW (feet bgs)</u>
SV-1	0.73	SV-6	1.84
SV-2	3.87	SV-7	>5.00
SV-3	>5.00	SV-8	NA
SV-4	1.70	SV-9	0.99
SV-5	1.82		

Each sampling point was purged for five minutes with a peristaltic sampling pump to remove “stagnant” air from the sampling location. This pump was set at a flow rate of approximately 1 liter per minute, purging an estimated 5 liters from each sampling point.

In accordance with the approved remedial investigation Work Plan, 1-liter Summa<sup>TM</sup> canisters were selected for the soil vapor sampling. The sampling rate of the Summa<sup>TM</sup> canisters was preset at the factory for an 8-hour sampling period. This resulted in a flow rate of 0.002 liters per minute, below the DOH specified maximum flow rate of 0.2 liters per minute. Each canister was permitted to run for more than 8 hours, to ensure a full sampling period.

Barometric pressure for the sampling period was tracked and appears on the chart below. Collection of the first soil vapor sample began at 7:16 a.m. and collection of the last soil vapor sample ceased at 5:35 p.m. As can be seen on the chart, this sampling interval coincides with a period of falling barometric pressure.



This sampling period was selected to optimize the soil vapor sampling, as the soil vapor mobility would be toward the atmosphere and there is less likelihood of short-circuiting directly to atmosphere during sample collection.

Short-circuiting during sampling was checked by placing tracer gas under the surface seal. The method selected for application of the tracer gas was to insert a rag soaked in 70% isopropyl alcohol under the surface seal. This application method allowed for the equal dispersion of the tracer gas under the surface seal without generating a positive pressure gradient under the seal. The laboratory checked for the presence of tracer gas by running a separate tentatively identified compound (TIC) analysis specifically for the isopropyl alcohol.



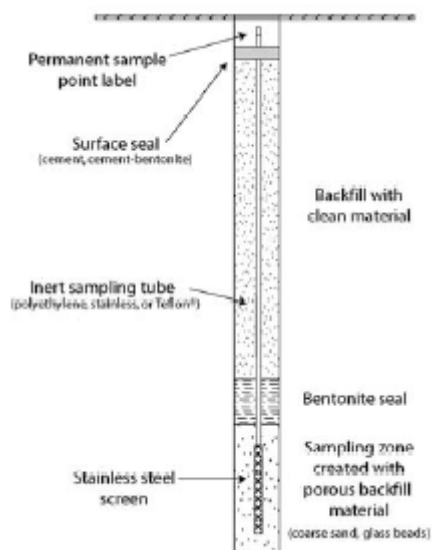
A total of nine samples were collected during the soil vapor investigation activities conducted on April 29, 2005. All soil vapor samples were submitted to Pace Analytical Services, Inc. for analysis of VOCs per EPA Method TO-15. The unvalidated analytical results are summarized as follows:

- *SV-1 (southeast property boundary):* The total VOC concentration detected at this location was 4,258 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). Eight VOCs were detected in the soil vapor sample collected at this location. The compound methylene chloride was detected at a concentration of  $126 \mu\text{g}/\text{m}^3$ , exceeding the NYSDOH Standard of  $60 \mu\text{g}/\text{m}^3$ . No tracer gas was detected at this soil vapor sampling location.
- *SV-2 (southwest property boundary):* The total VOC concentration detected at this location was  $2,275 \mu\text{g}/\text{m}^3$ . Sixteen VOCs were detected in the soil vapor sample collected at this location. No tracer gas was detected at this soil vapor sampling location.
- *SV-3 (northwest property boundary):* The total VOC concentration detected at this location was  $1,536 \mu\text{g}/\text{m}^3$ . Thirteen VOCs were detected in the soil vapor sample collected at this location. No tracer gas was detected at this soil vapor sampling location.
- *SV-4 (north property boundary, near MW-7):* The total VOC concentration detected at this location was  $921 \mu\text{g}/\text{m}^3$ . Seventeen VOCs were detected in the soil vapor sample collected at this location. The compound trichloroethene was detected at a concentration of  $8 \mu\text{g}/\text{m}^3$ , exceeding the NYSDOH Standard of  $5 \mu\text{g}/\text{m}^3$ . No tracer gas was detected at this soil vapor sampling location.
- *SV-5 (north property boundary, near MW-6):* The total VOC concentration detected at this location was  $2,300 \mu\text{g}/\text{m}^3$ . Thirteen VOCs were detected in the

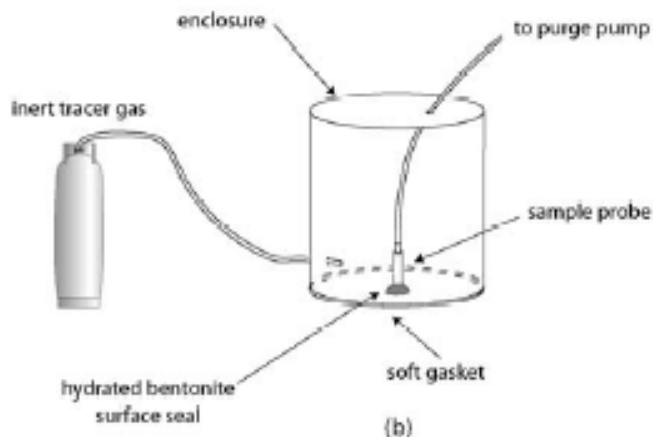
soil vapor sample collected at this location. No tracer gas was detected at this soil vapor sampling location.

- *SV-6 (northeastern property boundary):* The total VOC concentration detected at this location was 21  $\mu\text{g}/\text{m}^3$ . Two VOCs were detected in the soil vapor sample collected at this location. No tracer gas was detected at this soil vapor sampling location.
- *SV-7 (sub slab sample under proposed building at former residential property):* The total VOC concentration detected at this location was 1,501  $\mu\text{g}/\text{m}^3$ . Fourteen VOCs were detected in the soil vapor sample collected at this location. No tracer gas was detected at this soil vapor sampling location.
- *SV-8 (sub slab sample under building at former Rick's Auto property):* The total VOC concentration detected at this location was 322  $\mu\text{g}/\text{m}^3$ . Six VOCs were detected in the soil vapor sample collected at this location. No tracer gas was detected at this soil vapor sampling location.
- *SV-9 (parking area sample, to rear of building at former Rick's Auto property):* The total VOC concentration detected at this location was 1,938  $\mu\text{g}/\text{m}^3$ . Fourteen VOCs were detected in the soil vapor sample collected at this location. No tracer gas was detected at this soil vapor sampling location.

Additional soil vapor monitoring was performed on November 4, 2005 to assess off-site receptors. The construction of the soil vapor sampling points consisted of the installation of GeoProbe<sup>™</sup> sampling points in accordance with the Draft DOH Guidance Policy for Evaluating Soil Vapor Intrusion in the State of New York, dated February 2005. Soil vapor sampling point SV-12 was installed at a depth of 6.5 feet bgs. Shallow groundwater conditions at the site necessitated installation of the remaining soil vapor sampling points at depths between 3 and 3.5 feet bgs. A schematic of a common soil vapor sampling point construction and a photo of the field-constructed sampling point appear below:



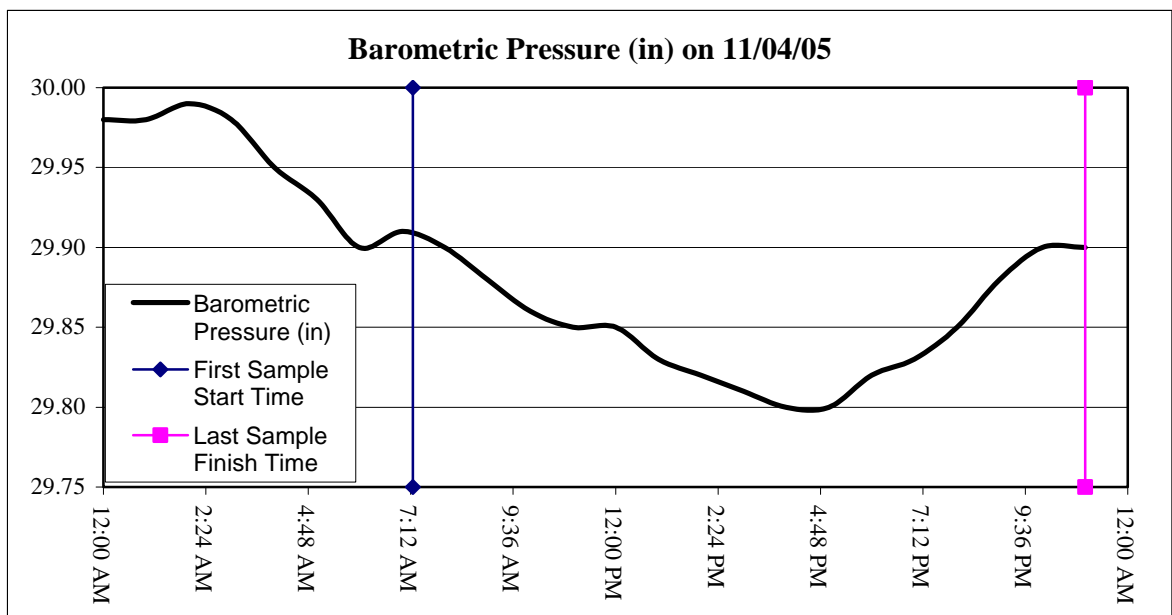
Each sampling point was purged for 30 seconds with a peristaltic sampling pump to remove “stagnant” air from the sampling location. This pump was set at a flow rate of approximately 1 liter per minute, purging an estimated 0.5 liters from each sampling point. Each sampling location was checked for gross short-circuiting by injecting 1-liter of helium gas into a 4-liter stainless enclosure obtained from the lab. A Mark 9822 helium leak detector with a detection limit of 0.01% to 100% helium was utilized to check for leaks in accordance with the procedures outlined in the Draft DOH Soil Vapor Guidance Policy mentioned above. No soil vapor sampling location exceeded 5.5% helium during the field testing (allowable maximum is 20%), indicating the construction of the soil vapor sampling points was adequately limiting short-circuiting to the atmosphere. A schematic of the tracer gas test construction appears below:



In accordance with the approved remedial investigation Work Plan (July 2004), 1-liter Summa™ canisters were selected for the soil vapor sampling. The sampling rate of the Summa™ canisters was preset at the laboratory for an 8-hour sampling period. This resulted in a flow rate of 0.002 liters per minute, below the DOH specified flow rate of 0.2 liters per minute. The vacuum gauges on the regulators were checked to verify that the Summa™ canisters held vacuum and to verify that the samples were being collected. Each canister was permitted to run until the regulator gauge read less than 5 inches of mercury vacuum, to ensure a the presence of a slight vacuum during transport to the laboratory.

It should be noted that one sample, SV-10, ceased sampling due to the presence of a single water droplet in the regulator. The laboratory was consulted, and the regulator was changed out at their recommendation. This should not affect the sample, as each regulator is purged and certified VOC-free at the laboratory, and each Summa™ canister contains a check valve to allow for disconnection. This resulted in the actual run time for this sample being extended to approximately 11 hours, resulting in the collection of a 1-liter sample. An extended sampling time was required because the replacement regulator was calibrated to a lower flow rate than the original.

Barometric pressure for the sampling period was tracked and appears on the chart below.



Collection of the first soil vapor sample began at 7:15 a.m. and collection of the last soil vapor sample ceased at approximately 11:00 p.m. As can be seen on the chart, the majority of this sampling interval coincides with a period of falling barometric pressure.

As previously stated, this sampling period was selected to optimize the soil vapor sampling, as the soil vapor mobility would be toward the atmosphere and there is less likelihood of short-circuiting directly to atmosphere during sample collection.

A total of four samples were collected during the soil vapor investigation activities conducted on November 4, 2005. All soil vapor samples were submitted to Centek Laboratories, LLC for analysis of VOCs per EPA Method TO-15. The analytical results are summarized as follows:

- *SV-10 (off-site adjacent to west property boundary, near SV-3 and residential structure):* A concentration of 3.2% tracer gas was detected at this soil vapor sampling location during the field testing. This concentration of tracer gas indicates that the surface seal at this sampling location has been adequately constructed. The total VOC concentration detected at this location was 107  $\mu\text{g}/\text{m}^3$ . Thirteen VOCs were detected in the soil vapor sample collected at this location.
- *SV-11 (off-site adjacent to southwest property boundary, near SV-2):* A concentration of 0.9% tracer gas was detected at this soil vapor sampling location during the field testing. This concentration of tracer gas indicates that the surface seal at this sampling location has been adequately constructed. The total VOC concentration detected at this location was 123  $\mu\text{g}/\text{m}^3$ . Seventeen VOCs were detected in the soil vapor sample collected at this location.
- *SV-12 (off-site adjacent to southwest property boundary, near SV-1):* A concentration of 5.4% tracer gas was detected at this soil vapor sampling location during the field testing. This concentration of tracer gas indicates the surface seal

at this sampling location has been adequately constructed. The total VOC concentration detected at this location was 73 µg/m³. Fifteen VOCs were detected in the soil vapor sample collected at this location.

- *SV-13 (off-site northwest of site in park, near MW-17):* A concentration of 2.6% tracer gas was detected at this soil vapor sampling location during the field testing. This concentration of tracer gas indicates the surface seal at this sampling location has been adequately constructed. The total VOC concentration detected at this location was 47 µg/m³. Fifteen VOCs were detected in the soil vapor sample collected at this location.

Refer to Table 7 for a summary of the analytical results. It should be noted that several additional compounds were reported in the analytical data for samples SV-10 through SV-13 than were reported for SV-1 through SV-9. This was due to a change in the analytical laboratory. Refer to *Figure 5 – Soil Vapor Sampling Locations* for additional information.

### **3.2 Data Validation**

In accordance with the approved Remedial Investigation Work Plan, all analytical data was submitted to an independent data validator for review. The data validation was completed by Data Validation Services (DVS). The laboratory analytical data packages were provided by Adirondack in Category B form. DVS completed full validation of approximately 20% of the laboratory analytical data, and prepared a Data Usability Report (DUSR) summarizing their findings in accordance with DEC guidelines. The following recommendations regarding qualification of the laboratory analytical data appear in the DUSR:

- *Soil Sampling - VOCs:* The data validator's review of the laboratory analytical data resulted in the following revision recommendations:

The data validator's review of the analytical data for samples received in June and August 2004 resulted in all detections for these sample being modified to estimated ("J"), due to the samples having been received at elevated temperatures (above 10°C). These samples were shipped via a courier provided by the laboratory, and were stored in a refrigerator and packed on ice prior to shipment.

Acetone in all samples should be modified to non-detection ("U"), due to the presence of acetone in the associated trip, method and/or equipment blanks for these samples.

All VOCs in sample RE-23 should be modified to estimated ("UJ" or "J"), due to the sample having been analyzed beyond the allowable holding time for this analysis.

All VOC detections in sample RE-10 should be modified to estimated ("J"), due to low surrogate recoveries for this sample.

2-Butanone detection in sample RE-20 should be modified to estimated ("NJ"), due to low surrogate recoveries for this sample.

Chloroform in samples STP-2, STP-4 and UST-1 should be modified to non-detection ("U"), due to the presence of chloroform in the associated trip blank for these samples.

Bromomethane, vinyl chloride and acetone in samples MW-16, RE-22R and RE-23R should be modified to estimated ("UJ" or "J"), due to the calibration standards being outside the validation guidelines for these samples.

- *Soil Sampling - SVOCs:* The data validator's review of the laboratory analytical data resulted in the following revision recommendations:

The data validator's review of the analytical data for samples collected in October 2004 resulted in the bis(2-ethylhexyl)phthalate in these samples being modified to

non-detection (“U”), due to the presence of bis(2-ethylhexyl)phthalate in the associated equipment blanks for these samples.

All SVOCs in samples SS-1, TP-5, TP-6, FD-3, FD-4, FD-5 and FD-6 should be modified to estimated (“UJ” or “J”), due to the samples having been extracted beyond the allowable holding time for this analysis.

All SVOCs in samples RE-1/RE-2 Comp, RE-3/RE-4 Comp and RE-13 should be modified to estimated (“UJ” or “J”), due to the samples having been received at elevated temperatures (above 10°C) and extracted at the limit of the allowable holding time for this analysis.

2,4-Dinitrophenol in samples RE-TP-1, RE-13, RE-15 through RE-19, RE-25, RE-26, SS-1, TP-4, TP-6 and FD-4 should be modified to unusable (“R”), due to poor response in the associated calibration standards.

2,4-Dinitro-2-methylphenol in samples RE-20 through RE-24 should be modified to unusable (“R”), due to poor response in the associated calibration standards.

Phenol and hexachlorocyclopentadiene in samples RE-20 through RE-24 should be modified to estimated (“UJ” or “J”), due to the calibration standards being outside the validation guidelines for these samples.

- *Soil Sampling - PCBs:* The data validator’s review of the laboratory analytical data resulted in the following revision recommendations:

No modification of laboratory analytical data was recommended.

- *Soil Sampling - Metals:* The data validator’s review of the laboratory analytical data resulted in the following revision recommendations:



Non-detected laboratory analytical data for arsenic and selenium in samples FD-1 and FD-2 should be modified to unusable (“R”), due to the matrix spike recoveries for FD-1 showing no recovery.

Detected laboratory analytical data for arsenic and selenium and all results for cadmium, lead and silver in samples FD-1 and FD-2 should be modified to estimated (“UJ” or “J”), due to the outlying spike recoveries.

Selenium in spiked samples SS-4 and MW-16 showed no recovery in matrix spike recoveries for these samples. Non-detect selenium analytical data for samples collected in October and November 2004 should be modified to unusable (“R”), and selenium detections should be qualified to estimated (“J”).

Silver and mercury in the samples collected in October 2004 being qualified to estimated (“UJ” or “J”), due to the matrix spike recoveries showing low recovery in spiked sample SS-4.

Silver in samples collected in September 2004 being qualified to estimated (“UJ” or “J”), due to the matrix spike recoveries showing low recovery in spiked sample RE-25.

- *Groundwater Sampling - VOCs:* The data validator’s review of the laboratory analytical data resulted in the following revision recommendations:

Acetone in all groundwater samples should be modified to non-detection (“U”) due to the presence of acetone in the associated trip, method and/or equipment blanks for these samples.

Vinyl chloride and chloromethane in all groundwater samples should be modified to estimated (“UJ” or “J”), due to the calibration standards being outside the validation guidelines for these samples.

Benzene detection in sample MW-4 should be modified to estimated (“J”), due to the outlying spike recoveries for this sample.

- *Groundwater Sampling - SVOCs:* The data validator’s review of the laboratory analytical data resulted in the following revision recommendation:

2,4-Dinitrophenol, 2,4-dinitro-2-methylphenol, 4-nitrophenol and 4-nitroaniline detections in samples MW-7 and MW-14 should be modified to estimated (“UJ” or “J”), due to the calibration standards being outside the validation guidelines for these samples.

- *Soil Vapor Sampling – VOCs:* The data validator’s review of the laboratory analytical data resulted in the following revision recommendations:

1,3-Butadiene in samples SV-2 and SV-3 should be modified to estimated (“UJ” or “J”), due to poor response in the associated calibration standard.

Methylene chloride in sample SV-1 should be modified to estimated (“J”), due to poor mass spectral quality. Additionally, all results for this sample should be modified to estimated (“UJ” or “J”), due to the significant addition of helium.

In addition to the DUSR, the DVS supplied handwritten modified copies of the laboratory analytical data pages for our review. As previously stated, these recommendations have been incorporated into the tabulated laboratory analytical data.

Data validation of the November 2005 sampling work is underway and will be submitted upon receipt.

## **4.0 CONTAMINANT FATE AND TRANSPORT**

This Site is located on the outskirts of an urban environment. The surrounding land is developed and a residential development is proposed for undeveloped land immediately south of the Site. As the developed nature of the Site will be of little value to wildlife, no exposure assessment for fish and wildlife was undertaken (DEC 1994 *Fish and Wildlife Impact Analysis, Step 1 – Site Description*; Appendix C). However, contaminant presence, migration and persistence in the environment were considered and are discussed in the succeeding sections.

### **4.1 Contaminant Presence**

The laboratory analytical data verifies the presence of contamination typical of historical gasoline dispensing and servicing operations. The occurrence of petroleum-related compounds at the site is most notable in the groundwater sample laboratory analytical data, which contains VOCs and SVOCs typically associated with gasoline contamination.

Of note is the presence of vinyl chloride and cis-1,2-dichloroethene (1,2-DCE) in MW-10R. The 1,2-DCE detected in the subsurface soils at UST-1 and in the groundwater at MW-10 is a solvent that has been used in the automotive repair industry. Vinyl chloride is a degradation product of 1,2-DCE. The soil sample from UST-1 was collected from a depth of 7 feet bgs, which is at or below the groundwater table. These compounds, detected in the groundwater at MW-10R at concentrations above their respective regulatory criteria, could be originating from the soils at UST-1. The detection of these compounds in only one monitoring well at the site suggests a limited extent for these site contaminants.

The widespread presence of acetone at the Site is also of interest. The laboratory analytical data and DUSR account for the presence acetone in the soil and groundwater samples as field/laboratory contamination due to the presence of acetone in the associated trip, field, equipment and/or method blanks. Its presence in the soil vapor samples cannot be readily explained, as no trip blank or field background sample was collected, in accordance with the approved Work Plan (July 2004). It is noted that acetone was not detected at concentrations exceeding the laboratory

analytical method detection limits in three of the four samples collected during the second round of soil vapor sampling.

Groundwater has shown a decline of contaminants since the source removal IRMs were complete in the fall of 2004. Table 6D presents total VOC concentrations in groundwater over time. Comparison of total VOCs in samples collected before completion of the IRMs (2002 to 2003) to total VOCs after IRM completion (2005) demonstrate a significant decline in groundwater concentrations. Specifically, monitoring wells MW-1, MW-3, MW-4, MW-5, MW-7, MW-10R and MW-11 all show a marked decline in total VOC concentrations since the source areas of contamination were removed from the subsurface through completion of the six IRMs.

#### **4.2 Potential Routes of Migration**

As previously stated, this investigation has confirmed the presence of petroleum (VOCs and SVOCs) and low concentrations of PCBs and a few metal contaminants in soils at discrete subsurface locations at this Site. The concentrations of VOCs and SVOCs across this Site are generally below the DEC recommended soil cleanup concentrations, with two of twenty-six subsurface soil samples showing concentrations of MTBE at three to four times the recommended cleanup levels and with one of five surface soil samples showing one to two times the recommended cleanup levels for two SVOCs. All detected PCB concentrations in surface and subsurface soils were below the DEC recommended clean-up concentrations. Metals occur naturally in soils. At this Site, elevated metals concentrations were detected in samples taken from the former Rick's Auto floor drains, in samples collected from one of five test pits during the sanitary system investigation and from one of five surface soil samples. Additionally, VOCs and SVOCs are present in groundwater at this Site. Multiple VOCs were detected in the soil vapor at this site.

Potential routes of migration for contaminants at this Site are primarily through volatilization, transport with downward percolating rainwater or in groundwater, and aerosolization of soil

particles containing one or more contaminants. Much of the soil contamination has been removed from the site through implementation of the IRM activities. Remaining soil contaminants either readily undergo natural attenuation in the environment (i.e., biodegradation of VOCs and SVOCs in soils and groundwater) or have extremely low water solubility, thus tending to remain in place (PCBs). Metals have low water solubility, but also have low acceptable concentration thresholds. Additionally, construction activities disturbing affected soils may cause aerosolization of soil particles with adhered contamination.

### **4.3 Contaminant Persistence**

Compounds with high water solubility values, low soil sorption ( $K_{oc}$ ) partitioning coefficients and low octanol water ( $K_{ow}$ ) partitioning coefficients are more susceptible to biodegradation and less susceptible to bioaccumulation.<sup>9</sup> The BTEX compounds will biodegrade in suitable soil and groundwater environments and are not particularly susceptible to bioaccumulation.

Halogenated organic compounds (i.e., trichloroethene, vinyl chloride) tend to have low to moderate solubilities, high volatilities, low to moderate partition coefficients, high mobilities, and densities greater than water. As a result, they are relatively easily leached from the soil into the groundwater (if conditions are suitable). Once in the subsurface, they typically undergo progressive dehalogenation. Generally, the time required for each step may be widely variable and degradation may or may not occur, depending on subsurface conditions (the presence of nutrients, microorganisms, etc.).

SVOC compounds are more susceptible to bioaccumulation and do not readily metabolize in living organisms. Given suitable conditions, SVOC compounds will biodegrade in natural soil and groundwater environments. They are also susceptible to photodecomposition and oxidation in surface water and aquatic environments.

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<sup>9</sup>*Where Did That Chemical Go?*; R.E. Ney; Van Nostrand Reinhold, New York; 1990.

The PCBs and metals are stable compounds that, while unlikely to migrate, are also very persistent in the environment. As discussed in the succeeding section, the stability of these compounds in the soils is a significant factor in their lack of mobility and also to their low exposure risk.

#### 4.4 Contaminant Migration

The chemical properties of the BTEX, SVOC, halogenated organic and aromatic hydrocarbon COCs related to their fate and transport in the environment are summarized in Table 8 and discussed below. Fate and transport of MTBE, PCBs and metals are also discussed below.

##### *SVOCs:*

- The molecular weights of the site SVOC compounds vary from relatively low (128 to 178) to high (202 to 390) values. In general, compounds within each molecular weight category exhibit similar environmental fates.<sup>10</sup> Table 8 groups the SVOCs into their respective molecular weight category. Seven of the compounds have low molecular weights and eight compounds have high molecular weights.
- All of the SVOC compounds have very low to low-medium<sup>11</sup> solubility values in water. The solubility of several of the higher molecular weight SVOC COCs is very low, 0.0007 to 0.01 milligrams per liter (mg/L), when compared to the solubility of BTEX compounds (~100 to 500 mg/L). Some examples of high molecular weight SVOCs include benzo(g,h,i)perylene, benzo(a)anthracene and chrysene. The lower molecular weight compounds have the highest solubility values. For example, naphthalene, 2-methylnaphthalene and dibenzofuran have the highest values (10 to 30 mg/L), while acenaphthylene, fluorene and phenanthrene form a secondary group with modest values

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<sup>10</sup>*Toxicological Profile for Polycyclic Aromatic Hydrocarbons*; Agency for Toxic Substances and Disease Registry; August 1995.

<sup>11</sup>Concentration terms refer to classification ranges presented in *Where did That Chemical Go?*; Nye, R.N.; Van Nostrand Reinhold, New York; 1990; see Table 11.

(1 to 5 mg/L). However, this class of compounds exhibits a very low solubility in comparison to VOCs. As expected, the more soluble SVOC compounds were generally detected at higher groundwater concentrations at this Site (Table 6C).

- The organic carbon partitioning coefficients (log K<sub>oc</sub>) for the SVOC compounds are mostly medium to high, indicating they will have a chemical tendency to sorb to organic bearing soils. The low molecular weight compounds tend to have medium values, while the high molecular weight compounds tend to have high values.
- The lower molecular weight SVOC compounds with the lowest (medium) log K<sub>oc</sub> values and also the higher water solubility, are somewhat more mobile in the soil and groundwater than the higher molecular weight compounds.
- The SVOC compounds have very low to medium-high vapor pressures, indicating they are not highly volatile. Their respective vapor pressures range considerably as a function of their molecular weights. The lower molecular weight compounds, such as naphthalene and acenaphthylene, have medium high vapor pressures (approximately  $1 \times 10^{-2}$  mm Hg), whereas higher molecular weight compounds, such as benzo(k)fluoranthene and chrysene, have very low vapor pressures ( $1 \times 10^{-7}$  to  $1 \times 10^{-11}$ ).
- The higher molecular weight SVOC compounds can be expected to sorb to soil and occur at low concentrations in the groundwater due to their high soil sorption coefficients and low water solubility values. They will also undergo minimum volatilization. The lower molecular weight compounds will have a tendency to be more mobile in the soil environment and occur at higher dissolved concentrations in water. They also have a greater tendency to volatilize.

***BTEX:***

- The BTEX compounds have solubility values in the medium to high range. Benzene has the highest solubility (about 1,800 mg/L), while the solubility of the other compounds range from 100 to 500 mg/L.

- All of the BTEX compounds have low log K<sub>oc</sub> values, indicating they are relatively mobile and will leach in the soil column.
- The vapor pressures of the BTEX compounds are relatively high, indicating they are volatile.

The fate and transport chemical data indicate the BTEX compounds are more mobile in the environment and will more readily partition into air and water than the SVOC compounds. BTEX will significantly volatilize from any source materials, leach in the soil column and dissolve in groundwater at higher concentrations than the SVOCs.

#### ***MTBE:***

MTBE possesses chemical qualities (i.e., solubility, log K<sub>oc</sub>, vapor pressure) similar to the BTEX compounds. The fate and transport chemical data for the BTEX compounds indicate that MTBE is more mobile in the environment and will more readily partition into air and water than the SVOC compounds. MTBE will significantly volatilize from any source materials, leach in the soil column and dissolve in groundwater at higher concentrations than the SVOCs.

#### ***Halogenated Organics:***

Halogenated organics include the compounds methylene chloride, vinyl chloride and cis-1,2-dichloroethene. The chemical qualities (i.e., solubility, log K<sub>oc</sub>, vapor pressure) of these compounds indicate they are more mobile in the environment and will more readily partition into air and water than the SVOC compounds. They will volatilize from any source materials, leach in the soil column and dissolve in groundwater at higher concentrations than the SVOCs.

#### ***Aromatic Hydrocarbons:***

Aromatic hydrocarbons include the compound isopropylbenzene (cumene). Aromatic hydrocarbons possess chemical qualities (i.e., solubility, log K<sub>oc</sub>, vapor pressure) similar to the BTEX



compounds. The fate and transport chemical data for the BTEX compounds indicate these compounds can be expected to be more mobile in the environment and will more readily partition into air and water than the SVOC compounds. These compounds will volatilize from any source materials, leach in the soil column and dissolve in groundwater at higher concentrations than the SVOCs.

#### ***PCBs:***

The PCB compounds detected, Aroclor 1254 and Aroclor 1260, have relatively high weight percents of chlorine saturation (54% and 60%, respectively), very low water solubility, low to moderate volatility and a strong affinity to sorb onto soil particles.<sup>12</sup> Therefore, these compounds have little potential for migration.

#### ***Metals:***

Metals detected at the site include lead, chromium and mercury. Lead was detected at a concentration above (approximately 200%) the average background level in suburban areas in one of five surface soil samples. Subsequent confirmatory delineation sampling at this location resulted in detected lead concentrations well below the average background level in suburban areas in five of five surface soil samples. Lead in soils is most commonly of the carbonate or oxide forms, both of which are insoluble in water and immobile in soils.<sup>13</sup>

Chromium was detected at concentrations above (approximately 10 to 15%) the recommended cleanup levels in one of five septic system test pit samples, and at this same concentration level in three of five floor drain soil samples. Chromium in soils is most commonly of the carbonate or oxide forms, both of which are insoluble in water and immobile in soils.<sup>14</sup>

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<sup>12</sup>Toxicological Profile for PCBs, USDHHS, Public Health Service, Agency for Toxic Substances and Disease Registry, Nov. 2000, Ch-1 Public Health Statement, Ch. 4 -Chemical /Physical Information, Tables 4-1, 4-3.

<sup>13</sup>Toxicological Profile for Lead, USDHHS, Public Health Service, Agency for Toxic Substances and Disease Registry, July 1999, Ch. 5 – Potential for Human Exposure.

<sup>14</sup>Toxicological Profile for Chromium, USDHHS, Public Health Service, Agency for Toxic Substances and Disease Registry, Sept. 2000, Ch. 5 – Potential for Human Exposure.

Mercury was detected in one of five surface soil samples at a concentration that was 10% above the recommended soil cleanup standard and in three of five floor drain samples at concentrations above (approximately 110% to 420%) the recommended soil cleanup concentration. The form of oxidized mercury most likely to be present in these soil samples is stable, has low volatility and is relatively insoluble in water, suggesting the potential for either volatilization to soil vapor or leaching potential into groundwater is very low for both routes of migration.<sup>15</sup>

## **5.0 HUMAN EXPOSURE ASSESSMENT**

Based on the information obtained from the investigation, a qualitative human health exposure assessment (EA) for the Site has been completed. The purpose of the assessment was to qualitatively determine the route, intensity, frequency and duration of potential human exposures to the COCs. The assessment evaluates the exposure setting (site characteristics), characterizes fate and transport properties of the COCs, and identifies the elements of exposure pathways that could lead to potential human health exposures. The EA includes characterizing exposed populations, if any.

An exposure pathway describes how exposure to a site contaminant may occur. The five elements of an exposure pathway include: 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. Release and transport mechanisms are the way the contaminant may be brought into contact with a receptor. The point of exposure is the location where exposure may occur. An exposure route is the manner in which the contaminant can enter the receptor body (inhalation, dermal absorption, ingestion or penetration). The receptor population is the group likely to be exposed at the point of exposure.

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<sup>15</sup> Toxicological Profile for Mercury, USDHHS, Public Health Service, Agency for Toxic Substances and Disease Registry, March 1999, Ch. 5 – Potential for Human Exposure, pp 400-401.

It has been demonstrated that petroleum (VOC and SVOC), low concentrations of PCBs and a few metal contaminants exist at this site. These contaminants, however, pose no risk to humans if one or more of the five exposure pathway elements do not exist.

## **5.1 Site Conceptual Model**

The purpose of presenting a site conceptual model is to describe the key features of the Site (including the nature/extent and the fate/transport characteristics of the contaminants) pertinent to evaluating the potential for human exposures to the site COCs. The site conceptual model also describes land use and human population characteristics at the site. The following narrative, including references to site plans, describes the site conceptual model used for the EA.

- The relevant site activities that generated the environmental contamination were from a gasoline dispensing and automotive repair shop that operated from 1955 until 1985. An automobile and/or small engine repair shop operated in the same building until its purchase in 2003.
- The main petroleum contaminant sources were two underground gasoline storage tanks and the pump dispenser island piping leaks. Additional activities contributing to site impact were associated with the hydraulic lifts, an on-site subsurface sanitary waste system, building floor drain piping leaks and their piping discharge point, and various activities associated with an automotive repair facility (i.e. motor and hydraulic oils handling).
- The commercial site is located on the west flank of a localized hill and is zoned for commercial use. This site is bordered on the south and west by residentially zoned land. Both the commercial and residential parcels are on the eastern limit of the Village of Baldwinsville boundary and both are serviced by Village of Baldwinsville water and sewer utilities. Based on the Site's newly established zoning, the current land use (commercial) is not expected to change in the foreseeable future.

- No permanent streams, ponds or similar surface water bodies are located on the Site. The south part of the Site is currently undergoing development for a 24-lot residential subdivision. The nearest surface water bodies are a small pond, approximately 300 feet hydraulically upgradient from the former Rick's Auto building, and the Seneca River, approximately 3,000 feet downgradient of the Site. The surface water drainage pattern of the site is controlled by the northwestward sloping topography. The surrounding area is served by municipal water and sewer, with the nearest drinking water wells serving residential homes in Lysander located over 2,000 feet northeast of the Site on Sixty Road.
  
- The key site hydrogeology conditions are summarized as follows (refer to Section 3.0 for additional details):
  - The site is underlain by fine sand, silts and silts with some clay. These sediments are of moderate to very low permeability.
  
  - The groundwater table is shallow, ranging in depths below ground surface from 1 to 6 feet.
  
  - The groundwater flow direction is governed by the site topography and flows to the northwest.
  
- For the EA, key conditions associated with the Site contamination are summarized as follows:
  - A narrow zone of SVOC and BTEX groundwater contamination associated with the former gasoline USTs and the dispenser island piping leaks exists. A plume of dissolved petroleum products extends from the area of the former USTs northwest toward MW-7.
  
  - Analytical results for groundwater samples from monitoring wells provide an indication that the site-wide concentration of VOC contaminants has decreased since the initiation of the IRMs.

- The following conditions suggest the contamination is relatively stable:
  - The fine sandy silt has low permeability and has impeded the plume migration rate and, therefore, its extent. These soils are conducive to natural attenuation mechanisms, including soil sorption, contaminant retardation, and hydraulic dispersion and diffusion.
  - The SVOC compounds have a distinct affinity to sorb to soil. This is a particularly important natural attenuation factor, resulting in decreased concentrations of total SVOC compounds in groundwater with increased distance from source areas.
  - BTEX and SVOC compounds are generally biodegradable in oxygenated groundwater environments. The oxygen content of the fine sand unit is expected to be good, considering the shallow depth to the water table and that it is readily recharged by oxygenated surface waters. The biodegradation potential and related natural attenuation mechanisms in the downgradient direction of the dissolved phase plume are expected to be good.
- Table 9 summarizes the potential receptors considered in the EA.

### **5.1.1 Exposure Assessment**

#### **5.1.1.1 Introduction**

The chemical properties relevant to the fate and transport of the site COCs were discussed in preceding sections. The site conceptual model, detailing the site conditions and a characterization of the local population, municipal water and sewer utilities and land uses, has also been presented. This section discusses the qualitative EA completed for the commercial site.

An exposure assessment considers the following five elements:

1. Contaminant sources;
2. Contaminant source release and transport (migration) pathways;
3. A point of exposure (location or area where contacts can occur);
4. A route of exposure (“uptake” mechanism, for example, ingestion); and
5. A receptor population.

An exposure pathway is complete when all five elements are present and documented. An exposure pathway can be eliminated if any one of the five elements does not exist in the past, present or future conditions. A potential exposure pathway exists if any one of the five elements comprising an exposure pathway is not documented.

The tables and discussion detail conditions considered provide the rationale used in eliminating or retaining exposure pathways identified. This assessment conforms to guidance provided by the DOH for EAs.<sup>16</sup>

#### **5.1.1.2 Exposure Assessment Analysis**

This section summarizes the five elements of the exposure assessment completed for this site and discusses the analyses made for each of the five elements.

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<sup>16</sup>Draft DER-10 Technical Guidance for Site Investigations and Remediation, December 2002, Appendix 3B, DOH Public Health Exposure Assessment Guidance.

This investigation confirmed the presence of VOCs in the soil vapor, petroleum (VOCs/SVOCs) in soils and groundwater, and low concentrations of PCBs and a few metal contaminants in soils at discrete subsurface locations at this site. A summary of EA elements for COCs is presented in the following tables.

### Release and Migration Pathways

Receiving Medium	Pathway	Release Sources
Air	<ul style="list-style-type: none"> <li>Vapor migration from contaminated subsurface soil and groundwater into buildings, underground utilities and outdoor locations.</li> </ul>	<ul style="list-style-type: none"> <li>Surface soils</li> <li>Shallow groundwater plume</li> <li>Subsurface soils</li> </ul>
Surface Soil	<ul style="list-style-type: none"> <li>Contact w/contaminated surface water runoff</li> </ul>	<ul style="list-style-type: none"> <li>Surface soils</li> </ul>
Subsurface Soil	<ul style="list-style-type: none"> <li>Leaching</li> </ul>	<ul style="list-style-type: none"> <li>Surface soils</li> </ul>
Surface Water	<ul style="list-style-type: none"> <li>Mobilization of contaminants in surface soils by surface water runoff.</li> <li>Contaminant mobilization in surface soils by surface water as it percolates to groundwater.</li> </ul>	<ul style="list-style-type: none"> <li>Surface soils</li> </ul>
Groundwater	<ul style="list-style-type: none"> <li>Down gradient migration of contaminated groundwater to off-site areas.</li> <li>Contamination from residual source areas</li> </ul>	<ul style="list-style-type: none"> <li>Surface and subsurface soils</li> </ul>

This EA considered direct contact with COCs by potential receptors. Direct contact exposure may result from contacting contaminants at their source location.

### Points of Exposure

Residual Contaminated Medium	Points of Exposure
Surface soils	<u>During Construction Activities:</u> <ul style="list-style-type: none"> <li>Unpaved areas of the site with SVOC contamination.</li> </ul>
Subsurface soil and groundwater in residual source areas.	<ul style="list-style-type: none"> <li><u>During Construction Activities:</u> Former UST and fuel dispenser island and west side of former Rick's Auto building.</li> <li>Inside commercial office building</li> </ul>

### Exposure Routes

Residual Contaminated Medium	Routes of Exposure
Surface Soil	Dermal absorption, Inhalation
Subsurface Soil	Dermal absorption, Inhalation during construction activity
Groundwater	Inhalation, Dermal absorption

### Receptor Population

<i>LAND USE AND POPULATION ANALYSIS</i>		
Conditions	Description	Activity Analysis
Land Uses	<ul style="list-style-type: none"> <li>Site is zoned for commercial uses.</li> </ul>	<ul style="list-style-type: none"> <li>Current and expected future conditions.</li> </ul>
	<ul style="list-style-type: none"> <li>Land to the west and south is zoned residential.</li> </ul>	<ul style="list-style-type: none"> <li>Current and expected future conditions.</li> </ul>
Potential Receptor Populations Relative to Site	<u>On-Site:</u> <ul style="list-style-type: none"> <li>Indoor commercial workers.</li> </ul>	<ul style="list-style-type: none"> <li>Current and expected future conditions.</li> <li>Standard work day/week schedules.</li> </ul>
	<ul style="list-style-type: none"> <li>Outdoor maintenance personnel</li> <li>Construction workers (indoors and outdoors).</li> <li>Adult or adolescent trespassers.</li> </ul>	<ul style="list-style-type: none"> <li>Occasional activities; current and expected future conditions.</li> </ul>
Potential Receptor Populations Relative to Site	<u>Adjacent Areas:</u> Residential lots to the west and south	<ul style="list-style-type: none"> <li>Current and expected future conditions.</li> </ul>

The results of this investigation accomplished three actions that directly bear upon this EA analysis:

- The six IRM actions completed significantly reduced the remaining contamination to below the DEC recommended clean up levels in most locations.
- Remaining soil and groundwater contamination is generally inaccessible to site occupants with the sole exception of vapor migration.



- The design and installation of a passive sub-slab soil vapor venting system as a precautionary design step to direct residual soil/groundwater vapors away from the interior of the proposed commercial building.

### **5.1.1.3 Potential Exposure Pathways**

Contaminant release, migration pathways and relevant environmental media have been discussed and are summarized in Table 9. This Table summarizes the rationale for eliminating or retaining releases or pathways for further consideration. It concludes with a final determination of incomplete or potentially complete exposure pathways and identifies the potentially exposed populations.

Table 9 indicates the only exposure pathways complete relate to on-site construction workers. The exposure risks are minimal and easily managed through a site specific Health and Safety Plan. No ongoing concerns exist for future occupants and users of the Site. The following site conditions and rationale form the basis of the determination of incomplete exposure pathways:

- A sub-slab soil vapor ventilation system will be incorporated into the building prior to pouring the concrete basement.
- Clean fill, landscaping and pavement will cover zones of impacted soils.
- The building will be connected to municipal sewer and water.
- Site zoning is designated as commercial.

## **6.0 SUMMARY AND CONCLUSIONS**

### **6.1 Summary**

A remedial investigation work plan, which included six interim remedial measures (IRMs), was completed to assess the nature and extent of environmental contamination and to reduce concentrations in source areas resulting from past operations at the former Rick's Automotive garage. The IRMs resulted in the removal of approximately 2,640 cubic yards of contaminated soil and approximately 8,000 gallons of contaminated water from the Site. Post IRM sampling documented the overall success of the IRM actions by confirming that most existing contaminant source areas at the Site have been reduced to residual concentrations which are below the DEC cleanup guidance levels.

This investigation entailed source area sampling and IRMs for site features, including:

- Former gasoline UST and dispenser island.
- Hydraulic lifts.
- Floor drains.
- Alignment pit.
- Sanitary septic system.
- 500-gallon UST.
- Replacement/installation of six groundwater monitoring wells.
- Sampling of all groundwater monitoring wells for VOC and SVOCs.

- Confirmation soils sampling at IRM areas where soil removal was completed.
- Surface soil sampling in ten locations.
- Soil vapor sampling in thirteen locations.

### **6.1.1 Nature and Extent of Contamination**

Based on the results of groundwater sampling, confirmation soil sampling after completion of six IRMs and soil vapor sampling, the following conclusions were reached regarding the nature and extent of site contamination.

- An IRM to remove a zone of subsurface soil contamination at the former gasoline UST and dispenser island was successful. It resulted in confirmation soil sample results demonstrating that remaining soils were below DEC recommended cleanup guidance values for VOC and SVOCs in 21 of 26 confirmation soil samples. Two of these samples (RE-22 and RE-23) indicated unacceptable contamination remained, prompting a second effort to remove an additional 12 cubic yards of affected soils in the area around these samples. The remaining samples contained MTBE and xylene compounds which were three to four times the recommended soil cleanup guidance levels, however, these compounds are susceptible to natural attenuation in soils.
- Analytical results from samples collected after soils were removed in the vicinity of RE-22 and RE-23 are presented as RE-22R and RE-23R. These results indicate the presence of organic compounds at concentrations below the DEC recommended clean up guidance values for VOCs and SVOCs.
- Five additional IRMs resulted in post confirmation subsurface soil samples (18 total), demonstrating that remaining subsurface soils do not contain VOCs or

SVOCs in concentrations above the DEC recommended soil cleanup guidance levels.

- Five areas of surface soils sampled for SVOCs show one sample with elevated concentrations of two compounds above the DEC recommended soil cleanup levels. The other four sample results showed all constituents were below the soil cleanup levels.
- One surface soil sample showed an elevated concentration of lead above the DEC recommended soil cleanup level. Results of an additional five surface soil samples collected from around this sample location showed lead concentrations were below the DEC recommended soil cleanup level.
- Six soil samples collected and analyzed for PCBs showed the presence of Aroclor 1254 and Aroclor 1260 at concentrations below the DEC soil cleanup levels.
- Chromium and mercury were detected at concentrations above the recommended cleanup values in three of six samples collected from automobile repair shop floor drains. This area is located beneath the renovated building.
- Mercury was detected at a concentration slightly above the DEC recommended soil cleanup level in one of five samples collected from test pits during the sanitary system investigation and in one of five surface soil samples collected.
- Although groundwater concentrations in the monitoring wells show the continued presence of VOCs at concentrations above the State standards, these concentrations are on the decline. A comparison of pre- and post-IRM groundwater sample results clearly indicates a strong downward concentration trend (Table 6D).

- Soil vapor sampling demonstrated the presence of petroleum-related VOCs at the site. Two of the detected compounds, methylene chloride and TCE, exceeded the draft DOH guidance values.

### **6.1.2 Fate and Transport**

The results of the successful completion of six IRMs and investigation of soil vapor and groundwater concentrations indicate the bulk of soil contamination has been removed from the Site. This finding indicates that source areas capable of leaching contaminants to groundwater or volatilizing compounds for vapor intrusion have been significantly reduced. Residual VOC/SVOC contamination does exist, however, remaining compounds either have very low mobility due to low water solubility or affinity for adherence to soil particles, or are readily biodegradable. The reduction of VOC/SVOC concentrations in former source areas to at or below DEC recommended cleanup levels enhances the ability of naturally extenuative processes to further reduce concentrations.

As a result of the six IRMs completed at this Site, the only remaining VOC/SVOC concern for this Site is the potential for migration of dissolved constituents in groundwater. The significant reduction of contaminants in source areas and results from the groundwater sampling suggest that groundwater concentrations of VOC/SVOC are in decline.

The two PCB compounds detected at the site (Aroclor 1254 and Aroclor 1260) were at concentrations below the DEC recommended soil cleanup levels. These compounds were detected in subsurface soil samples at the hydraulic lifts and at the former septic system. They were also detected in surface soil samples collected west of the former Rick's Auto facility. The redevelopment plans for the Site are for this surface soils area to be at or near a paved right-of-way and for clean fill to be brought in for adjacent landscaping. As these compounds have extremely low water solubility and have extremely low mobility in soils, they are expected to remain inaccessible to receptor populations.

The metals detected above the DEC recommended soil cleanup guidance values have low mobility in the environment and are either located below the renovated building or in surface soils which are to be covered with topsoil for landscaping. In both instances, the low mobility of the metals poses little risk for migration or exposure.

### **6.1.3 Risk Assessment**

The overall risk associated with potential exposure to residual contamination at this Site is low. A significant reduction in contamination at source areas was accomplished. Remaining contaminants, including groundwater concentrations of VOC and SVOCs and PCBs and metals in surface soils, are unlikely to result in exposures, as the receptor populations are to be physically isolated from points of exposure for all but volatile compounds. In the outdoor environment, insufficient volatile concentrations are anticipated to be present to pose an exposure risk. The indoor environment has been engineered with a soil vapor venting system that will be equipped with a fan to actively collect any vapors and direct them away from building occupants.

## **6.2 Conclusions**

This Site has been substantially improved through completion of tasks outlined in the Remedial Investigation Work Plan. In addition, a number of area specific investigations were completed as IRMs resulting in the removal of affected soils and confirmation soil sampling that documented the effectiveness of the IRMs. The final results of all actions completed at this Site were to significantly reduce source areas of contamination and to provide analytical data to document that contamination in most source areas is below the DEC recommended cleanup guidance concentrations. Remaining soil contamination is comprised of constituents that are either readily susceptible to natural attenuation or have low mobility. Furthermore, these residual source areas are unlikely to result in future exposures, as the remaining source areas are either below grade, in proposed areas of a public roadway or will be adjacent to the commercial building and will remain below the final graded surface.

The Site groundwater VOC concentration trend is downward, although groundwater VOC and SVOC concentrations of some constituents are above State Standards. No trend in SVOC concentrations can be determined due to a lack of sufficient pre-IRM data, however, the bulk of the SVOC exceedance is due to the presence of naphthalene. Successful removal of course area soils through the completion of six IRMs has resulted in significant improvement in the environmental condition of the site, as represented by the improving groundwater VOC trend. Monitoring of groundwater VOCs should confirm continuation of this trend toward the State Standards.

#### **6.2.1 Data Limitations and Recommendations for Future Work**

This investigation gathered a substantial volume of subsurface and surface soil, soil vapor and groundwater data. A thorough review of past practices and prior environmental reports was completed to provide a firm base of knowledge from which to design the Remedial Investigation Work Plan. This plan was developed after the review of available site information and following site reconnaissance that revealed additional areas of concern for further investigation. Based on the totality of investigative work completed at this Site to date, it is concluded that sufficient knowledge of the nature and extent of contamination is documented and understood.

The laboratory analytical data was reviewed by the project data validator. Revisions to many of the laboratory analytical data points were recommended based on the data validator's review of the data packages. These revisions to the laboratory analytical data qualifiers have been incorporated in the tabulated data. A copy of the data usability report (DUSR) may be found in *Appendix E – Data Usability Summary Report (DUSR)*.

As a result of this investigation and its remedial actions, it is recommended that groundwater concentrations be monitored quarterly for eight consecutive quarters to document an expected decline in concentrations over time. The VOC and SVOC constituents currently present in the groundwater are susceptible to natural attenuation and do not pose an unacceptable health risk. However, documentation of this expected

decline in concentration is needed. Additional, more proactive approaches to the groundwater issue may be considered if these concentrations do not demonstrate the expected decline. Based on the spatial distribution of the groundwater plume and the network of monitoring wells, monitoring wells MW-1, MW-4, MW-7, MW-10, MW-11 and MW-12 are recommended for quarterly monitoring in the first, second and fourth calendar quarters of the year. A full round of sampling of all monitor wells will be performed in the third calendar quarter of the year.

### **6.2.2 Recommended Remedial Action Objectives**

The objective for the collection and evaluation of groundwater quarterly samples from eight consecutive quarters is to assess whether an expected decline in groundwater concentrations occurs at the Site. As natural attenuation processes do not degrade individual constituents equally and do not result in equivalent reduction rates, the objective of this monitoring is to demonstrate a clear reduction in total volatile organics in groundwater. A statistically significant reduction in total groundwater VOC and SVOC constituents is the goal. As long as progress can be demonstrated toward this goal, this action plan is deemed successful. An annual report addressing results from the most recent four consecutive quarters of groundwater sampling shall be prepared and submitted to the DEC BCA administrator. This report shall evaluate the groundwater data and make recommendations regarding the necessity for an additional four quarters of monitoring.

### **6.2.3 Remedial Work Plan**

The remedial investigation has demonstrated that the IRMs satisfactorily addressed on-site soil contamination, with essentially all soil samples indicating achievement of the DEC's recommended soil cleanup guidance values. Residual groundwater contamination still exists on the site, but concentrations have shown significant decreases from pre-remediation levels. In the source areas that were excavated and in the areas immediately downgradient, groundwater contaminant concentrations have declined by at least 50%



and some by as much as three orders of magnitude. This clearly defined declining trend in groundwater contaminant concentrations further demonstrates that the source removal measures were effective. Therefore, no additional remedial measures are proposed for the Site. A Remedial Work Plan (RWP) will be prepared documenting this determination. The following institutional and engineering controls will be proposed in the RWP to address potentially completed exposure pathways as outlined in Table 9:

***Engineering Controls:***

- A sub-slab depressurization system has been installed in the existing office building and a similar system will be installed in a second office building, if constructed.

***Institutional Controls:***

- The future use of the property will be restricted to business or commercial use, consistent with Village zoning.
- Groundwater use prohibition, including the prohibition of installing water supply wells or discharging groundwater until monitoring results indicate groundwater standards have been achieved site-wide.
- A Soil Management Plan will outline procedures for future excavations on the Site, including the screening of soils excavated, appropriate health and safety measures and soil handling procedures.

As discussed above, a groundwater monitoring program will be undertaken to verify groundwater contaminant concentrations are declining.

These measures will be included in a Site Management Plan, that will be submitted as part of the RWP. The institutional and engineering controls will also be included in an Environmental Easement to be developed for the site.

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SOIL ANALYTICAL SUMMARY TABLES NOTES:

<sup>1</sup>DEC Technical Administration Guidance Memorandum (TAGM) No. 4046, *Determination of Soil Cleanup Objectives and Cleanup Levels* , dated January 24, 1994, as modified by DEC Memorandum of April 10, 2001. Allowable concentration with no dilution/attenuation factor. See TAGM 4046. Soil cleanup objectives are developed for soil organic carbon content of 1% and should be adjusted for actual carbon content, if known.

<sup>2</sup>DEC Spill Technology and Remediation Series (STARS) Memo #1 - *Petroleum-Contaminated Soil Guidance Policy* , dated August 1992.

TCL Target Compound List of organic compounds  
TAL Target Analyte List of organic compounds  
mg/kg milligrams per kilogram (parts per million, ppm)  
--- No DEC recommended soil cleanup guideline  
SB Site background determined cleanup level.  
\* Indicates compound concentration obtained from sample confirmation reanalysis (RE qualified sample) or sample dilution reanalysis (DL qualified sample).  
\*\* Duplicate analysis not within control limits.  
\*\*\* See specific language in NYSDEC TAGM No. 4046, Table 4 - Heavy Metals regarding Cyanide.  
ND< Not detected less than  
J Indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero.  
D Indicates diluted sample analysis due to compound concentration exceeding instrumentation calibration range.  
--- No promulgated State Standard or Guidance Value  
B The compound was found in the laboratory blank as well as the sample.  
N Spiked sample recovery not within control limits.  
P Greater than 25% difference for detected concentrations between the 2 GC columns. The lower of the two values is reported.  
0.4\* Applies to the sum of cis- and trans-1,3-dichloropropene  
1.2\* Applies to the sum of xylene isomers (o-, m-, and p-)  
Compounds that exceeded Recommended Soil Cleanup Levels are denoted in **BOLD** .  
Background levels for lead vary widely. Average background levels in metropolitan areas typically range from 300 to 500 ppm.

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**TABLE 1A - EXCAVATION SOILS - PHOTOIONIZATION DETECTOR READINGS**

Sample ID	Location	Date Sampled	Time Sampled	Depth	PID (ppm)
RE-1	floor sample, east side north	08/13/04	1550	8	1.3
RE-2	floor sample, east side south	08/13/04	1620	8	0.0
RE-3	east wall sample south	08/13/04	1625	6	0.6
RE-4	east wall sample north	08/13/04	1630	6	5.5
RE-5	south wall below water line	08/17/04	846	5	65.7
RE-6	north wall below water line	08/17/04	852	5	96.7
RE-7	floor sample, south middle east, in line with bldg	08/17/04	1042	8	0.4
RE-8	floor sample, north middle east, in line with bldg	08/17/04	1050	8	0.0
RE-9	east wall midway between bldg and MW-10	08/18/04	1317	7.5	2.8
RE-10	floor sample in line with RE-9 and RE-12	08/18/04	1436	8	43.5
RE-11	wall sample in line with RE-9 and just east of MW-10	08/18/04	1450	7.5	29.5
RE-12	south wall midway between MW-10 and bldg.	08/18/04	1600	7.5	8.1
RE-13	floor sample along midline from RE-14 to RE-18	08/20/04	1253	8	0.0
RE-14	north wall east of MW-4	08/23/04	1516	6	40.4
RE-15	south wall, east of MW-10	08/23/04	1534	8	0.0
RE-16	floor sample along midline from RE-13 to RE-17	08/25/04	1056	8	12.4
RE-17	north wall south of MW-4	08/25/04	1241	8	7.1
RE-18	east wall center	08/25/04	1302	8	1.2
RE-19	east wall south near telephone pole	08/26/04	1508	8	3.8
RE-TP-1	test pit located approx. 25 ft. south of MW-12	08/20/04	930	NS	0.0
RE-20	north wall sample , easternmost residential driveway	09/01/04	1125	8	2.6
RE-21	floor sample, in driveway midway between MW-11 and road	09/01/04	1343	8	0.9
RE-22	east wall sample, near MW-3	09/01/04	1434	8	18.8
RE-22R	secondary excavation at location RE-22	11/30/04	1130	12	8.0
RE-23	west wall sample near MW-11	09/01/04	1444	8	17.8
RE-23R	secondary excavation at location RE-23	11/30/04	1100	12	1.2
RE-24	floor sample, midway between MW-11 and road	09/02/04	1502	12	5.3
RE-25	wall sample at NW bldg corner	09/29/04	1635	6	1.3
RE-26	wall sample at NW bldg corner	09/29/04	1640	6	0.4

Notes:

NS    Sample not screened

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**TABLE 1B - EXCAVATION SOILS - TARGET COMPOUND LIST VOLATILE ORGANIC COMPOUNDS**

**Date Sampled:** As Shown**Matrix:** IRM Excavation Soil

Compound	State Standard <sup>1</sup> (mg/kg)	Compound Concentration (mg/kg)					
		RE-1/RE-2 8' b.g.s.	RE-3/RE-4 6' b.g.s.	RE-5 5' b.g.s.	RE-6 5' b.g.s.	RE-7/RE-8 8' b.g.s.	RE-9 7.5' b.g.s.
		8/13/04	8/13/04	8/17/04	8/17/04	8/17/04	8/18/04
Chloromethane (methyl chloride)	---	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Bromomethane	---	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Vinyl Chloride	1.2	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Chloroethane	1.9	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Methylene Chloride	0.1	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Acetone	0.2	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Carbon Disulfide	2.7	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
1,1-Dichloroethene	0.4	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
1,1-Dichloroethane	0.2	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
trans-1,2-Dichloroethene	0.3	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
cis-1,2-Dichloroethene	---	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Chloroform	0.3	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
1,2-Dichloroethane	0.1	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
2-Butanone	0.3	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
1,1,1-Trichloroethane	0.8	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Carbon Tetrachloride	0.6	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Bromodichloromethane	---	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
1,2-Dichloropropane	---	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
cis-1,3-Dichloropropene	0.4*	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Trichloroethene	0.7	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Dibromochloromethane	---	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
1,1,2-Trichloroethane	---	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Benzene	0.06	ND < 0.011	ND < 0.011	0.023 J	ND < 0.011	ND < 0.011	ND < 0.011
trans-1,3-Dichloropropene	0.4*	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Bromoform	---	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
4-Methyl-2-Pentanone	1.0	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
2-Hexanone	---	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Tetrachloroethene	1.4	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
1,1,2,2-Tetrachloroethane	0.6	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Toluene	1.5	ND < 0.011	ND < 0.011	0.017 J	ND < 0.011	ND < 0.011	ND < 0.011
Chlorobenzene	1.7	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Ethyl Benzene	5.5	0.002 J	ND < 0.011	0.220 J	ND < 0.011	ND < 0.011	ND < 0.011
Styrene	---	ND < 0.006	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
m/p-Xylenes	1.2*	0.012 J	ND < 0.011	0.440 J	0.190 J	ND < 0.011	ND < 0.011
o-Xylene	1.2*	ND < 0.006	ND < 0.011	0.060 J	ND < 0.011	ND < 0.011	ND < 0.011
MTBE	0.12	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Dichlorodifluoromethane	---	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Methyl Acetate	---	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Freon 113	6.0	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Trichlorofluoromethane	---	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Cyclohexane	---	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Methylcyclohexane	---	ND < 0.011	ND < 0.011	0.110 J	0.080 J	ND < 0.011	ND < 0.011
1,2-Dibromoethane (ethylene dibron	---	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
1,3-Dichlorobenzene	1.6	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Isopropylbenzene	2.3	ND < 0.011	ND < 0.011	0.041 J	0.033 J	ND < 0.011	ND < 0.011
1,4-Dichlorobenzene	8.5	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
1,2-Dichlorobenzene	7.9	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
1,2-dibromo-3-Chloropropane	---	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
1,2,4-Trichlorobenzene	3.4	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Total VOCs	10	0.014	ND	0.911	0.303	ND	ND

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TABLE 1B - EXCAVATION SOILS - TARGET COMPOUND LIST VOLATILE ORGANIC COMPOUNDS

Date Sampled: As Shown

Matrix: IRM Excavation Soil

Compound	State Standard <sup>1</sup> (mg/kg)	Compound Concentration (mg/kg)					
		RE-10 8' b.g.s.	RE-11 7.5' b.g.s.	RE-12 7.5' b.g.s.	RE-13 8' b.g.s.	RE-14 6' b.g.s.	RE-15 8' b.g.s.
		8/18/04	8/18/04	8/18/04	8/20/04	8/23/04	8/23/04
Chloromethane (methyl chloride)	---	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.11	ND < 0.011
Bromomethane	---	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.11	ND < 0.011
Vinyl Chloride	1.2	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.11	ND < 0.011
Chloroethane	1.9	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.11	ND < 0.011
Methylene Chloride	0.1	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.11	ND < 0.011
Acetone	0.2	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.11	ND < 0.011
Carbon Disulfide	2.7	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.11	ND < 0.011
1,1-Dichloroethene	0.4	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.11	ND < 0.011
1,1-Dichloroethane	0.2	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.11	ND < 0.011
trans-1,2-Dichloroethene	0.3	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.11	ND < 0.011
cis-1,2-Dichloroethene	---	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.11	ND < 0.011
Chloroform	0.3	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.11	ND < 0.011
1,2-Dichloroethane	0.1	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.11	ND < 0.011
2-Butanone	0.3	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.11	ND < 0.011
1,1,1-Trichloroethane	0.8	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.11	ND < 0.011
Carbon Tetrachloride	0.6	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.11	ND < 0.011
Bromodichloromethane	---	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.11	ND < 0.011
1,2-Dichloropropane	---	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.11	ND < 0.011
cis-1,3-Dichloropropene	0.4*	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.11	ND < 0.011
Trichloroethene	0.7	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.11	ND < 0.011
Dibromochloromethane	---	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.11	ND < 0.011
1,1,2-Trichloroethane	---	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.11	ND < 0.011
Benzene	0.06	ND < 0.057	0.059 J	ND < 0.011	0.024 J	ND < 0.11	ND < 0.011
trans-1,3-Dichloropropene	0.4*	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.11	ND < 0.011
Bromoform	---	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.11	ND < 0.011
4-Methyl-2-Pentanone	1.0	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.11	ND < 0.011
2-Hexanone	---	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.11	ND < 0.011
Tetrachloroethene	1.4	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.11	ND < 0.011
1,1,2,2-Tetrachloroethane	0.6	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.11	ND < 0.011
Toluene	1.5	0.044 J	0.063 J	ND < 0.011	ND < 0.011	0.047 J	ND < 0.011
Chlorobenzene	1.7	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.11	ND < 0.011
Ethyl Benzene	5.5	0.200 J	0.022 J	ND < 0.011	ND < 0.011	0.940 J	ND < 0.011
Styrene	---	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.11	ND < 0.011
m/p-Xylenes	1.2*	0.810 J	0.099 J	ND < 0.011	ND < 0.011	<b>3.600 J</b>	ND < 0.011
o-Xylene	1.2*	0.270 J	0.045 J	ND < 0.011	ND < 0.011	0.400 J	ND < 0.011
MTBE	0.12	<b>0.410 J</b>	<b>0.460 J</b>	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Dichlorodifluoromethane	---	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Methyl Acetate	---	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Freon 113	6.0	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Trichlorofluoromethane	---	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Cyclohexane	---	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Methylcyclohexane	---	0.048 J	ND < 0.057	ND < 0.011	ND < 0.011	0.790 J	ND < 0.011
1,2-Dibromoethane (ethylene dibromide)	---	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
1,3-Dichlorobenzene	1.6	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Isopropylbenzene	2.3	0.033 J	ND < 0.057	ND < 0.011	ND < 0.011	0.220 J	ND < 0.011
1,4-Dichlorobenzene	8.5	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
1,2-Dichlorobenzene	7.9	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
1,2-dibromo-3-Chloropropane	---	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
1,2,4-Trichlorobenzene	3.4	ND < 0.057	ND < 0.057	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Total VOCs	10	1.815	0.748	ND	0.024	5.997	ND

**BCP Site No. C734085**

**TABLE 1B - EXCAVATION SOILS - TARGET COMPOUND LIST VOLATILE ORGANIC COMPOUNDS**

**Date Sampled:** As Shown**Matrix:** IRM Excavation Soil

Compound	State Standard <sup>1</sup> (mg/kg)	Compound Concentration (mg/kg)					
		RE-16 8' b.g.s.	RE-17 8' b.g.s.	RE-18 8' b.g.s.	RE-19 8' b.g.s.	RE-20 8' b.g.s.	RE-21 8' b.g.s.
		8/25/04	8/25/04	8/25/04	8/26/04	9/1/04	9/1/04
Chloromethane (methyl chloride)	---	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Bromomethane	---	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Vinyl Chloride	1.2	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Chloroethane	1.9	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Methylene Chloride	0.1	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Acetone	0.2	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Carbon Disulfide	2.7	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
1,1-Dichloroethene	0.4	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
1,1-Dichloroethane	0.2	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
trans-1,2-Dichloroethene	0.3	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
cis-1,2-Dichloroethene	---	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Chloroform	0.3	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
1,2-Dichloroethane	0.1	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
2-Butanone	0.3	ND < 0.011	0.015 J	ND < 0.011	ND < 0.011	0.012 NJ	0.011 J
1,1,1-Trichloroethane	0.8	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Carbon Tetrachloride	0.6	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Bromodichloromethane	---	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
1,2-Dichloropropane	---	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
cis-1,3-Dichloropropene	0.4*	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Trichloroethene	0.7	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Dibromochloromethane	---	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
1,1,2-Trichloroethane	---	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Benzene	0.06	0.002 J	0.019 J	0.014 J	0.023 J	ND < 0.011	ND < 0.011
trans-1,3-Dichloropropene	0.4*	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Bromoform	---	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
4-Methyl-2-Pentanone	1.0	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
2-Hexanone	---	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Tetrachloroethene	1.4	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
1,1,2,2-Tetrachloroethane	0.6	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Toluene	1.5	ND < 0.011	0.007 J	ND < 0.011	ND < 0.011	0.001 J	ND < 0.011
Chlorobenzene	1.7	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
Ethyl Benzene	5.5	ND < 0.011	0.010 J	0.008 J	ND < 0.011	0.034	0.018
Styrene	---	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011	ND < 0.011
m/p-Xylenes	1.2*	ND < 0.011	0.015 J	0.002 J	ND < 0.011	0.092	ND < 0.011
o-Xylene	1.2*	ND < 0.011	0.004 J	ND < 0.011	ND < 0.011	0.004 J	ND < 0.011

**BCP Site No. C734085**

**TABLE 1B - EXCAVATION SOILS - TARGET COMPOUND LIST VOLATILE ORGANIC COMPOUNDS**

**Date Sampled:** As Shown**Matrix:** IRM Excavation Soil

Compound	State Standard <sup>1</sup> (mg/kg)	Compound Concentration (mg/kg)					
		RE-22 8' b.g.s.	RE-23 8' b.g.s.	RE-24 8'b.g.s.	RE-25 8'b.g.s.	RE-26 8'b.g.s.	RE-TP-1 6' b.g.s.
		9/1/04	9/1/04	9/2/04	9/29/04	9/29/04	8/26/04
Chloromethane (methyl chloride)	---	ND < 5.700	ND < 0.280	ND < 0.023	ND < 0.022	ND < 0.011	ND < 0.012
Bromomethane	---	ND < 5.700	ND < 0.280	ND < 0.023	ND < 0.022	ND < 0.011	ND < 0.012
Vinyl Chloride	1.2	ND < 5.700	ND < 0.280	ND < 0.023	ND < 0.022	ND < 0.011	ND < 0.012
Chloroethane	1.9	ND < 5.700	ND < 0.280	ND < 0.023	ND < 0.022	ND < 0.011	ND < 0.012
Methylene Chloride	0.1	ND < 5.700	ND < 0.280	ND < 0.023	ND < 0.022	ND < 0.011	ND < 0.012
Acetone	0.2	ND < 5.700	ND < 0.280	ND < 0.023	ND < 0.022	ND < 0.011	ND < 0.012
Carbon Disulfide	2.7	ND < 5.700	ND < 0.280	ND < 0.023	ND < 0.022	ND < 0.011	ND < 0.012
1,1-Dichloroethene	0.4	ND < 5.700	ND < 0.280	ND < 0.023	ND < 0.022	ND < 0.011	ND < 0.012
1,1-Dichloroethane	0.2	ND < 5.700	ND < 0.280	ND < 0.023	ND < 0.022	ND < 0.011	ND < 0.012
trans-1,2-Dichloroethene	0.3	ND < 5.700	ND < 0.280	ND < 0.023	ND < 0.022	ND < 0.011	ND < 0.012
cis-1,2-Dichloroethene	---	ND < 5.700	ND < 0.280	ND < 0.023	ND < 0.022	ND < 0.011	ND < 0.012
Chloroform	0.3	ND < 5.700	ND < 0.280	ND < 0.023	ND < 0.022	ND < 0.011	ND < 0.012
1,2-Dichloroethane	0.1	ND < 5.700	ND < 0.280	ND < 0.023	ND < 0.022	ND < 0.011	ND < 0.012
2-Butanone	0.3	ND < 5.700	ND < 0.280	ND < 0.023	ND < 0.022	ND < 0.011	ND < 0.012
1,1,1-Trichloroethane	0.8	ND < 5.700	ND < 0.280	ND < 0.023	ND < 0.022	ND < 0.011	ND < 0.012
Carbon Tetrachloride	0.6	ND < 5.700	ND < 0.280	ND < 0.023	ND < 0.022	ND < 0.011	ND < 0.012
Bromodichloromethane	---	ND < 5.700	ND < 0.280	ND < 0.023	ND < 0.022	ND < 0.011	ND < 0.012
1,2-Dichloropropane	---	ND < 5.700	ND < 0.280	ND < 0.023	ND < 0.022	ND < 0.011	ND < 0.012
cis-1,3-Dichloropropene	0.4*	ND < 5.700	ND < 0.280	ND < 0.023	ND < 0.022	ND < 0.011	ND < 0.012
Trichloroethene	0.7	ND < 5.700	ND < 0.280	ND < 0.023	ND < 0.022	ND < 0.011	ND < 0.012
Dibromochloromethane	---	ND < 5.700	ND < 0.280	ND < 0.023	ND < 0.022	ND < 0.011	ND < 0.012
1,1,2-Trichloroethane	---	ND < 5.700	ND < 0.280	ND < 0.023	ND < 0.022	ND < 0.011	ND < 0.012
Benzene	0.06	ND < 5.700	ND < 0.280	0.013 J	ND < 0.022	ND < 0.011	ND < 0.012
trans-1,3-Dichloropropene	0.4*	ND < 5.700	ND < 0.280	ND < 0.023	ND < 0.022	ND < 0.011	ND < 0.012
Bromoform	---	ND < 5.700	ND < 0.280	ND < 0.023	ND < 0.022	ND < 0.011	ND < 0.012
4-Methyl-2-Pentanone	1.0	ND < 5.700	ND < 0.280	ND < 0.023	ND < 0.022	ND < 0.011	ND < 0.012
2-Hexanone	---	ND < 5.700	ND < 0.280	ND < 0.023	ND < 0.022	ND < 0.011	ND < 0.012
Tetrachloroethene	1.4	ND < 5.700	ND < 0.280	ND < 0.023	ND < 0.022	ND < 0.011	ND < 0.012
1,1,2,2-Tetrachloroethane	0.6	ND < 5.700	ND < 0.280	ND < 0.023	ND < 0.022	ND < 0.011	ND < 0.012
Toluene	1.5	2.5 J	ND < 0.280	0.082	0.003 J	ND < 0.011	ND < 0.012
Chlorobenzene	1.7	ND < 5.700	ND < 0.280	ND < 0.023	ND < 0.022	ND < 0.011	ND < 0.012
Ethyl Benzene	5.5	36	1.600 J	0.22	ND < 0.022	ND < 0.011	ND < 0.012
Styrene	---	ND < 5.700	ND < 0.280	ND < 0.023	ND < 0.022	ND < 0.011	ND < 0.012
m/p-Xylenes	1.2*	150	5.700 J	0.630	ND < 0.022	ND < 0.011	ND < 0.012
o-Xylene	1.2*	37	0.240 J	0.330	ND < 0.022	ND < 0.011	ND < 0.012

RICK'S AUTO REDEVELOPMENT  
Baldwinsville, New York  
BCP Site No. C734085

TABLE 1B - EXCAVATION SOILS - TARGET COMPOUND LIST VOLATILE ORGANIC COMPOUNDS

Date Sampled: As Shown

Matrix: IRM Excavation Soil

Compound	State Standard <sup>1</sup> (mg/kg)	Compound Concentration (mg/kg)	
		RE-22R 12' b.g.s.	RE-23R 12' b.g.s.
		11/30/05	11/30/05
Chloromethane (methyl chloride)	---	ND < 0.012	ND < 0.011
Bromomethane	---	ND < 0.012	ND < 0.011
Vinyl Chloride	1.2	ND < 0.012	ND < 0.011
Chloroethane	1.9	ND < 0.012	ND < 0.011
Methylene Chloride	0.1	ND < 0.012	ND < 0.011
Acetone	0.2	ND < 0.047	ND < 0.011
Carbon Disulfide	2.7	ND < 0.012	ND < 0.011
1,1-Dichloroethene	0.4	ND < 0.012	ND < 0.011
1,1-Dichloroethane	0.2	ND < 0.012	ND < 0.011
trans-1,2-Dichloroethene	0.3	ND < 0.012	ND < 0.011
cis-1,2-Dichloroethene	---	ND < 0.012	ND < 0.011
Chloroform	0.3	ND < 0.012	ND < 0.011
1,2-Dichloroethane	0.1	ND < 0.012	ND < 0.011
2-Butanone	0.3	ND < 0.012	ND < 0.011
1,1,1-Trichloroethane	0.8	ND < 0.012	ND < 0.011
Carbon Tetrachloride	0.6	ND < 0.012	ND < 0.011
Bromodichloromethane	---	ND < 0.012	ND < 0.011
1,2-Dichloropropane	---	ND < 0.012	ND < 0.011
cis-1,3-Dichloropropene	0.4*	ND < 0.012	ND < 0.011
Trichloroethene	0.7	ND < 0.012	ND < 0.011
Dibromochloromethane	---	ND < 0.012	ND < 0.011
1,1,2-Trichloroethane	---	ND < 0.012	ND < 0.011
Benzene	0.06	ND < 0.012	ND < 0.011
trans-1,3-Dichloropropene	0.4*	ND < 0.012	ND < 0.011
Bromoform	---	ND < 0.012	ND < 0.011
4-Methyl-2-Pentanone	1.0	ND < 0.012	ND < 0.011
2-Hexanone	---	ND < 0.012	ND < 0.011
Tetrachloroethene	1.4	ND < 0.012	ND < 0.011
1,1,2,2-Tetrachloroethane	0.6	ND < 0.012	ND < 0.011
Toluene	1.5	ND < 0.012	ND < 0.011
Chlorobenzene	1.7	ND < 0.012	ND < 0.011
Ethyl Benzene	5.5	0.001 J	ND < 0.011
Styrene	---	ND < 0.012	ND < 0.011
m/p-Xylenes	1.2*	0.013	ND < 0.011
o-Xylene	1.2*	0.002 J	ND < 0.011
MTBE	0.12	ND < 0.012	ND < 0.011
Dichlorodifluoromethane	---	ND < 0.012	ND < 0.011
Methyl Acetate	---	ND < 0.012	ND < 0.011
Freon 113	6.0	ND < 0.012	ND < 0.011
Trichlorofluoromethane	---	ND < 0.012	ND < 0.011
Cyclohexane	---	ND < 0.012	ND < 0.011
Methylcyclohexane	---	ND < 0.012	ND < 0.011
1,2-Dibromoethane (ethylene dibromide)	---	ND < 0.012	ND < 0.011
1,3-Dichlorobenzene	1.6	ND < 0.012	ND < 0.011
Isopropylbenzene	2.3	ND < 0.012	ND < 0.011
1,4-Dichlorobenzene	8.5	ND < 0.012	ND < 0.011
1,2-Dichlorobenzene	7.9	ND < 0.012	ND < 0.011
1,2-dibromo-3-Chloropropane	---	ND < 0.012	ND < 0.011
1,2,4-Trichlorobenzene	3.4	ND < 0.012	ND < 0.011
Total VOCs	10	0.016	ND



**RICK'S AUTO REDEVELOPMENT**  
**Baldwinsville, New York**  
**BCP Site No. C734085**

**TABLE 1C - EXCAVATION SOILS - TARGET COMPOUND LIST SEMI-VOLATILE ORGANIC COMPOUNDS**

**Date Sampled:** As Shown

**Matrix:** IRM Excavation Soil

Compound	State Standard <sup>1</sup> (mg/kg)	Compound Concentration (mg/kg)					
		RE-1/RE-2 8' b.g.s.	RE-3/RE-4 6' b.g.s.	RE-5 5' b.g.s.	RE-6 5' b.g.s.	RE-7/RE-8 8' b.g.s.	RE-9 7.5' b.g.s.
		8/13/04	8/13/04	8/17/04	8/17/04	8/17/04	8/18/04
Phenol	0.03 or MDL	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370	ND < 0.370
bis(2-Chloroethyl)ether	---	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370	ND < 0.370
2-Chlorophenol	0.8	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370	ND < 0.370
1,3-Dichlorobenzene	---	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370	ND < 0.370
1,4-Dichlorobenzene	---	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370	ND < 0.370
1,2-Dichlorobenzene	---	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370	ND < 0.370
2-Methylphenol	0.10 or MDL	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370	ND < 0.370
bis(2-Chloroisopropyl)ether	---	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370	ND < 0.370
4-Methylphenol	0.9	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370	ND < 0.370
N-Nitroso-di-n-propylamine	---	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370	ND < 0.370
Hexachloroethane	---	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370	ND < 0.370
Nitrobenzene	0.20 or MDL	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370	ND < 0.370
Isophorone	4.40	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370	ND < 0.370
2-Nitrophenol	0.33 or MDL	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370	ND < 0.370
2,4-Dimethylphenol	---	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370	ND < 0.370
bis(2-Chloroethoxy)methane	---	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370	ND < 0.370
2,4-Dichlorophenol	0.40	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370	ND < 0.370
1,2,4-Trichlorobenzene	---	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370	ND < 0.370
Naphthalene	13.0	ND < 0.380	ND < 0.380	1.600 J	0.490 J	ND < 0.370	ND < 0.370
4-Chloroaniline	0.22 or MDL	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370	ND < 0.370
Hexachlorobutadiene	---	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370	ND < 0.370
4-Chloro-3-methylphenol	0.24 or MDL	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370	ND < 0.370
2-Methylnaphthalene	36.4	ND < 0.380	ND < 0.380	3.600 J	3.100 J	ND < 0.370	ND < 0.370
Hexachlorocyclopentadiene	---	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370	ND < 0.370
2,4,6-Trichlorophenol	---	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370	ND < 0.370
2,4,5-Trichlorophenol	0.10	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370	ND < 0.370
2-Chloronaphthalene	---	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370	ND < 0.370
2-Nitroaniline	0.43 or MDL	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.800	ND < 1.900	ND < 1.900
Dimethylphthalate	2.0	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370	ND < 0.370
Acenaphthylene	41.0	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370	ND < 0.370
2,6-Dinitrotoluene	1.0	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370	ND < 0.370
3-Nitroaniline	0.50 or MDL	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.800	ND < 1.900	ND < 1.900
Acenaphthene	50.0	ND < 0.380	ND < 0.380	ND < 0.380	0.140 J	ND < 0.370	ND < 0.370
2,4-Dinitrophenol	0.20	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.800	ND < 1.900	ND < 1.900

**BCP Site No. C734085**

**TABLE 1C - EXCAVATION SOILS - TARGET COMPOUND LIST SEMI-VOLATILE ORGANIC COMPOUNDS**

**Date Sampled:** As Shown

**Matrix:** IRM Excavation Soil

Compound	State Standard <sup>1</sup> (mg/kg)	Compound Concentration (mg/kg)					
		RE-10	RE-11	RE-12	RE-13	RE-14	RE-15
		8' b.g.s.	7.5' b.g.s.	7.5' b.g.s.	8' b.g.s.	6' b.g.s.	8' b.g.s.
		8/18/04	8/18/04	8/18/04	8/20/04	8/23/04	8/23/04
Phenol	0.03 or MDL	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
bis(2-Chloroethyl)ether	---	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
2-Chlorophenol	0.8	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
1,3-Dichlorobenzene	---	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
1,4-Dichlorobenzene	---	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
1,2-Dichlorobenzene	---	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
2-Methylphenol	0.10 or MDL	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
bis(2-Chloroisopropyl)ether	---	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
4-Methylphenol	0.9	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
N-Nitroso-di-n-propylamine	---	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
Hexachloroethane	---	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
Nitrobenzene	0.20 or MDL	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
Isophorone	4.40	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
2-Nitrophenol	0.33 or MDL	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
2,4-Dimethylphenol	---	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
bis(2-Chloroethoxy)methane	---	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
2,4-Dichlorophenol	0.40	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
1,2,4-Trichlorobenzene	---	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
Naphthalene	13.0	0.750 J	ND < 0.380	ND < 0.380	ND < 0.380	0.620 J	ND < 0.380
4-Chloroaniline	0.22 or MDL	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
Hexachlorobutadiene	---	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
4-Chloro-3-methylphenol	0.24 or MDL	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
2-Methylnaphthalene	36.4	0.750 J	ND < 0.380	ND < 0.380	ND < 0.380	1.100 J	ND < 0.380
Hexachlorocyclopentadiene	---	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
2,4,6-Trichlorophenol	---	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
2,4,5-Trichlorophenol	0.10	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
2-Chloronaphthalene	---	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
2-Nitroaniline	0.43 or MDL	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900	ND < 0.380	ND < 0.380
Dimethylphthalate	2.0	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
Acenaphthylene	41.0	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
2,6-Dinitrotoluene	1.0	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
3-Nitroaniline	0.50 or MDL	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900
Acenaphthene	50.0	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
2,4-Dinitrophenol	0.20	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900 R	ND < 1.900	ND < 1.900 R
4-Nitrophenol	0.10 or MDL	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900
Dibenzofuran	6.2	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
2,4-Dinitrotoluene	---	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
Diethylphthalate	7.1	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
4-Chlorophenyl-phenylether	---	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
Fluorene	50.0	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
4-Nitroaniline	---	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900
4,6-Dinitro-2-methylphenol	---	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900
N-Nitrosodiphenylamine	---	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
4-Bromophenyl-phenylether	---	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
Hexachlorobenzene	0.41	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
Pentachlorophenol	1.0 or MDL	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900
Phenanthrene	50	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
Anthracene	50	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
Carbazole	---	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
Di-n-butylphthalate	8.1	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
Fluoranthene	50.0	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
Pyrene	50.0	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
Butylbenzylphthalate	50.0	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
3,3-Dichlorobenzidine	---	ND < 0.770	ND < 0.770	ND < 0.760	ND < 0.760	ND < 0.770	ND < 0.760
Benzo(a)anthracene	0.224 or MDL	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
Chrysene	0.40	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
bis(2-Ethylhexyl)phthalate	50.0	0.053 J	0.160 J	ND < 0.380	0.051 J	ND < 0.380	ND < 0.380
Di-n-octyl phthalate	50.0	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
Benzo(b)fluoranthene	1.1	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
Benzo(k)fluoranthene	1.1	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
Benzo(a)pyrene	0.61 or MDL	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
Indeno(1,2,3-cd)pyrene	3.2	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
Dibenz(a,h)anthracene	0.014 or MDL	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
Benzo(g,h,i)perylene	50.0	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380	ND < 0.380
Total SVOCs	500	1.55	0.160	ND	0.05	1.72	ND

**BCP Site No. C734085**

**TABLE 1C - EXCAVATION SOILS - TARGET COMPOUND LIST SEMI-VOLATILE ORGANIC COMPOUNDS**

**Date Sampled:** As Shown

**Matrix:** IRM Excavation Soil

Compound	State Standard <sup>1</sup> (mg/kg)	Compound Concentration (mg/kg)					
		RE-16	RE-17	RE-18	RE-19	RE-20	RE-21
		8' b.g.s.	8' b.g.s.	8' b.g.s.	8' b.g.s.	8' b.g.s.	8' b.g.s.
		8/25/04	8/25/04	8/25/04	8/26/04	9/1/04	9/1/04
Phenol	0.03 or MDL	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
bis(2-Chloroethyl)ether	---	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
2-Chlorophenol	0.8	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
1,3-Dichlorobenzene	---	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
1,4-Dichlorobenzene	---	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
1,2-Dichlorobenzene	---	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
2-Methylphenol	0.10 or MDL	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
bis(2-Chloroisopropyl)ether	---	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
4-Methylphenol	0.9	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
N-Nitroso-di-n-propylamine	---	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
Hexachloroethane	---	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
Nitrobenzene	0.20 or MDL	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
Isophorone	4.40	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
2-Nitrophenol	0.33 or MDL	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
2,4-Dimethylphenol	---	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
bis(2-Chloroethoxy)methane	---	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
2,4-Dichlorophenol	0.40	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
1,2,4-Trichlorobenzene	---	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
Naphthalene	13.0	0.042 J	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
4-Chloroaniline	0.22 or MDL	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
Hexachlorobutadiene	---	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
4-Chloro-3-methylphenol	0.24 or MDL	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
2-Methylnaphthalene	36.4	0.087 J	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
Hexachlorocyclopentadiene	---	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
2,4,6-Trichlorophenol	---	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
2,4,5-Trichlorophenol	0.10	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
2-Chloronaphthalene	---	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
2-Nitroaniline	0.43 or MDL	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 1.900	ND < 1.900
Dimethylphthalate	2.0	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
Acenaphthylene	41.0	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
2,6-Dinitrotoluene	1.0	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
3-Nitroaniline	0.50 or MDL	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900
Acenaphthene	50.0	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
2,4-Dinitrophenol	0.20	ND < 1.900 R	ND < 1.900 R	ND < 1.900 R	ND < 1.900 R	ND < 1.900 R	ND < 1.900 R
4-Nitrophenol	0.10 or MDL	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900
Dibenzofuran	6.2	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
2,4-Dinitrotoluene	---	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
Diethylphthalate	7.1	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
4-Chlorophenyl-phenylether	---	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
Fluorene	50.0	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
4-Nitroaniline	---	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900
4,6-Dinitro-2-methylphenol	---	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900 R	ND < 1.900 R
N-Nitrosodiphenylamine	---	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
4-Bromophenyl-phenylether	---	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
Hexachlorobenzene	0.41	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
Pentachlorophenol	1.0 or MDL	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900
Phenanthrene	50	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
Anthracene	50	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
Carbazole	---	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
Di-n-butylphthalate	8.1	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
Fluoranthene	50.0	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
Pyrene	50.0	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
Butylbenzylphthalate	50.0	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
3,3-Dichlorobenzidine	---	ND < 0.750	ND < 0.750	ND < 0.750	ND < 0.760	ND < 0.750	ND < 0.760
Benzo(a)anthracene	0.224 or MDL	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
Chrysene	0.40	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
bis(2-Ethylhexyl)phthalate	50.0	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
Di-n-octyl phthalate	50.0	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
Benzo(b)fluoranthene	1.1	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
Benzo(k)fluoranthene	1.1	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
Benzo(a)pyrene	0.61 or MDL	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
Indeno(1,2,3-cd)pyrene	3.2	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
Dibenz(a,h)anthracene	0.014 or MDL	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
Benzo(g,h,i)perylene	50.0	ND < 0.370	ND < 0.370	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380
Total SVOCs	500	0.13	ND	ND	ND	ND	ND

**RICK'S AUTO REDEVELOPMENT**  
**Baldwinsville, New York**  
**BCP Site No. C734085**

**TABLE 1C - EXCAVATION SOILS - TARGET COMPOUND LIST SEMI-VOLATILE ORGANIC COMPOUNDS**

**Date Sampled:** As Shown

**Matrix:** IRM Excavation Soil

Compound	State Standard <sup>1</sup> (mg/kg)	Compound Concentration (mg/kg)					
		RE-22 8' b.g.s.	RE-23 8' b.g.s.	RE-24 8'b.g.s.	RE-25 6'b.g.s.	RE-26 6'b.g.s.	RE-TP-1 6' b.g.s.
		9/1/04	9/1/04	9/2/04	9/29/04	9/29/04	8/26/04
Phenol	0.03 or MDL	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
bis(2-Chloroethyl)ether	---	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
2-Chlorophenol	0.8	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
1,3-Dichlorobenzene	---	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
1,4-Dichlorobenzene	---	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
1,2-Dichlorobenzene	---	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
2-Methylphenol	0.10 or MDL	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
bis(2-Chloroisopropyl)ether	---	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
4-Methylphenol	0.9	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
N-Nitroso-di-n-propylamine	---	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
Hexachloroethane	---	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
Nitrobenzene	0.20 or MDL	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
Isophorone	4.40	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
2-Nitrophenol	0.33 or MDL	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
2,4-Dimethylphenol	---	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
bis(2-Chloroethoxy)methane	---	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
2,4-Dichlorophenol	0.40	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
1,2,4-Trichlorobenzene	---	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
Naphthalene	13.0	7.200	1.700	0.310 J	ND < 0.370	ND < 0.380	ND < 0.390
4-Chloroaniline	0.22 or MDL	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
Hexachlorobutadiene	---	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
4-Chloro-3-methylphenol	0.24 or MDL	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
2-Methylnaphthalene	36.4	8.600	4.000	0.580	ND < 0.370	ND < 0.380	ND < 0.390
Hexachlorocyclopentadiene	---	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
2,4,6-Trichlorophenol	---	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
2,4,5-Trichlorophenol	0.10	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
2-Chloronaphthalene	---	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
2-Nitroaniline	0.43 or MDL	ND < 7.700	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900	ND < 0.390
Dimethylphthalate	2.0	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
Acenaphthylene	41.0	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
2,6-Dinitrotoluene	1.0	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
3-Nitroaniline	0.50 or MDL	ND < 7.700	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900	ND < 2.000
Acenaphthene	50.0	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
2,4-Dinitrophenol	0.20	ND < 7.700 R	ND < 1.900 R	ND < 1.900 R	ND < 1.900 R	ND < 1.900 R	ND < 2.000 R
4-Nitrophenol	0.10 or MDL	ND < 7.700	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900	ND < 2.000
Dibenzofuran	6.2	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
2,4-Dinitrotoluene	---	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
Diethylphthalate	7.1	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
4-Chlorophenyl-phenylether	---	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
Fluorene	50.0	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
4-Nitroaniline	---	ND < 7.700	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900	ND < 2.000
4,6-Dinitro-2-methylphenol	---	ND < 7.700 R	ND < 1.900 R	ND < 1.900 R	ND < 1.900	ND < 1.900	ND < 2.000
N-Nitrosodiphenylamine	---	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
4-Bromophenyl-phenylether	---	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
Hexachlorobenzene	0.41	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
Pentachlorophenol	1.0 or MDL	ND < 7.700	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900	ND < 2.000
Phenanthrene	50	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
Anthracene	50	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
Carbazole	---	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
Di-n-butylphthalate	8.1	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
Fluoranthene	50.0	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
Pyrene	50.0	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
Butylbenzylphthalate	50.0	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
3,3-Dichlorobenzidine	---	ND < 3.100	ND < 0.750	ND < 0.760	ND < 0.750	ND < 0.770	ND < 0.780
Benzo(a)anthracene	0.224 or MDL	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
Chrysene	0.40	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
bis(2-Ethylhexyl)phthalate	50.0	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
Di-n-octyl phthalate	50.0	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
Benzo(b)fluoranthene	1.1	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
Benzo(k)fluoranthene	1.1	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
Benzo(a)pyrene	0.61 or MDL	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
Indeno(1,2,3-cd)pyrene	3.2	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
Dibenz(a,h)anthracene	0.014 or MDL	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
Benzo(g,h,i)perylene	50.0	ND < 1.500	ND < 0.370	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.390
Total SVOCs	500	15.80	5.70	0.89	ND	ND	ND

RICK'S AUTO REDEVELOPMENT

Baldwinsville, New York

BCP Site No. C734085

TABLE 1C - EXCAVATION SOILS - TARGET COMPOUND LIST SEMI-VOLATILE ORGANIC COMPOUNDS

Date Sampled: As Shown

Matrix: IRM Excavation Soil

Compound	State Standard <sup>1</sup> (mg/kg)	Compound Concentration (mg/kg)	
		RE-22R 12' b.g.s.	RE-23R 12' b.g.s.
		11/30/05	11/30/05
Phenol	0.03 or MDL	ND < 0.390	ND < 0.370
bis(2-Chloroethyl)ether	---	ND < 0.390	ND < 0.370
2-Chlorophenol	0.8	ND < 0.390	ND < 0.370
1,3-Dichlorobenzene	---	ND < 0.390	ND < 0.370
1,4-Dichlorobenzene	---	ND < 0.390	ND < 0.370
1,2-Dichlorobenzene	---	ND < 0.390	ND < 0.370
2-Methylphenol	0.10 or MDL	ND < 0.390	ND < 0.370
bis(2-Chloroisopropyl)ether	---	ND < 0.390	ND < 0.370
4-Methylphenol	0.9	ND < 0.390	ND < 0.370
N-Nitroso-di-n-propylamine	---	ND < 0.390	ND < 0.370
Hexachloroethane	---	ND < 0.390	ND < 0.370
Nitrobenzene	0.20 or MDL	ND < 0.390	ND < 0.370
Isophorone	4.40	ND < 0.390	ND < 0.370
2-Nitrophenol	0.33 or MDL	ND < 0.390	ND < 0.370
2,4-Dimethylphenol	---	ND < 0.390	ND < 0.370
bis(2-Chloroethoxy)methane	---	ND < 0.390	ND < 0.370
2,4-Dichlorophenol	0.40	ND < 0.390	ND < 0.370
1,2,4-Trichlorobenzene	---	ND < 0.390	ND < 0.370
Naphthalene	13.0	0.110 J	ND < 0.370
4-Chloroaniline	0.22 or MDL	ND < 0.390	ND < 0.370
Hexachlorobutadiene	---	ND < 0.390	ND < 0.370
4-Chloro-3-methylphenol	0.24 or MDL	ND < 0.390	ND < 0.370
2-Methylnaphthalene	36.4	0.120 J	ND < 0.370
Hexachlorocyclopentadiene	---	ND < 0.390	ND < 0.370
2,4,6-Trichlorophenol	---	ND < 0.390	ND < 0.370
2,4,5-Trichlorophenol	0.10	ND < 0.390	ND < 0.370
2-Chloronaphthalene	---	ND < 0.390	ND < 0.370
2-Nitroaniline	0.43 or MDL	ND < 1.900	ND < 1.900
Dimethylphthalate	2.0	ND < 0.390	ND < 0.370
Acenaphthylene	41.0	ND < 0.390	ND < 0.370
2,6-Dinitrotoluene	1.0	ND < 0.390	ND < 0.370
3-Nitroaniline	0.50 or MDL	ND < 1.900	ND < 1.900
Acenaphthene	50.0	ND < 0.390	ND < 0.370
2,4-Dinitrophenol	0.20	ND < 1.900	ND < 1.900
4-Nitrophenol	0.10 or MDL	ND < 1.900	ND < 1.900
Dibenzofuran	6.2	ND < 0.390	ND < 0.370
2,4-Dinitrotoluene	---	ND < 0.390	ND < 0.370
Diethylphthalate	7.1	ND < 0.390	ND < 0.370
4-Chlorophenyl-phenylether	---	ND < 0.390	ND < 0.370
Fluorene	50.0	ND < 0.390	ND < 0.370
4-Nitroaniline	---	ND < 1.900	ND < 1.900
4,6-Dinitro-2-methylphenol	---	ND < 1.900	ND < 1.900
N-Nitrosodiphenylamine	---	ND < 0.390	ND < 0.370
4-Bromophenyl-phenylether	---	ND < 0.390	ND < 0.370
Hexachlorobenzene	0.41	ND < 0.390	ND < 0.370
Pentachlorophenol	1.0 or MDL	ND < 1.900	ND < 1.900
Phenanthrene	50	ND < 0.390	ND < 0.370
Anthracene	50	ND < 0.390	ND < 0.370
Carbazole	---	ND < 0.390	ND < 0.370
Di-n-butylphthalate	8.1	ND < 0.390	ND < 0.370
Fluoranthene	50.0	ND < 0.390	0.038 J
Pyrene	50.0	ND < 0.390	0.043 J
Butylbenzylphthalate	50.0	ND < 0.390	ND < 0.370
3,3-Dichlorobenzidine	---	ND < 0.780	ND < 0.750
Benzo(a)anthracene	0.224 or MDL	ND < 0.390	ND < 0.370
Chrysene	0.40	ND < 0.390	ND < 0.370
bis(2-Ethylhexyl)phthalate	50.0	0.052 BJ	0.048 BJ
Di-n-octyl phthalate	50.0	ND < 0.390	ND < 0.370
Benzo(b)fluoranthene	1.1	ND < 0.390	ND < 0.370
Benzo(k)fluoranthene	1.1	ND < 0.390	ND < 0.370
Benzo(a)pyrene	0.61 or MDL	ND < 0.390	ND < 0.370
Indeno(1,2,3-cd)pyrene	3.2	ND < 0.390	ND < 0.370
Dibenz(a,h)anthracene	0.014 or MDL	ND < 0.390	ND < 0.370
Benzo(g,h,i)perylene	50.0	ND < 0.390	ND < 0.370
Total SVOCs	500	0.28	0.13

**RICK'S AUTO REDEVELOPMENT**  
**Baldwinsville, New York**  
**BCP Site No. C734085**

**TABLE 1D - EXCAVATION SOILS - RCRA METALS**

**Date Sampled:** As Shown

**Matrix:** IRM Soil

Compound	Recommended Soil Cleanup Level <sup>1</sup> (mg/kg)	Compound Concentration (mg/kg)	
		RE-25	RE-26
		9/29/04	9/29/04
Arsenic	7.5 or SB	ND < 0.83	ND < 0.85
Barium	300 or SB	39.6                  B	33.0                  B
Cadmium	1 or SB	ND < 0.11	ND < 0.11
Chromium	10 or SB	5.5	4.1
Lead	SB	ND < 0.61	ND < 0.62
Mercury	0.1	0.094                  B	ND < 0.057
Selenium	2 or SB	ND < 0.85	ND < 0.87
Silver	SB	ND < 0.630                  NUJ	ND < 0.65                  NUJ

**RICK'S AUTO REDEVELOPMENT**  
**Baldwinsville, New York**  
**BCP Site No. C734085**

**TABLE 2A - HYDRAULIC LIFT SOILS - TOTALS SUMMARY**

<b>Sample ID</b>	<b>Location</b>	<b>Date Sampled</b>	<b>Time Sampled</b>	<b>Depth</b>	<b>PID (ppm)</b>	<b>VOC (limit 10 ppm)</b>	<b>SVOC (limit 500 ppm)</b>
TP-1	hydraulic lift test pit sample	06/21/04	945	4	0.0	NA	ND
TP-2	hydraulic lift test pit sample	06/21/04	1120	10	0.0	NA	ND
TP-3	hydraulic lift test pit sample	06/21/04	1030	6	0.0	NA	0.220
TP-4	hydraulic lift test pit sample	09/28/04	1351	8	0.0	ND	ND
TP-5	hydraulic lift test pit sample	09/27/04	1555	10	0.0	0.002	ND
TP-6	hydraulic lift test pit sample	09/28/04	1530	8	0.0	ND	ND

**RICK'S AUTO REDEVELOPMENT**  
**Baldwinsville, New York**  
**BCP Site No. C734085**

**TABLE 2B - HYDRAULIC LIFT SOILS - TARGET COMPOUND LIST VOLATILE ORGANIC COMPOUNDS**

**Date Sampled:** As Shown

**Matrix:** Hydraulic Lift Soil

Compound	State Standard <sup>1</sup> (mg/kg)	Compound Concentration (mg/kg)					
		TP-1 4' b.g.s.	TP-2 10' b.g.s.	TP-3 6' b.g.s.	TP-4 8' b.g.s.	TP-5 10' b.g.s.	TP-6 8' b.g.s.
		6/21/04	6/21/04	6/21/04	9/28/04	9/27/04	9/28/04
Chloromethane	---	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
Bromomethane	---	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
Vinyl Chloride	1.2	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
Chloroethane	1.9	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
Methylene Chloride	0.1	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
Acetone	0.2	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
Carbon Disulfide	2.7	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
1,1-Dichloroethene	0.4	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
1,1-Dichloroethane	0.2	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
trans-1,2-Dichloroethene	0.3	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
cis-1,2-Dichloroethene	---	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
Chloroform	0.3	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
1,2-Dichloroethane	0.1	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
2-Butanone	0.3	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
1,1,1-Trichloroethane	0.8	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
Carbon Tetrachloride	0.6	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
Bromodichloromethane	---	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
1,2-Dichloropropane	---	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
cis-1,3-Dichloropropene	0.4*	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
Trichloroethene	0.7	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
Dibromochloromethane	---	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
1,1,2-Trichloroethane	---	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
Benzene	0.06	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
trans-1,3-Dichloropropene	0.4*	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
Bromoform	---	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
4-Methyl-2-Pentanone	1.0	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
2-Hexanone	---	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
Tetrachloroethene	1.4	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
1,1,2,2-Tetrachloroethane	0.6	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
Toluene	1.5	NA	NA	NA	ND < 0.011	0.002 J	ND < 0.011
Chlorobenzene	1.7	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
Ethyl Benzene	5.5	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
Styrene	---	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
m/p-Xylenes	1.2*	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
o-Xylene	1.2*	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
MTBE	0.12	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
Dichlorodifluoromethane	---	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
Methyl Acetate	---	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
Freon 113	6.0	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
Trichlorofluoromethane	---	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
Cyclohexane	---	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
Methylcyclohexane	---	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
1,2-Dibromoethane	---	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
1,3-Dichlorobenzene	1.6	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
Isopropylbenzene	2.3	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
1,4-Dichlorobenzene	8.5	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
1,2-Dichlorobenzene	7.9	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
1,2-dibromo-3-chloro-Propane	---	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
1,2,4-Trichlorobenzene	3.4	NA	NA	NA	ND < 0.011	ND < 0.011	ND < 0.011
Total VOCs	---	NA	NA	NA	ND	0.002	ND



**RICK'S AUTO REDEVELOPMENT**  
**Baldwinsville, New York**  
**BCP Site No. C734085**

**TABLE 2C - HYDRAULIC LIFT SOILS - TARGET COMPOUND LIST SEMI-VOLATILE ORGANIC COMPOUNDS**

**Matrix:** Hydraulic Lift Soil

Compound	State Standard <sup>1</sup> (mg/kg)	Compound Concentration (mg/kg)					
		TP-1	TP-2	TP-3	TP-4	TP-5	TP-6
		4' b.g.s.	10' b.g.s.	6' b.g.s.	8' b.g.s.	10' b.g.s.	8' b.g.s.
		6/21/04	6/21/04	6/21/04	9/28/04	9/27/04	9/28/04
Phenol	0.03 or MDL	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
bis(2-Chloroethyl)ether	---	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
2-Chlorophenol	0.8	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
1,3-Dichlorobenzene	---	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
1,4-Dichlorobenzene	---	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
1,2-Dichlorobenzene	---	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
2-Methylphenol	0.10 or MDL	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
bis(2-Chloroisopropyl)ether	---	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
4-Methylphenol	0.9	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
N-Nitroso-di-n-propylamine	---	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
Hexachloroethane	---	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
Nitrobenzene	0.20 or MDL	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
Isophorone	4.40	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
2-Nitrophenol	0.33 or MDL	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
2,4-Dimethylphenol	---	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
bis(2-Chloroethoxy)methane	---	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
2,4-Dichlorophenol	0.40	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
1,2,4-Trichlorobenzene	---	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
Naphthalene	13.0	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
4-Chloroaniline	0.22 or MDL	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
Hexachlorobutadiene	---	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
4-Chloro-3-methylphenol	0.24 or MDL	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
2-Methylnaphthalene	36.4	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
Hexachlorocyclopentadiene	---	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
2,4,6-Trichlorophenol	---	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
2,4,5-Trichlorophenol	0.10	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
2-Chloronaphthalene	---	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
2-Nitroaniline	0.43 or MDL	ND < 1.900	ND < 1.800	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900
Dimethylphthalate	2.0	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
Acenaphthylene	41.0	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
2,6-Dinitrotoluene	1.0	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
3-Nitroaniline	0.50 or MDL	ND < 1.900	ND < 1.800	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900
Acenaphthene	50.0	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
2,4-Dinitrophenol	0.20	ND < 1.900	ND < 1.800	ND < 1.900	ND < 1.900 R	ND < 1.900	ND < 1.900 R
4-Nitrophenol	0.10 or MDL	ND < 1.900	ND < 1.800	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900
Dibenzofuran	6.2	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
2,4-Dinitrotoluene	---	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
Diethylphthalate	7.1	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
4-Chlorophenyl-phenylether	---	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
Fluorene	50.0	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
4-Nitroaniline	---	ND < 1.900	ND < 1.800	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900
4,6-Dinitro-2-methylphenol	---	ND < 1.900	ND < 1.800	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900
N-Nitrosodiphenylamine	---	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
4-Bromophenyl-phenylether	---	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
Hexachlorobenzene	0.41	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
Pentachlorophenol	1.0 or MDL	ND < 1.900	ND < 1.800	ND < 1.900	ND < 1.900	ND < 1.900	ND < 1.900
Phenanthrene	50	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
Anthracene	50	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
Carbazole	---	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
Di-n-butylphthalate	8.1	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
Fluoranthene	50.0	ND < 0.380	ND < 0.370	0.070 J	ND < 0.380	ND < 0.370	ND < 0.370
Pyrene	50.0	ND < 0.380	ND < 0.370	0.064 J	ND < 0.380	ND < 0.370	ND < 0.370
Butylbenzylphthalate	50.0	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
3,3-Dichlorobenzidine	---	ND < 0.760	ND < 0.740	ND < 0.770	ND < 0.760	ND < 0.750	ND < 0.750
Benzo(a)anthracene	0.224 or MDL	ND < 0.380	ND < 0.370	0.039 J	ND < 0.380	ND < 0.370	ND < 0.370
Chrysene	0.40	ND < 0.380	ND < 0.370	0.049 J	ND < 0.380	ND < 0.370	ND < 0.370
bis(2-Ethylhexyl)phthalate	50.0	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
Di-n-octyl phthalate	50.0	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
Benzo(b)fluoranthene	1.1	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
Benzo(k)fluoranthene	1.1	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
Benzo(a)pyrene	0.61 or MDL	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
Indeno(1,2,3-cd)pyrene	3.2	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
Dibenz(a,h)anthracene	0.014 or MDL	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
Benzo(g,h,i)perylene	50.0	ND < 0.380	ND < 0.370	ND < 0.380	ND < 0.380	ND < 0.370	ND < 0.370
Total SVOCs	---	ND	ND	0.222	ND	ND	ND

RICK'S AUTO REDEVELOPMENT  
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TABLE 2D - HYDRAULIC LIFT SOILS - PCBs

Date Sampled: As Shown

Matrix: Hydraulic Lift Soil

Compound	Recommended Soil Cleanup Level <sup>1</sup> (mg/kg)	Compound Concentration (mg/kg)					
		TP-1 4' b.g.s.	TP-2 10' b.g.s.	TP-3 6' b.g.s.	TP-4 6' b.g.s.	TP-5 6' b.g.s.	TP-6 6' b.g.s.
		6/21/04	6/21/04	6/21/04	9/28/04	9/27/04	9/28/04
AROCLOR 1016	10	ND < 0.038	ND < 0.037	ND < 0.038	ND < 0.038	ND < 0.037	ND < 0.037
AROCLOR 1221	10	ND < 0.038	ND < 0.037	ND < 0.038	ND < 0.038	ND < 0.037	ND < 0.037
AROCLOR 1232	10	ND < 0.038	ND < 0.037	ND < 0.038	ND < 0.038	ND < 0.037	ND < 0.037
AROCLOR 1242	10	ND < 0.038	ND < 0.037	ND < 0.038	ND < 0.038	ND < 0.037	ND < 0.037
AROCLOR 1248	10	ND < 0.038	ND < 0.037	ND < 0.038	ND < 0.038	ND < 0.037	ND < 0.037
AROCLOR 1254	10	ND < 0.038	ND < 0.037	0.017 J	ND < 0.038	ND < 0.037	ND < 0.037
AROCLOR 1260	10	ND < 0.038	ND < 0.037	ND < 0.038	ND < 0.038	ND < 0.037	ND < 0.037
TOTALS	---	ND	ND	0.017	ND	ND	ND

**RICK'S AUTO REDEVELOPMENT**  
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**TABLE 3A - FLOOR DRAIN SOILS - TOTALS SUMMARY**

<b>Sample ID</b>	<b>Location</b>	<b>Date Sampled</b>	<b>Time Sampled</b>	<b>Depth</b>	<b>PID (ppm)</b>
FD-1	floor drain sample (floor drain east)	06/21/04	1410	1	0.0
FD-2	floor drain sample (floor drain west)	06/21/04	1415	1	0.0
FD-3	floor drain sample	09/28/04	1610	1	0.0
FD-4	floor drain sample	09/28/04	1501	1	0.0
FD-5	floor drain sample	09/28/04	1618	1	0.0
FD-6	floor drain sample	09/27/04	1530	1	0.0

**RICK'S AUTO REDEVELOPMENT**  
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**TABLE 3B - FLOOR DRAIN SOILS - TARGET COMPOUND LIST VOLATILE ORGANIC COMPOUNDS**

**Date Sampled:** As Shown

**Matrix:** Floor Drain Soil

Compound	State Standard <sup>1</sup> (mg/kg)	Compound Concentration (mg/kg)					
		Floor Drain East (FD-1)	Floor Drain West (FD-2)	FD-3	FD-4	FD-5	FD-6
		1' b.g.s.	1' b.g.s.	1' b.g.s.	1' b.g.s.	1' b.g.s.	1' b.g.s.
		6/21/04	6/21/04	9/28/04	9/28/04	9/28/04	9/27/04
Chloromethane	---	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
Bromomethane	---	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
Vinyl Chloride	1.2	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
Chloroethane	1.9	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
Methylene Chloride	0.1	ND < 0.011	0.007 J	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
Acetone	0.2	ND < 0.011	ND < 0.017	ND < 0.017	ND < 0.013	ND < 0.012	ND < 0.011
Carbon Disulfide	2.7	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
1,1-Dichloroethene	0.4	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
1,1-Dichloroethane	0.2	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
trans-1,2-Dichloroethene	0.3	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
cis-1,2-Dichloroethene	---	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
Chloroform	0.3	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
1,2-Dichloroethane	0.1	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
2-Butanone	0.3	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
1,1,1-Trichloroethane	0.8	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
Carbon Tetrachloride	0.6	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
Bromodichloromethane	---	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
1,2-Dichloropropane	---	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
cis-1,3-Dichloropropene	0.4*	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
Trichloroethene	0.7	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
Dibromochloromethane	---	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
1,1,2-Trichloroethane	---	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
Benzene	0.06	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
trans-1,3-Dichloropropene	0.4*	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
Bromoform	---	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
4-Methyl-2-Pentanone	1.0	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
2-Hexanone	---	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
Tetrachloroethene	1.4	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
1,1,2,2-Tetrachloroethane	0.6	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
Toluene	1.5	ND < 0.011	ND < 0.013	0.002 J	ND < 0.013	ND < 0.012	ND < 0.011
Chlorobenzene	1.7	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
Ethyl Benzene	5.5	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
Styrene	---	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
m/p-Xylenes	1.2*	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
o-Xylene	1.2*	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
MTBE	0.12	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
Dichlorodifluoromethane	---	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
Methyl Acetate	---	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
Freon 113	6.0	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
Trichlorofluoromethane	---	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
Cyclohexane	---	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
Methylcyclohexane	---	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
1,2-Dibromoethane	---	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
1,3-Dichlorobenzene	1.6	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
Isopropylbenzene	2.3	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
1,4-Dichlorobenzene	8.5	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
1,2-Dichlorobenzene	7.9	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
1,2-dibromo-3-chloro-Propane	---	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
1,2,4-Trichlorobenzene	3.4	ND < 0.011	ND < 0.013	ND < 0.012	ND < 0.013	ND < 0.012	ND < 0.011
Total VOCs	---	ND	0.007	0.002	ND	ND	ND

**RICK'S AUTO REDEVELOPMENT**  
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**BCP Site No. C734085**

**TABLE 3C - FLOOR DRAIN SOILS - TARGET COMPOUND LIST SEMI-VOLATILE ORGANIC COMPOUNDS**

**Date Sampled:** As Shown

**Matrix:** Floor Drain Soil

Compound	State Standard¹ (mg/kg)	Compound Concentration (mg/kg)					
		Floor Drain East (FD-1)	Floor Drain West (FD-2)	FD-3	FD-4	FD-5	FD-6
		1' b.g.s.	1' b.g.s.	1' b.g.s.	1' b.g.s.	1' b.g.s.	1' b.g.s.
		6/21/04	6/21/04	9/28/04	9/28/04	9/28/04	9/27/04
Phenol	0.03 or MDL	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
bis(2-Chloroethyl)ether	---	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
2-Chlorophenol	0.8	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
1,3-Dichlorobenzene	---	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
1,4-Dichlorobenzene	---	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
1,2-Dichlorobenzene	---	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
2-Methylphenol	0.10 or MDL	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
bis(2-Chloroisopropyl)ether	---	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
4-Methylphenol	0.9	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
N-Nitroso-di-n-propylamine	---	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
Hexachloroethane	---	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
Nitrobenzene	0.20 or MDL	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
Isophorone	4.40	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
2-Nitrophenol	0.33 or MDL	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
2,4-Dimethylphenol	---	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
bis(2-Chloroethoxy)methane	---	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
2,4-Dichlorophenol	0.40	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
1,2,4-Trichlorobenzene	---	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
Naphthalene	13.0	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
4-Chloroaniline	0.22 or MDL	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
Hexachlorobutadiene	---	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
4-Chloro-3-methylphenol	0.24 or MDL	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
2-Methylnaphthalene	36.4	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
Hexachlorocyclopentadiene	---	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
2,4,6-Trichlorophenol	---	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
2,4,5-Trichlorophenol	0.10	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
2-Chloronaphthalene	---	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
2-Nitroaniline	0.43 or MDL	ND < 1.900	ND < 2.200	ND < 2.000	ND < 2.100	ND < 1.700	ND < 1.900
Dimethylphthalate	2.0	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
Acenaphthylene	41.0	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
2,6-Dinitrotoluene	1.0	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
3-Nitroaniline	0.50 or MDL	ND < 1.900	ND < 2.200	ND < 2.000	ND < 2.100	ND < 1.700	ND < 1.900
Acenaphthene	50.0	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
2,4-Dinitrophenol	0.20	ND < 1.900	ND < 2.200	ND < 2.000	ND < 2.100 R	ND < 1.700	ND < 1.900
4-Nitrophenol	0.10 or MDL	ND < 1.900	ND < 2.200	ND < 2.000	ND < 2.100	ND < 1.700	ND < 1.900
Dibenzofuran	6.2	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
2,4-Dinitrotoluene	---	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
Diethylphthalate	7.1	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
4-Chlorophenyl-phenylether	---	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
Fluorene	50.0	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
4-Nitroaniline	---	ND < 1.900	ND < 2.200	ND < 2.000	ND < 2.100	ND < 1.700	ND < 1.900
4,6-Dinitro-2-methylphenol	---	ND < 1.900	ND < 2.200	ND < 2.000	ND < 2.100	ND < 1.700	ND < 1.900
N-Nitrosodiphenylamine	---	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
4-Bromophenyl-phenylether	---	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
Hexachlorobenzene	0.41	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
Pentachlorophenol	1.0 or MDL	ND < 1.900	ND < 2.200	ND < 2.000	ND < 2.100	ND < 1.700	ND < 1.900
Phenanthrene	50	ND < 0.370	0.078 J	0.093 J	ND < 0.420	ND < 0.330	ND < 0.380
Anthracene	50	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
Carbazole	---	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
Di-n-butylphthalate	8.1	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
Fluoranthene	50.0	ND < 0.370	0.200 J	0.220 J	ND < 0.420	0.090 J	ND < 0.380
Pyrene	50.0	ND < 0.370	0.160 J	0.190 J	ND < 0.420	0.077 J	ND < 0.380
Butylbenzylphthalate	50.0	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
3,3-Dichlorobenzidine	---	ND < 0.740	ND < 0.870	ND < 0.800	ND < 0.840	ND < 0.670	ND < 0.760
Benzo(a)anthracene	0.224 or MDL	ND < 0.370	0.110 J	0.120 J	ND < 0.420	0.054 J	ND < 0.380
Chrysene	0.40	ND < 0.370	0.120 J	0.140 J	ND < 0.420	0.057 J	ND < 0.380
bis(2-Ethylhexyl)phthalate	50.0	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
Di-n-octyl phthalate	50.0	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
Benzo(b)fluoranthene	1.1	ND < 0.370	0.070 J	0.052 J	ND < 0.420	ND < 0.330	ND < 0.380
Benzo(k)fluoranthene	1.1	ND < 0.370	0.110 J	0.110 J	ND < 0.420	0.049 J	ND < 0.380
Benzo(a)pyrene	0.61 or MDL	ND < 0.370	0.100 J	0.110 J	ND < 0.420	0.048 J	ND < 0.380
Indeno(1,2,3-cd)pyrene	3.2	ND < 0.370	0.070 J	0.043 J	ND < 0.420	ND < 0.330	ND < 0.380
Dibenz(a,h)anthracene	0.014 or MDL	ND < 0.370	ND < 0.430	ND < 0.400	ND < 0.420	ND < 0.330	ND < 0.380
Benzo(g,h,i)perylene	50.0	ND < 0.370	0.068 J	0.043 J	ND < 0.420	ND < 0.330	ND < 0.380
Total SVOCs	---	ND	1.008	1.028	ND	0.375	ND

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TABLE 3D - FLOOR DRAIN SOILS - RCRA METALS

Date Sampled: As Shown

Matrix: Floor Drain Soil

Compound	Recommended Soil Cleanup Leve1 <sup>1</sup> (mg/kg)	Compound Concentration (mg/kg)					
		Floor Drain East (FD-1) 1' b.g.s.	Floor Drain West (FD-2) 1' b.g.s.	FD-3 1' b.g.s.	FD-4 1' b.g.s.	FD-5 1' b.g.s.	FD-6 1' b.g.s.
		6/21/04	6/21/04	9/28/04	9/28/04	9/28/04	9/27/04
Arsenic	7.5 or SB	1.5BNJ	ND < 0.960R	ND < 0.890	ND < 0.940	ND < 0.910	ND < 0.840
Barium	300 or SB	51.9	99.5	115.0	53.1	94.9	50.2
Cadmium	1 or SB	ND < 0.110NJ	ND < 0.130NJ	ND < .120	ND < 0.130	ND < 0.120	ND < 0.110
Chromium	10 or SB	7.3	11.7J	11.5	6.2	11.1	7.3
Lead	SB	ND < 0.600NJ	34.0NJ	ND < 0.065	ND < 0.680	ND < 0.670	ND < 0.610
Mercury	0.1	ND < 0.056	0.075BJ	0.390	ND < 0.063	0.420	0.120
Selenium	2 or SB	ND < 0.840R	ND < 0.990R	ND < 0.920	ND < 0.960	ND < 0.940	ND < 0.860
Silver	SB	ND < 0.620NJ	ND < 0.730NJ	ND < 0.670NUJ	ND < 0.710NUJ	ND < 0.690NUJ	ND < 0.640NUJ

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TABLE 3E - FLOOR DRAIN SOILS - PCBs

Date Sampled: As Shown

Matrix: Floor Drain Soil

Compound	Recommended Soil Cleanup Level <sup>1</sup> (mg/kg)	Compound Concentration (mg/kg)					
		Floor Drain East (FD-1) 1' b.g.s.	Floor Drain West (FD-2) 1' b.g.s.	FD-3 1' b.g.s.	FD-4 1' b.g.s.	FD-5 1' b.g.s.	FD-6 1' b.g.s.
		6/21/04	6/21/04	9/28/04	9/28/04	9/28/04	9/27/04
AROCLOR 1016	10	ND < 0.037	ND < 0.043	ND < 0.040	ND < 0.042	ND < 0.041	ND < 0.038
AROCLOR 1221	10	ND < 0.037	ND < 0.043	ND < 0.040	ND < 0.042	ND < 0.041	ND < 0.038
AROCLOR 1232	10	ND < 0.037	ND < 0.043	ND < 0.040	ND < 0.042	ND < 0.041	ND < 0.038
AROCLOR 1242	10	ND < 0.037	ND < 0.043	ND < 0.040	ND < 0.042	ND < 0.041	ND < 0.038
AROCLOR 1248	10	ND < 0.037	ND < 0.043	ND < 0.040	ND < 0.042	ND < 0.041	ND < 0.038
AROCLOR 1254	10	ND < 0.037	ND < 0.043	ND < 0.040	ND < 0.042	ND < 0.041	ND < 0.038
AROCLOR 1260	10	ND < 0.037	ND < 0.043	ND < 0.040	ND < 0.042	ND < 0.041	ND < 0.038
TOTALS	---	ND	ND	ND	ND	ND	ND

**RICK'S AUTO REDEVELOPMENT**  
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**Table 4A - Sanitary Soil - Totals Summary**

<b>Sample ID</b>	<b>Location</b>	<b>Date Sampled</b>	<b>Time Sampled</b>	<b>Depth</b>	<b>PID (ppm)</b>
STP-1	septic test pit sample	10/12/04	1015	4	4.0
STP-2	septic test pit sample	10/12/04	1243	4	2.0
STP-3	septic test pit sample	10/12/04	1400	4	9.7
STP-4	septic test pit sample	10/13/04	925	4	0.6
STP-5	septic test pit sample	10/13/04	935	4	2.1
UST-1	UST (encountered during septic investigation) - sample from UST bottom	10/12/04	1511	7	0.7



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TABLE 4B - SANITARY SOILS - TARGET COMPOUND LIST VOLATILE ORGANIC COMPOUNDS

Date Sampled: As Shown

Matrix: Septic System and Subsurface Soil

Compound	State Standard <sup>1</sup> (mg/kg)	Compound Concentration (mg/kg)						
		STP-1 4' b.g.s.	STP-2 4' b.g.s.	STP-3 4' b.g.s.	STP-4 4' b.g.s.	STP-5 4' b.g.s.	UST-1 7' b.g.s.	MW-16 0-2' b.g.s.
		10/12/04	10/12/04	10/12/04	10/13/04	10/13/04	10/12/04	11/30/05
Chloromethane	---	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
Bromomethane	---	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
Vinyl Chloride	1.2	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	0.009 J	ND < 0.012
Chloroethane	1.9	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
Methylene Chloride	0.1	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
Acetone	0.2	ND < 0.140	ND < 0.018	ND < 0.023	ND < 0.037	ND < 0.017	ND < 0.011	ND < 0.012
Carbon Disulfide	2.7	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
1,1-Dichloroethene	0.4	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
1,1-Dichloroethane	0.2	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
trans-1,2-Dichloroethene	0.3	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
cis-1,2-Dichloroethene	---	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	0.027	ND < 0.012
Chloroform	0.3	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
1,2-Dichloroethane	0.1	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
2-Butanone	0.3	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
1,1,1-Trichloroethane	0.8	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
Carbon Tetrachloride	0.6	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
Bromodichloromethane	---	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
1,2-Dichloropropane	---	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
cis-1,3-Dichloropropene	0.4*	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
Trichloroethene	0.7	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
Dibromochloromethane	---	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
1,1,2-Trichloroethane	---	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
Benzene	0.06	0.003 J	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
trans-1,3-Dichloropropene	0.4*	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
Bromoform	---	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
4-Methyl-2-Pentanone	1.0	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
2-Hexanone	---	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012

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TABLE 4B - SANITARY SOILS - TARGET COMPOUND LIST VOLATILE ORGANIC COMPOUNDS

Date Sampled: As Shown

Matrix: Septic System and Subsurface Soil

Compound	State Standard <sup>1</sup> (mg/kg)	Compound Concentration (mg/kg)						
		STP-1 4' b.g.s.	STP-2 4' b.g.s.	STP-3 4' b.g.s.	STP-4 4' b.g.s.	STP-5 4' b.g.s.	UST-1 7' b.g.s.	MW-16 0-2' b.g.s.
		10/12/04	10/12/04	10/12/04	10/13/04	10/13/04	10/12/04	11/30/05
Tetrachloroethene	1.4	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
1,1,2,2-Tetrachloroethane	0.6	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
Toluene	1.5	0.011 J	ND < 0.011	ND < 0.023	ND < 0.012	0.001 J	ND < 0.011	ND < 0.012
Chlorobenzene	1.7	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
Ethyl Benzene	5.5	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
Styrene	---	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
m/p-Xylenes	1.2*	0.054	ND < 0.011	0.041	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
o-Xylene	1.2*	0.010 J	ND < 0.011	0.004 J	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
MTBE	0.12	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
Dichlorodifluoromethane	---	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
Methyl Acetate	---	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
Freon 113	6.0	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
Trichlorofluoromethane	---	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
Cyclohexane	---	ND < 0.026	ND < 0.011	0.013 J	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
Methylcyclohexane	---	0.045	ND < 0.011	0.014 J	ND < 0.012	0.002 J	ND < 0.011	ND < 0.012
1,2-Dibromoethane	---	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
1,3-Dichlorobenzene	1.6	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
Isopropylbenzene	2.3	0.015 J	ND < 0.011	0.012 J	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
1,4-Dichlorobenzene	8.5	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
1,2-Dichlorobenzene	7.9	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
1,2-dibromo-3-chloro-Propane	---	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
1,2,4-Trichlorobenzene	3.4	ND < 0.026	ND < 0.011	ND < 0.023	ND < 0.012	ND < 0.011	ND < 0.011	ND < 0.012
Total VOCs	---	38272.138	ND	38272.084	ND	38273.003	38272.036	ND

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TABLE 4C - SANITARY SOILS - TARGET COMPOUND LIST SEMI-VOLATILE ORGANIC COMPOUNDS

Date Sampled: As Shown

Matrix: Septic System and Subsurface Soil

Compound	State Standard¹ (mg/kg)	Compound Concentration (mg/kg)						
		STP-1	STP-2	STP-3	STP-4	STP-5	UST-1	MW-16
		10/12/04	10/12/04	10/12/04	10/13/04	10/13/04	10/12/04	11/30/05
Phenol	0.03 or MDL	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
bis(2-Chloroethyl)ether	---	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
2-Chlorophenol	0.8	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
1,3-Dichlorobenzene	---	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
1,4-Dichlorobenzene	---	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
1,2-Dichlorobenzene	---	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
2-Methylphenol	0.10 or MDL	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
bis(2-Chloroisopropyl)ether	---	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
4-Methylphenol	0.9	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
N-Nitroso-di-n-propylamine	---	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
Hexachloroethane	---	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
Nitrobenzene	0.20 or MDL	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
Isophorone	4.40	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
2-Nitrophenol	0.33 or MDL	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
2,4-Dimethylphenol	---	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
bis(2-Chloroethoxy)methane	---	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
2,4-Dichlorophenol	0.40	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
1,2,4-Trichlorobenzene	---	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
Naphthalene	13.0	0.580	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
4-Chloroaniline	0.22 or MDL	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
Hexachlorobutadiene	---	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
4-Chloro-3-methylphenol	0.24 or MDL	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
2-Methylnaphthalene	36.4	0.880	ND < 0.380	0.048 J	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
Hexachlorocyclopentadiene	---	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
2,4,6-Trichlorophenol	---	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
2,4,5-Trichlorophenol	0.10	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
2-Chloronaphthalene	---	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
2-Nitroaniline	0.43 or MDL	ND < 2.200	ND < 1.900	ND < 1.900	ND < 2.000	ND < 1.900	ND < 1.900	ND < 1.900
Dimethylphthalate	2.0	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
Acenaphthylene	41.0	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
2,6-Dinitrotoluene	1.0	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
3-Nitroaniline	0.50 or MDL	ND < 2.200	ND < 1.900	ND < 1.900	ND < 2.000	ND < 1.900	ND < 1.900	ND < 1.900
Acenaphthene	50.0	0.055 J	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390

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**TABLE 4C - SANITARY SOILS - TARGET COMPOUND LIST SEMI-VOLATILE ORGANIC COMPOUNDS**

**Date Sampled:** As Shown

**Matrix:** Septic System and Subsurface Soil

Compound	State Standard <sup>1</sup> (mg/kg)	Compound Concentration (mg/kg)						
		STP-1	STP-2	STP-3	STP-4	STP-5	UST-1	MW-16
		10/12/04	10/12/04	10/12/04	10/13/04	10/13/04	10/12/04	11/30/05
2,4-Dinitrophenol	0.20	ND < 2.200	ND < 1.900	ND < 1.900	ND < 2.000	ND < 1.900	ND < 1.900	ND < 1.900
4-Nitrophenol	0.10 or MDL	ND < 2.200	ND < 1.900	ND < 1.900	ND < 2.000	ND < 1.900	ND < 1.900	ND < 1.900
Dibenzofuran	6.2	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
2,4-Dinitrotoluene	---	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
Diethylphthalate	7.1	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
4-Chlorophenyl-phenylether	---	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
Fluorene	50.0	0.150 J	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
4-Nitroaniline	---	ND < 2.200	ND < 1.900	ND < 1.900	ND < 2.000	ND < 1.900	ND < 1.900	ND < 1.900
4,6-Dinitro-2-methylphenol	---	ND < 2.200	ND < 1.900	ND < 1.900	ND < 2.000	ND < 1.900	ND < 1.900	ND < 1.900
N-Nitrosodiphenylamine	---	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
4-Bromophenyl-phenylether	---	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
Hexachlorobenzene	0.41	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
Pentachlorophenol	1.0 or MDL	ND < 2.200	ND < 1.900	ND < 1.900	ND < 2.000	ND < 1.900	ND < 1.900	ND < 1.900
Phenanthrene	50	0.450	ND < 0.380	0.071 J	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
Anthracene	50	0.170 J	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
Carbazole	---	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
Di-n-butylphthalate	8.1	0.062 J	ND < 0.380	0.039 J	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
Fluoranthene	50.0	0.330 J	0.049 J	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
Pyrene	50.0	0.420 J	0.086 J	0.047 J	ND < 0.400	0.045 J	ND < 0.370	ND < 0.390
Butylbenzylphthalate	50.0	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
3,3-Dichlorobenzidine	---	ND < 0.870	ND < 0.760	ND < 0.760	ND < 0.790	ND < 0.770	ND < 0.750	ND < 0.390
Benzo(a)anthracene	0.224 or MDL	0.220 J	0.039 J	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
Chrysene	0.40	0.200 J	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
bis(2-Ethylhexyl)phthalate	50.0	ND < 1.200	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	0.280 BJ
Di-n-octyl phthalate	50.0	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
Benzo(b)fluoranthene	1.1	0.110 J	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
Benzo(k)fluoranthene	1.1	0.110 J	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
Benzo(a)pyrene	0.61 or MDL	0.110 J	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
Indeno(1,2,3-cd)pyrene	3.2	0.091 J	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
Dibenz(a,h)anthracene	0.014 or MDL	ND < 0.430	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
Benzo(g,h,i)perylene	50.0	0.120 J	ND < 0.380	ND < 0.380	ND < 0.400	ND < 0.380	ND < 0.370	ND < 0.390
<b>Total SVOCs</b>	---	1.94	0.17	0.09	ND	0.05	ND	0.28

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TABLE 4D - SANITARY SOILS - RCRA METALS

Date Sampled: As Shown

Matrix: Septic System and Subsurface Soil

Compound	Recommended Soil Cleanup Level <sup>1</sup> (mg/kg)	Compound Concentration (mg/kg)							
		STP-1 4' b.g.s.	STP-2 4' b.g.s.	STP-3 4' b.g.s.	STP-4 4' b.g.s.	STP-5 4' b.g.s.	UST-1 7' b.g.s.	MW-16 0-2' b.g.s.	
		10/12/04	10/12/04	10/12/04	10/13/04	10/13/04	10/12/04	11/30/04	
Arsenic	7.5 or SB	ND < 0.96	ND < 0.84	ND < 0.84	ND < 0.88	ND < 0.85	ND < 0.83	ND < 0.86	
Barium	300 or SB	129.0	49.2	48.1	45.0      B	57.8	42.3      B	55.2	
Cadmium	1 or SB	ND < 0.13	ND < 0.11	ND < 0.11	ND < 0.12	ND < 0.11	ND < 0.11	ND < 0.12	
Chromium	10 or SB	<i>11.1</i>	6.9	6.5	9.0	7.7	6.2	8.2	
Lead	SB	473.0      **	18.8      **	44.8      **	ND < 0.64      **	26.3      **	ND < 0.61      **	ND < 0.63      N	
Mercury	0.1	ND < 0.065      NJ	ND < 0.057      NJ	ND < 0.057      NJ	ND < 0.060      NJ	ND < 0.057      NJ	ND < 0.056      NJ	ND < 0.058      NJ	
Selenium	2 or SB	ND < 0.99      R	ND < 0.86      R	ND < 0.86      R	ND < 0.90      R	ND < 0.87      R	ND < 0.85      R	ND < 0.88      R	
Silver	SB	ND < 0.73      NJ	ND < 0.64      NJ	ND < 0.64      NJ	ND < 0.67      NJ	ND < 0.64      NJ	ND < 0.63      NJ	ND < 0.65      NJ	

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TABLE 4E - SANITARY SOILS - PCBs

Date Sampled: As Shown

Matrix: Septic System Soil

Compound	Recommended Soil Cleanup Leve1 <sup>1</sup> (mg/kg)	Compound Concentration (mg/kg)					
		STP-1 4' b.g.s.	STP-2 4' b.g.s.	STP-3 4' b.g.s.	STP-4 4' b.g.s.	STP-5 4' b.g.s.	UST-1 7' b.g.s.
		10/12/04	10/12/04	10/12/04	10/13/04	10/13/04	10/12/04
AROCLOR 1016	10	ND < 0.043	ND < 0.038	ND < 0.038	ND < 0.039	ND < 0.038	ND < 0.037
AROCLOR 1221	10	ND < 0.043	ND < 0.038	ND < 0.038	ND < 0.039	ND < 0.038	ND < 0.037
AROCLOR 1232	10	ND < 0.043	ND < 0.038	ND < 0.038	ND < 0.039	ND < 0.038	ND < 0.037
AROCLOR 1242	10	ND < 0.043	ND < 0.038	ND < 0.038	ND < 0.039	ND < 0.038	ND < 0.037
AROCLOR 1248	10	ND < 0.043	ND < 0.038	ND < 0.038	ND < 0.039	ND < 0.038	ND < 0.037
AROCLOR 1254	10	ND < 0.043	ND < 0.038	ND < 0.038	ND < 0.039	ND < 0.038	ND < 0.037
AROCLOR 1260	10	0.010 J	0.011 J	ND < 0.038	ND < 0.039	ND < 0.038	ND < 0.037
TOTALS	---	0.010	0.011	ND	ND	ND	ND

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**Table 5A - Surface Soil - Totals Summary**

<b>Sample ID</b>	<b>Location</b>	<b>Date Sampled</b>	<b>Time Sampled</b>	<b>Depth</b>	<b>PID (ppm)</b>
SS-1	surface soil sample	9/28/2004	1430	NA	0.2
SS-2	surface soil sample	10/12/2004	919	NA	0.7
SS-3	surface soil sample	10/13/2004	1120	NA	0.4
SS-4	surface soil sample	10/13/2004	1110	NA	0.6
SS-5	surface soil sample	10/12/2004	941	NA	0.4

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**GROUNDWATER TABLE INDEX:**

TABLE 6A - GROUNDWATER ELEVATIONS

TABLE 6B - GROUNDWATER SAMPLES - TARGET COMPOUND LIST VOLATILE ORGANIC COMPOUNDS

TABLE 6C - GROUNDWATER SAMPLES - TARGET COMPOUND LIST SEMI-VOLATILE ORGANIC COMPOUNDS

TABLE 6D - SUMMARY OF HISTORICAL GROUNDWATER ANALYTICAL RESULTS - TOTAL VOCs

**GROUNDWATER TABLES NOTES:**

<sup>1</sup> State standard is in reference to the NYSDEC Division of Water's Technical and Operational Guidance Series (TOGS) (1.1.1), *Ambient Water Quality Standards and Guidance Values*, reissued June 1998.

µg/L    micrograms per liter (equivalent to parts per billion, ppb)

A blank cell indicates that the specified analyte was not detected at a concentration greater than the method detection limit (MDL).

Compounds that exceeded State Standards are denoted in ***BOLD***.

J        Indicates the presence of a compound that meets the identification criteria at less than the quantitation limit but greater than zero.

B        Indicates compounds was detected in the method blank.

0.4\*    Applies to the sum of cis- and trans-1,3-dichloropropene

1\*       Applies to the general phenolic standard

ND<    Not detected less than

---      No promulgated State Standard



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TABLE 6A - GROUNDWATER ELEVATIONS

MONITORING WELL CONSTRUCTION DATA	MONITORING WELL DESIGNATION																			
	MW-1	MW-2	MW-3	MW-3R	MW-4	MW-5	MW-6	MW-6R	MW-7	MW-8	MW-9	MW-10	MW-10R	MW-11	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17
Top-of-Casing Elevation (06/07/05)	110.20	103.83	WD	107.29	105.28	106.80	WD	111.20	103.70	104.26	106.20	WD	108.89	NS	102.19	99.19	113.14	114.97	110.03	99.24
Ground Elevation	108.83	104.03	unk.	104.72	105.45	107.00	WD	109.27	104.11	104.87	106.65	WD	109.25	105.57	102.64	100.00	109.69	111.29	107.23	99.86
Total Depth of Well	6.65	7.20	12.00	13.34	12.15	12.30	12.00	12.62	11.10	12.22	12.14	12.00	11.22	12.00	12.10	12.13	13.57	14.60	12.32	7.75
Depth of Well Elevation	103.55	96.63	WD	93.95	93.13	94.50	WD	98.58	92.60	92.04	94.06	WD	97.67	NS	90.09	87.06	99.57	100.37	97.71	91.49
Diameter (inches)	3	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
MEASUREMENT DATE	GROUNDWATER ELEVATIONS <sup>1</sup>																			
06/24/02 <sup>2</sup>	101.18	94.32	98.17	NI	98.08	100.72	102.09	NI	95.90	96.16	98.63	NI	NI	NI	NI	NI	NI	NI	NI	NI
08/08/02 <sup>2</sup>	100.54	91.75	96.08	NI	96.58	98.79	99.86	NI	91.95	92.81	96.72	NI	NI	NI	NI	NI	NI	NI	NI	NI
09/03/02 <sup>2</sup>	100.67	DRY	96.42	NI	96.33	98.86	99.88	NI	91.02	93.70	96.68	99.12	NI	93.84	DRY	88.49	NI	NI	NI	NI
11/20/02 <sup>2</sup>	101.82	97.09	100.30	NI	98.27	100.53	102.13	NI	97.15	98.36	99.70	101.08	NI	99.47	93.13	92.00	NI	NI	NI	NI
04/04/03 <sup>2</sup>	101.82	98.80	100.70	NI	98.87	100.65	102.09	NI	98.01	98.90	100.15	101.23	NI	99.87	95.52	93.61	NI	NI	NI	NI
04/26/05 <sup>3</sup>	104.38	101.92	WD	98.98	103.67	105.06	WD	107.70	103.70	103.53	105.19	WD	NS	NS	99.19	96.73	110.78	108.67	101.03	NI
06/07/05 <sup>3</sup>	DRY	99.83	WD	95.98	102.45	104.25	WD	105.90	100.70	102.00	104.80	WD	NS	NS	97.35	95.19	109.64	107.52	98.36	NI
11/08/05 <sup>3</sup>	103.55	98.28	WD	101.17	101.66	103.83	WD	108.23	101.04	100.38	103.15	WD	102.44	WD	98.29	95.85	112.42	110.90	102.93	95.02

Notes:

<sup>1</sup> Groundwater elevations are based on an arbitrary datum of 100.0 feet.  
<sup>2</sup> Top-of-Casing for MW-1 through MW-9 surveyed in by Nature's Way on June 19, 2002; re-surveyed from new benchmark on September 3, 2002 following well repairs/installation of additional wells  
<sup>3</sup> Groundwater elevations are based on benchmark established during post-development survey conducted by Plumley Engineering, P.C. in June 7, 2005.

NS      Not surveyed  
NI      Not installed  
WD      Well Destroyed  
DRY     Well was dry at the time of measurement  
unk.     No data supplied in Nature's Way reports

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TABLE 6B - GROUNDWATER SAMPLES - TARGET COMPOUND LIST VOLATILE ORGANIC COMPOUNDS  
Groundwater Monitoring Wells

Matrix: Groundwater

Compound	State Standard <sup>1</sup> (µg/L)	Monitoring Well Location					
		MW-1	MW-2	MW-3R	MW-4	MW-5	MW-6
		Date Sampled: April 26, 2005					
		Compound Concentration (µg/L)					
Chloromethane (methyl chloride)	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Bromomethane	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Vinyl Chloride	2	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Chloroethane	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Methylene Chloride	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Acetone	50	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Carbon Disulfide	60	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
1,1-Dichloroethene	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
1,1-Dichloroethane	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
trans-1,2-Dichloroethene	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
cis-1,2-Dichloroethene	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Chloroform	7	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
1,2-Dichloroethane	0.6	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
2-Butanone (MEK)	50	ND<10	ND<10	ND<10	7 J	ND<10	ND<10
1,1,1-Trichloroethane	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Carbon Tetrachloride	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Bromodichloromethane	50	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
1,2-Dichloropropane	1	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
cis-1,3-Dichloropropene	0.4*	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Trichloroethene	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Dibromochloromethane	50	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
1,1,2-Trichloroethane	1	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Benzene	1	ND<10	ND<10	ND<10	73 J	ND<10	ND<10
trans-1,3-Dichloropropene	0.4*	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Bromoform	50	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
4-Methyl-2-Pentanone	---	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
2-Hexanone	50	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Tetrachloroethene	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
1,1,2,2-Tetrachloroethane	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Toluene	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Chlorobenzene	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Ethyl Benzene	5	ND<10	ND<10	ND<10	51	6 J	ND<10
Styrene	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
m/p-Xylenes	5	ND<10	ND<10	ND<10	41	4 J	ND<10
o-Xylene	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Methyl tert-butyl Ether (MTBE)	10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Dichlorodifluoromethane	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
1,1,2-Trichlorotrifluoroethane (Freon 113)	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Methyl Acetate	---	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Trichlorofluoromethane	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Cyclohexane	---	ND<10	ND<10	ND<10	28	ND<10	ND<10
Methylcyclohexane	---	ND<10	ND<10	ND<10	22	ND<10	ND<10
1,3-Dichlorobenzene	3	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Isopropylbenzene (Cumene)	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
1,4-Dichlorobenzene	3	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
1,2-Dichlorobenzene	3	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
1,2-Dibromo-3-Chloropropane	0.4	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
1,2,4-Trichlorobenzene	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
1,2-Dibromoethane (ethylene dibromide)	0.0006	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Total VOCs	---	ND	ND	ND	222	10	ND

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TABLE 6B - GROUNDWATER SAMPLES - TARGET COMPOUND LIST VOLATILE ORGANIC COMPOUNDS  
Groundwater Monitoring Wells

Matrix: Groundwater

Compound	State Standard <sup>1</sup> (µg/L)	Monitoring Well Location					
		MW-7	MW-8	MW-9	MW-10R	MW-11	MW-12
		Date Sampled: April 26, 2005					
		Compound Concentration (µg/L)					
Chloromethane (methyl chloride)	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Bromomethane	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Vinyl Chloride	2	ND<10	ND<10	ND<10	380 J	ND<10	ND<10
Chloroethane	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Methylene Chloride	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Acetone	50	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Carbon Disulfide	60	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
1,1-Dichloroethene	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
1,1-Dichloroethane	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
trans-1,2-Dichloroethene	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
cis-1,2-Dichloroethene	5	ND<10	ND<10	ND<10	770	ND<10	ND<10
Chloroform	7	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
1,2-Dichloroethane	0.6	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
2-Butanone (MEK)	50	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
1,1,1-Trichloroethane	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Carbon Tetrachloride	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Bromodichloromethane	50	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
1,2-Dichloropropane	1	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
cis-1,3-Dichloropropene	0.4*	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Trichloroethene	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Dibromochloromethane	50	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
1,1,2-Trichloroethane	1	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Benzene	1	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
trans-1,3-Dichloropropene	0.4*	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Bromoform	50	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
4-Methyl-2-Pentanone	---	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
2-Hexanone	50	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Tetrachloroethene	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
1,1,2,2-Tetrachloroethane	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Toluene	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Chlorobenzene	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Ethyl Benzene	5	610	ND<10	ND<10	ND<10	ND<10	960
Styrene	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
m/p-Xylenes	5	2,600	ND<10	ND<10	ND<10	ND<10	3,200
o-Xylene	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Methyl tert-butyl Ether (MTBE)	10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Dichlorodifluoromethane	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
1,1,2-Trichlorotrifluoroethane (Freon 113)	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Methyl Acetate	---	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Trichlorofluoromethane	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Cyclohexane	---	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Methylcyclohexane	---	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
1,3-Dichlorobenzene	3	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Isopropylbenzene (Cumene)	5	ND<10	ND<10	ND<10	ND<10	ND<10	95 J
1,4-Dichlorobenzene	3	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
1,2-Dichlorobenzene	3	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
1,2-Dibromo-3-Chloropropane	0.4	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
1,2,4-Trichlorobenzene	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
1,2-Dibromoethane (ethylene dibromide)	0.0006	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Total VOCs	---	3,210	ND	ND	1,150	ND	4,255

RICK'S AUTO REDEVELOPMENT  
Baldwinsville, New York  
BCP Site No. C734085

TABLE 6B - GROUNDWATER SAMPLES - TARGET COMPOUND LIST VOLATILE ORGANIC COMPOUNDS  
Groundwater Monitoring Wells

Matrix: Groundwater

Compound	State Standard¹ (µg/L)	Monitoring Well Location			
		MW-13	MW-14	MW-15	MW-16
		Compound Concentration (µg/L)			
Chloromethane (methyl chloride)	5	ND<10	ND<10	ND<10	ND<10
Bromomethane	5	ND<10	ND<10	ND<10	ND<10
Vinyl Chloride	2	ND<10	ND<10	ND<10	ND<10
Chloroethane	5	ND<10	ND<10	ND<10	ND<10
Methylene Chloride	5	ND<10	ND<10	ND<10	ND<10
Acetone	50	ND<10	ND<10	ND<10	ND<10
Carbon Disulfide	60	ND<10	ND<10	ND<10	ND<10
1,1-Dichloroethene	5	ND<10	ND<10	ND<10	ND<10
1,1-Dichloroethane	5	ND<10	ND<10	ND<10	ND<10
trans-1,2-Dichloroethene	5	ND<10	ND<10	ND<10	ND<10
cis-1,2-Dichloroethene	5	ND<10	ND<10	ND<10	ND<10
Chloroform	7	ND<10	ND<10	ND<10	ND<10
1,2-Dichloroethane	0.6	ND<10	ND<10	ND<10	ND<10
2-Butanone (MEK)	50	ND<10	ND<10	ND<10	ND<10
1,1,1-Trichloroethane	5	ND<10	ND<10	ND<10	ND<10
Carbon Tetrachloride	5	ND<10	ND<10	ND<10	ND<10
Bromodichloromethane	50	ND<10	ND<10	ND<10	ND<10
1,2-Dichloropropane	1	ND<10	ND<10	ND<10	ND<10
cis-1,3-Dichloropropene	0.4*	ND<10	ND<10	ND<10	ND<10
Trichloroethene	5	ND<10	ND<10	ND<10	ND<10
Dibromochloromethane	50	ND<10	ND<10	ND<10	ND<10
1,1,2-Trichloroethane	1	ND<10	ND<10	ND<10	ND<10
Benzene	1	ND<10	ND<10	ND<10	ND<10
trans-1,3-Dichloropropene	0.4*	ND<10	ND<10	ND<10	ND<10
Bromoform	50	ND<10	ND<10	ND<10	ND<10
4-Methyl-2-Pentanone	---	ND<10	ND<10	ND<10	ND<10
2-Hexanone	50	ND<10	ND<10	ND<10	ND<10
Tetrachloroethene	5	ND<10	ND<10	ND<10	ND<10
1,1,2,2-Tetrachloroethane	5	ND<10	ND<10	ND<10	ND<10
Toluene	5	ND<10	ND<10	ND<10	ND<10
Chlorobenzene	5	ND<10	ND<10	ND<10	ND<10
Ethyl Benzene	5	ND<10	ND<10	ND<10	ND<10
Styrene	5	ND<10	ND<10	ND<10	ND<10
m/p-Xylenes	5	ND<10	ND<10	ND<10	ND<10
o-Xylene	5	ND<10	ND<10	ND<10	ND<10
Methyl tert-butyl Ether (MTBE)	10	ND<10	ND<10	ND<10	ND<10
Dichlorodifluoromethane	5	ND<10	ND<10	ND<10	ND<10
1,1,2-Trichlorotrifluoroethane (Freon 113)	5	ND<10	ND<10	ND<10	ND<10
Methyl Acetate	---	ND<10	ND<10	ND<10	ND<10
Trichlorofluoromethane	5	ND<10	ND<10	ND<10	ND<10
Cyclohexane	---	ND<10	ND<10	ND<10	ND<10
Methylcyclohexane	---	ND<10	ND<10	ND<10	ND<10
1,3-Dichlorobenzene	3	ND<10	ND<10	ND<10	ND<10
Isopropylbenzene (Cumene)	5	ND<10	ND<10	ND<10	ND<10
1,4-Dichlorobenzene	3	ND<10	ND<10	ND<10	ND<10
1,2-Dichlorobenzene	3	ND<10	ND<10	ND<10	ND<10
1,2-Dibromo-3-Chloropropane	0.4	ND<10	ND<10	ND<10	ND<10
1,2,4-Trichlorobenzene	5	ND<10	ND<10	ND<10	ND<10
1,2-Dibromoethane (ethylene dibromide)	0.0006	ND<10	ND<10	ND<10	ND<10
Total VOCs	---	ND	ND	ND	ND

**RICK'S AUTO REDEVELOPMENT**  
**Baldwinsville, New York**  
**BCP Site No. C734085**

**TABLE 6B - GROUNDWATER SAMPLES - TARGET COMPOUND LIST VOLATILE ORGANIC COMPOUNDS**  
**Groundwater Monitoring Wells**

Compound	State Standard <sup>1</sup> (µg/L)	Monitoring Well Location					
		MW-4	MW-5	MW-7	MW-10R	MW-12	MW-17
		Date Sampled: November 8, 2005					
		Compound Concentration (µg/L)					
Chloromethane (methyl chloride)	5	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
Bromomethane	5	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
Vinyl Chloride	2	ND<20	ND<10	ND<200	18	ND<100	ND<10
Chloroethane	5	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
Methylene Chloride	5	17 BJ	5 BJ	180 BJ	ND<10	55 BJ	ND<10
Acetone	50	130 B	40 B	350 B	9 BJ	ND<100	ND<10
Carbon Disulfide	60	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
1,1-Dichloroethene	5	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
1,1-Dichloroethane	5	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
trans-1,2-Dichloroethene	5	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
cis-1,2-Dichloroethene	5	ND<20	ND<10	ND<200	130	ND<100	ND<10
Chloroform	7	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
1,2-Dichloroethane	0.6	13 J	ND<10	ND<200	ND<10	ND<100	ND<10
2-Butanone (MEK)	50	ND<20	ND<10	380	ND<10	ND<100	ND<10
1,1,1-Trichloroethane	5	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
Carbon Tetrachloride	5	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
Bromodichloromethane	50	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
1,2-Dichloropropane	1	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
cis-1,3-Dichloropropene	0.4*	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
Trichloroethene	5	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
Dibromochloromethane	50	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
1,1,2-Trichloroethane	1	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
Benzene	1	410 E	ND<10	ND<200	8	ND<100	ND<10
trans-1,3-Dichloropropene	0.4*	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
Bromoform	50	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
4-Methyl-2-Pentanone	---	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
2-Hexanone	50	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
Tetrachloroethene	5	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
1,1,2,2-Tetrachloroethane	5	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
Toluene	5	7 J	ND<10	ND<200	ND<10	ND<100	ND<10
Chlorobenzene	5	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
Ethyl Benzene	5	160	ND<10	1,400	ND<10	770	ND<10
Styrene	5	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
m/p-Xylenes	5	30	ND<10	5,300	ND<10	1,000	ND<10
o-Xylene	5	5 J	ND<10	130 J	ND<10	52 J	ND<10
Methyl tert-butyl Ether (MTBE)	10	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
Dichlorodifluoromethane	5	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
1,1,2-Trichlorotrifluoroethane (Freon 113)	5	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
Methyl Acetate	---	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
Trichlorofluoromethane	5	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
Cyclohexane	---	89	ND<10	ND<200	ND<10	ND<100	ND<10
Methylcyclohexane	---	32	ND<10	110 J	ND<10	ND<100	ND<10
1,3-Dichlorobenzene	3	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
Isopropylbenzene (Cumene)	5	62	ND<10	190 J	ND<10	150	ND<10
1,4-Dichlorobenzene	3	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
1,2-Dichlorobenzene	3	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
1,2-Dibromo-3-Chloropropane	0.4	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
1,2,4-Trichlorobenzene	5	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
1,2-Dibromoethane (ethylene dibromide)	0.0006	ND<20	ND<10	ND<200	ND<10	ND<100	ND<10
Total VOCs	---	955	45	8,040	165	2,027	ND

**RICK'S SUTO REDEVELOPMENT**  
**Baldwinsville, New York**  
**BCP Site No. C734085**

**TABLE 6C - GROUNDWATER SAMPLES - TARGET COMPOUND LIST SEMI-VOLATILE ORGANIC COMPOUNDS**  
**Groundwater Monitoring Wells**

**Matrix:** Groundwater

Compound	State Standard¹ (µg/L)	Monitoring Well Location					
		MW-1	MW-2	MW-3R	MW-4	MW-5	MW-6R
		Date Sampled: April 26, 2005					
		Compound Concentration (µg/L)					
Phenol	1*	ND<5	ND<5	ND<5	1 J	ND<5	ND<5
bis(2-Chloroethyl)ether	1	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
2-Chlorophenol	1*	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
1,3-Dichlorobenzene	3	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
1,4-Dichlorobenzene	3	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
1,2-Dichlorobenzene	3	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
2-Methylphenol	1*	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
bis(2-chloroisopropyl)ether	5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
3+4-Methylphenols	1*	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
N-Nitroso-di-n-propylamine	---	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Hexachloroethane	5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Nitrobenzene	0.4	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Isophorone	50	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
2-Nitrophenol	1*	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
2,4-Dimethylphenol	50	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
bis(2-Chloroethoxy)methane	5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
2,4-Dinitrophenol	10	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
1,2,4-Trichlorobenzene	5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Naphthalene	10	ND<5	ND<5	ND<5	36	ND<5	ND<5
4-Chloroaniline	5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Hexachlorobutadiene	0.5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
4-Chloro-3-methylphenol	1*	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
2-Methylnaphthalene	---	ND<5	ND<5	ND<5	4 J	ND<5	ND<5
Hexachlorocyclopentadiene	5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
2,4,6-Trichlorophenol	1*	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
2,4,5-Trichlorophenol	1*	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
2-Chloronaphthalene	10	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
2-Nitroaniline	5	ND<25	ND<25	ND<25	ND<25	ND<25	ND<25
Dimethylphthalate	50	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Acenaphthylene	---	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
2,6-Dinitrotoluene	5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
3-Nitroaniline	5	ND<25	ND<25	ND<25	ND<25	ND<25	ND<25
Acenaphthene	20	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
2,4-Dichlorophenol	1*	ND<25	ND<25	ND<25	ND<25	ND<25	ND<25
4-Nitrophenol	1*	ND<25	ND<25	ND<25	ND<25	ND<25	ND<25
Dibenzofuran	---	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
2,4-Dinitrotoluene	5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Diethylphthalate	50	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
4-Chlorophenyl-phenylether	---	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Fluorene	50	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
4-Nitroaniline	5	ND<25	ND<25	ND<25	ND<25	ND<25	ND<25
4,6-Dinitro-2-methylphenol	1*	ND<25	ND<25	ND<25	ND<25	ND<25	ND<25
N-Nitrosodiphenylamine	50	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
4-Bromophenyl-phenylether	---	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Hexachlorobenzene	0.04	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Pentachlorophenol	1*	ND<25	ND<25	ND<25	ND<25	ND<25	ND<25
Phenanthrene	50	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Anthracene	50	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Carbazole	---	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Di-n-butylphthalate	50	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Fluoranthene	50	ND<5	ND<5	0.6 J	ND<5	ND<5	ND<5
Pyrene	50	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Butylbenzylphthalate	50	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
3,3-Dichlorobenzidine	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Benzo(a)anthracene	0.002	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Chrysene	0.002	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
bis(2-Ethylhexyl)phthalate	5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Di-n-octyl phthalate	50	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Benzo(b)fluoranthene	0.002	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Benzo(k)fluoranthene	0.002	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Benzo(a)pyrene	0.002	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Indeno(1,2,3-cd)pyrene	0.002	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Dibenz(a,h)anthracene	50	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Benzo(g,h,i)perylene	0.002	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Total SVOCs	---	ND	ND	1	41	ND	ND

**RICK'S SUTO REDEVELOPMENT**  
**Baldwinsville, New York**  
**BCP Site No. C734085**

**TABLE 6C - GROUNDWATER SAMPLES - TARGET COMPOUND LIST SEMI-VOLATILE ORGANIC COMPOUNDS**  
**Groundwater Monitoring Wells**

**Matrix:** Groundwater

Compound	State Standard¹ (µg/L)	Monitoring Well Location					
		MW-7	MW-8	MW-9	MW-10R	MW-11	MW-12
		Date Sampled: April 26, 2005					
		Compound Concentration (µg/L)					
Phenol	1*	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
bis(2-Chloroethyl)ether	1	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
2-Chlorophenol	1*	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
1,3-Dichlorobenzene	3	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
1,4-Dichlorobenzene	3	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
1,2-Dichlorobenzene	3	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
2-Methylphenol	1*	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
bis(2-chloroisopropyl)ether	5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
3+4-Methylphenols	1*	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
N-Nitroso-di-n-propylamine	---	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Hexachloroethane	5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Nitrobenzene	0.4	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Isophorone	50	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
2-Nitrophenol	1*	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
2,4-Dimethylphenol	50	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
bis(2-Chloroethoxy)methane	5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
2,4-Dinitrophenol	10	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
1,2,4-Trichlorobenzene	5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Naphthalene	10	240	ND<5	ND<5	ND<5	ND<5	250
4-Chloroaniline	5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Hexachlorobutadiene	0.5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
4-Chloro-3-methylphenol	1*	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
2-Methylnaphthalene	---	91	ND<5	ND<5	ND<5	ND<5	88
Hexachlorocyclopentadiene	5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
2,4,6-Trichlorophenol	1*	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
2,4,5-Trichlorophenol	1*	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
2-Chloronaphthalene	10	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
2-Nitroaniline	5	ND<25	ND<25	ND<25	ND<25	ND<25	ND<25
Dimethylphthalate	50	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Acenaphthylene	---	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
2,6-Dinitrotoluene	5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
3-Nitroaniline	5	ND<25	ND<25	ND<25	ND<25	ND<25	ND<25
Acenaphthene	20	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
2,4-Dichlorophenol	1*	ND<25	ND<25	ND<25	ND<25	ND<25	ND<25
4-Nitrophenol	1*	ND<25	ND<25	ND<25	ND<25	ND<25	ND<25
Dibenzofuran	---	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
2,4-Dinitrotoluene	5	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Diethylphthalate	50	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
4-Chlorophenyl-phenylether	---	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Fluorene	50	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
4-Nitroaniline	5	ND<25	ND<25	ND<25	ND<25	ND<25	ND<25
4,6-Dinitro-2-methylphenol	1*	ND<25	ND<25	ND<25	ND<25	ND<25	ND<25
N-Nitrosodiphenylamine	50	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
4-Bromophenyl-phenylether	---	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Hexachlorobenzene	0.04	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Pentachlorophenol	1*	ND<25	ND<25	ND<25	ND<25	ND<25	ND<25
Phenanthrene	50	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Anthracene	50	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Carbazole	---	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Di-n-butylphthalate	50	ND<5	ND<5	ND<5	3 J	ND<5	ND<5
Fluoranthene	50	ND<5	ND<5	ND<5	1 J	ND<5	ND<5
Pyrene	50	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Butylbenzylphthalate	50	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
3,3-Dichlorobenzidine	5	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
Benzo(a)anthracene	0.002	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Chrysene	0.002	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
bis(2-Ethylhexyl)phthalate	5	ND<5	ND<5	ND<5	0.9 J	ND<5	ND<5
Di-n-octyl phthalate	50	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Benzo(b)fluoranthene	0.002	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Benzo(k)fluoranthene	0.002	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Benzo(a)pyrene	0.002	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Indeno(1,2,3-cd)pyrene	0.002	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Dibenz(a,h)anthracene	50	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Benzo(g,h,i)perylene	0.002	ND<5	ND<5	ND<5	ND<5	ND<5	ND<5
Total SVOCs	---	331	ND	ND	5	ND	338

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**TABLE 6C - GROUNDWATER SAMPLES - TARGET COMPOUND LIST SEMI-VOLATILE ORGANIC COMPOUNDS**  
**Groundwater Monitoring Wells**

Compound	State Standard¹ (µg/L)	Monitoring Well Location			
		MW-13	MW-14	MW-15	MW-16
		Date Sampled: April 26, 2005			
		Compound Concentration (µg/L)			
Phenol	1*	ND<5	ND<5	ND<5	ND<5
bis(2-Chloroethyl)ether	1	ND<5	ND<5	ND<5	ND<5
2-Chlorophenol	1*	ND<5	ND<5	ND<5	ND<5
1,3-Dichlorobenzene	3	ND<5	ND<5	ND<5	ND<5
1,4-Dichlorobenzene	3	ND<5	ND<5	ND<5	ND<5
1,2-Dichlorobenzene	3	ND<5	ND<5	ND<5	ND<5
2-Methylphenol	1*	ND<5	ND<5	ND<5	ND<5
bis(2-chloroisopropyl)ether	5	ND<5	ND<5	ND<5	ND<5
3+4-Methylphenols	1*	ND<5	ND<5	ND<5	ND<5
N-Nitroso-di-n-propylamine	---	ND<5	ND<5	ND<5	ND<5
Hexachloroethane	5	ND<5	ND<5	ND<5	ND<5
Nitrobenzene	0.4	ND<5	ND<5	ND<5	ND<5
Isophorone	50	ND<5	ND<5	ND<5	ND<5
2-Nitrophenol	1*	ND<5	ND<5	ND<5	ND<5
2,4-Dimethylphenol	50	ND<5	ND<5	ND<5	ND<5
bis(2-Chloroethoxy)methane	5	ND<5	ND<5	ND<5	ND<5
2,4-Dinitrophenol	10	ND<5	ND<5	ND<5	ND<5
1,2,4-Trichlorobenzene	5	ND<5	ND<5	ND<5	ND<5
Naphthalene	10	ND<5	ND<5	ND<5	ND<5
4-Chloroaniline	5	ND<5	ND<5	ND<5	ND<5
Hexachlorobutadiene	0.5	ND<5	ND<5	ND<5	ND<5
4-Chloro-3-methylphenol	1*	ND<5	ND<5	ND<5	ND<5
2-Methylnaphthalene	---	ND<5	ND<5	ND<5	ND<5
Hexachlorocyclopentadiene	5	ND<5	ND<5	ND<5	ND<5
2,4,6-Trichlorophenol	1*	ND<5	ND<5	ND<5	ND<5
2,4,5-Trichlorophenol	1*	ND<5	ND<5	ND<5	ND<5
2-Chloronaphthalene	10	ND<5	ND<5	ND<5	ND<5
2-Nitroaniline	5	ND<25	ND<25	ND<25	ND<25
Dimethylphthalate	50	ND<5	16	ND<5	ND<5
Acenaphthylene	---	ND<5	ND<5	ND<5	ND<5
2,6-Dinitrotoluene	5	ND<5	ND<5	ND<5	ND<5
3-Nitroaniline	5	ND<25	ND<25	ND<25	ND<25
Acenaphthene	20	ND<5	ND<5	ND<5	ND<5
2,4-Dichlorophenol	1*	ND<25	ND<25	ND<25	ND<25
4-Nitrophenol	1*	ND<25	ND<25	ND<25	ND<25
Dibenzofuran	---	ND<5	ND<5	ND<5	ND<5
2,4-Dinitrotoluene	5	ND<5	ND<5	ND<5	ND<5
Diethylphthalate	50	ND<5	ND<5	ND<5	ND<5
4-Chlorophenyl-phenylether	---	ND<5	ND<5	ND<5	ND<5
Fluorene	50	ND<5	ND<5	ND<5	ND<5
4-Nitroaniline	5	ND<25	ND<25	ND<25	ND<25
4,6-Dinitro-2-methylphenol	1*	ND<25	ND<25	ND<25	ND<25
N-Nitrosodiphenylamine	50	ND<5	ND<5	ND<5	ND<5
4-Bromophenyl-phenylether	---	ND<5	ND<5	ND<5	ND<5
Hexachlorobenzene	0.04	ND<5	ND<5	ND<5	ND<5
Pentachlorophenol	1*	ND<25	ND<25	ND<25	ND<25
Phenanthrene	50	ND<5	ND<5	ND<5	ND<5
Anthracene	50	ND<5	ND<5	ND<5	ND<5
Carbazole	---	ND<5	ND<5	ND<5	ND<5
Di-n-butylphthalate	50	ND<5	ND<5	ND<5	ND<5
Fluoranthene	50	ND<5	0.8 J	ND<5	ND<5
Pyrene	50	ND<5	ND<5	ND<5	ND<5
Butylbenzylphthalate	50	ND<5	ND<5	ND<5	ND<5
3,3-Dichlorobenzidine	5	ND<10	ND<10	ND<10	ND<10
Benzo(a)anthracene	0.002	ND<5	ND<5	ND<5	ND<5
Chrysene	0.002	ND<5	ND<5	ND<5	ND<5
bis(2-Ethylhexyl)phthalate	5	ND<5	ND<5	ND<5	ND<5
Di-n-octyl phthalate	50	ND<5	ND<5	ND<5	ND<5
Benzo(b)fluoranthene	0.002	ND<5	ND<5	ND<5	ND<5
Benzo(k)fluoranthene	0.002	ND<5	ND<5	ND<5	ND<5
Benzo(a)pyrene	0.002	ND<5	ND<5	ND<5	ND<5
Indeno(1,2,3-cd)pyrene	0.002	ND<5	ND<5	ND<5	ND<5
Dibenz(a,h)anthracene	50	ND<5	ND<5	ND<5	ND<5
Benzo(g,h,i)perylene	0.002	ND<5	ND<5	ND<5	ND<5
Total SVOCs	---	ND	17	ND	ND



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**TABLE 6C - GROUNDWATER SAMPLES - TARGET COMPOUND LIST SEMI-VOLATILE ORGANIC COMPOUNDS**  
**Groundwater Monitoring Wells**

**Matrix:** Groundwater

Compound	State Standard¹ (µg/L)	Monitoring Well Location					
		MW-4	MW-5	MW-7	MW-10R	MW-12	MW-17
		Date Sampled: November 8, 2005					
		Compound Concentration (µg/L)					
Phenol	1*	3 J	ND<5	ND<25	ND<5	ND<25	ND<5
bis(2-Chloroethyl)ether	1	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
2-Chlorophenol	1*	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
1,3-Dichlorobenzene	3	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
1,4-Dichlorobenzene	3	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
1,2-Dichlorobenzene	3	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
2-Methylphenol	1*	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
bis(2-chloroisopropyl)ether	5	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
3+4-Methylphenols	1*	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
N-Nitroso-di-n-propylamine	---	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
Hexachloroethane	5	ND<5	ND<5	ND<25	ND<5	19 J	ND<5
Nitrobenzene	0.4	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
Isophorone	50	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
2-Nitrophenol	1*	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
2,4-Dimethylphenol	50	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
bis(2-Chloroethoxy)methane	5	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
2,4-Dinitrophenol	10	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
1,2,4-Trichlorobenzene	5	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
Naphthalene	10	5	1 J	300	2 J	250	2 J
4-Chloroaniline	5	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
Hexachlorobutadiene	0.5	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
4-Chloro-3-methylphenol	1*	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
2-Methylnaphthalene	---	ND<5	ND<5	110	1 J	67	1 J
Hexachlorocyclopentadiene	5	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
2,4,6-Trichlorophenol	1*	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
2,4,5-Trichlorophenol	1*	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
2-Chloronaphthalene	10	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
2-Nitroaniline	5	ND<26	ND<25	ND<130	ND<26	ND<130	ND<26
Dimethylphthalate	50	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
Acenaphthylene	---	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
2,6-Dinitrotoluene	5	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
3-Nitroaniline	5	ND<26	ND<25	ND<130	ND<26	ND<130	ND<26
Acenaphthene	20	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
2,4-Dichlorophenol	1*	ND<26	ND<25	ND<130	ND<26	ND<130	ND<26
4-Nitrophenol	1*	ND<26	ND<25	ND<130	ND<26	ND<130	ND<26
Dibenzofuran	---	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
2,4-Dinitrotoluene	5	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
Diethylphthalate	50	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
4-Chlorophenyl-phenylether	---	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
Fluorene	50	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
4-Nitroaniline	5	ND<26	ND<25	ND<130	ND<26	ND<130	ND<26
4,6-Dinitro-2-methylphenol	1*	ND<26	ND<25	ND<130	ND<26	ND<130	ND<26
N-Nitrosodiphenylamine	50	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
4-Bromophenyl-phenylether	---	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
Hexachlorobenzene	0.04	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
Pentachlorophenol	1*	ND<26	ND<25	ND<130	ND<26	ND<130	ND<26
Phenanthrene	50	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
Anthracene	50	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
Carbazole	---	1 J	ND<5	ND<25	ND<5	ND<25	ND<5
Di-n-butylphthalate	50	2 J	1 J	ND<25	1 J	ND<25	ND<5
Fluoranthene	50	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
Pyrene	50	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
Butylbenzylphthalate	50	ND<5	1 J	ND<25	ND<5	ND<25	ND<5
3,3-Dichlorobenzidine	5	ND<10	ND<10	ND<50	ND<10	ND<50	ND<11
Benzo(a)anthracene	0.002	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
Chrysene	0.002	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
bis(2-Ethylhexyl)phthalate	5	10 B	19 B	ND<25	9 B	5 BJ	27 B
Di-n-octyl phthalate	50	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
Benzo(b)fluoranthene	0.002	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
Benzo(k)fluoranthene	0.002	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
Benzo(a)pyrene	0.002	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
Indeno(1,2,3-cd)pyrene	0.002	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
Dibenz(a,h)anthracene	50	ND<5	ND<5	ND<25	ND<5	ND<25	ND<5
Benzo(g,h,i)perylene	0.002	ND<5	1 J	ND<25	ND<5	ND<25	ND<5
Total SVOCs	---	21	22	410	13	341	30

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TABLE 6D - SUMMARY OF HISTORICAL GROUNDWATER ANALYTICAL RESULTS - TOTAL VOCs

MONITORING INFORMATION		MONITORING WELL																
ANALYTICAL METHOD	SAMPLING DATE	MW-1	MW-2	MW-3/3R	MW-4	MW-5	MW-6R	MW-7	MW-8	MW-9	MW-10R	MW-11	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17
		Pre-IRM Remediation Total Compound Concentration (µg/L)																
EPA 8260 (STARS)	06/24/02	218	ND	4,318	1,344	315	ND	16,500	2	ND	NI	NI	NI	NI	NI	NI	NI	NI
EPA 8260 (TAGM)	09/03/02	26	NS	8,870	2,129	561	ND	18,090	ND	1	6,557	36,310	NS	130.0	NI	NI	NI	NI
EPA 8260 (TAGM)	11/20/02	21	ND	1,040	958.6	20	ND	13,600	ND	1	432	790	6,960	ND	NI	NI	NI	NI
EPA 8260 (TAGM)	04/04/03	78	ND	2,945	3,326	159	ND	11,460	ND	ND	735	29	2,909	ND	NI	NI	NI	NI
		Post-IRM Remediation Total Compound Concentration (µg/L)																
EPA 8260 (TCL)	04/26/05	ND	ND	ND	276	28	ND	3,350	ND	ND	1,150	8	4,255	ND	ND	ND	ND	NI
EPA 8260 (TCL)	11/08/05	NS	NS	NS	955	45	NS	8,040	NS	NS	165	WD	2,027	NS	NS	NS	NS	ND

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**SOIL VAPOR ANALYTICAL SUMMARY TABLE INDEX:**

TABLE 7 - SOIL VAPOR - TARGET COMPOUND LIST VOLATILE ORGANIC COMPOUNDS

**SOIL VAPOR ANALYTICAL SUMMARY TABLE NOTES:**

<sup>1</sup> Values obtained from NYSDOH Draft Guidance for Evaluating Soil Vapor Intrusion in the State of New York (Feb 2005), Section 3.2.4 table referencing to the unpublished summary of indoor levels of VOCs from fuel oil heated homes from 1997 through 2003.

<sup>2</sup> Values obtained from NYSDOH Draft Guidance for Evaluating Soil Vapor Intrusion in the State of New York (Feb 2005), Table 3.1 - air guideline values derived by NYSDOH.

µg/m<sup>3</sup>    micrograms per cubic meter

ND        Not detected greater than reporting limit

NS        No screening for this compound

NA        No toxicity factor information available to determine a screening level.

---       No promulgated State Standard

Compounds that exceeded State Standards are denoted in ***BOLD*** .

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TABLE 8 - CHEMICAL PROPERTIES OF COCs RELATED TO FATE AND TRANSPORT

VOCs	Maximum Sitewide Soil Concentration (mg/kg)	Molecular Weight	Solubility (mg/L)	Log Kow	Kow	Log Koc	Koc	VP (mm Hg)	Contaminant Classification							
									Alkane	Alkene	Alcohol	Ketones	Ether	Esters	Monocyclic Aromatic Hydrocarbons	Polycyclic Aromatic Hydrocarbons
Benzene	0.165	78.11	1,800	2.18	1.5E+02	1.7	5.5E+01	7.6E+01		x					x	
Chlorobenzene	0.010	112.56	500	2.84	6.9E+02	2.5	3.3E+02	8.8E+00		x					x	
Ethyl Benzene	39.232	106.17	152	4.34	2.2E+04	2.2	1.7E+02	7.0E+00		x					x	
Isopropylbenzene	9.257	120.19	50.1	3.43	2.7E+03	4.0	9.3E+03	6.0E-03		x					x	
m/p-Xylenes	161.668	106.16	175	3.15 - 3.20	1.5E+03	2.22 - 2.31	2.0E+02	6.00 - 6.50		x					x	
o-Xylene	38.119	106.16	175	3.12	1.3E+03	2.1	1.3E+02	5.0E+00		x					x	
Toluene	0.223	94.12	534.8	2.69	4.9E+02	2.4	2.4E+02	2.2E+01		x					x	
Chloroform	0.006	119.38	7,220	1.97	9.3E+01	1.7	4.5E+01	1.6E+02	x							
Cyclohexane	0.013	84.16	55	3.44	2.8E+03	2.7	4.8E+02	7.7E+01	x							
Methylcyclohexane	25.871	98.19	14	4.10	1.3E+04	3.8	6.0E+03	1.4E+02	x							
Methylene Chloride	0.007	84.93	20,000	1.30	2.0E+01	1.4	2.5E+01	3.5E+02	x							
cis-1,2-Dichloroethene	0.027	96.95	3,500	1.86	7.2E+01	1.7	4.9E+01	1.8E+02		x						
Vinyl Chloride	0.009	62.50	2,763	1.36	2.3E+01	2.0	9.8E+01	2.5E+03		x						
2-Butanone	0.027	72.11	136,000	0.29	1.9E+00	0.6	3.5E+00	9.1E+01				x				
Acetone	0.668	58.08	completely miscible	-0.24	5.8E-01	0.7	5.4E+00	1.8E+02				x				
MTBE	0.870	88.15	4,800	1.24	1.7E+01	1.6	4.1E+01	2.5E+02					x			

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**TABLE 8 - CHEMICAL PROPERTIES OF COCs RELATED TO FATE AND TRANSPORT**

SVOCs	Maximum Sitewide Soil Concentration (mg/kg)	Molecular Weight	Solubility (mg/L)	Log Kow	Kow	Log Koc	Koc	VP (mm Hg)	Contaminant Classification							
									Alkane	Alkene	Alcohol	Ketones	Ether	Esters	Monocyclic Aromatic Hydrocarbons	Polycyclic Aromatic Hydrocarbons
2-Methylnaphthalene	22.737	142.2	25	4.11	1.3E+04	3.9	8.3E+03	4.5E-02		x						x
4-Methylphenol [p-Cresol]	0.110	108.14	25,000	1.94	8.7E+01	1.9	8.1E+01	1.3E-01			x					x
Acenaphthene	0.055	154.21	1.93	3.98	9.5E+03	3.7	4.6E+03	4.5E-03		x						x
Acenaphthylene	0.047	152.20	3.93	4.07	1.2E+04	1.4	2.5E+01	2.9E-02		x						x
Anthracene	0.348	178.20	0.076	4.45	2.8E+04	4.2	1.4E+04	1.7E-05		x						x
Benzo(a)anthracene	1.074	228.29	0.01	5.61	4.1E+05	5.3	2.0E+05	2.2E-08		x						x
Benzo(a)pyrene	0.788	252.30	0.0023	6.06	1.1E+06	6.7	5.5E+06	5.6E-09		x						x
Benzo(b)fluoranthene	1.022	252.30	0.0012	6.04	1.1E+06	5.7	5.5E+05	5.0E-07		x						x
Benzo(g,h,i)perylene	1.401	276.34	0.00026	6.50	3.2E+06	6.2	1.6E+06	1.0E-10		x						x
Benzo(k)fluoranthene	0.699	252.30	0.00076	6.06	1.1E+06	5.7	5.5E+05	9.6E-11		x						x
Chrysene	1.016	228.30	0.0028	5.16	1.4E+05	5.3	2.0E+05	6.3E-07		x						x
Fluoranthene	1.902	202.26	0.26	4.90	7.9E+04	4.6	3.8E+04	5.0E-06		x						x
Fluorene	0.530	166.20	1.98	4.18	1.5E+04	3.9	7.2E+03	3.2E-04		x						x
Indeno(1,2,3-cd)pyrene	0.654	276.30	0.062	6.58	3.8E+06	6.2	1.6E+06	1.0E-06		x						x
Naphthalene	12.940	128.17	31.7	3.30	2.0E+03	3.0	9.6E+02	9.0E-02		x						x
Phenanthrene	1.410	178.20	1.2	4.45	2.8E+04	4.2	1.4E+04	6.8E-04		x						x
Pyrene	2.175	202.30	0.077	4.88	7.6E+04	4.6	3.8E+04	2.5E-06		x						x
bis(2-Ethylhexyl)phthalate	3.364	390.55	0.34	7.30	2.0E+07	7.2	1.5E+07	6.5E-06						x		
Di-n-butylphthalate	0.116	278.34	11.2	4.61	4.1E+04	4.5	3.4E+04	4.3E-05						x		
Carbazole	0.041	167.21	7.48	3.59	3.9E+03	3.5	3.4E+03	2.7E-04		x						
PCB	0.088	varies	nearly insoluble	2.81 - 4.33	---	---	---	7.7E-05 - 4.1E-03								

**RICK'S AUTO REDEVELOPMENT**  
**Baldwinsville, New York**  
**BCP Site No. C734085**

**TABLE 9 - SUMMARY OF CONCEPTUAL EXPOSURE SCENARIO ANALYSES**

Potentially Exposed Population	Exposure Route, Medium and Exposure Point	Pathway Complete?	Reason for Selection or Non-Selection	Exposure Risk	Action
On-Site Commercial Worker	Inhalation of volatiles from subsurface soils	No	New and renovated buildings to have sub-slab soil vapor ventilation.	NA	Sub-slab Depressurization System
	Inhalation of volatiles from shallow groundwater	No	New and renovated buildings to have sub-slab soil vapor ventilation.	NA	
	Dermal contact / ingestion of shallow groundwater	No	Municipal water supply.	NA	No wells allowed
	Dermal contact with surficial soils	No	No exposure - majority of site is to be paved / landscaped.	NA	Soil Mgmt. Plan
	Dermal contact with subsurface soils	No	No exposure - majority of site is to be paved / landscaped.	NA	
On-Site Residential (future)	Inhalation of volatiles from subsurface soils	No	Site not zoned residential. No residential future occupancy of the site.	NA	Env. easement restricts future use to commercial or industrial
	Inhalation of volatiles from shallow groundwater	No	Site not zoned residential. No residential future occupancy of the site.	NA	
	Dermal contact / ingestion of shallow groundwater	No	Municipal water supply.	NA	
	Dermal contact with surficial soils	No	Site not zoned residential. No residential future occupancy of the site.	NA	
	Dermal contact with subsurface soils	No	Site not zoned residential. No residential future occupancy of the site.	NA	
On-Site Construction Worker	Inhalation of volatiles from subsurface soils	Yes	Accidental exposure during excavation activities.	Minimal *	Soil Mgmt. Plan
	Inhalation of volatiles from shallow groundwater	Yes	Accidental exposure during excavation activities.	Minimal *	
	Dermal contact / ingestion of shallow groundwater	Yes	Accidental exposure during excavation activities.	Minimal **	
	Dermal contact with surficial soils	Maybe	Surface soils to be tested. Accidental exposure during excavation activities.	Minimal ***	
	Dermal contact with subsurface soils	Yes	Accidental exposure during excavation activities.	Minimal ***	
Off-Site Residential	Inhalation of volatiles from subsurface soils	No	Historical PID screening does not indicate off-site vapor.	NA	NA
	Inhalation of volatiles from shallow groundwater	No	Groundwater contaminant plume does not extend off-site.	NA	NA
	Dermal contact / ingestion of shallow groundwater	No	Municipal water supply.	NA	NA
	Dermal contact with surficial soils	No	Surficial soil contamination related to site activities limited to site.	NA	NA
	Dermal contact with subsurface soils	No	Subsurface soil contamination related to site activities does not extend off-site.	NA	NA
Off-Site Construction Worker	Inhalation of volatiles from subsurface soils	No	Historical PID screening does not indicate off-site soil contamination.	NA	NA
	Inhalation of volatiles from shallow groundwater	Possible	Groundwater monitoring to confirm.	NA	NA
	Dermal contact / ingestion of shallow groundwater	Possible	Groundwater monitoring to confirm.	NA	NA
	Dermal contact with surficial soils	No	Surficial soil contamination related to site activities limited to site.	NA	NA
	Dermal contact with subsurface soils	No	Historical PID screening does not indicate off-site soil contamination.	NA	NA

\* Soil vapor screening levels (see Table 1) indicate minimal risk of exposure to concentrations exceeding the National Institute for Occupational Safety and Health (NIOSH) Relative Exposure Limits (REL) guidelines. The NIOSH RELs are time-weighted average (TWA) concentrations for up to a 10-hour workday during a 40-hour work week.

\*\* Groundwater contaminant concentrations indicate minimal risk to human health through incidental contact and/or ingestion based upon review of Material Safety Data Sheets (MSDS) for indentified contaminants of concern.

\*\*\* Limited data supplied regarding soil impacts at the site. Remedial excavation expected to address soil impacts prior to site redevelopment.

Unless otherwise noted, rationale applies to both current and future conditions.

## **APPENDIX A**

### **WASTE DISPOSAL TICKETS**

JOB 41144

**NON-HAZARDOUS  
WASTE MANIFEST**

1. Generator's US EPA ID No.

Manifest  
Document No.

2. Page 1  
of 1

7A-SM/43177501

3. Generator's Name and Mailing Address

C.L. Dev. of Ballwinstown  
30 Oswego Street  
Ballwinstown NY 13027

SITE: 13861 Geneva Road  
Ballwinstown NY

4. Generator's Phone

5. Transporter 1 Company Name  
Paragon Environmental Construction

6. US EPA ID Number  
NYR0000119289

A. Transporter's Phone  
315-693-0840

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address

Industrial Oil Tank Service  
120 Dry Road  
Oriskany, NY 13424

10. US EPA ID Number

NYR0000005298

C. Facility's Phone

315-736-6000

11. Waste Shipping Name and Description

a. Non-RCRA, Non DOT Regulated  
(Water contaminated with Gas)

b.

c.

d.

D. Additional Descriptions for Materials Listed Above

New York State Waste Code: N

excavation fluids

15. Special Handling Instructions and Additional Information

Emergency Contact: CHS 866-734-2553

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

M. Colucci

Signature

M. Colucci

Month Day Year  
8/19/09

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Bruce Reynolds

Signature

Bruce Reynolds

Month Day Year  
08/19/09

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

1. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Brett D. Field

Signature

Brett D. Field

Month Day Year  
08/19/09

TRANSPORTER #1

12 BLC MB

GENERATOR

TRANSPORTER

FACILITY

Y



4144

**NON-HAZARDOUS  
WASTE MANIFEST**

1. Generator's US EPA ID No.

Manifest  
Document No.

2. Page 1  
of 1

90 516 / 4317750N

3. Generator's Name and Mailing Address

C.L. Development Co. Baldwinsville  
30 Oswego St. Baldwinsville NY.  
13027

Site: Tree Store  
138 West Genesee St  
Baldwinsville, NY

4. Generator's Phone (315) 638-2129

5. Transporter 1 Company Name  
Paragon Environmental Construction

6. US EPA ID Number

N.Y.R.O.O.O.1.1.9.2.0.9

A. Transporter's Phone

315-699-0840

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address

Industrial Oil Tank Service  
120 Dry Road  
Oriskany, NY 13424

10. US EPA ID Number

N.Y.R.O.O.O.O.O.5.2.9.8

C. Facility's Phone

315-736-6000

11. Waste Shipping Name and Description

12. Containers  
No. Type

13.  
Total  
Quantity

14.  
Unit  
Wt/Vol

a. Non-RCRA, Non DOT Regulated Material  
(Water contaminated with Gasoline)

0.01 T.T

EST.  
415

G

b.

c.

d.

12. Additional Descriptions for Materials Listed Above

New York State Waste Code: N018

E. Handling Codes for Wastes Listed Above

B

15. Special Handling Instructions and Additional Information

Emergency Contact: CHS 866-734-2553

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

09/29/04

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

09/29/04

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

09/29/04

19. Discrepancy Indication Space

1. 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

09/29/04



# NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest  
Document No.

2. Page 1  
of 1

3. Generator's Name and Mailing Address

CL DEVELOPMENT OF B'VILLE LLC.  
138 WEST GENESEE ST. BALDWINVILLE, N.Y. 13027

SITE: 138 WEST GENESEE ST.  
(BA 31) EAST GENESEE ST.  
BALDWINVILLE, N.Y.

4. Generator's Phone (315) 638-2129

5. Transporter 1 Company Name  
Paragon Environmental Construction

6. US EPA ID Number  
N Y R 0 0 0 1 1 9 2 8 9

A. Transporter's Phone  
315-699-0840

7. Transporter 2 Company Name

OP-TECH ENVIRONMENTAL SVCS.

8. US EPA ID Number

B. Transporter's Phone  
315 463-1643

9. Designated Facility Name and Site Address

Industrial Oil Tank Service  
120 Dry Road  
Oriskany, NY 13424

10. US EPA ID Number  
N Y R 0 0 0 0 0 5 2 9 8

C. Facility's Phone  
315-736-6080

11. Waste Shipping Name and Description

a. Non-RCRA, Non DOT Regulated Material  
(Water contaminated with Gasoline)

12. Containers  
No. Type

0.01 T.T. EST. 0.2445 G

b.

c.

d.

D. Additional Descriptions for Materials Listed Above

New York State Waste Code: N018

E. Handling Codes for Wastes Listed Above

R

15. Special Handling Instructions and Additional Information

Emergency Contact: CMS 866-734-2553

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

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

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

JOHN HITCHINGS

John Hitchings

10/24/04

TRANSPORTER #1



# NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. **N/A**

Manifest Document No.

2. Page 1 of 1

3. Generator's Name and Mailing Address

**C.L. Development  
30 Oswego St. Baldwinsville NY**

**SITE: TIA Store  
138 West Genesee St.  
Baldwinsville NY**

4. Generator's Phone (315) 635-2129

5. Transporter 1 Company Name

**Paragon Environmental Construction**

6. US EPA ID Number

**NYR0000119289**

A. Transporter's Phone

**315-699-0840**

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address

**Industrial Oil Tank Service  
120 Dry Road  
Oriskany, NY 13424**

10. US EPA ID Number

**NYR0000005298**

C. Facility's Phone

**315-736-6080**

11. Waste Shipping Name and Description

a. **Non-RCRA, Non DOT Regulated Material  
(Water contaminated with Gasoline)**

12. Containers  
No. Type

**0.01 T.T**

13. Total Quantity

**EST.**

**26.75**

14. Unit Wt/Vol

**G**

D. Additional Descriptions for Materials Listed Above

**New York State Waste Code: N018**

E. Handling Codes for Wastes Listed Above

**R**

15. Special Handling Instructions and Additional Information

**Emergency Contact: CMS 866-734-2553**

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

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

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

T/S/D/F COPY



382-1044

SPEC 0009

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  
Document No.

2. Page 1  
of 1

3. Generator's Name and Mailing Address

CL DEVELOPMENT of BALDWINSVILLE  
30 OSWEGO ST., BALDWINSVILLE, N.Y. 13027

4. Generator's Phone (315) 632-2129

SITE:

136 WEST GENESEE ST.  
BALDWINSVILLE, ALA. 36207

5. Transporter 1 Company Name  
Paragon Environmental Construction

6. US EPA ID Number  
N.Y.R.0000119289

A. Transporter's Phone

313-699-0840

7. Transporter 2 Company Name  
DP-TECH ENVIRONMENTAL SVCS.

8. US EPA ID Number

B. Transporter's Phone

315-463-1543

9. Designated Facility Name and Site Address  
Industrial Oil Tank Service  
120 Dry Road  
Oriskany, NY 13424

10. US EPA ID Number  
N.Y.R.0000005298

C. Facility's Phone

315-735-6000

11. Waste Shipping Name and Description

12. Containers

13. Total  
Quantity

14. Unit  
Wt/Vol

a. Non-RCRA, Non DOT Regulated Material  
(Water contaminated with Gasoline)

No. Type EST.  
0.01 T.T. 0.07.7.2 G

b.

c.

d.

D. Additional Descriptions for Materials Listed Above

New York State Waste Code: W018

E. Handling Codes for Wastes Listed Above

R

15. Special Handling Instructions and Additional Information

Emergency Contact: CHS 866-734-2533

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

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

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



**NON-HAZARDOUS  
WASTE MANIFEST**

1. Generator's US EPA ID No.

Manifest  
Document No.

2. Page 1  
of 1

72237 37

3. Generator's Name and Mailing Address

C L Development of Baldwinville  
Ricks Auto, Rt. 31, Baldwinville, NY 1302220

SITE:

Scrub

4. Generator's Phone ( 315 ) 638-2129

5. Transporter 1 Company Name

Paragon Environmental Construction

6. US EPA ID Number

NYR0000119209

A. Transporter's Phone

315-699-0840

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address

Industrial Oil Tank Service  
120 Dry Road  
Oriskany, NY 13424

10. US EPA ID Number

NYR0000005298

C. Facility's Phone

315-736-6080

11. Waste Shipping Name and Description

12. Containers

No.

Type

13. Total  
Quantity

14. Unit  
Wt/Vol

a. Non-RCRA, Non DOT Regulated Material  
(Fuel Oil Tank Bottoms)

0.010 N

EST.

X-X-4.00

P

b.

c.

d.

Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

R

15. Special Handling Instructions and Additional Information

Emergency Contact: CNS 866-734-2553

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

SCOTT A ZILG AS AGENT FOR CL DEVELOPMENT

Signature

[Signature]

Month Day Year

10 28 04

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Bruno Gorsch

Signature

[Signature]

Month Day Year

10 28 04

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

.

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Michael P. Marks

Signature

[Signature]

Month Day Year

10 28 04

GENERATOR

TRANSPORTER

FACILITY

COPY



**NON-HAZARDOUS  
WASTE MANIFEST**

1. Generator's US EPA ID No.

Manifest  
Document No.

2. Page 1  
of 1

3. Generator's Name and Mailing Address  
C L Development of Baldwinville  
Ricks Auto, Rt. 31, Baldwinville, NY 1302220

SITE:  
Same

4. Generator's Phone ( 315 ) 638-2129

5. Transporter 1 Company Name  
Paragon Environmental Construction

6. US EPA ID Number  
N Y R 0 0 0 1 1 9 2 8 9

A. Transporter's Phone 315-699-0840

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address  
Industrial Oil Tank Service  
120 Dry Road  
Oriskany, NY 13424

10. US EPA ID Number  
N Y R 0 0 0 0 0 5 2 9 0

C. Facility's Phone  
315-736-6000

11. Waste Shipping Name and Description

12. Containers

13. Total  
Quantity

14. Unit  
Wt/Vol

a. Non-RCRA, Non DOT Regulated Material  
(Fuel Oil Tank Bottoms)

No. Type EST. P  
0 0 1 0 N . . . . .

b.

c.

d.

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

R

15. Special Handling Instructions and Additional Information

Emergency Contact: CNS 866-734-2553

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  
S. H. A. Zillo AS AGENT FOR  
CL DEVELOPMENT

Signature  
Month Day Year  
10 28 04

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name  
Bruno Goscil

Signature  
Month Day Year  
10 28 04

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature  
Month Day Year  
. . .

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Signature  
Month Day Year  
. . .

GENERATOR'S COPY

12-BLC-M6

# Roth Steel Corporation

800 W. Hiawatha Blvd. • Syracuse, New York

Address correspondence to: P.O. Box 1354 Syracuse, NY 13201-1354

(315) 475-8431

FAX (315) 475-6070

NYS DMV #7002634



Institute of Scrap  
Recycling  
Industries, Inc.

**"Home of Super Shred"**

	Date	Ticket Nr
PURCHASE - FERROUS	11/19/04 11:34	1-3477433

From: ORLEON  
ORLANDO CONSTRUCTION  
16 EAST GENESEE ST  
BALDWINSVILLE, NY 13027

Truck: Truck By:

2 & 3 SHIPPING  
cleaned tank

2,320 Lbs @ \$ 60.0000 / NT

69.60

16,420 Lbs Gross  
14,100 Lbs Tare  
2,320 Lbs Net

Due Customers: 69.60

Paid Cash 69.60

Cash Received \_\_\_\_\_



41144

**NON-HAZARDOUS  
WASTE MANIFEST**

1. Generator's US EPA ID No.

Manifest  
Document No.

2. Page 1  
of 1

Generator's Name and Mailing Address

C.L. Development  
30 Osurego St  
Baldwinsville, NY 13027

SITE: Tide Store

138 W. Genesee St.  
Baldwinsville, NY

4. Generator's Phone

315-635-2129

5. Transporter 1 Company Name

Paragon Environmental Construction

6. US EPA ID Number

NYR0000119289

A. Transporter's Phone

315-699-0840

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address

Industrial Oil Tank Service  
120 Dry Road  
Oriskany, NY 13424

10. US EPA ID Number

NYR0000003298

C. Facility's Phone

315-736-6080

11. Waste Shipping Name and Description

12. Containers

No.

Type

13. Total  
Quantity

14. Unit  
Wt/Vol

a. Non-RCRA, Non DDT Regulated Material  
(Oil & Water)

0.01 T.T

EST.

450

U

b.

c.

d.

Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

R

15. Special Handling Instructions and Additional Information

Emergency Contact: CNS 866-734-2533

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

Jeff Worsley

[Signature]

. . .

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

Bruce Reynolds

[Signature]

10/12/04

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Signature

Month Day Year

Don Connors

[Signature]

11/01/04

COPY



## **APPENDIX B**

### **TEST PIT LOGS**

# **PLUMLEY ENGINEERING, P.C.** **TEST PIT LOG**

**PROJECT:** Rick's Auto  
**LOCATION:** Baldwinsville, New York  
**JOB NO.:** 2003115

**DATE:** June 21, 2004  
**WEATHER:** SUNNY, 76  
**OBSERVER:** SAZ

**TEST PIT NO.** TP-1

DEPTH	SAMPLE DEPTH	PID/COC INFO	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
1		0	medium to coarse gravel fill around lift	
2		0	medium to coarse gravel fill around lift	
3		0	medium to coarse gravel fill around lift	
4	4	0	medium to coarse gravel fill around lift	
5		0	medium to coarse gravel fill around lift	5.0
6		0	fine sand and silt, little fine gravel, brown, moist	
7				
8				
9				
10				
11				
12				
13				
14				
15				

**Comments:**

hydraulic lift excavation on east side of Rick's Auto bldg

single ram lift removed

test pit bottom at 5 ft bgs

sample collected at fill material/native soil interface

no volatile odors detected in excavation

no sign of leaking lift fluids observed (i.e., no staining)

total test pit size 12 x 6 x 5 (L x W x D)

# **PLUMLEY ENGINEERING, P.C.** **TEST PIT LOG**

**PROJECT:** Rick's Auto  
**LOCATION:** Baldwinsville, New York  
**JOB NO.:** 2003115

**DATE:** June 21, 2004  
**WEATHER:** SUNNY, 76  
**OBSERVER:** SAZ

**TEST PIT NO.** TP-2

DEPTH	SAMPLE DEPTH	PID/COC INFO	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
1		0	sand and fine to medium gravel, dark brown/grey staining	
2		0	sand and fine to medium gravel, dark brown/grey staining	
3		0	sand and fine to medium gravel, dark brown/grey staining	
4		0	sand and fine to medium gravel, dark brown/grey staining	
5		0	sand and fine to medium gravel, dark brown/grey staining	
6		0	sand and fine to medium gravel, dark brown/grey staining	
7		0	sand and fine to medium gravel, dark brown/grey staining	
8		0	sand and fine to medium gravel, dark brown/grey staining	
9		0	sand and fine to medium gravel, dark brown/grey staining	
10	10	0	fine sand and silt, little clay and fine gravel, red-grey, moist	10
11				
12				
13				
14				
15				

**Comments:**

hydraulic lift excavation on east side of Rick's Auto bldg  
dual ram lift removed  
test pit bottom at 10 ft bgs  
sample collected at bottom of test pit following excavation of stained material  
no volatile odors detected in excavation  
staining evident, but no odor, sheen or PID readings observed  
total test pit size 11 x 15 x 9 (L x W x D)

**PLUMLEY ENGINEERING, P.C.**  
**TEST PIT LOG**

**PROJECT:** Rick's Auto  
**LOCATION:** Baldwinsville, New York  
**JOB NO.:** 2003115

**DATE:** June 21, 2004  
**WEATHER:** SUNNY, 76  
**OBSERVER:** SAZ

**TEST PIT NO.** TP-3

DEPTH	SAMPLE DEPTH	PID/COC INFO	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
1		0	sand and fine to medium gravel fill	
2		0	sand and fine to medium gravel fill	
3		0	sand and fine to medium gravel fill	
4		0	sand and fine to medium gravel fill	
5		0	sand and fine to medium gravel fill	
6	6	0	sand and fine to medium gravel fill	
7		0	sand and fine to medium gravel fill	
8		0	fine sand and silt, little fine gravel, red-brown, moist	8
9				
10				
11				
12				
13				
14				
15				

**Comments:**

hydraulic lift excavation on east side of Rick's Auto bldg  
single ram lift removed  
test pit bottom at 7 ft bgs  
sample collected at fill material/native soil interface  
no volatile odors detected in excavation  
no sign of leaking lift fluids observed (i.e., no staining)  
total test pit size 10 x 4 x 7 (L x W x D)

**PLUMLEY ENGINEERING, P.C.**  
**TEST PIT LOG**

PROJECT: Rick's Auto  
LOCATION: Baldwinsville, New York  
JOB NO.: 2003115

DATE: September 28, 2004  
WEATHER: PARTLY CLOUDY, 70  
OBSERVER: SAZ

TEST PIT NO. TP-4

DEPTH	SAMPLE DEPTH	PID/COC INFO	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
1		0	fine sand and silt, little fine gravel, red-brown, moist, slight odor/sheen	
2		0	fine sand and silt, little fine gravel, red-brown, moist, slight odor/sheen	
3		0	fine sand and silt, little fine gravel, red-brown, moist, slight odor/sheen	
4		0	fine sand and silt, little fine gravel, red-brown, moist, slight odor/sheen	
5		0	fine sand and silt, little fine gravel, red-brown, moist, slight odor/sheen	
6		0	fine sand and silt, little fine gravel, red-brown, moist, slight odor/sheen	
7		0	fine sand and silt, little fine gravel, red-brown, moist, slight odor/sheen	
8	8	0	fine sand and silt, little fine gravel, red-brown, moist	
9				
10				
11				
12				
13				
14				
15				

**Comments:**

hydraulic lift excavation on west side of Rick's Auto bldg  
single ram lift removed  
test pit bottom at 7 ft bgs  
sample collected at bottom of test pit following excavation of sheen material  
all PID readings less than 1.0, but slight odor detected  
sheen observed, no staining  
total test pit size 10 x 10 x 7 (L x W x D)

**PLUMLEY ENGINEERING, P.C.**  
**TEST PIT LOG**

PROJECT: Rick's Auto  
LOCATION: Baldwinsville, New York  
JOB NO.: 2003115

DATE: September 27, 2004  
WEATHER: PARTLY CLOUDY, 70  
OBSERVER: SAZ

TEST PIT NO. TP-5

DEPTH	SAMPLE DEPTH	PID/COC INFO	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
1		0	fine sand and silt, little fine gravel, red-brown, moist, slight odor/sheen	
2		0	fine sand and silt, little fine gravel, red-brown, moist, slight odor/sheen	
3		0	fine sand and silt, little fine gravel, red-brown, moist, slight odor/sheen	
4		0	fine sand and silt, little fine gravel, red-brown, moist, slight odor/sheen	
5		0	fine sand and silt, little fine gravel, red-brown, moist, slight odor/sheen	
6	6	0	fine sand and silt, little fine gravel, red-brown, moist, slight odor/sheen	
7		0	fine sand and silt, little fine gravel, red-brown, moist, slight odor/sheen	
8		0	fine sand and silt, little fine gravel, red-brown, moist, slight odor/sheen	
9		0	fine sand and silt, little fine gravel, red-brown, moist	
10				
11				
12				
13				
14				
15				

**Comments:**

hydraulic lift excavation on west side of Rick's Auto bldg  
dual ram lift removed  
test pit bottom at 9 ft bgs  
sample collected at fill material/native soil interface  
no volatile odors detected in excavation  
some staining and odor observed around hydraulic cylinders  
total test pit size 12 x 6 x 5 (L x W x D)

**PLUMLEY ENGINEERING, P.C.**  
**TEST PIT LOG**

PROJECT: Rick's Auto  
LOCATION: Baldwinsville, New York  
JOB NO.: 2003115

DATE: September 28, 2004  
WEATHER: PARTLY CLOUDY, 70  
OBSERVER: SAZ

TEST PIT NO. TP-6

DEPTH	SAMPLE DEPTH	PID/COC INFO	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
1		0	fine sand and silt, little fine gravel, red-brown, moist, staining/sheen observed	
2		0	fine sand and silt, little fine gravel, red-brown, moist, staining/sheen observed	
3		0	fine sand and silt, little fine gravel, red-brown, moist, staining/sheen observed	
4		0	fine sand and silt, little fine gravel, red-brown, moist, staining/sheen observed	
5		0	fine sand and silt, little fine gravel, red-brown, moist, staining/sheen observed	
6		0	fine sand and silt, little fine gravel, red-brown, moist, staining/sheen observed	
7		0	fine sand and silt, little fine gravel, red-brown, moist, staining/sheen observed	
8	8	0	fine sand and silt, little fine gravel, red-brown, moist	
9				
10				
11				
12				
13				
14				
15				

**Comments:**

hydraulic lift excavation on east side of Rick's Auto bldg  
single ram lift removed  
test pit bottom at 5 ft bgs  
sample collected at bottom of test pit following excavation of sheen material  
all PID readings less than 1.0, but slight odor detected  
sheen and staining observed  
total test pit size 10 x 10 x 7 (L x W x D)

## **APPENDIX C**

### **MONIOTRING WELL INSTALLATION LOGS**





# TEST BORING LOG

5879 Fisher Road  
East Syracuse, NY 13057

PROJECT Former Rick's Auto  
136-138 Genesee Street  
LOCATION Baldwinsville, New York

HOLE NO. MW-3R  
JOB NUMBER: 04202B  
SURF. EL.

GROUNDWATER DEPTH  
WHILE DRILLING 5.5'

DATE STARTED: 04/15/05  
DATE COMPLETED: 04/15/05

BEFORE CASING  
REMOVED

N - NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER  
FALLING 30" - ASTM D-1586 STANDARD PENETRATION TEST

AFTER CASING  
REMOVED

C - NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER  
FALLING % OR PERCENT CORE RECOVERY

CASING TYPE HOLLOW STEM AUGER  
DRILLER'S FIELD LOG

SHEET 1 OF 1  
Job #2003115.00

DEPTH	SAMPLE DEPTH	SAMPLE NO.	Rec	SAMPLE DRIVE RECORD PER 6"	N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
5.0	0.0'-	1		DIRECT		Brown moist SILT, little fine to coarse sand, trace fine to coarse sand	5.5'
	4.0'			PUSH			
WL ▾	4.0'-	2		DIRECT		Brown wet fine to coarse SAND, little silt, little fine to coarse gravel	
	8.0'			PUSH			
10.0	8.0'-	3		DIRECT			
	12.0'			PUSH			
15.0	12.0'-	4		DIRECT		Bottom of Boring	16.0'
	16.0'			PUSH			
						Note: Installed 2" PVC 10 slot screen 13.0' to 3.0', 2" PVC riser to surface.	



ENVIRONMENTAL CONSULTANTS & CONTRACTORS, INC.

CRITTENDEN  
(716) 937-6527  
SENECA FALLS  
(315) 568-1664

BORE HOLE: MW-4

DATE: 6/18/02

ELEVATION: 100.03'

PROJECT:

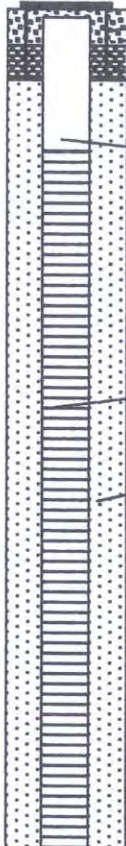
DEC 7 - Rick's Auto Repair, Baldwinsville

PREPARED FOR:

NYSDEC - Region 7, Syracuse, NY

BORING LOCATION:

Approximately 45' north of MW-3.

SN	0"/ 6"	6"/ 12"	12"/ 18"	18"/ 24"	N	REC (ft.)	DESCRIPTION/ CLASSIFICATION	OVM (ppm)	WELL CONSTRUCTION	COMMENTS
0'							0'-4': Dark brown to brown SILT, fine sand and medium-coarse gravel, damp, odors.	1,984		8-inch, flush-mounted curbbox Auger cuttings Bentonite seal 2-inch, PVC riser 10' of 2-inch, 10 slot, Sch 40 PVC well screen #0 silica sand pack
4'							4'-8': Brown dense SILT with some fine sand and gravel, wet, odors.	249		
							8'-12': Brown, dense silty CLAY and silt with some fine-medium gravel, trace fine sand, wet, odors.	88		
12'							Augered to 12' BG.		Well set at 12' BG.	

LOGGED BY: T. DiCaprio

PAGE: 1 of 1





ENVIRONMENTAL CONSULTANTS & CONTRACTORS, INC.

CRITTENDEN  
(716) 937-6527  
SENECA FALLS  
(315) 568-1664

BORE HOLE: MW-5

DATE: 6/18/02

ELEVATION: 101.37'

PROJECT: DEC 7 - Rick's Auto Repair, Baldwinsville

PREPARED FOR: NYSDEC - Region 7, Syracuse, NY

BORING LOCATION: Approximately 40' east/northeast of MW-4.

SN	0"/ 6"	6"/ 12"	12"/ 18"	18"/ 24"	N	REC (ft.)	DESCRIPTION/ CLASSIFICATION	OVM (ppm)	WELL CONSTRUCTION	COMMENTS
0'							0'-4': Brown dense SILT and silty clay with some fine sand and gravel, damp, odors.	181		
4'							4'-8': Brown dense SILT and silty clay with some fine sand and gravel, moist, odors.	72.4		
8'							8'-12': Brown dense SILT and silty clay with some fine sand and gravel, wet, odors.	63		
12'							Augered to 12' BG.		Well set at 12' BG.	

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PAGE: 1 of 1





**ENVIRONMENTAL CONSULTANTS & CONTRACTORS, INC.**

**CRITTENDEN**  
(716) 937-6527  
**SENECA FALLS**  
(315) 568-1664

**BORE HOLE: MW-7**

DATE: 6/19/02

ELEVATION: 98.14'

PROJECT: DEC 7 - Rick's Auto Repair, Baldwinsville

PREPARED FOR: NYSDEC - Region 7, Syracuse, NY

BORING LOCATION: Approximately 55' west of MW-4, on adjoining property.

SN	0"/ 6"	6"/ 12"	12"/ 18"	18"/ 24"	N	REC (ft.)	DESCRIPTION/ CLASSIFICATION	OVM (ppm)	WELL CONSTRUCTION	COMMENTS
0'							0'-4': Dark brown SILT, silty clay with some fine-medium gravel, moist, odors.	26.7		
4'							4'-8': Dark brown SILT, silty clay with some fine-medium gravel, wet, odors.	481		
8'							8'-12': Dark brown SILT, silty clay with some fine-medium gravel, wet, odors.	160		
12'							Augered to 12' BG.		Well set at 12'BG.	

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PAGE: 1 of 1





ENVIRONMENTAL CONSULTANTS & CONTRACTORS, INC.

CRITTENDEN  
(716) 937-6527  
SENECA FALLS  
(315) 568-1664  
98.71'

BORE HOLE: MW-8

DATE: 6/19/02

ELEVATION:

PROJECT:

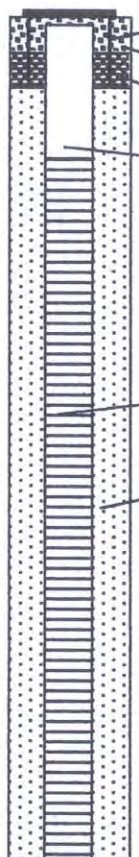
DEC 7 - Rick's Auto Repair, Baldwinsville

PREPARED FOR:

NYSDEC - Region 7, Syracuse, NY

BORING LOCATION:

Approximately 50' north of MW-7, across Route 31.

SN	0"/ 6"	6"/ 12"	12"/ 18"	18"/ 24"	N	REC (ft.)	DESCRIPTION/ CLASSIFICATION	OVM (ppm)	WELL CONSTRUCTION	COMMENTS
0'							0'-4': Brown silty CLAY, firm, some fine-medium gravel, damp, slight odors.	12.7		8-inch, flush-mounted curbbox Auger cuttings Bentonite seal 2-inch, PVC riser 10' of 2-inch, 10 slot, Sch 40 PVC well screen #0 silica sand pack
4'							4'-8': Brown silty CLAY, firm, some fine-medium gravel, small cobbles, wet, no odors.	1.7		
8'							8'-12': Brown silty CLAY, firm, some fine-medium gravel, small cobbles, wet, no odors.	1		
12'							Augered to 12' BG.		Well set at 12' BG.	

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PAGE: 1 of 1





ENVIRONMENTAL CONSULTANTS & CONTRACTORS, INC.

CRITTENDEN  
(716) 937-6527  
SENECA FALLS  
(315) 568-1664  
100.67'

BORE HOLE: MW-9

DATE: 6/19/02

ELEVATION:

PROJECT: DEC 7 - Rick's Auto Repair, Baldwinsville

PREPARED FOR: NYSDEC - Region 7, Syracuse, NY

BORING LOCATION: Approximately 70' east/northeast of MW-8.

SN	0"/ 6"	6"/ 12"	12"/ 18"	18"/ 24"	N	REC (ft.)	DESCRIPTION/ CLASSIFICATION	OVM (ppm)	WELL CONSTRUCTION	COMMENTS
0'							0'-4': Brown, soft silty CLAY with some fine-medium gravel, moist, no odors.	2.4		
4'							4'-8': Brown, soft silty CLAY with some fine-medium gravel, wet, no odors.	0.3		
8'							8'-12': Brown, soft silty CLAY with some fine-medium gravel, wet, no odors.	3.7		
12'							Augered to 12' BG.		Well set at 12' BG.	

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PAGE: 1 of 1



# TEST BORING LOG

5879 Fisher Road  
East Syracuse, NY 13057

PROJECT **Former Rick's Auto**  
136-138 Genesee Street  
LOCATION **Baldwinsville, New York**

HOLE NO. **MW-10**  
JOB NUMBER: **04202B**  
SURF. EL.

GROUNDWATER DEPTH  
WHILE DRILLING

DATE STARTED: **04/15/05**  
DATE COMPLETED: **04/15/05**

BEFORE CASING  
REMOVED

N - NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER  
FALLING 30" - ASTM D-1586 STANDARD PENETRATION TEST

AFTER CASING  
REMOVED

C - NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER  
FALLING "/ OR PERCENT CORE RECOVERY

CASING TYPE **HOLLOW STEM AUGER**  
DRILLER'S FIELD LOG

SHEET **1 OF 1**  
Job #2003115.00

DEPTH	SAMPLE DEPTH	SAMPLE NO.	Rec	SAMPLE DRIVE RECORD PER 6"	N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
5.0						Red-brown moist CLAY, some silt and fine to coarse gravel, few cobbles	2.0'
						Gray moist SILT and fine to medium GRAVEL, little to trace clay	5.0'
10.0						Red-brown moist to wet SILT, little clay, trace fine gravel	
15.0						Bottom of Boring	13.0'
						Note: Installed 2" PVC 10 slot screen 13.0' to 3.0', 2" PVC riser to surface.	





ENVIRONMENTAL CONSULTANTS & CONTRACTORS, INC.

CRITTENDEN  
(716) 937-6527  
SENECA FALLS  
(315) 568-1664  
ELEVATION: 99.87'

BORE HOLE: MW-11

DATE: 8/28/02

PROJECT:

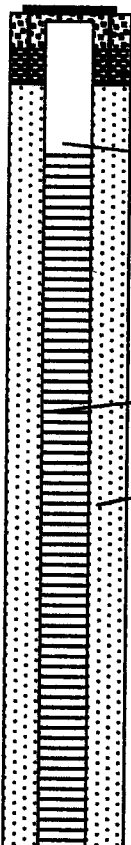
DEC 7 - Rick's Auto Repair, Baldwinsville

PREPARED FOR:

NYSDEC - Region 7, Syracuse, NY

BORING LOCATION:

East of #136 Residence.

SN	0"/ 6"	6"/ 12"	12"/ 18"	18"/ 24"	N	REC (ft.)	DESCRIPTION/ CLASSIFICATION	PID (ppm)	WELL CONSTRUCTION	COMMENTS
0'							0'-4': Brown SILT and silty clay with some fine-medium gravel, moist at 3', slight petroleum odors.	19		8-inch, flush-mounted curbbox Auger cuttings Bentonite seal 2-inch, PVC riser 10' of 2-inch, 10 slot, Sch 40 PVC well screen #0 silica sand pack
4'							4'-8': Brown SILT and silty clay with some fine-medium gravel, wet, strong petroleum odors.	1,590		
12'							Augered to 12' BG.		Well set at 12' BG.	

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PAGE: 1 of 1



ENVIRONMENTAL CONSULTANTS & CONTRACTORS, INC.

CRITTENDEN  
(716) 937-652

SENECA FALLS  
(315) 568-166

# BORE HOLE: MW-12

DATE: 8/28/02

ELEVATION: 97.22'

PROJECT: DEC 7 - Rick's Auto Repair, Baldwinsville

PREPARED FOR: NYSDEC - Region 7, Syracuse, NY

BORING LOCATION: Northwest corner of #136 residence property.

SN	0"/ 6"	6"/ 12"	12"/ 18"	18"/ 24"	N	REC (ft.)	DESCRIPTION/ CLASSIFICATION	PID (ppm)	WELL CONSTRUCTION	COMMENTS
0'							0'-4': Brown SILT with trace fine gravel, dry, no petroleum odors.	0		8-inch, flush-mounted curbbox Auger cuttings Bentonite seal 2-inch, PVC riser
4'							4'-8': Brown SILT with trace fine gravel, wet, strong petroleum odors.	1,104		10' of 2-inch, 10 slot, Sch 40 PVC well screen #0 silica sand pack
8'										
12'							Augered to 12' BG.		Well set at 12'BG.	

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PAGE: 1 of 1



ENVIRONMENTAL CONSULTANTS & CONTRACTORS, INC.

CRITTENDEN  
(716) 937-6527  
SENECA FALLS  
(315) 568-1664

BORE HOLE: MW-13

ELEVATION: 94.12'

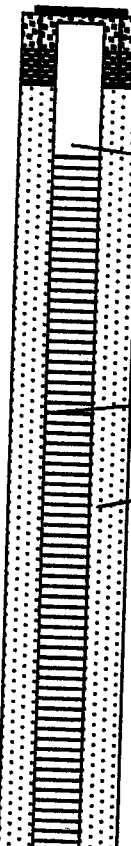
8/28/02

EC

DEC 7 - Rick's Auto Repair, Baldwinsville

NYSDEC - Region 7, Syracuse, NY

IG LOCATION: West of MW-12; #134 Residence.

0"/ 6"	6"/ 12"	12"/ 18"	18"/ 24"	N	REC (ft.)	DESCRIPTION/ CLASSIFICATION	PID (ppm)	WELL CONSTRUCTION	COMMENTS
						0'-4': Brown SILT with some fine gravel, moist at 3', no petroleum odors.	0		8-inch, flush-mounted curbbox Auger cuttings Bentonite seal 2-inch, PVC riser 10' of 2-inch, 10 slot, Sch 40 PVC well screen #0 silica sand pack
						4'-8': Brown SILT with some fine gravel, wet, no petroleum odors.	1		
						Augered to 12' BG.		Well set at 12'BG.	

BY: T. DiCaprio

PAGE: 1 of 1

CRITTENDEN ROAD • CRITTENDEN, NEW YORK 14038  
1 AUBURN ROAD • SENECA FALLS, NEW YORK 13149

FAX (716) 937-9360



## TEST BORING LOG

**5879 Fisher Road  
East Syracuse, NY 13057**

**PROJECT** Former Rick's Auto  
**LOCATION** 136-138 Genesee Street  
Baldwinsville, New York

HOLE NO. MW-14  
JOB NUMBER: 04202B  
SURF. EL.

### GROUNDWATER DEPTH WHILE DRILLING

DATE STARTED: 04/15/05  
DATE COMPLETED: 04/15/05

BEFORE CASING  
REMOVED

N - NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER  
FALLING 30" - ASTM D-1586 STANDARD PENETRATION TEST

AFTER CASING  
REMOVED

C - NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER  
FALLING " / OR PERCENT CORE RECOVERY

CASING TYPE **HOLLOW STEM AUGER**  
 DRILLER'S FIELD LOG

**SHEET 1 OF 1**  
**Job #2003115.00**

[illegible]



**5879 Fisher Road  
East Syracuse, NY 13057**

**PROJECT** Former Rick's Auto  
**LOCATION** 136-138 Genesee Street  
Baldwinsville, New York

**HOLE NO. MW-15**  
**JOB NUMBER: 04202B**

## GROUNDWATER DEPTH WHILE DRILLING

**SURF. EL.**  
**DATE STARTED: 04/15/05**  
**DATE COMPLETED: 04/15/05**

**BEFORE CASING  
REMOVED**

N - NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER  
FALLING 30" - ASTM D-1586 STANDARD PENETRATION TEST

**AFTER CASING  
REMOVED**

C - NO. OF BLOWS TO DRIVE CASING 12" W/ FALLING      "/ OR PERCENT CORE RECOVERY	# HAMMER
---	----------

**CASING TYPE                      HOLLOW STEM AUGER**  
**DRILLER'S FIELD LOG**

**SHEET 1 OF 1**  
**Job #2003115.00**

[illegible]



# TEST BORING LOG



PROJECT **Former Rick's Auto**  
**136-138 Genesee Street**  
 LOCATION **Baldwinsville, New York**

HOLE NO. **MW-16**  
 JOB NUMBER: **04202A**

SURF. EL.

DATE STARTED **11/15/04**

DATE COMPLETED **11/15/04**

GROUNDWATER DEPTH  
 WHILE DRILLING

BEFORE CASING  
 REMOVED

N - NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER  
 FALLING 30" - ASTM D-1586 STANDARD PENETRATION TEST

AFTER CASING  
 REMOVED

C - NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER  
 FALLING "/ OR PERCENT CORE RECOVERY

CASING TYPE **HOLLOW STEM AUGER**  
 DRILLER'S FIELD LOG

SHEET **1 OF 1**  
 Job #2003115.00

JOB #2003115.00

DEPTH	SAMPLE DEPTH	SAMPLE NO.	Rec	SAMPLE DRIVE RECORD PER 6"	N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH		
5.0	0.0'-	1		DIRECT		Red-brown wet SILT and CLAY, some fine to medium embedded gravel			
	2.0'			PUSH					
	2.0'-	2		DIRECT					
	4.0'			PUSH					
	4.0'-	3		DIRECT					
10.0	6.0'			PUSH					
	6.0'-	4		DIRECT					
	8.0'			PUSH					
	8.0'-	5		DIRECT					
	10.0'			PUSH					
15.0						Bottom of Boring	10.0'		
								Note: Installed 2" PVC 10 slot screen 7.0' to grade, 2" PVC riser to 3' above surface	
						Material used: 7.0' - 2" PVC 10 slot screen 3.0' - 2" PVC riser 4 bags - "0" sand			







**5879 Fisher Road  
East Syracuse, NY 13057**

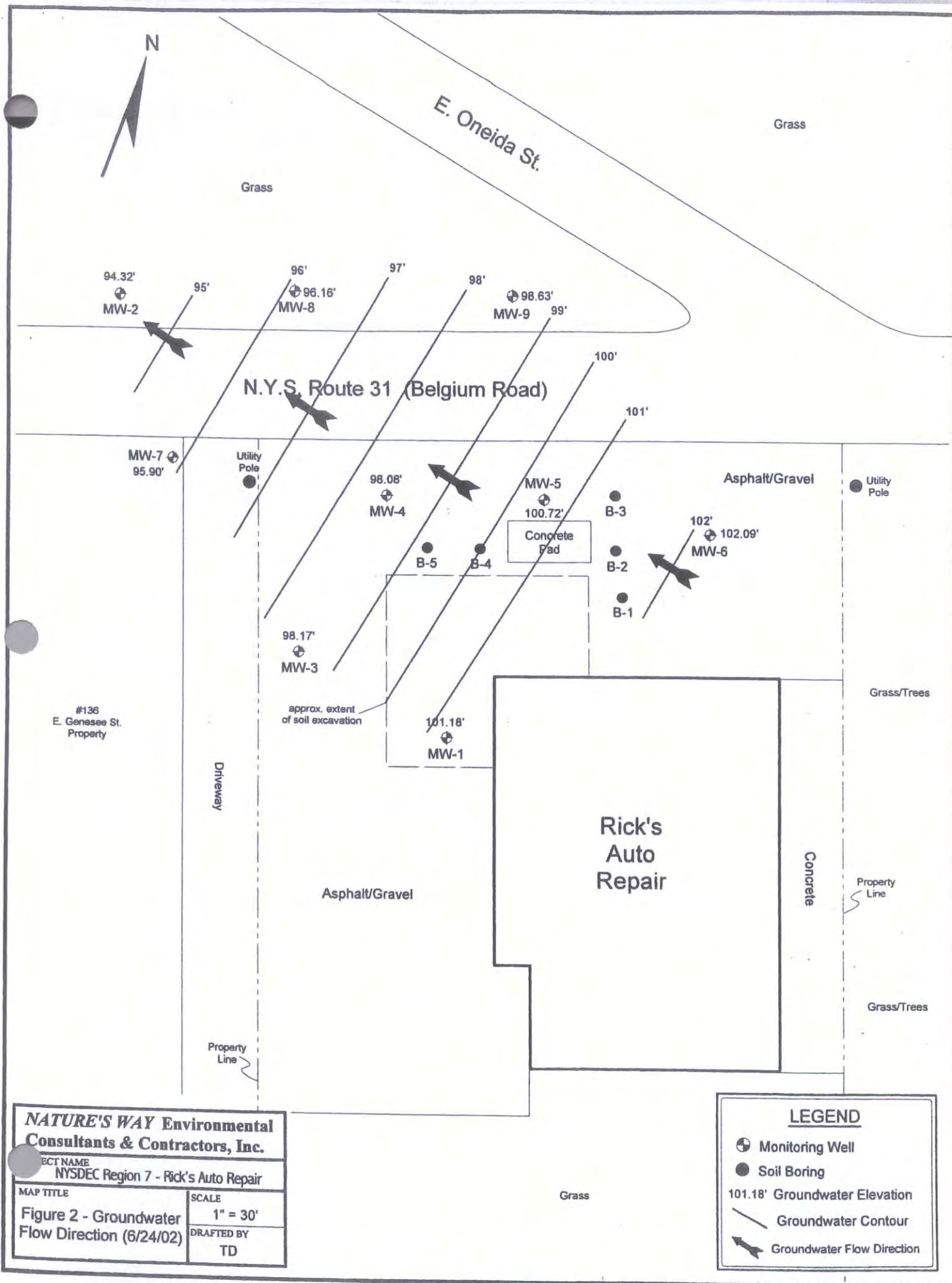
**SHEET 1 OF 1**

[illegible]

## **APPENDIX D**

### **HISTORICAL GROUNDWATER FLOWS**





**NATURE'S WAY Environmental Consultants & Contractors, Inc.**

PROJECT NAME  
NYSDEC Region 7 - Rick's Auto Repair

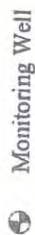
MAP TITLE  
Figure 2 - Groundwater Flow Direction (6/24/02)

SCALE  
1" = 30'  
DRAFTED BY  
TD

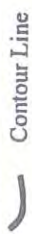
**LEGEND**

- Monitoring Well
- Soil Boring
- 101.18' Groundwater Elevation
- Groundwater Contour
- Groundwater Flow Direction

# LEGEND



100.67' Groundwater Elevation



E. Oneida Street

Barn

#135

N.Y.S. Route 31

utility pole

grass/trees

grass/trees

concrete

approx. property line

grass

asphalt/gravel

approx. property line

approx. property line

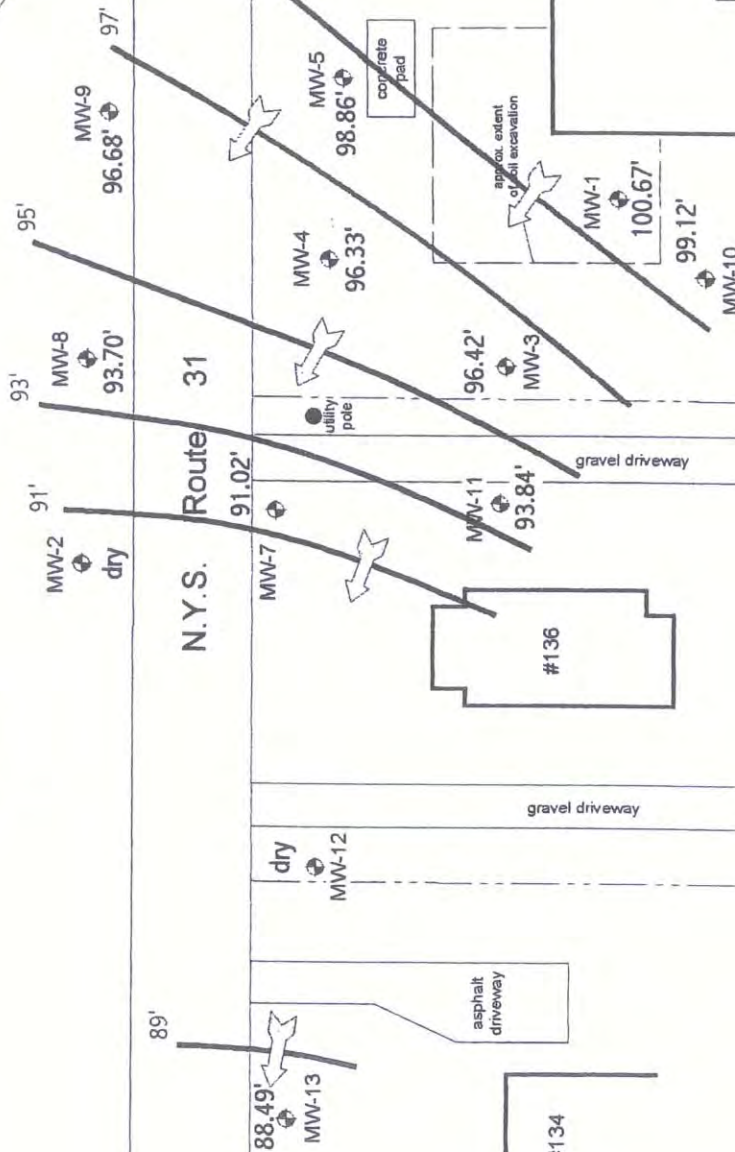
**NATURE'S WAY Environmental Consultants & Contractors, Inc.**

PROJECT NAME  
NYSDEC Region 7 - Rick's Auto Repair

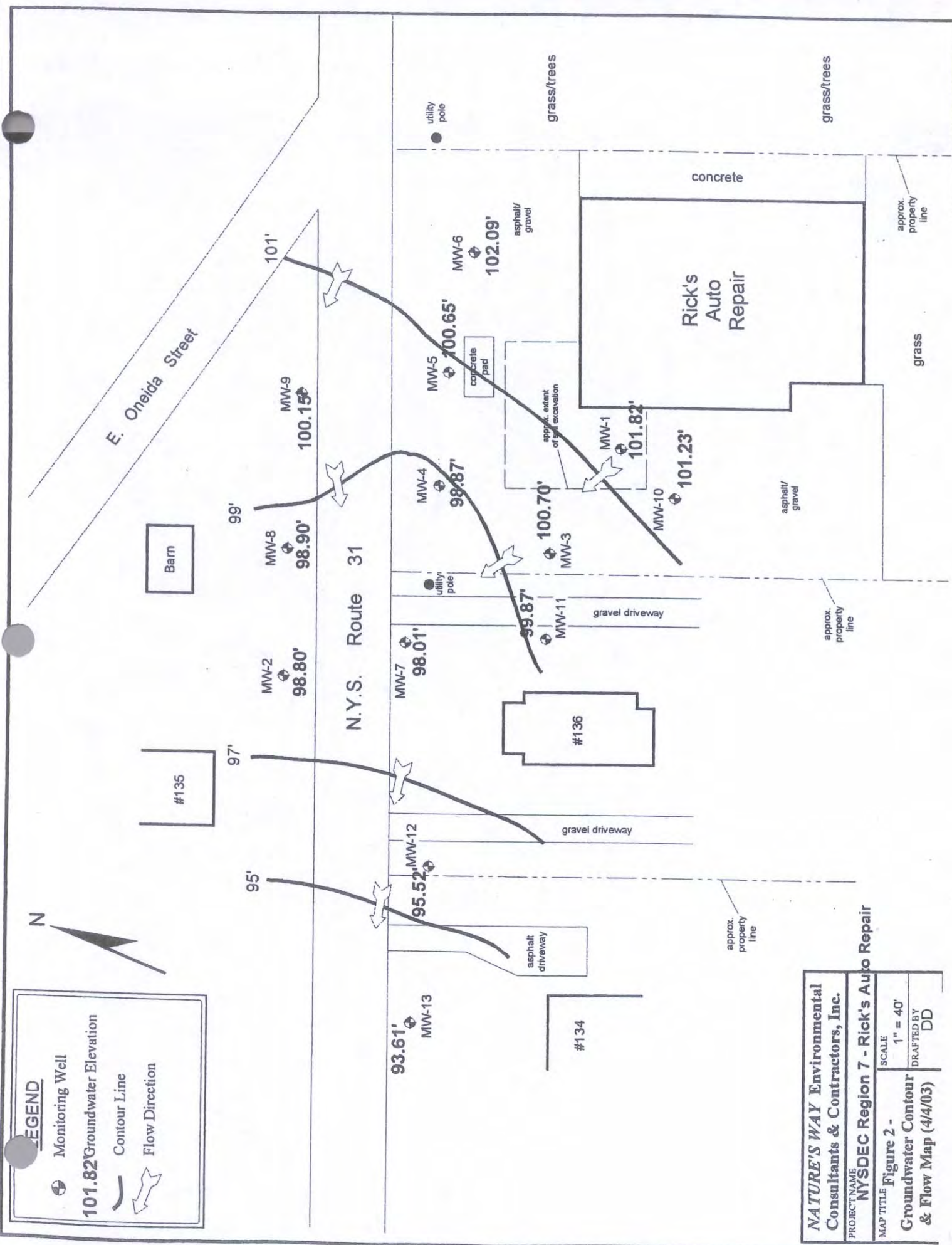
MAP TITLE  
**Figure 2 - Groundwater Contour & Flow Map (9/3/02)**

SCALE  
1" = 40'

DRAFTED BY  
DD







**NATURE'S WAY Environmental Consultants & Contractors, Inc.**

**PROJECT NAME**  
NYSDEC Region 7 - Rick's Auto Repair

**MAP TITLE**  
Figure 2 - Groundwater Contour & Flow Map (4/4/03)

**SCALE**  
1" = 40'

**DRAFTED BY**  
DD

## **APPENDIX E**

### **DATA USABILITY SUMMARY REPORT (DUSR)**

# Data Validation Services

120 Cobble Creek Road P. O. Box 208

North Creek, NY 12853

Phone (518) 251-4429

Facsimile (518) 251-4428

## LETTER OF TRANSMITTAL

TO: Scott Zollo

COMPANY: Plumley Engineering

FROM: Judy Harry

DATE: 09-09-05

ENCLOSED: Validation report for the Rick's Auto site

Qualified report forms

Associated invoice

COMMENTS:



Ship via: US Express \_\_\_\_ UPS \_\_\_\_ US Priority \_\_X\_\_ Fed Ex \_\_\_\_ Other \_\_\_\_



# Data Validation Services

120 Cobble Creek Road P. O. Box 208

North Creek, N. Y. 12853

Phone 518-251-4429

Facsimile 518-251-4428



September 8, 2005

Scott Zollo  
Plumley Engineering  
8232 Loop Rd.  
Baldwinsville, NY 13027

RE: **Data Usability Summary Report for the Rick's Auto site**  
AES Package Nos. 040625025, 040819040, 040831012, 040910038, 041005008, 041015021,  
041208014, and 050428024  
Pace Package No. 1012585

Dear Mr. Zollo:

A limited review has been completed for the data packages generated by Adirondack Environmental Services that pertain to samples collected 6/21/04 through 5/06/05 at the Rick's Auto site. Sixteen aqueous samples were analyzed for TCV volatiles and TCL semivolatiles. Five surface soil samples were analyzed for TCL semivolatiles, TCL PCBs, and RCRA metals. Forty eight subsurface soil samples were analyzed for various combinations of TCL volatiles, TCL semivolatiles, base/neutrals, TCL PCBs, and/or RCRA metals. Nine soil gas samples were processed for volatiles by USEPA method TO-15. Laboratory methodologies utilized for the waters and soils were those of the USEPA SW846 methods 8260B, 8270C, 8082, 6010B, and 7470/7471. The air analyses were subcontracted to Pace Laboratory. Sample matrix spikes and equipment/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 full review of raw data for 20% of the samples, and limited review of associated QC raw data. Full validation has not been performed. However, the reported summary form have been reviewed for application of validation qualifiers, per the USEPA Region 2 validation SOPs and the USEPA National Functional Guidelines for Data Review, as affects the usability of the sample data. The following items were reviewed:

- \* Laboratory Narrative Discussion
- \* Custody Documentation
- \* Holding Times
- \* Surrogate and Internal Standard Recoveries
- \* Matrix Spike Recoveries/Duplicate Correlations
- \* Preparation/Calibration Blanks
- \* Control Spike/Laboratory Control Samples
- \* Instrumental Tunes and IDLs
- \* Calibration/CRI/CRA Standards (for validated samples)
- \* ICP Interference Check Standards
- \* ICP Serial Dilution Correlations

- \* Sample Result Verification (for validated samples)
- \* Method Compliance

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.

Samples undergoing full validation are MW-1, MW-5, MW-10, MW-14, SS-3, TP-1, TP-5, RE-5, RE-7/RE-8 Comp, RE-16, RE-18, RE-20, STP-2, FD-3, FD-6, SV-2, and SV-3.

In summary, samples were primarily processed in compliance with protocol requirements, and most sample results are usable. However, many of the sample results are qualified as being estimated in value, with potential low biases, due to elevated cooler temperatures at sample receipt. Several samples were analyzed for semivolatiles beyond the allowable holding times, and those results are also qualified as estimated. Results for one acidic semivolatile analyte are not usable in eighteen of the samples, and results for a second acidic semivolatile analyte is not usable in five of those samples.

Copies of the laboratory case narratives and laboratory NYSDEC Sample Identification and Analytical Requirement Summary Forms 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 for the fully validated samples, and that reflect qualifications for the others that became evident during the review process.

The following text discusses quality issues of concern.

#### **Custody/Sample Receipt**

The samples were not transferred to the laboratory within the required two days from collection. The duration between sample collection and laboratory receipt was as much as eleven days. The attached memorandum documents the condition and custody of the samples during the interim. The holding times of the samples were evaluated as technical holding times from sample collection. Those holding times were met, unless stated specifically below.

Many of the samples were received at elevated temperatures (above 10°C). All results for those samples are therefore qualified as estimated ("UJ" or "J"), with a possible low bias. The affected samples are those collected in June and August 2004 (14°C to 20°C after overnight delivery).

Some of the custody forms do not include an entry for release date/time. Those dates were provided upon request.

#### **TCL Volatiles by EPA 8260B**

RE-23 was analyzed beyond the allowable holding time, at 15 days from collection. Results are therefore qualified as estimated ("UJ" or "J") due to possible losses. This medium level analysis involved the use of 400 uL of methanol, above the limit of 100 uL allowed by the protocol. This can change the solvency of the purging matrix, and reduce the recovery of some of the analytes from the sample. The results are considered additionally estimated.



RE-10 shows low surrogate recovery, indicating additional consideration as estimated. The results for this sample are already qualified due to elevated temperature at receipt.

Due to poor mass spectral quality, the detection of 2-butanone in RE-20 is qualified as tentative in identification and estimated in value ("NJ").

Detections of acetone in all samples are considered external contamination (as evidenced by the presence in associated trip, method, or spiked blanks), and are to be edited to nondetection ("U") at the CRDL. Similarly, the detections of chloroform in STP-2, STP-4, and UST-1 are also edited to non-detection due to presence in the associated trip blank.

The trip blank associated with the aqueous volatile samples was filled more than two months before the samples, and was thus processed beyond an allowable holding time. The non-detected results for that blank are not usable, and therefore a thorough evaluation for external contamination is not made. Low level detected results in the aqueous samples should be used with caution.

Matrix spikes of soil samples Floor Drain West, RE-3/RE-4 Comp, RE-16, RE-21, RE-22 (medium level), STP-5, MW16 0-2, and RE-26 show acceptable accuracy and precision.

Matrix spikes of aqueous samples MW-4 and MW-15 show acceptable accuracy and precision, or slightly outlying recoveries in only one of the spikes, with the exception of that for benzene (54% and 74%, below 76%; 31%RPD) in the former. The result for benzene in MW-4 is qualified as estimated.

Calibrations standards show responses within validation guidelines, with the following exceptions, results for which are therefore qualified as estimated ("J" or "UJ") in the indicated samples:

- chloromethane and vinyl chloride in the aqueous samples
- bromomethane, vinyl chloride, and acetone in MW16 0-2, RE-22R, and RE-23R
- several analytes show low responses in standards associated with samples, results for which are already qualified due to elevated temperature at receipt.

#### **Semivolatile Analyses by EPA8270C**

SS-1, TP-5, TP-6, FD-3, FD-4, FD-5, and FD-6 were extracted at 15 days from collection, and results for all compounds in those samples are therefore to be qualified as estimated ("J" or "UJ").

Results for non-detected analytes in RE-1/RE-2 Comp, RE-3/RE-4 Comp, and RE-13 are to be considered as being potentially seriously biased low, due to the combined effect of being received at elevated temperature (noted above), and also being extracted at 13 days from collection (due to delays in transit).

Matrix spikes of TP-1, RE-TP-1, RE-22, FD-6, MW-22R, STP-5, and MW-15 show acceptable accuracy and precision values within recommended ranges, with the exception of some minor elevated recoveries or duplicate correlations for analytes not detected in the samples. No qualification is indicated.



Results for 2,4-dinitrophenol in RE-TP-1, RE-13, RE-15 through RE-19, RE-25, RE-26, SS-1, TP-4, TP-6, and FD-4, and results for 2,4-dinitrophenol and 4,6-dinitro-2-methylphenol in RE-20 through RE-24, are not usable ("R") due to poor response in the associated calibration standards. No corrective action was required of the laboratory.

Detections of bis(2-ethylhexyl)phthalate in the samples collected in October 2004 are considered external contamination (as evidenced by the presence in associated equipment blanks), and are to be edited to nondetection ("U") at the CRDL, or originally reported concentration, whichever is greater.

Other calibrations standards show responses within validation guidelines, with the following exceptions, results for which are qualified as estimated ("J" or "UJ") in the indicated samples:

- phenol and hexachlorocyclopentadiene in RE-20 through RE-24
- 2,4-dinitrophenol, 4,6-dinitro-2-methylphenol, 4-nitrophenol, and 4-nitroaniline in MW-7, M-14, and EB-1
- several analytes show low responses in standards associated with samples, results for which are already qualified due to elevated temperature at receipt

Instrument tunes were within required ranges, and surrogate and internal standard recoveries were acceptable.

#### **TCL PCBs by EPA8082**

Surrogate recoveries are within recommended ranges. Blanks show no contamination. Calibration standard responses were within validation action guidelines.

The matrix spikes of Aroclors 1016 and 1260 in FD-3, SS-4, STP-5, and Drain West show acceptable accuracy and precision.

#### **RCRA Metals by 6010B and 7471/7470**

The matrix spike of Floor Drain E shows no recovery for arsenic or selenium. Results reporting non-detection of those elements in Floor Drain E and Floor Drain W are not usable ("R" qualifier). Detected results of arsenic and selenium in those samples, and all results for cadmium, lead, and silver in those samples are qualified as estimated ("J" or "UJ") due to outlying spike recoveries (the latter three at 13%, 16%, and 71%).

The matrix spikes of SS-4 and MW-16 0-2 show no recovery for selenium. Results reporting non-detection of those elements in soil samples collected in October and November 2004 are not usable ("R" qualifier). Detected results of selenium in those samples are qualified as estimated ("J").

The matrix spike of SS-4 also showed a low recovery for silver (26%) and mercury (70%). Results for those two elements in the samples collected in October 2004 are qualified as estimated.

The matrix spike of MW16 0-2 also showed a low recovery for silver (36%).

Matrix spike/duplicate evaluations performed on soil sample RE-25M show low recovery for silver (63%). Results for silver in the samples collected in September 2004 are therefore qualified as estimated ("J" or "UJ").

The serial dilution of soil sample SS-4 shows acceptable correlations.

The serial dilution evaluations of RE-25 and Floor Drain E are not applicable due to low sample concentrations.

Equipment blanks show no contamination. No aqueous LCS associated with equipment blanks from October 2004 was reported. There is not perceived significant effect on sample reported results.

#### **Volatiles by TO-15**

Although not one of the validated samples, it is observed that SV-1 was received at very low pressure, indicating incomplete sample collection. The sample required significant addition of helium, resulting in very elevated reporting limits (resulting dilution factor of 23). The results for this sample may not be usable for the project goals. All results have been flagged as estimated ("J"), and may have a bias of unknown direction.

Tentatively Identified Compounds (TICs) were reported for the air samples, but not for the associated method blanks, which also do show non-target responses. Sample TIC results should be used with that caution.

Isopropyl alcohol was not reported as a target analyte. The laboratory states that the TICs of the samples were evaluated for the presence of that compound, and it was not observed. However, the qualitative presence of this compound cannot be properly determined without analysis in a calibration standard or control spike.

Results for 1,3-butadiene in SV-2 and SV-3 are to be qualified as estimated ("UJ") due to low response in the associated calibration standard (28%D).

The result for methylene chloride in SV-1 is to be qualified as tentative in identification and estimated in value ("NJ") due to poor mass spectral quality.

Holding times and internal standard responses are acceptable.

Please do not hesitate to contact me if you have comments or questions regarding this report.

Very truly yours,

  
Judy Harry



PLUMLEY ENGINEERING, P.C.  
*Civil, Environmental and Geotechnical Engineering*

8232 LOOP ROAD, BALDWINVILLE, NEW YORK 13027

Telephone: (315) 638-8587 Fax: (315) 638-9740 E-mail: Pros@PlumleyEng.com

**MEMORANDUM**

**To:** Judy Harry  
**From:** Scott A. Zollo  
**Re:** 2003115.00 – Sample Handling  
**Date:** June 14, 2005

---

In accordance with our previous discussion regarding sample handling and storage prior to receipt by the lab, it is Plumley Engineering policy to store all samples in a temperature-controlled environment (sample refrigerator) prior to shipping. The samples are maintained at a temperature-controlled environment by packing them with ice prior to shipment. I hope that this resolves any issues related to our sample handling procedures. Please call if you have any questions.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION AND  
ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	*VOA GC/MS Method	*BNA GC/MS Method	*PCB GC Method	*Pest GC Method	*Metals	*Other CN
TP-1	040625025-001		X	X			
TP-2	040625025-002		X	X			
TP-3	040625025-003		X	X			
FLOOR DRAIN EAST	040625025-004	X	X	X		X	
FLOOR DRAIN WEST	040625025-005	X	X	X		X	

000001

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION AND  
ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	*VOA GC/MS Method	*BNA GC/MS Method	*PCB GC Method	*Pest GC Method	*Metals	*Other CN
RE-1/RE-2 Comp.	040819040-001	X	X				
RE-3/RE-4 Comp.	040819040-002	X	X				
RE-5	040819040-003	X	X				
RE-6	040819040-004	X	X				
RE-7/RE-8 Comp.	040819040-005	X	X				
RE-9	040819040-006	X	X				
RE-10	040819040-007	X	X				
RE-11	040819040-008	X	X				
RE-12	040819040-009	X	X				

000001

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION AND  
ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	*VOA GC/MS Method	*BNA GC/MS Method	*PCB GC Method	*Pest GC Method	*Metals	*Other CN
RE-13	040831012-001	X	X				
RE-14	040831012-002	X	X				
RE-15	040831012-003	X	X				
RE-16	040831012-004	X	X				
RE-17	040831012-005	X	X				
RE-18	040831012-006	X	X				
RE-19	040831012-007	X	X				
RE-TP-1	040831012-008	X	X				

00000C1

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION AND  
ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	*VOA GC/MS Method	*BNA GC/MS Method	*PCB GC Method	*Pest GC Method	*Metals	*Other CN
RE-20	040910038-001	X	X				
RE-21	040910038-002	X	X				
RE-22	040910038-003	X	X				
RE-23	040910038-004	X	X				
RE-24	040910038-005	X	X				

000001

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION AND  
ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	*VOA GC/MS Method	*BNA GC/MS Method	*PCB GC Method	*Pest GC Method	*Metals	*Other CN
RE-25	041005008-001	X	X			X	
RE-26	041005008-002	X	X			X	
SS-1	041005008-003		X	X		X	
RTE 48 Soils	041005008-004	X				X	
TP-4	041005008-005	X	X	X			
TP-5	041005008-006	X	X	X			
TP-6	041005008-007	X	X	X			
FD-3	041005008-008	X	X	X		X	
FD-4	041005008-009	X	X	X		X	
FD-5	041005008-010	X	X	X		X	
FD-6	041005008-011	X	X	X		X	

000001



NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION AND  
ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	*VOA GC/MS Method	*BNA GC/MS Method	*PCB GC Method	*Pest GC Method	*Metals	*Other CN
SS-2	041015021-001		X	X		X	
SS-3	041015021-002		X	X		X	
SS-4	041015021-003		X	X		X	
SS-5	041015021-004		X	X		X	
EB-2	041015021-005		X	X		X	
STP-1	041015021-006	X	X	X		X	
STP-2	041015021-007	X	X	X		X	
STP-3	041015021-008	X	X	X		X	
STP-4	041015021-009	X	X	X		X	
STP-5	041015021-010	X	X	X		X	
UST-1	041015021-011	X	X	X		X	
EB-1	041015021-012	X	X	X		X	

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NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION AND  
ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	*VOA GC/MS Method	*BNA GC/MS Method	*PCB GC Method	*Pest GC Method	*Metals	*Other CN
MW-16-0-2	041208014-001	X	X			X	
RE-22R	041208015-001	X	X				
RE-23R	041208015-002	X	X				

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NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION AND  
ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	*VOA GC/MS Method	*BNA GC/MS Method	*PCB GC Method	*Pest GC Method	*Metals	*Other CN
MW-1	050428024-001	X	X				
MW-2	050428024-002	X	X				
MW-3	050428024-003	X	X				
MW-4	050428024-004		X				
MW-5	050428024-005	X	X				
MW-6	050428024-006	X	X				
MW-7	050428024-007	X	X				
MW-8	050428024-008	X	X				
MW-9	050428024-009	X	X				
MW-10	050428024-010	X	X				
MW-11	050428024-011	X	X				
MW-12	050428024-012	X	X				
MW-13	050428024-013	X	X				
MW-14	050428024-014	X	X				
MW-15	050428024-015	X	X				
V-16	050428024-016	X	X				
LB-1	050428024-017	X	X				
Trip Blank	050428024-018	X					
MW-4	050428024-019	X					

000001

## SAMPLE SUMMARY

Project: 1012585

Project ID: RICK'S AUTO 2003115

Lab ID	Sample ID	Matrix	Date Collected	Date Received
1012585001	SV-1 PACE0754	Air	04/29/05 10:19	05/03/05 09:05
1012585002	SV-2 PACE0810	Air	04/29/05 08:28	05/03/05 09:05
1012585003	SV-3 PACE0752	Air	04/29/05 08:56	05/03/05 09:05
1012585004	SV-4 PACE0765	Air	04/29/05 09:18	05/03/05 09:05
1012585005	SV-5 PACE0758	Air	04/29/05 09:32	05/03/05 09:05
1012585006	SV-6 PACE0867	Air	04/29/05 11:09	05/03/05 09:05
1012585007	SV-7 PACE0756	Air	04/29/05 09:02	05/03/05 09:05
1012585008	SV-8 PACE0769	Air	04/29/05 08:24	05/03/05 09:05
1012585009	SV-9 PACE0773	Air	04/29/05 09:54	05/03/05 09:05

## REPORT OF LABORATORY ANALYSIS

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### Case Narrative

**Client: Plumley Engineering – Rick's Auto**

**Case: PLE 0403**

**SDG: Floor Drain East**

<u>Sample ID</u>	<u>Laboratory Sample ID</u>	<u>Date Received</u>	<u>VTSR</u>	<u>Matrix</u>
TP-1	040625025-001	06/25/04	11:00	Soil
TP-2	040625025-002	06/25/04	11:00	Soil
TP-3	040625025-003	06/25/04	11:00	Soil
Floor Drain East	040625025-004	06/25/04	11:00	Soil
Floor Drain West	040625025-005	06/25/04	11:00	Soil

### Volatile Organics

- 1) The samples were analyzed using EPA Method 8260 following the criteria for NYSDEC ASP.
- 2) The samples received on 6/25/04 had a temperature of 20 °C.
- 3) The sample ID's were shortened due to software restrictions by dropping the prefix – Floor.
- 4) The %RSD's for the compounds Bromoform and 1,1,2,2-Tetrachloroethane in the initial calibration analyzed on 6/30/04 were outside the criteria established by the method. The %RSD's for these compounds were 27.9 % and 32.8 %, respectively. According to the protocol, two volatile organic compounds may exceed the %RSD limit of 20.5 % as long as the %RSD is less than 40 % and the RRF is above 0.010. The %RSD was below 40 % and the RRF was greater than 0.010 for these compounds.
- 5) Sample Floor Drain West (AES sample number 040625025-005) was used for the soil matrix spike and the matrix spike duplicate analysis. All recoveries were within acceptable limits.
- 6) The column used in Instrument C for analysis was an RTX-502.2, 60 meters long with an internal diameter of 0.32 mm. The trap used for this instrument is a VOCARB 4000 with Carboxen C&B / Carboxen 1000 & 1001.

000005



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### **Semi-Volatile Organics**

- 1) The samples were analyzed using EPA Method 8270 following the criteria for NYSDEC ASP.
- 2) The %D for the compound Pentachlorophenol in the continuing calibration analyzed on 7/12/04 was outside the criteria established by the method. The %D for this compound was 27.7 %. The RRF's for the compounds n-Nitroso-di-n-propylamine and Benzo(b)fluoranthene in the continuing calibration analyzed on 7/12/04 were outside the criteria established by the method. The RRF for these compounds were 0.446 and 0.688, respectively. According to the protocol, four semi-volatile organic compounds may exceed the %D limit of 25.0 % as long as the %D is less than 40 % and the RRF is above 0.010. The %D was less than 40 % and the RRF was greater than 0.010 for these compounds.
- 3) The sample ID's were shortened due to software restrictions by dropping the prefix – Floor.
- 4) Sample TP-1 (AES sample number 040625025-001) was used for the matrix spike and the matrix spike duplicate analysis. The %RPD recovery for 4-Nitrophenol between the matrix spike and matrix spike duplicate was outside specified limits. According to the protocol, a matrix spike blank must be analyzed. A matrix spike blank was analyzed and all recoveries were within acceptable limits.

### **PCB**

- 1) The samples were analyzed using EPA Method 8082 following the criteria for NYSDEC ASP.
- 2) Peak area was used to calculate all values appearing in this data package.
- 3) The sample ID's were shortened due to software restrictions by dropping the prefix – Floor.
- 4) The primary quantitation column is identified as DB5 and the confirmation column is identified as DB608.
- 5) Please find after this narrative, a listing of the peaks used to identify and quantitate Aroclor constituents in this data package.
- 6) The injection volume for the primary column was 1.0 uL and the injection volume for the confirmation column was 2.0 uL.

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- 7) All samples were acid and sulfur cleaned prior to analysis as necessary.
- 8) Sample Floor Drain West (AES sample number 040625025-005) was used for the soil matrix spike and the matrix spike duplicate analysis. The sample was spiked with Aroclor 1016 and Aroclor 1260. All recoveries were within acceptable limits.

#### **Inorganics – Total Metals**

- 1) The recovery for Calcium and Iron in the ICSA and the ICSAB check standards were outside the required limit. The required concentration for these analytes in the check standards is 500,000 ug/L and 200,000 ug/L, respectively. The linear range on this instrument for Calcium and Iron is 200,000 ug/L and 100,000 ug/L, respectively. At this level accurate recovery of Calcium and Iron in the check standards is not possible. No further action is required.
- 2) The digested spike recoveries for the elements Arsenic, Cadmium, Lead, Selenium and Silver for sample Floor Drain East (AES sample number 040625025-004) were outside the required 75-125 % limits. A post digestion spike was performed and the recoveries for Lead and Selenium were outside acceptable limits. The results for these elements are flagged with an "N" as specified by the protocol. This indicates possible matrix interference.

"I certify that this data package is in compliance with the terms and conditions of the protocol, both technically and for completeness, to the best of my knowledge, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature."

Laboratory Manager

Date: \_\_\_\_\_

7/29/04

000007



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### Case Narrative

**Client:** Plumley Engineering – Rick's Auto

**Case:** PLE 0406

**SDG:** RE-1/RE-2Comp

<u>Sample ID</u>	<u>Laboratory Sample ID</u>	<u>Date Received</u>	<u>VTSR</u>	<u>Matrix</u>
RE-1/RE-2 Comp.	040819040-001	08/19/04	12:45	Soil
RE-3/RE-4 Comp.	040819040-002	08/19/04	12:45	Soil
RE-5	040819040-003	08/19/04	12:45	Soil
RE-6	040819040-004	08/19/04	12:45	Soil
RE-7/RE-8 Comp.	040819040-005	08/19/04	12:45	Soil
RE-9	040819040-006	08/19/04	12:45	Soil
RE-10	040819040-007	08/19/04	12:45	Soil
RE-11	040819040-008	08/19/04	12:45	Soil
RE-12	040819040-009	08/19/04	12:45	Soil

### Volatile Organics

- 1) The samples were analyzed using EPA Method 8260 following the criteria for NYSDEC ASP.
- 2) The samples received on 8/19/04 had a temperature of 15 °C.
- 3) The %RSD's for the compounds Bromoform and 1,1,2,2-Tetrachloroethane in the initial calibration analyzed on 6/30/04 were outside the criteria established by the method. The %RSD's for these compounds were 27.9 % and 32.8 %, respectively. According to the protocol, two volatile organic compounds may exceed the %RSD limit of 20.5 % as long as the %RSD is less than 40 % and the RRF is above 0.010. The %RSD was below 40 % and the RRF was greater than 0.010 for these compounds.
- 4) Sample RE-3/RE-4 Comp (AES sample number 040819040-002) was used for the soil matrix spike and the matrix spike duplicate analysis. All recoveries were within acceptable limits.
- 5) The surrogate recovery for Toluene-d8 on sample RE-10 (AES sample number 040819040-007) was outside specified limits. This sample was not re-analyzed due to a laboratory oversight.
- 6) The column used in Instrument C for analysis was an RTX-502.2, 60 meters long with an internal diameter of 0.32 mm. The trap used for this instrument is a VOCARB 4000 with Carboxen C&B / Carboxen 1000 & 1001.

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## Case Narrative

**Client: Plumley Engineering – Rick's Auto**

**Case: PLE 0407**

**SDG: RE-13**

<u>Sample ID</u>	<u>Laboratory Sample ID</u>	<u>Date Received</u>	<u>VTSR</u>	<u>Matrix</u>
RE-13	040831012-001	08/31/04	10:10	Soil
RE-14	040831012-002	08/31/04	10:10	Soil
RE-15	040831012-003	08/31/04	10:10	Soil
RE-16	040831012-004	08/31/04	10:10	Soil
RE-17	040831012-005	08/31/04	10:10	Soil
RE-18	040831012-006	08/31/04	10:10	Soil
RE-19	040831012-007	08/31/04	10:10	Soil
RE-TP-1	040831012-008	08/31/04	10:10	Soil

## Volatile Organics

- 1) The samples were analyzed using EPA Method 8260 following the criteria for NYSDEC ASP.
- 2) The samples received on 8/31/04 had a temperature of 14 °C.
- 3) The %RSD's for the compounds Bromoform and 1,1,2,2-Tetrachloroethane in the initial calibration analyzed on 6/30/04 were outside the criteria established by the method. The %RSD's for these compounds were 27.9 % and 32.8 %, respectively. According to the protocol, two volatile organic compounds may exceed the %RSD limit of 20.5 % as long as the %RSD is less than 40 % and the RRF is above 0.010. The %RSD was below 40 % and the RRF was greater than 0.010 for these compounds.
- 4) The %D's for the compounds Bromomethane and trans-1,3-Dichloropropene in the continuing calibration analyzed on 9/1/04 were outside the criteria established by the method. The %D's for these compounds were 27.6 % and 28.0 %, respectively. According to the protocol, two volatile organic compounds may exceed the %D limit of 25.0 % as long as the %D is less than 40 % and the RRF is above 0.010. The %D was less than 40 % and the RRF was greater than 0.010 for these compounds.
- 5) Sample RE-14 (AES sample number 040831012-002) was diluted 1:10 due to the high level of compounds present. A 0.5 gram sample was used instead of the usual 5.0 gram sample.



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- 6) Sample RE-16 (AES sample number 040831012-004) was used for the soil matrix spike and matrix spike duplicate analysis. All recoveries were within acceptable limits.
- 7) The column used in Instrument C for analysis was an RTX-502.2, 60 meters long with an internal diameter of 0.32 mm. The trap used for this instrument is a VOCARB 4000 with Carboxen C&B / Carboxen 1000 & 1001.

### **Semi-Volatile Organics**

- 1) The samples were analyzed using EPA Method 8270 following the criteria for NYSDEC ASP.
- 2) The %RSD for the compound Phenol in the initial calibration analyzed on 9/23/04 was outside the criteria established by the method. According to the protocol, four semi-volatile organic compounds may exceed the %RSD limit of 20.5 % as long as the %RSD is less than 40 % and the RRF is above 0.010. The %RSD was less than 40 % and the RRF was greater than 0.010 for this compound.
- 3) The RRF for the compound Benzo(a)pyrene in the continuing calibration analyzed on 9/23/04 was outside the criteria established by the method. The RRF for this compound was 0.688. According to the protocol, four semi-volatile organic compounds may exceed the %D limit of 25.0 % as long as the %D is less than 40 % and the RRF is above 0.010. The %D was less than 40 % and the RRF was greater than 0.010 for this compound.
- 4) The RRF's for the compounds Benzo(b)fluoranthene and Benzo(a)pyrene in the continuing calibration analyzed on 9/24/04 were outside the criteria established by the method. The RRF's for these compounds were 0.668 and 0.657, respectively. According to the protocol, four semi-volatile organic compounds may exceed the %D limit of 25.0 % as long as the %D is less than 40 % and the RRF is above 0.010. The %D was less than 40 % and the RRF was greater than 0.010 for these compounds.
- 5) Sample RE-TP-1 (AES sample number 040831012-008) was used for the matrix spike and the matrix spike duplicate analysis. The recovery for Phenol in the matrix spike and matrix spike duplicate was outside specified limits. According to the protocol, a matrix spike blank must be analyzed. A matrix spike blank was analyzed and all recoveries were within acceptable limits.

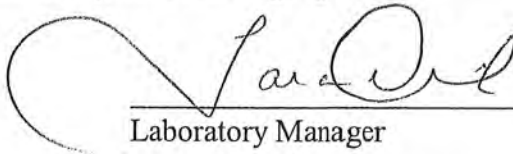
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Laboratory Manager

Date: 9/27/07

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## Case Narrative

**Client:** Plumley Engineering – Rick's Auto

**Case:** PLE 0408

**SDG:** RE-20

<u>Sample ID</u>	<u>Laboratory Sample ID</u>	<u>Date Received</u>	<u>VTSR</u>	<u>Matrix</u>
RE-20	040910038-001	09/10/04	11:48	Soil
RE-21	040910038-002	09/10/04	11:48	Soil
RE-22	040910038-003	09/10/04	11:48	Soil
RE-23	040910038-004	09/10/04	11:48	Soil
RE-24	040910038-005	09/10/04	11:48	Soil

## Volatile Organics

- 1) The samples were analyzed using EPA Method 8260 following the criteria for NYSDEC ASP.
- 2) The samples received on 9/10/04 had a temperature of 4 °C.
- 3) The %D for the compound Vinyl Chloride in the continuing calibration analyzed on 9/15/04 was outside the criteria established by the method. The %D for this compound was 25.3 %.  
According to the protocol, two volatile organic compounds may exceed the %D limit of 25.0 % as long as the %D is less than 40 % and the RRF is above 0.010. The %D was less than 40 % and the RRF was greater than 0.010 for this compound.
- 4) The %D for the compound Vinyl Chloride in the continuing calibration analyzed on 9/16/04 was outside the criteria established by the method. The %D for this compound was 31.9 %.  
According to the protocol, two volatile organic compounds may exceed the %D limit of 25.0 % as long as the %D is less than 40 % and the RRF is above 0.010. The %D was less than 40 % and the RRF was greater than 0.010 for this compound.
- 5) Sample RE-21 (AES sample number 040910038-002) was used for the low level soil matrix spike and matrix spike duplicate analysis. All recoveries were within acceptable limits.
- 6) Sample RE-22 (AES sample number 040910038-003) was used for the medium level soil matrix spike and matrix spike duplicate analysis. All recoveries were within acceptable limits.
- 7) Sample RE-24 (AES sample number 040910038-005) was diluted 1:2 due to the high level of compounds present. A 2.5 gram sample was used instead of the usual 5.0 gram sample.

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- 8) The following samples were analyzed using a medium level analysis. This was due to the high level of compounds present. The dilution given below is the overall dilution based on the amount of methanol extract used.

<u>Client ID</u>	<u>Laboratory ID</u>	<u>Dilution</u>
RE-22	040910038-003	1:500
RE-23	040910038-004	1:25

- 9) The column used in Instrument C for analysis was an RTX-502.2, 60 meters long with an internal diameter of 0.32 mm. The trap used for this instrument is a VOCARB 4000 with Carboxen C&B / Carboxen 1000 & 1001.

#### Semi-Volatile Organics

- 1) The samples were analyzed using EPA Method 8270 following the criteria for NYSDEC ASP.
- 2) The %D for the compound Phenol in the continuing calibration analyzed on 10/8/04 was outside the criteria established by the method. The %D for this compound was 25.3 %. The RRF for the compound Benzo(a)pyrene in the continuing calibration analyzed on 10/8/04 was outside the criteria established by the method. The RRF for this compound was 0.678. According to the protocol, four semi-volatile organic compounds may exceed the %D limit of 25.0 % as long as the %D is less than 40 % and the RRF is above 0.010. The %D was less than 40 % and the RRF was greater than 0.010 for these compounds.
- 3) The %D for the compound Phenol in the continuing calibration analyzed on 10/12/04 was outside the criteria established by the method. The %D for this compound was 30.4 %. According to the protocol, four semi-volatile organic compounds may exceed the %D limit of 25.0 % as long as the %D is less than 40 % and the RRF is above 0.010. The %D was less than 40 % and the RRF was greater than 0.010 for this compound.
- 4) Sample RE-22 (AES sample number 040910038-003) was used for the matrix spike and the matrix spike duplicate analysis. The recoveries for several compounds in the matrix spike and matrix spike duplicate were outside specified limits. According to the protocol, a matrix spike blank must be analyzed. A matrix spike blank was analyzed and all recoveries were within acceptable limits.
- 5) Sample RE-22 (AES sample number 040910038-003) was diluted 1:4 due to the high level of compounds present. The associated matrix spike and matrix spike duplicate were also diluted 1:4 prior to analysis.

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A handwritten signature in dark ink, appearing to read "Paul J. DeRosa", written over a horizontal line.

Laboratory Manager

Date: 10/15/04

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## Case Narrative

**Client:** Plumley Engineering – Rick's Auto

**Case:** PLE 0409

**SDG:** FD-3

<u>Sample ID</u>	<u>Laboratory Sample ID</u>	<u>Date Received</u>	<u>VTSR</u>	<u>Matrix</u>
RE-25	041005008-001	10/05/04	09:30	Soil
RE-26	041005008-002	10/05/04	09:30	Soil
SS-1	041005008-003	10/05/04	09:30	Soil
RTE 48 Soils	041005008-004	10/05/04	09:30	Soil
TP-4	041005008-005	10/05/04	09:30	Soil
TP-5	041005008-006	10/05/04	09:30	Soil
TP-6	041005008-007	10/05/04	09:30	Soil
FD-3	041005008-008	10/05/04	09:30	Soil
FD-4	041005008-009	10/05/04	09:30	Soil
FD-5	041005008-010	10/05/04	09:30	Soil
FD-6	041005008-011	10/05/04	09:30	Soil

## Volatile Organics

- 1) The samples were analyzed using EPA Method 8260 following the criteria for NYSDEC ASP.
- 2) The samples received on 10/5/04 had a temperature of 6 °C.
- 3) The %RSD for the compound Bromoform in the initial calibration analyzed on 10/5/04 was outside the criteria established by the method. The %RSD for this compound was 29.8 %. According to the protocol, two volatile organic compounds may exceed the %RSD limit of 20.5 % as long as the %RSD is less than 40 % and the RRF is above 0.010. The %RSD was less than 40 % and the RRF was greater than 0.010 for this compound.
- 4) The %D for the compound Vinyl Chloride in the continuing calibration analyzed on 10/6/04 was outside the criteria established by the method. The %D for this compound was 34.0 %. According to the protocol, two volatile organic compounds may exceed the %D limit of 25.0 % as long as the %D is less than 40 % and the RRF is above 0.010. The %D was less than 40 % and the RRF was greater than 0.010 for this compound.
- 5) Sample RE-26 (AES sample number 041005008-002) was used for the soil matrix spike and matrix spike duplicate analysis. All recoveries were within acceptable limits.

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- 6) Sample RE-25 (AES sample number 041005008-001) was diluted 1:2 due to the high level of non-target compounds present.
- 7) The column used in Instrument C for analysis was an RTX-502.2, 60 meters long with an internal diameter of 0.32 mm. The trap used for this instrument is a VOCARB 4000 with Carboxen C&B / Carboxen 1000 & 1001.

### **Semi-Volatile Organics**

- 1) The samples were analyzed using EPA Method 8270 following the criteria for NYSDEC ASP.
- 2) The %D's for the compounds Phenol, 1,2,4-Trichlorobenzene and Hexachlorobenzene in the continuing calibration analyzed on 10/20/04 were outside the criteria established by the method. The %D's for these compounds were 29.6 %, 26.7 % and 25.6 %. According to the protocol, four semi-volatile organic compounds may exceed the %D limit of 25.0 % as long as the %D is less than 40 % and the RRF is above 0.010. The %D was less than 40 % and the RRF was greater than 0.010 for these compounds.
- 3) The %D's for the compounds 2,4-Dichlorophenol, 1,2,4-Trichlorobenzene and Fluoranthene in the continuing calibration analyzed on 10/21/04 were outside the criteria established by the method. The %D's for these compounds were 30.8 %, 26.3 % and 31.4 %. According to the protocol, four semi-volatile organic compounds may exceed the %D limit of 25.0 % as long as the %D is less than 40 % and the RRF is above 0.010. The %D was less than 40 % and the RRF was greater than 0.010 for these compounds.
- 4) Sample FD-6 (AES sample number 041005008-011) was used for the matrix spike and the matrix spike duplicate analysis. All recoveries were within acceptable limits.

### **PCB's**

- 1) Samples were analyzed using EPA Method 8082.
- 2) Peak area was used to calculate all values appearing in this data package.
- 3) The primary quantitation column is identified as DB5 and the confirmation column is identified as DB608.
- 4) Please find after this narrative, a listing of the peaks used to identify and quantitate Aroclor constituents in this data package.

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- 5) The injection volume for the primary column was 1.0 uL and for the confirmation column was 2.0 uL.
- 6) Sample FD-6 (AES sample number 041005008-008) was used for the matrix spike and the matrix spike duplicate. This sample was spiked with Aroclor 1016 and Aroclor 1260. All recoveries were within acceptable limits.
- 7) All samples were acid and sulfur cleaned prior to analysis as necessary.

### **Inorganics – Metals**

- 1) The recovery for Calcium and Iron in the ICSA and the ICSAB check standards were outside the required limit. The required concentration for these analytes in the check standards is 500,000 ug/L and 200,000 ug/L, respectively. The linear range on this instrument for Calcium and Iron is 200,000 ug/L and 100,000 ug/L, respectively. At this level accurate recovery of Calcium and Iron in the check standards is not possible. No further action is required.
- 2) The digested spike recovery for the element Silver for sample RE-25 (AES sample number 041005008-001) was outside the required 75-125 % limits. A post digestion spike was performed and the recovery for Silver was outside acceptable limits. The results for this element are flagged with an "N" as specified by the protocol. This indicates possible matrix interference.

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Laboratory Manager

Date:

11/5/04

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## Case Narrative

**Client:** Plumley Engineering – Rick's Auto

**Case:** PLE 0410

**SDG:** SS-2

<u>Sample ID</u>	<u>Laboratory Sample ID</u>	<u>Date Received</u>	<u>VTSR</u>	<u>Matrix</u>
SS-2	041015021-001	10/15/04	08:57	Soil
SS-3	041015021-002	10/15/04	08:57	Soil
SS-4	041015021-003	10/15/04	08:57	Soil
SS-5	041015021-004	10/15/04	08:57	Soil
EB-2	041015021-005	10/15/04	08:57	Water
STP-1	041015021-006	10/15/04	08:57	Soil
STP-2	041015021-007	10/15/04	08:57	Soil
STP-3	041015021-008	10/15/04	08:57	Soil
STP-4	041015021-009	10/15/04	08:57	Soil
STP-5	041015021-010	10/15/04	08:57	Soil
UST-1	041015021-011	10/15/04	08:57	Soil
EB-1	041015021-012	10/15/04	08:57	Water

## Volatile Organics

- 1) The samples were analyzed using EPA Method 8260 following the criteria for NYSDEC ASP.
- 2) The samples received on 10/15/04 had a temperature of 10 °C.
- 3) The %RSD for the compound Bromoform in the initial calibration analyzed on 10/5/04 was outside the criteria established by the method. The %RSD for this compound was 29.8 %. According to the protocol, two volatile organic compounds may exceed the %RSD limit of 20.5 % as long as the %RSD is less than 40 % and the RRF is above 0.010. The %RSD was less than 40 % and the RRF was greater than 0.010 for this compound.
- 4) The %D for the compound Vinyl Chloride in the continuing calibration analyzed on 10/19/04 was outside the criteria established by the method. The %D for this compound was 26.7 %. According to the protocol, two volatile organic compounds may exceed the %D limit of 25.0 % as long as the %D is less than 40 % and the RRF is above 0.010. The %D was less than 40 % and the RRF was greater than 0.010 for this compound.

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- 5) Sample STP-5 (AES sample number 041015021-010) was used for the soil matrix spike and matrix spike duplicate analysis. All recoveries were within acceptable limits.
- 6) Samples STP-1 and STP-3 (AES sample numbers 041015021-006 and 041015021-008) were diluted 1:2 due to the high level of non-target compounds present.
- 7) The column used in Instrument C for analysis was an RTX-502.2, 60 meters long with an internal diameter of 0.32 mm. The trap used for this instrument is a VOCARB 4000 with Carboxen C&B / Carboxen 1000 & 1001.

### **Semi-Volatile Organics**

- 1) The samples were analyzed using EPA Method 8270 following the criteria for NYSDEC ASP.
- 2) Sample STP-5 (AES sample number 041015021-010) was used for the matrix spike and the matrix spike duplicate analysis. All recoveries were within acceptable limits.

### **PCB's**

- 1) Samples were analyzed using EPA Method 8082.
- 2) Peak area was used to calculate all values appearing in this data package.
- 3) The primary quantitation column is identified as DB5 and the confirmation column is identified as DB608.
- 4) Please find after this narrative, a listing of the peaks used to identify and quantitate Aroclor constituents in this data package.
- 5) The injection volume for the primary column was 1.0 uL and for the confirmation column was 2.0 uL.
- 6) Sample SS-4 (AES sample number 041015021-003) was used for the matrix spike and the matrix spike duplicate. This sample was spiked with Aroclor 1016 and Aroclor 1260. All recoveries were within acceptable limits.
- 7) Sample STP-5 (AES sample number 041015021-010) was used for the matrix spike and the matrix spike duplicate. This sample was spiked with Aroclor 1016 and Aroclor 1260. All recoveries were within acceptable limits.
- 8) All samples were acid and sulfur cleaned prior to analysis as necessary.

**000007**





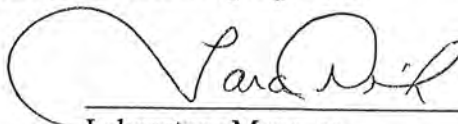
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## Inorganics – Metals

- 1) The recovery for Calcium and Iron in the ICSA and the ICSAB check standards were outside the required limit. The required concentration for these analytes in the check standards is 500,000 ug/L and 200,000 ug/L, respectively. The linear range on this instrument for Calcium and Iron is 200,000 ug/L and 100,000 ug/L, respectively. At this level accurate recovery of Calcium and Iron in the check standards is not possible. No further action is required.
- 2) The digested spike recoveries for the elements Selenium and Silver for sample SS-4 (AES sample number 041015021-003) were outside the required 75-125 % limits. A post digestion spike was performed and the recoveries for Selenium and Silver were outside acceptable limits. The results for these elements are flagged with an "N" as specified by the protocol. This indicates possible matrix interference.
- 3) The digested spike recovery for the element Mercury for sample STP-5 (AES sample number 041015021-010) was outside the required 75-125 % limits. The results for this element are flagged with an "N" as specified by the protocol. This indicates possible matrix interference.
- 4) The recovery between sample SS-4 (AES sample number 041015021-003) and the duplicate sample for the element Lead was outside the required limits for sample duplication. This element is flagged with an "\*" as required by the protocol.

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\_\_\_\_\_  
Laboratory Manager

Date: 11/30/04

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SDG # SS-1

INSTRUMENT ID: ECD-E

ANALYSIS DATES: 10/20-10/21/04

CASE # PLE0410

COLUMN ID: DB5

AR1016

1. 5.300  
2. to  
3. 8.117 REF  
4. to  
5. 10.200

AR1221

1. 3.500  
2. to  
3. 5.830 REF  
4. to  
5. 6.000

AR1232

1. 3.100  
2. to  
3. 5.830 REF  
4. to  
5. 8.800

AR1242

1. 5.200  
2. to  
3. 8.100 REF  
4. to  
5. 10.200

AR1248

1. 6.700  
2. to  
3. 10.980 REF  
4. to  
5. 12.000

AR1254

1. 11.000  
2. to  
3. 12.490 REF  
4. to  
5. 12.500

AR1260

1. 11.000  
2. to  
3. 16.338 REF  
4. to  
5. 17.600

All numbers represent Retention Times.

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### Case Narrative

**Client: Plumley Engineering – Rick's Auto**

**Case: PLE 0411**

**SDG: MW-16-0-2**

<u>Sample ID</u>	<u>Laboratory Sample ID</u>	<u>Date Received</u>	<u>VTSR</u>	<u>Matrix</u>
MW-16-0-2	041208014-001	12/08/04	10:30	Soil
RE-22R	041208015-001	12/08/04	10:30	Soil
RE-23R	041208015-002	12/08/04	10:30	Soil

### Volatile Organics

- 1) The samples were analyzed using EPA Method 8260 following the criteria for NYSDEC ASP.
- 2) The samples received on 12/8/04 had a temperature of 4 °C.
- 3) The %RSD's for the compounds Bromomethane and Vinyl Chloride in the initial calibration analyzed on 11/17/04 was outside the criteria established by the method. The %RSD's for these compounds were 21.0 % and 32.0 %, respectively. According to the protocol, two volatile organic compounds may exceed the %RSD limit of 20.5 % or the specified RRF as long as the %RSD is less than 40 % and the RRF is above 0.010. The %RSD was below 40 % and the RRF was greater than 0.010 for these compounds.
- 4) The %D's for the compounds Bromomethane and Vinyl Chloride in the continuing calibration analyzed on 12/9/04 were outside the criteria established by the method. The %D's for these compounds were 33.7 % and 37.0 %, respectively. According to the protocol, two volatile organic compounds may exceed the %D limit of 25.0 % as long as the %D is less than 40 % and the RRF is above 0.010. The %D was less than 40 % and the RRF was greater than 0.010 for these compounds.
- 5) Sample MW-16-0-2 (AES sample number 041208014-001) was used for the soil matrix spike and matrix spike duplicate analysis. All recoveries were within acceptable limits.
- 6) The column used in Instrument C for analysis was an RTX-502.2, 60 meters long with an internal diameter of 0.32 mm. The trap used for this instrument is a VOCARB 4000 with Carboxen 1000 & 1001.

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### Semi-Volatile Organics

- 1) The samples were analyzed using EPA Method 8270 following the criteria for NYSDEC ASP.
- 2) Sample RE-22R (AES sample number 041208015-001) was used for the matrix spike and the matrix spike duplicate analysis. The %RPD recovery for Pentachlorophenol between the matrix spike and matrix spike duplicate was outside specified limits. According to the protocol, a matrix spike blank must be analyzed. A matrix spike blank was analyzed and all recoveries were within acceptable limits.

### Inorganics – Metals

- 1) The recovery for Calcium and Iron in the ICSA and the ICSAB check standards were outside the required limit. The required concentration for these analytes in the check standards is 500,000 ug/L and 200,000 ug/L, respectively. The linear range on this instrument for Calcium and Iron is 200,000 ug/L and 100,000 ug/L, respectively. At this level accurate recovery of Calcium and Iron in the check standards is not possible. No further action is required.
- 2) The digested spike recoveries for the elements Lead, Selenium and Silver for sample MW-16-0-2 (AES sample number 041208014-001) were outside the required 75-125 % limits. A post digestion spike was performed and the recoveries for Selenium and Silver were outside acceptable limits. The results for these elements are flagged with an "N" as specified by the protocol. This indicates possible matrix interference.

"I certify that this data package is in compliance with the terms and conditions of the protocol, both technically and for completeness, to the best of my knowledge, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature."

Laboratory Manager

Date: \_\_\_\_\_

1/7/05

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### Case Narrative

**Client:** Plumley Engineering – Rick's Auto

**Case:** PLE 0501

**SDG:** MW-1

<u>Sample ID</u>	<u>Laboratory Sample ID</u>	<u>Date Received</u>	<u>VTSR</u>	<u>Matrix</u>
MW-1	050428024-001	04/28/05	10:15	Water
MW-2	050428024-002	04/28/05	10:15	Water
MW-3	050428024-003	04/28/05	10:15	Water
MW-4	050428024-004	04/28/05	10:15	Water
MW-5	050428024-005	04/28/05	10:15	Water
MW-6	050428024-006	04/28/05	10:15	Water
MW-7	050428024-007	04/28/05	10:15	Water
MW-8	050428024-008	04/28/05	10:15	Water
MW-9	050428024-009	04/28/05	10:15	Water
MW-10	050428024-010	04/28/05	10:15	Water
MW-11	050428024-011	04/28/05	10:15	Water
MW-12	050428024-012	04/28/05	10:15	Water
MW-13	050428024-013	04/28/05	10:15	Water
MW-14	050428024-014	04/28/05	10:15	Water
MW-15	050428024-015	04/28/05	10:15	Water
MW-16	050428024-016	04/28/05	10:15	Water
EB-1	050428024-017	04/28/05	10:15	Water
Trip Blank	050428024-018	04/28/05	10:15	Water
MW-4	050428024-019	05/11/05	10:32	Water

### Volatile Organics

- 1) The samples were analyzed using EPA Method 8260 following the criteria for NYSDEC ASP.
- 2) The samples received on 4/28/05 had a temperature of 4 °C.
- 3) The water samples were preserved with HCl to a pH of less than 2. All samples were analyzed within the required holding times.

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- 4) The %RSD for the compound Bromomethane in the initial calibration analyzed on 5/4/05 was outside the criteria established by the method. The %RSD for this compound was 24.9 %. The RRF for the compound Trichloroethene was outside the criteria established by the method. The RRF for this compound was 0.224. According to the protocol, two volatile organic compounds may exceed the %RSD limit of 20.5 % as long as the %RSD is less than 40 % and the RRF is above 0.010. The %RSD was less than 40 % and the RRF was greater than 0.010 for these compounds.
- 5) The %D for the compound Vinyl Chloride in the continuing calibration analyzed on 5/5/05 was outside the criteria established by the method. The %D for this compound was 31.3 %. The RRF for the compound Trichloroethene in the continuing calibration analyzed on 5/5/05 was outside the criteria established by the method. The RRF for this compound was 0.206. According to the protocol, two volatile organic compounds may exceed the %D limit of 25.0 % as long as the %D is less than 40 % and the RRF is above 0.010. The %D was less than 40 % and the RRF was greater than 0.010 for these compounds.
- 6) The %D for the compound Vinyl Chloride in the continuing calibration analyzed on 5/6/05 was outside the criteria established by the method. The %D for this compound was 33.5 %. The RRF for the compound Trichloroethene in the continuing calibration analyzed on 5/6/05 was outside the criteria established by the method. The RRF for this compound was 0.240. According to the protocol, two volatile organic compounds may exceed the %D limit of 25.0 % as long as the %D is less than 40 % and the RRF is above 0.010. The %D was less than 40 % and the RRF was greater than 0.010 for these compounds.
- 7) Sample MW-4 (AES sample number 050428024-019) was used for the matrix spike and matrix spike duplicate analysis. The recoveries for Benzene in the matrix spike and matrix spike duplicate was outside specified limits. According to the protocol, a matrix spike blank must be analyzed. A matrix spike blank was analyzed and all recoveries were within acceptable limits.
- 8) Sample MW-15 (AES sample number 050428024-015) was used for the matrix spike and matrix spike duplicate analysis. The level spiked in this MS/MSD was at 100 ug/L instead of 50 ug/L. The recovery for Chlorobenzene in the matrix spike was outside specified limits. According to the protocol, a matrix spike blank must be analyzed. A matrix spike blank was analyzed and all recoveries were within acceptable limits.
- 9) The following samples were diluted prior to analysis due to the high levels of compounds present.

<u>Client ID</u>	<u>Laboratory ID</u>	<u>Final Dilution</u>
MW-7	050428024-007	1:10
MW-10	050428024-010	1:5
MW-12	050428024-012	1:10

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- 10) The surrogate recovery for Bromofluorobenzene on sample VMSB (AES sample number Matrix Spike Blank) was outside specified limits. According to the protocol, the matrix spike, matrix spike duplicate and matrix spike blank are not re-analyzed for surrogate recoveries outside of specified limits.
- 11) The column used in Instrument E for analysis was an RTX-624, 20 meters long with an internal diameter of 0.18 mm. The trap used for this instrument is a VOCARB 4000 with Carbopack C&B / Carboxen 1000 & 1001.

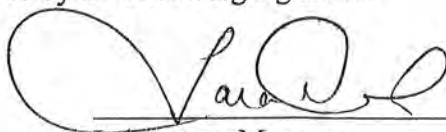
### Semi-Volatile Organics

- 1) The samples were analyzed using EPA Method 8270 following the criteria for NYSDEC ASP.
- 2) Sample MW-15 (AES sample number 050428024-015) was used for the matrix spike and the matrix spike duplicate analysis. The recoveries for 4-Chloro-3-methylphenol and Pentachlorophenol in the matrix spike and matrix spike duplicate were outside specified limits. According to the protocol, a matrix spike blank must be analyzed. A matrix spike blank was analyzed and the recovery for Pentachlorophenol was outside required limits. The recovery for Pentachlorophenol was higher than the acceptable limit. All other recoveries were within acceptable limits.
- 3) The following samples were diluted prior to analysis due to the high levels of compounds present.

<u>Client ID</u>	<u>Laboratory ID</u>	<u>Final Dilution</u>
MW-7	050428024-007	1:4
MW-12	050428024-012	1:4

- 4) The surrogate recovery for 2-Fluorophenol on sample MW-12 (AES sample number 050428024-012) was outside specified limits. According to the protocol, one base/neutral and one acid surrogate may be outside specified limits with no further action necessary.

"I certify that this data package is in compliance with the terms and conditions of the protocol, both technically and for completeness, to the best of my knowledge, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature."

  
\_\_\_\_\_  
Laboratory Manager

Date: 6/3/05



## TO15 ANALYSIS

### GC/MS Tuning

All BFB tuning criteria were met prior to the analysis of calibration standards, blanks, and samples.

### Instrumental Calibrations (ICAL)

The initial calibration criteria are based on a maximum 30% RSD for averaged and a minimum 0.995  $r^2$  for linear calibration. The initial calibration met method criteria.

### Continuing Calibration (CCAL)

All continuing calibrations met method criteria for all compounds of interest. Criteria are based on a maximum 30% difference (%D) for all compounds.

### Method Blanks

The method blanks associated with this SDG met method criteria. Criteria are all of the desired compounds must be absent or if present be below the PRL. A canister filled with clean, humidified nitrogen is used for the blank.

### Internal Standard Response

All internal standard responses were within the QC limits established by the daily calibration standard. Criteria are  $\pm 40\%$  area response and  $\pm 0.33$  minutes retention time difference from the CCAL.

### LCS Recoveries

All of the recoveries were within QC limits. The CCAL was used as the LCS. Criteria are 70-130% recovery.

### Analysis Conditions

All sample analyses were completed on a DB5 column installed in a HP5890 GC with a HP5972 mass selective (MS) detector. The oven is programmed to ramp from 40°C to 200°C at a rate of 6.5°C/min. The temperature is held steady for 2 minutes at each end of the run. This yields a total GC run time of 28.6 minutes. All compounds were run initially with the MS set to full scan. The MS was also run in SIM mode for a select list of compounds. The initial solvent delay is 4 minutes long.

Canisters were placed on an Entech 7016 autosampler where 500 cc of sample was concentrated using an Entech 7000 sample concentration system. Dilutions are accomplished by decreasing the sampling size. The smallest sample size the mass flow controller can accurately accomplish is 20cc (a 1:25 dilution). Dilutions of greater magnitude than 1:25 require the canister to be serially diluted to achieve a value within the calibration range. Regardless of sample size being concentrated the system automatically adds 100cc of the internal standard mix to each run.

**Analysis Comments**

When samples arrive at the lab for analysis the pressure inside the canister is measured. If below 2 psig then it is pressurized to 5 psig to allow for multiple analytical runs. This pressurization causes a slight dilution factor in all effected samples. All canisters arrived at the lab with pressures less than 2 psig.

A TIC search was done on all samples with the exception of dilutions. A TIC search compares unknown compound spectra to spectra in the computer library. The parameters necessary for a TIC to be judged valid by the laboratory are as follows: the match quality must be 80% or greater; and the area must be at least 10% of the area of the nearest IS. All compounds that do not meet the match quality, but do meet the minimum area are labeled as unknown. Note that definitive determinations of identity are impossible in the case of isomers. The spectra of isomers will be identical and only retention time information that would come from a calibration can be used to positively identify which isomer is which. Analyst judgment, based on general knowledge of the column used, was used to make the best estimate in cases where isomeric compounds were involved. Since no calibration is made of any TIC compounds all quantitative results are estimates based off of the IS nearest to each compound.

This case narrative was completed on 6/7/05 by Matt Gurnsey.