SUPPLEMENT TO THE BASELINE STUDY REPORT
VALEO FORMER GM - DELCO CHASSIS FACILITY
ROCHESTER, NEW YORK
REGISTRY SITE #8-28-099

Volume I

by

Haley & Aldrich of New York
Rochester, New York

for

General Motors Corporation
Detroit, Michigan

File No. 70436-242
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22 December 2000
File No. 70436-242

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Attention: Marilyn J. Dedyne, P.E.

Subject: Supplement to the Baseline Study Report
Valeo Former GM - Delco Chassis Division Facility
1555 Lyell Avenue
Rochester, New York
Registry Site #8-28-099

Ladies and Gentlemen:

Haley & Aldrich is pleased to provide the attached report for the Former Delco Chassis Division Facility located at 1555 Lyell Avenue in Rochester, New York.

Sincerely yours,
HALEY & ALDRICH OF NEW YORK

Thomas D. Wells
Sr. Environmental Geologist

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Vice President

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LIST OF ACRONYMS AND ABBREVIATIONS

AOR – Area of Review
ASP – Analytical Services Protocols (New York State Department of Health)
BDL – Below Detection Limit
BTEX – Benzene, Toluene, Ethylbenzene, and Xylene
CLP – U.S. EPA Contract Laboratory Program
COPC – Compound of Potential Concern
DCA - dichloroethane
DCE – dichloroethene (also known as dichloroethylene)
DOH – Department of Health
EPA – U.S. Environmental Protection Agency
FEI – Further Environmental Investigations
FS – Feasibility Study
GC – Gas Chromatograph
GM – General Motors Corporation
GW - Groundwater
LNAPL – Light Non-Aqueous Phase Liquid
MC – Monroe County
MEK - Methyl Ethyl Ketone (also known as 2-butanone)
MIBK – Methyl Isobutyl Ketone (also known as 4methyl-2-pentanone)
NA – Not Analyzed
NAPL – Non-Aqueous Phase Liquid
ND – Not Detected
NYS – New York State
NYSDEC – New York State Department of Environmental Conservation
PCB – Poly-Chlorinated Biphenyl
PERC (or PCE) - perchloroethene (also known as perchloroethylene, tetrachloroethene, or tetrachloroethylene)
ppb – parts per billion
PPL – U.S. EPA's Priority Pollutant List
ppm – parts per million
QA/QC – Quality Assurance / Quality Control
RI/FS – Remedial Investigation / Feasibility Study
SCFM – Standard Cubic Feet per Minute
SVOC – Semi-Volatile Organic Compound
SW-846 – EPA publication SW-846, "Test Methods of Evaluating Solid Waste, Physical/Chemical Methods," 3rd edition, Update III.
TCA - trichloroethane
TCE - trichloroethene (also known as trichloroethylene)
TCL - U.S. EPA's Target Compound List
TPH – Total Petroleum Hydrocarbons
VOC – Volatile Organic Compound

I. INTRODUCTION

This report presents the results of Further Environmental Investigations performed at the Former General Motors Corporation (GM) Delco Chassis Facility site (the site). The Further Environmental Investigations were undertaken to supplement the Baseline Study of the site completed in August 1996.

The site is located at 1555 Lyell Avenue in the City of Rochester, Monroe County, New York. The location of the site is shown on Figure 1.

This report has been prepared to accompany a Draft Remedial Investigation / Feasibility Study (RI/FS) Work Plan for the site that GM is submitting to the New York State Department of Environmental Conservation (NYSDEC). The site is listed on the New York State Registry of Inactive Hazardous Waste Disposal Sites (Registry Site No. 8-28-099), and GM and NYSDEC are negotiating an RI/FS Consent Order for the site. The information presented in this report and other information previously submitted to NYSDEC provide the technical basis for the Draft RI/FS work plan.

II. BACKGROUND INFORMATION

The former Delco Chassis Facility was owned and operated by GM until 1994. ITT Automotive Electrical Systems (ITT Automotive) purchased the facility in 1994. In September 1998, ITT Industries, Inc. conveyed its interest in ITT Automotive to Valeo S.A. by stock transfer. As a result of the transfer, ITT Automotive changed its name to Valeo Electrical Systems, Inc. (Valeo). Valeo is the current owner and operator of the facility.

In 1993, GM began a comprehensive remedial investigation of the site in co-operation with ITT Automotive. That investigation has continued in cooperation with Valeo to the present.

In 1993, GM and ITT identified nine areas of the site that required additional investigation or remediation, and named the nine areas "Areas of Review" #1 through #9 (the AORs). The locations of AORs #1 through #8 are shown on Figure 2. AOR #9 covered sitewide groundwater issues.

GM and ITT then prepared the Work Plan for the Baseline Study to address the need for additional investigation or remediation in the AORs. GM submitted the Work Plan to NYSDEC in March 1994, and GM provided a response to comments received from NYSDEC concerning the Work Plan in a letter dated 27 October 1994.

GM then implemented the Baseline Study Work Plan to characterize the nature and extent of known or potential releases at the AORs. A report on the Baseline Study was submitted to NYSDEC and the New York State and Monroe County Departments of Health in August 1996. Results of the Baseline Study indicated that there was a need for delineation and possible recovery of floating oil (free product or LNAPL) detected at the water table in AORs #1, 2, 3, and 4. AORs #1 through 4 are located in the southeast part of the site along the east side of the manufacturing building.

In 1997, GM began the Further Environmental Investigations (FEI) at the site. The FEI included additional characterization of the nature and extent of LNAPL contamination in AORs #1, 2, 3, and 4. Supplemental investigation of deep-bedrock groundwater conditions was performed to complete the investigations specified in the Baseline Study Work Plan. Additional monitoring of sitewide groundwater levels and groundwater quality was conducted to support and confirm the Baseline Study characterization of groundwater conditions in the overburden and shallow-bedrock zones.

In March 1997, at the request of NYSDEC, GM prepared the Work Plan for Further Environmental Investigations. Most of the activities described in the FEI Work Plan had been completed by the time the plan was submitted to NYSDEC, and documentation of the results of FEI activities that had been completed by March 1997 was appended to the work plan. FEI activities have, however, been ongoing at the site since March 1997. Ongoing FEI activities have included the following:

- two sitewide groundwater- and LNAPL-sampling events.
- periodic groundwater- and LNAPL-level monitoring in AORs #1 through 4.
- installation and operation of an automated LNAPL-recovery system in AOR #3.
- pilot testing of vacuum recovery methods for LNAPL recovery.
- testing of passive LNAPL-recovery methods at all wells in which LNAPL has been detected.

Summaries of the results of the ongoing FEI activities have been provided to NYSDEC, but detailed documentation of supporting data has not previously been presented. The purpose of this Baseline Study Report Supplement is to provide the detailed documentation of the activities, methods, and

results of the FEI activities conducted at the site since March 1997. This report also reviews the conclusions of the Baseline Study Report in light of the FEI data collected since the Baseline Study Report was issued in August 1996.

III. DESCRIPTION OF FEI ACTIVITIES AND METHODS

This section of the report describes the activities performed and methods used during the FEI. A discussion of the results of FEI activities and a re-evaluation of the conclusions of the Baseline Study concerning the issues investigated during the FEI are presented in Section IV of this report.

3.1 Deep Bedrock Investigation Activities

FEI deep-bedrock test-boring and well installation activities were described in the March 1997 FEI Work Plan. Monitoring of deep bedrock groundwater quality and water levels has been performed during the FEI as part of the sitewide groundwater sampling events described below in Section 3.2.

3.2 Monitoring of Groundwater Quality and Elevations

A sitewide groundwater-sampling event had been performed in February 1995 as part of the Baseline Study. The groundwater quality data from the February 1995 event provided the basis for the evaluation of sitewide groundwater quality that was presented in the Baseline Study Report.

Three sitewide groundwater-sampling events have subsequently been performed as part of the FEI program to augment the understanding of groundwater conditions at the site. The sampling events were performed in December 1996, April 1998 and June 1999. The groundwater sampling events were performed in accordance with the sampling methods specified in the March 1994 Work Plan for the Baseline Study, Sampling and Analytical Plan.

The FEI groundwater sampling events included the following activities: measurement of static groundwater and LNAPL elevation at all site wells on the first day of the sampling event, and collection of groundwater or LNAPL samples from most (December 1996 and April 1998 events) or all (June 1999 event) site wells. Laboratory analysis of the samples collected focussed on the compounds of potential concern (COPCs) which had been identified by the Baseline Study.

Table I of this report presents a summary of the groundwater quality data for all three of the FEI sampling events. Table II presents a comparison of the FEI groundwater quality data to the results of the February 1995 Baseline Study sampling event. Groundwater elevation contour plans for the site showing the groundwater-elevation and LNAPL-distribution data collected during the December 1996, April 1998, and June 1999 groundwater sampling events are presented in Figures 3 through 5.

Laboratory data summary reports for the April 1998 and June 1999 events are presented in Appendices A and B, respectively, of this report. (Copies of the laboratory analysis reports for the December 1996 event were previously presented in an appendix to the March 1997 FEI work plan.) Groundwater and LNAPL level measurements taken at site wells during the FEI are summarized in Appendix C.

3.2.1 December 1996 Sampling Event

A summary of the activities and results of the December 1996 event was previously presented in the March 1997 FEI work plan.

3.2.2 April 1998 Sampling Event

The April 1998 event was performed on 26 April through 1 May 1998. The list of wells sampled, the chemical parameters analyzed, and the sampling and analytical methods used were all similar to those of the December 1996 sampling event.

LNAPL from each site well or piezometer in which LNAPL was encountered was sampled for laboratory analysis of PCB Aroclors by U.S. EPA SW-846 Method 8082.

Groundwater from wells in which LNAPL was not encountered was sampled for analysis of COPCs that had been identified in the Baseline Study risk assessment. The COPCs in site groundwater included:

- the aromatic volatile organic compounds (VOCs) benzene, ethylbenzene, toluene, and xylene which are collectively referred to as BTEX and are components of solvents and of petroleum and petroleum products.
- the volatile non-aromatic solvent compounds acetone, methyl ethyl ketone (MEK, also known as 2-butanone), and methyl isobutyl ketone (MIBK).
- the volatile chlorinated solvent compounds 1,1,1-trichloroethane (TCA), trichloroethene (TCE), and tetrachloroethene (also known as perchloroethene, PERC or PCE) and the products of the breakdown of TCA, TCE, or PERC in the environment, including chloroethane, 1,1-dichloroethane (DCA), 1,2-dichloroethene (DCE), and vinyl chloride.
- carbon disulfide, a VOC possibly produced in the subsurface by bacterial activity in the presence of hydrocarbon compounds and sulfur.
- the semi-volatile organic compound (SVOC) 4-methylphenol.
- the metals arsenic, barium, cadmium, chromium, and lead.

The parameter list for groundwater analysis also included chloroform and 1,1-DCE, the other VOCs that had been detected in site groundwater. These chlorinated VOCs were not identified as COPCs but had been detected at low concentrations in groundwater at the site during the Baseline Study.

Differences between the December 1996 and April 1998 sampling events included the following additions to the sampling program for the April 1998 event:

- hexavalent chromium was added as an analytical parameter for groundwater from selected wells.
- Collection of a groundwater sample from AOR #2 LNAPL piezometer PZ-402-2 was added to the sampling program.

Hexavalent chromium was analyzed in groundwater samples from the following wells:

- Wells located in and downgradient or possibly downgradient of the former facility plating area (OW-104, -105, -107, MW-205, and MW-207).
- an onsite well that had previously exhibited a relatively high level (0.774 parts per million in groundwater) of total chromium (MW-206).
- one upgradient well located on the eastern site boundary (MW-211).

As in the December 1996 event, piezometers in AORs #1, 2, 3, and 4 (wells designated with the PZ prefix) which did not contain LNAPL were not sampled for groundwater analysis. These piezometers had been installed to monitor the extent of LNAPL. However, AOR #2 piezometer PZ-402-2 was

sampled for groundwater analysis for the first time in April 1998 for the following reasons. It is located adjacent to the combined sewer line that runs past the east sides of AORs #1 and 2 on the east side of the facility, and its monitoring interval intersects the bedding material in which the sewer line was constructed. Previous groundwater level monitoring had indicated that the direction of shallow groundwater flow along the sewer line was to the south from AOR #1 towards PZ-402-2. The sewer line and/or its bedding was therefore thought to be a potential pathway for migration of groundwater contaminants from AOR #1, and the sampling of PZ-402-2 was performed to determine groundwater quality conditions along the sewer line in this area. PZ-402-2 did not and had not previously contained LNAPL, and was therefore presumed to be useable as a groundwater sampling point since there was not an apparent potential for sample contamination by NAPL.

Analytical methods for groundwater samples included EPA SW-846 Methods 8260 for VOCs, 8270 for 4-methylphenol, 6010 for the COPC metals, and 7196A for hexavalent chromium.

3.2.3 June 1999 Sampling Event

All site wells were sampled during the June 1999 sampling event, including all the LNAPL piezometers in AORs #1, 2, 3, and 4 that had not been previously sampled and three new wells which had been installed by Valeo in March 1999.

The new wells, MW-99-1, -2, and –3, were installed during Valeo's investigation of soil and groundwater conditions along the 42-inch combined sewer line which leads from the facility north to the municipal combined sewer line located along Lyell Avenue. The onsite discharges to the 42-inch sewer include all treated process wastewater from the facility. No releases were identified by the March 1999 investigation, although the investigation report (Golder Associates, May 1999), which was submitted to NYSDEC by Valeo, recommended resampling of the groundwater monitoring wells installed during the investigation. The recommendation was based on the conclusion that resampling, after allowing for passage of additional time and after additional well development, might provide results more representative of aquifer conditions than the initial sampling results. The initial sampling had been performed within a few days of well installation.

Groundwater from all wells in which LNAPL was not encountered was sampled for analysis of the same list of organic parameters and COPC metals that had been used for the April 1998 event. Analytical methods for groundwater samples included EPA SW-846 Methods 8260 for VOCs, 8270 for 4-methylphenol, and 6010 for the COPC metals. Method 7196A analysis for hexavalent chromium was performed on groundwater samples from well MW-201, which is located southeast of the former plating area, and those wells that were tested for hexavalent chromium in the April 1998 event.

In addition to the analysis of potential site contaminants, analysis of low-molecular-weight hydrocarbons was performed on groundwater samples from all deep bedrock wells and several shallow wells in an attempt to differentiate between site contamination and naturally-occurring petroleum hydrocarbons derived from the deep bedrock. The additional hydrocarbons analyzed included ethane, ethylene, methane, propane, and pentene. Analysis of pentene, an indicator of gasoline contamination, was added at the specific request of the Monroe County DOH and NYSDEC. Modified SW-846 Method 8015 analysis was performed to detect the volatile gases ethane, ethylene, methane, and propane; pentene was added to the 8260 VOC analyte list for the subject group of wells.

LNAPL from each site well or piezometer in which LNAPL was present in sufficient quantity to permit collection of a sample was sampled for laboratory analysis of the US EPA's Target Compound List (TCL) VOCs, TCL SVOCs, and PCB Aroclors. Analytical methods for the LNAPL analyses

were New York State's Analytical Services Protocol (NYSASP) methods 95-1, 95-2, and 95-3, respectively. ASP Category B deliverables were provided for these analyses, and all tentatively identified compounds (TICs) indicated by the VOC and SVOC analyses were also reported.

Collection of an LNAPL sample from AOR #2 well PZ-402-4, in which a thin LNAPL layer was detected during the groundwater- and LNAPL-level measurement event that preceded the sampling of wells, was attempted but was not possible. A groundwater sample from this well was submitted for ASP analysis of TCL VOCs, TCL SVOCs, and PCBs. ASP Category B deliverables were provided, and all TICs were reported.

At other wells in which a thin LNAPL layer was detected but from which a sample could not be collected (AOR #1 wells MW-201 and MW-213), groundwater samples were collected for analysis of COPCs and the remaining VOCs detected in groundwater at the site during the Baseline Study. Analytical methods for these samples included EPA SW-846 Methods 8260 for VOCs, 8270 for 4-methylphenol, and 6010 for the COPC metals.

3.3 LNAPL Investigation Activities

Further investigation of the nature and extent of LNAPL in AORs #1 through 4 has been performed during the FEI. The investigation has included the following components:

- installation of 25 LNAPL-monitoring piezometers in AORs #1 through 4.
- soil sampling during piezometer installations to investigate potential PCB contamination in AOR #3.
- periodic LNAPL sampling and analysis.
- periodic monitoring of the distribution and extent of LNAPL.
- installation and operation of an automated LNAPL-recovery system in AOR #3 monitoring well MW-303-1.
- pilot testing of vacuum extraction for LNAPL recovery.
- testing of passive, manual LNAPL-recovery methods at all wells in which LNAPL has been detected.

The installation of LNAPL piezometers and associated soil sampling activities and results were described in the March 1997 FEI work Plan.

Periodic sampling and analysis of LNAPL was performed during the sitewide FEI sampling events described above in Section 3.2. Sampling of all LNAPL wells for PCB analysis was also performed in January 1997, as reported in the March 1997 FEI Work Plan. Results of the FEI LNAPL sample analyses are summarized on Table I B.

The remaining LNAPL investigation activities performed during the FEI are described below.

3.3.1 Periodic Monitoring of the Distribution and Extent of LNAPL

As described above in Section 3.2, each of the FEI sitewide groundwater sampling events included measurement of static groundwater and LNAPL elevations at all site wells on the first day of the event. Many additional measurement events have been performed during the FEI which focussed only on the 25 LNAPL piezometers and other monitoring wells in the area of AORs #1 through 4. During each of

these events, groundwater and LNAPL levels were measured in accordance with the methods specified in the Work Plan for the Baseline Study, Sampling and Analytical Plan.

A summary of groundwater and LNAPL level measurements taken at site wells during the FEI is presented in Appendix C. LNAPL distribution as measured during the three FEI sitewide groundwater sampling events is shown on Figures 3 through 5. LNAPL distribution as measured in October 2000 is shown on Figure 6.

3.3.2 Installation and operation of an automated LNAPL-recovery system in AOR #3

In January 1997 an LNAPL-recovery system was installed in well MW-303-1, a 2-inch-diameter shallow-bedrock monitoring well located in AOR #3. The well is located in the oil reclaim department adjacent to the concrete-lined pit that holds the steel tank in which used cutting oil is collected. MW-303-1 has contained an LNAPL layer, and PCBs had been detected in samples of the MW-303-1 LNAPL collected in 1995 during the Baseline Study.

The Operation and Maintenance Plan for the recovery system was presented in Appendix A of the Response to Comments document submitted to NYSDEC in December 1998. The system is a passive skimming system designed to collect oil only. The system includes an LNAPL skimmer that is installed in the well and is buoyant enough to keep the water-occluding intake screen at the top of the unit within oil but above water. The skimming unit travels freely up and down in the well over a range of slightly more than one foot, and the skimmer depth must be repositioned manually to accommodate larger fluctuations in the water table. A small reservoir in the skimmer is attached by vacuum hose to a collection drum. The drum and the vacuum pump for the system are housed in a locked cabinet with secondary containment. The system has automatic shut-offs activated by a full-drum condition or by the presence of material in the secondary containment pan.

Operation of the MW-303-1 LNAPL recovery system began in January 1997. In 1997, operation of the system resulted in recovery of small volumes of oil and periodic collection of significant volumes of water. The unintended recovery of water is thought to have resulted when the water level in the well rose above the free-travel range of the skimmer. Other possible causes for the collection of water include the possible presence of an emulsion in the subsurface oil layer, or damage to the water-occluding screen on the inlet to the reservoir in the skimmer.

From January through October of 1998, no oil recovery was accomplished in spite of the presence of oil in the well and the performance of regular monitoring and maintenance activities and replacement of the selective oil-passing, water-occluding screen in the skimming unit. Testing was performed in October 1998 which confirmed that the selective oil skimmer was still compatible with the type of oil in the well.

The original design was then modified by installation of a larger-diameter extraction tube on 21 October 1998. Oil recovery resumed, and the oil layer in the well was reduced; however, approximately 20 gallons of water was also collected. Subsequent adjustments to the operation of the system briefly resulted in resumption of minor oil-only recovery. However, automatic oil recovery did not proceed continuously in spite of the presence of a few inches of oil in the well.

Therefore, in January 1999 the system was shut off and the skimmer was removed from the well for one month to permit the testing, described below in Section 3.3.4, of an alternative passive oil skimmer in MW-303-1. The automated system was re-installed in February 1999, but continued efforts to achieve effective recovery with it were not successful in spite of the presence of more than one foot of

oil in the well. In September 1999, the system was shut off and the skimmer was again removed from the well. Testing of oil recovery using sorbent socks has been ongoing since then, as described below in Section 3.3.4.

The operation of the MW-303-1 system for the two and one half year period during which it was in place resulted in the recovery of approximately 15 gallons of oil. Three 55-gallon drums were filled with recovered liquid, most of which was water, during this period. Samples of the oil fraction in each drum of recovered liquid were submitted for analysis of PCBs by EPA method 8080/8082. PCBs were not detected in any of the samples. GM arranged for appropriate waste transport and offsite disposal of the recovered liquid. Drummed solid wastes associated with the monitoring and maintenance of the MW-303-1 system and monitoring and sampling of the MW-303-1 LNAPL (wastes such as disposable bailers, protective clothing and gloves, and absorbent toweling) were also disposed of appropriately by GM.

Water and oil levels measured in MW-303-1 during the FEI, including the period when the automated oil-recovery system was in place, are summarized in the table presented in Appendix C.

3.3.3 Pilot Testing of Vacuum Extraction for LNAPL Recovery

A vacuum-extraction pilot test was performed at the site in December 1998. The pilot testing included short-term tests of a vacuum-extraction technology at monitoring wells PZ-404-4, MW-213, and MW-204. The objective of the testing performed was to assess whether interface vacuum extraction technologies could be applied successfully to recovery of LNAPL while minimizing recovery of groundwater.

Vacuum extraction was performed at each well by inserting a vacuum straw to the level of the interface between the unsaturated zone and the LNAPL oil layer. At the start of each test, the straw bottom was positioned slightly above the oil layer in the subject well. Following application of vacuum to the well, air flow and vacuum measurements were collected and observations of water and/or product recovery were made. If necessary, the straw position (the depth of the bottom of the extraction tube), the aspiration air flow (amount of air being allowed to flow into the top of the well) or the strength of the applied vacuum were adjusted to minimize groundwater production and maximize product recovery. Liquids collected by the vacuum extraction straw were collected in a recovery drum. The extraction vapor effluent was treated using a granular activated-carbon drum prior to discharge.

During the testing, effluent vapor samples were periodically collected ahead of the treatment drum and analyzed to estimate mass removal of organic contaminants in the vapor effluent. Groundwater and product level measurements were collected periodically during the testing at the extraction well and at adjacent monitoring points. Upon completion of each test the recovered product was sampled for volatile organic and PCB analysis. Recovered liquids and the vapor-treatment carbon were disposed of appropriately.

Quantities of LNAPL recovered from subject test wells during the vacuum extraction testing were relatively limited, and the volume of LNAPL recovered was less than the amount of groundwater removed during the testing. The application of interface vacuum extraction (application of a vacuum through a straw inserted in a well to the interface between the unsaturated zone and the water table) did not appear to promote an enhanced rate of product recovery.

The activities, methods, and results of the vacuum-extraction pilot testing are described in detail in a memorandum presented in Appendix D.

3.3.4 Pilot Testing of Passive, Manual Methods for LNAPL Recovery

A test program is currently in progress at all piezometers and wells at the site that contain or have previously contained LNAPL. The program was initiated in October 1998 to determine the effectiveness of passive, manual methods of LNAPL Recovery. Testing of a Mapleleaf floating-product skimmer has been performed in selected wells, and testing of New Pig Corporation sorbent tubes (socks) has been performed at all LNAPL well locations.

The Mapleleaf oil-water interface skimmer was installed sequentially in selected wells (including MW-303-1, MW-208, MW-403-5, MW-204, PZ-404-4, and MW-201) beginning on 21 December 1998. Test intervals at each well generally ranged from approximately 3 to 5 weeks, except at PZ-404-4, where the skimmer was in place for 5 months. Use of the skimmer was discontinued in July 2000. The total amount of product recovered from all 6 wells with the Mapleleaf oil skimmer was approximately 0.2 gallons.

Details of the testing duration and recovery and monitoring results for the oil skimmer applications in each well are presented in Appendix E.

Concurrent with the testing of the Mapleleaf oil skimmer, oil-sorbent tubes (socks) manufactured by New Pig Corporation were installed in all other site wells containing LNAPL. Between October 1998 and January 2000, product and water levels were measured one or more times per month and saturated sorbent tubes were removed and new tubes installed as required. The frequency of monitoring has since decreased, but passive oil recovery using the sorbent socks has been continued to the present. The schedule and results of the sorbent tube applications are presented in Appendix E.

The volume of product recovered from all wells with the sorbent socks between October 1998 and May 2000 was approximately 6 gallons. That volume was calculated using an average specific gravity of 0.9 for the oil and an average weight differential between new socks and saturated socks.

As shown on the table presented in Appendix E, MW-303-1 and PZ-402-5 are the two wells that consistently saturated the socks each monitoring period. Piezometer PZ-402-5 contained approximately 0.8 feet of product prior to sorbent tube installation, and a few to several inches of oil has been present in this well since the installation of socks. At MW-303-1, where the LNAPL thickness in the well was 1.5 feet prior to the first installation of socks in September 1999, regular changeout of the socks apparently reduced the oil layer thickness to 0.4 to 0.6 feet.

At MW-213 in AOR #1, regular changeouts of sorbent socks when they became saturated eliminated the LNAPL layer. The LNAPL layer in MW-213 was one inch thick before the start of the trial, but had been as thick as 1.4 feet in the past. At MW-204 in AOR #2, regular changeouts of saturated socks reduced to the LNAPL layer from 2.2 feet to a few inches. However, LNAPL layers have increased in these two wells since the frequency of changeouts was reduced after January 2000.

LNAPL thickness have been maintained at less than approximately one inch in several wells that had measurable thicknesses of LNAPL at the start of the test. These include PZ-403-5 in AOR #3, which had 2.6 feet of oil at the start of the trial. Also included are the following wells, which had LNAPL thicknesses ranging from one to several inches at the start of the trial: PZ-402-4, PZ-403-3, and PZ-403-6 located in AORs #2 and 3, and PZ-404-4, the only AOR #4 well in which LNAPL has been detected.

IV. DISCUSSION OF RESULTS

This section of the report presents a discussion of the results of FEI activities and a re-evaluation of the conclusions of the Baseline Study concerning the issues investigated during the FEI.

4.1 Sitewide Groundwater Conditions

The monitoring of groundwater quality and groundwater elevations performed during the FEI indicates that site groundwater conditions are generally consistent with the conditions indicated by the results of the Baseline Study. The findings of the FEI monitoring that differ from or are new to those of the Baseline Study were the following:

- Shallow groundwater contamination by BTEX compounds in AOR #1 was found to be present at higher concentrations than indicated by the Baseline Study. Specifically, the concentrations of ethylbenzene (5.9 ppm) and xylene (20 ppm) detected in groundwater from PZ-401-5 were higher than the concentrations of VOCs detected previously or during the FEI in samples from AOR #1 wells MW-201, -202, -203, and –213. PZ-401-5, like the other LNAPL piezometers at the site, had not been installed or been sampled for groundwater analysis until the FEI.

- Shallow groundwater contamination by chlorinated VOCs was detected in AOR #1 and in areas to the east and west of AORs #2 and 3 at higher concentrations than the concentrations detected in shallow site groundwater during the Baseline Study. The specific findings concerning the presence of chlorinated VOCs in site groundwater are described more fully below in Section 4.1.1.

- Shallow groundwater contamination by acetone, carbon disulfide, MIBK, and 4-methylphenol was found to be present in the area of AOR #4 at concentrations up to 3 times the concentrations detected during the Baseline Study.

- An apparent influence from underground sewer lines on the direction of shallow-bedrock groundwater flow on the east side of the facility was confirmed during the FEI. The specific findings of the FEI concerning hydraulic gradients in this area are described more fully below in Section 4.1.2.

- Shallow groundwater contamination was not detected along the western site boundary in the most recent (June 1999) sampling event. The specific findings concerning shallow groundwater conditions along the western site boundary are described more fully below in Section 4.1.3.

- Concentrations of metals in groundwater at the site are variable, and metals concentrations above NYSDEC's GA standards for sources of drinking water were not consistently observed during the FEI in any areas of the site. Hexavalent chromium, which had not been analyzed prior to the FEI, was not detected in site groundwater.

- Analysis of petroleum hydrocarbons in FEI groundwater samples support the Baseline Study conclusion that contaminants detected in deep bedrock groundwater are naturally-occurring features of groundwater in the area and are not the result of site contamination. Specific

findings concerning deep-bedrock groundwater issues investigated during the FEI are described more fully below in Section 4.1.4.

4.1.1 Chlorinated VOCs in Groundwater in the Southeast Quadrant of the Site

During the Baseline Study, chlorinated VOCs were detected in intermediate bedrock groundwater at the southeast corner of the site. The solvent compounds TCA and TCE and their degradation products were detected in the 25-37 foot depth interval of the deep bedrock test boring DB-309-2. TCA and 1,1-DCA were detected at concentrations of 0.9 and 1.1 ppm respectively, and TCE and 1,2-DCE were detected at concentrations of 5.2 and 3.5 ppm respectively.

The DB-309-2 test boring had been intended as a deep bedrock exploration, and it had been planned to advance the boring to a total depth of 100 feet. However, when the contaminants were detected in the 25-37 foot depth interval of DB-309-2, a well casing was installed to 37 feet. The bedrock coring was advanced an additional 5 feet, to a bottom depth of 42 feet, to install an intermediate bedrock monitoring well (DB-309-2) in that test boring.

TCA, TCE and related degradation products have since been observed in samples from monitoring well DB-309-2 at concentrations of up to 0.16 ppm each. DB-309-2 is the only intermediate bedrock well to have been installed onsite to date.

MW-212, an overburden-bedrock interface monitoring well with a total depth of 13 feet, had been installed a year before DB-309-2 at a location approximately 20 feet to the south. Chlorinated VOCs have never been detected in samples from MW-212.

Chlorinated VOC contaminants, primarily 1,1-DCA and/or cis-1,2-DCE, were detected at concentrations of up to 0.46 ppm in FEI groundwater samples from overburden-bedrock interface piezometers in AORs #1, 2 and 3. These wells had not been sampled prior to the FEI. The maximum concentrations detected to date were detected in an April 1998 sample from PZ-402-2 at the east edge of AOR #2, in which concentrations of individual chlorinated VOCs up to 0.5 ppm were detected. June 1999 samples from PZ-401-1 in AOR #1 and wells PZ-403-3 and PZ-403-8 at the west side of AOR #3 contained chlorinated VOCs at concentrations (individually) of up to 0.1 to 0.3 ppm. Traces (0.005 to 0.03 ppm) of chlorinated VOCs have also been detected at other wells located in the vicinity of AORs #1, 2 and 3, including the wells OW-107, MW-1, MW-205, and MW-207.

Sources of the chlorinated VOC contamination of site groundwater have not been identified. The distribution of chlorinated VOCs in shallow groundwater is relatively wide and variable, and shallow-groundwater contaminant hot-spots are not evident. An on-site source or sources for the relatively low concentrations (0.005 to 0.46 ppm) of chlorinated VOCs detected in shallow groundwater at the site has not been identified during the previous site investigations. The previous investigations have included investigation of the subsurface conditions in likely potential source areas. No releases of chlorinated solvents are known to have occurred on site, nor have potential locations for onsite sources of the chlorinated VOC contamination been evident from available information on the site history. TCE is not known to have been used at the site. Although in the past TCA was used in vapor degreasers at the site, the results of shallow soil sampling performed at the locations of former degreasers indicated that significant VOC contamination was not present at those locations.

Monitoring well PZ-402-2, where the highest concentrations of chlorinated VOCs in shallow groundwater have been detected, is located adjacent to a combined sewer line on the east side of the

facility. The concentrations of chlorinated VOCs which were detected in April 1998 at PZ-402-2 suggest either that the sewer line was a source of the contaminants detected or that the sewer or the bedding material around it may have acted as a pathway for the migration of the contamination from an unidentified source area. However, samples from wells MW-203, PZ-401-5, PZ-401-4, and MW-202, all of which are located adjacent to the same sewer line upstream of PZ-402-2, have not contained similar contamination.

The presence of contaminants at the eastern site boundary indicates that offsite releases may be the source. Documentation of known or suspected releases at adjacent properties is not found in the publicly-available records maintained by state and municipal environmental agencies. However, undocumented offsite sources of the contamination may exist on the industrial and commercial properties located along the eastern site boundary and along the south side of Interstate 490 southeast of the site.

A summary of the detections of chlorinated VOCs in groundwater samples collected during the June 1999 sampling event is presented on the following page.

Summary of Chlorinated VOCs Detected in June 1999 Groundwater Samples

Concentrations in mg/L (PPM)

SHALLOW WELLS INSIDE THE MANUFACTURING BUILDING

Well Number	OW-104	OW-107	MW-205 (north of bldg.)		MW-207	PZ-403-3	PZ-403-7	PZ-403-8
Sample Date	6/25/1999	6/30/1999	6/28/1999		6/25/1999	6/29/1999	6/29/1999	6/30/1999
Sample Type	GW	GW	GW	Dupl.	GW	GW	GW	GW
1,1,1-Trichloroethane (TCA)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1-Dichloroethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	**0.010**	**0.009**
Chloroethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Subtotal of TCA and breakdown products	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.009
Tetrachloroethylene (PERC)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Trichloroethylene (TCE)	<0.005	**0.014**	<0.005	<0.005	<0.005	**0.006**	<0.005	**0.032**
cis-1,2-Dichloroethylene	**0.006**	**0.034**	**0.009**	**0.009**	**0.009**	**0.065**	<0.005	**0.260**
trans-1,2-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	**0.005**	<0.005	**0.010**
1,1-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Vinyl chloride	<0.005	<0.005	<0.005	<0.005	<0.005	**0.077**	<0.005	**0.016**
Subtotal of PERC, TCE, and breakdown products	0.006	0.048	0.009	0.009	0.009	0.153	0.000	0.318
Total Chlorinated VOCs	0.006	0.048	0.009	0.009	0.009	0.153	0.010	0.327

SHALLOW WELLS EAST OF THE MANUFACTURING BUILDING

Well Number	MW-1	MW-202	MW-213	PZ-401-1	PZ-401-3	PZ-402-2
Sample Date	6/22/1999	6/22/1999	6/29/1999	6/24/1999	6/28/1999	6/22/1999
Sample Type	GW	GW	GW	GW	GW	GW
1,1,1-Trichloroethane (TCA)	<0.005	<0.005	<0.005	<0.005	<0.005	**0.006**
1,1-Dichloroethane	**0.005**	<0.005	**0.009**	**0.044**	**0.014**	**0.055**
Chloroethane	<0.005	**0.011**	<0.005	**0.042**	**0.016**	<0.005
Subtotal of TCA and breakdown products	0.005	0.011	0.009	0.086	0.030	0.061
Tetrachloroethylene (PERC)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Trichloroethylene (TCE)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
cis-1,2-Dichloroethylene	<0.005	<0.005	<0.005	**0.055**	<0.005	**0.046**
trans-1,2-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Vinyl chloride	<0.005	<0.005	<0.005	**0.013**	<0.005	**0.009**
Subtotal of PERC, TCE, and breakdown products	0.000	0.000	0.000	0.068	0.000	0.055
Total Chlorinated VOCs	0.005	0.011	0.009	0.154	0.030	0.116

INTERMEDIATE BEDROCK WELL AT SOUTHEAST BOUNDARY

Well Number	DB-309-2
Sample Date	6/29/1999
Sample Type	GW
1,1,1-Trichloroethane (TCA)	**0.021**
1,1-Dichloroethane	**0.100**
Chloroethane	<0.005
Subtotal of TCA and breakdown products	0.121
Tetrachloroethylene (PERC)	<0.005
Trichloroethylene (TCE)	**0.045**
cis-1,2-Dichloroethylene	**0.150**
trans-1,2-Dichloroethylene	<0.005
1,1-Dichloroethylene	<0.005
Vinyl chloride	<0.005
Subtotal of PERC, TCE, and breakdown products	0.195
Total Chlorinated VOCs	0.316

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4.1.2 Hydraulic Gradients and Combined Sewer Lines in the Southeast Part of the Site

Groundwater elevation monitoring results for LNAPL-monitoring piezometers installed during the FEI indicate that overburden and shallow-bedrock groundwater flow in the southeast quadrant of the site is toward the main branches of the combined sewer for east half of the facility. The combined sewer lines in this area are located east of Building A and within, east, and south of Building B, and they lead to the 36-inch-diameter municipal sewer line that runs east from the site beneath Jay Street. The main branches of the sewers in this area are installed in trenches cut below the relatively shallow top of bedrock, and invert elevations of the main branches of the sewers are below the water table.

As shown on Figures 3 through 5, groundwater elevation contours in this area appear to indicate that the direction of shallow groundwater flow in the southeast part of the site is deflected away from the general westward trend towards the canal, which is present elsewhere onsite, toward the sewer lines. This data appears to indicate that the sewer lines or the trenches and bedding material in which the sewers are installed may be zones of shallow groundwater discharge, and may therefore act as pathways for migration of contaminants.

4.1.3 Groundwater Conditions along the Western Site Boundary

Groundwater elevation data from the site indicate that along the western site boundary, shallow groundwater from the site flows towards the Barge Canal. FEI results support the Baseline Study conclusion that significant impacts to the canal are not occurring. The levels of contaminants detected in FEI samples from wells in this area were generally less than the low levels detected during the Baseline Study. Site contamination was not detected in groundwater samples collected from wells located along and near the western site boundary during the June 1999 sampling event. A summary of the FEI analytical results for wells in this area is presented on the following page.

Summary of Analytical Results for Groundwater Samples Collected from Shallow Western Boundary Wells During FEI Sampling Events

Concentration in mg/L (ppm)

Well Number	MW-5			MW-6			MW-209			
Sample Date	12/17/96	04/28/98	06/23/99	12/17/96	04/28/98	06/23/99	12/18/96	04/28/98		06/28/99
Sample Type	GW	GW	GW	GW	GW	GW	GW	GW	Dupl.	GW
VOCs identified as COCs										
Acetone	<0.020	<0.020	<0.020	**0.110**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Benzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Ethylbenzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Xylene (o)	<0.005	<0.005	<0.005	**0.006**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Xylene (m,p)	<0.005	<0.005	<0.005	**0.012**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
SVOCs identified as COCs										
4-Methylphenol	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Metals identified as COCs										
Arsenic	<0.01	0.017	<0.01	<0.01	0.011	<0.01	<0.01	0.016	0.021	<0.01
Barium	0.027	0.042	0.025	0.244	0.041	<0.02	0.189	0.212	0.282	0.139
Cadmium	0.029	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chromium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Well Number	MW-306-1				MW-307-1			
Sample Date	12/17/96		04/27/98	06/23/99	12/18/96	04/28/98	06/28/99	
Sample Type	GW	Dupl.	GW	GW	GW	GW	GW	Dupl.
Acetone	<0.020	<0.020	<0.020	<0.020	<0.020	**0.025**	<0.020	<0.020
Benzene	<0.005	<0.005	<0.005	<0.005	**0.020**	<0.005	<0.005	<0.005
Ethylbenzene	**0.008**	**0.007**	**0.009**	<0.005	**0.018**	<0.005	<0.005	<0.005
Toluene	<0.005	<0.005	<0.005	<0.005	**0.012**	<0.005	<0.005	<0.005
Xylene (o)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Xylene (m,p)	**0.036**	**0.036**	**0.078**	<0.005	**0.026**	<0.005	<0.005	<0.005
4-Methylphenol	<0.01	<0.01	<0.01	<0.01	<1.00	<0.1	<0.01	<0.010
Arsenic	0.018	0.015	0.027	<0.01	<0.01	0.017	<0.01	<0.01
Barium	0.600	0.524	0.450	0.218	<0.02	<0.02	<0.02	0.621
Cadmium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005
Chromium	0.045	0.038	0.021	<0.01	0.021	<0.01	<0.01	<0.01
Lead	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Well Number	MW-309-1			MW-309-2		
Sample Date	12/18/96	04/28/98	06/23/99	12/17/96	04/27/98	06/28/99
Sample Type	GW	GW	GW	GW	GW	GW
Acetone	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Benzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Ethylbenzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Xylene (o)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Xylene (m,p)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
4-Methylphenol	<0.01	<0.01	<0.011	<0.01	<0.01	<0.01
Arsenic	<0.01	0.013	<0.01	<0.01	0.015	<0.01
Barium	0.044	0.073	0.067	0.104	0.031	0.024
Cadmium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chromium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

4.1.4 Deep bedrock groundwater quality

Acetone, benzene, toluene, xylene, and propane have been detected in samples of deep-bedrock groundwater from monitoring intervals within the bottom of the Gates Dolostone and the underlying Rochester Shale (members of the Rochester Formation) at each of the three locations on site where deep bedrock groundwater monitoring has been performed. The presence of these constituents at the concentrations detected in deep-bedrock groundwater is apparently a natural condition. The Rochester Formation and the overlying dolostones present in the southern half of the site are petroliferous, and naturally-occurring petroleum hydrocarbons including BTEX are present in groundwater in these units at other locations in the Rochester area and elsewhere in western New York and southern Ontario. These units are commercial sources of petroleum hydrocarbons in the Northern Appalachian Basin and surrounding areas. Natural gas is present in the Rochester Formation in the Rochester area, and natural gas was encountered during drilling of deep bedrock wells at the site. Bituminous, shaley sections of the Rochester Formation are a primary source for the petroleum hydrocarbons.

During the December 1996 sampling event, groundwater samples from wells MW-202, DB-309-1, DB-309-3 and DB-409-1 were analyzed for ethane, ethylene, methane and propane. These gases were analyzed at these locations to determine whether BTEX compounds previously detected at these locations could be correlated with the presence of possible indicators of petroleum fuel releases (ethylene) or naturally-occurring petroleum or natural gas (methane, ethane, and propane). During the June 1999 sampling event, samples from the same four wells and from several other locations were submitted for analysis of the same four gases and pentene. Pentene is an indicator of gasoline contamination.

A summary of groundwater analysis results for the deep-bedrock well locations, including data from before and after March 1997, is presented on the following page. A summary of all FEI analytical results for petroleum hydrocarbons is presented on the next following page. As shown in these summaries, neither ethylene nor pentene was detected at any of the sampling locations. Methane, ethane and propane were detected together in significant concentrations only in the samples from the deep bedrock wells. Traces of propane and methane and ethane were detected in the sample from MW-209, a 42-foot deep intermediate bedrock well screened in the Gates Dolostone member of the Rochester Formation. Propane was not detected elsewhere. Methane was detected at every location. Ethane was detected at several locations, with the highest concentrations at the deep bedrock locations.

Results of the FEI sampling and analysis for petroleum hydrocarbon gasses, which detected the presence of components of natural gas in the absence of fuel components, appear to confirm that there is a natural source for the petroleum hydrocarbons which have been detected in the deep bedrock groundwater. The apparent consistency of deeper-bedrock groundwater quality across the site supports that conclusion.

MEK and carbon disulfide have been detected in deep bedrock well water at levels below state standards, and, as stated above, acetone has also been detected at each deep-bedrock well. The apparently-widespread presence of these compounds in deep groundwater is similar to that of petroleum hydrocarbons, and suggests that, as for BTEX, the presence of these compounds in deep bedrock groundwater at the site is not related to a release at the site.

Traces of chlorinated VOCs were detected during the Baseline Study in samples of deep bedrock groundwater collected from the test borings in which the deep wells located at the

northern and southern site boundaries were installed. Chlorinated VOCs have not since been detected in samples from the wells, although the deep wells are screened in the same intervals in which the chlorinated VOCs were detected during the test-boring process. No sources for the chlorinated VOCs detected during the Baseline Study have been identified. It is possible that the sources were the same sources responsible for the presence of chlorinated VOCs present in shallow and intermediate groundwater at the site. Sources for the chlorinated VOCs in shallow and intermediate groundwater have not yet been identified.

SUMMARY OF PREVIOUS ANALYTICAL RESULTS FOR VOCs IN DEEP BEDROCK GROUNDWATER FROM THE ROCHESTER FORMATION

Well Location	Western Boundary									
Sample Location	Test Boring DB-309-1		Well DB-309-1				Test Boring DB-309-1			
Sample Date	12/28/94	1/4/95	2/22/95	12/18/96	4/28/98	6/23/99	1/6/95	1/10/95	1/11/95	1/13/95
Top Depth (Feet)	35	45	45	45	45	45	55	65	75	85
Bottom Depth (Feet)	45	55	70	70	70	70	65	75	85	101
Bedrock unit(s) monitored	Gates Dolostone (bottom at 55.3')		Gates Dolostone (bottom at 55.3') and Rochester Formation shale member							
Compounds Detected	Concentrations in parts per million (ppm), equivalent to milligrams per liter									
Benzene	<0.005	<0.005	0.320	0.470	0.130	0.047	0.052	0.005	0.069	0.0066	0.023
Toluene	0.0071	<0.005	0.230	0.280	0.110	0.007	<0.010	<0.005	0.074	0.021	0.046
Ethylbenzene	<0.005	<0.005	0.033	0.014	0.018	0.014	0.015	<0.005	<0.005	<0.005	<0.005
Total Xylene (o,m,p)	<0.005	<0.005	0.140	0.113	0.082	0.008	<0.010	<0.005	0.028	0.026	0.033
Acetone	<0.020	<0.020	0.039	0.083	<0.020	<0.020	<0.040	<0.020	<0.020	<0.020	0.055
2-Butanone (MEK)	<0.010	<0.010	<0.005	0.037	<0.010	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010
Carbon Disulfide	<0.010	<0.010	<0.010	0.020	0.016	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010
Chloroform	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005
1,1-Dichloroethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005
cis-1,2-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005
Vinyl chloride	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005

Well Location	Northeast Corner									
Sample Location	Test Boring DB-309-3			Well DB-309-3				Test Boring DB-309-3		
Sample Date	1/26/95	1/30/95	2/3/95	2/24/95	12/18/96	4/28/98	6/25/99	2/8/95	2/14/95	2/16/95
Top Depth (Feet)	32	42	55	55	55	55	55	68	78	88
Bottom Depth (Feet)	42	55	68	69	69	69	69	78	88	100
Bedrock unit(s) monitored	Gates Dolostone (bottom at 51.3')		Rochester Formation shale member							
Compounds Detected	Concentrations in parts per million (ppm), equivalent to milligrams per liter									
Benzene	<0.005	<0.005	0.0099	0.430	0.640	0.046	0.270	0.11	0.18	0.42
Toluene	<0.005	<0.005	0.0091	0.290	0.430	0.037	0.240	0.084	0.13	0.24
Ethylbenzene	<0.005	<0.005	<0.005	0.015	0.020	<0.005	0.013	<0.005	<0.005	0.0078
Total Xylene (o,m,p)	<0.005	<0.005	0.0057	0.120	0.195	0.015	0.136	0.036	0.06	0.096
Acetone	0.045	<0.020	<0.020	<0.020	0.089	<0.020	0.020	0.03	0.028	<0.020
2-Butanone (MEK)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.016	<0.010	<0.010	<0.010
Carbon Disulfide	<0.010	<0.005	<0.005	<0.005	0.020	<0.010	<0.010	<0.005	<0.005	<0.005
Chloroform	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1-Dichloroethane	<0.005	<0.005	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
cis-1,2-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Vinyl chloride	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

Well Location	Southern Boundary								
Sample Location	Test Boring DB-409-1		Well DB-409-1			TB DB-409-1	Test Boring DB-409-2		
Sample Date	10/18/96	10/22/96	12/18/96	4/28/98	6/28/99	10/23/96	10/29/96	10/31/96	11/1/96
Top Depth (Feet)	40	50	50	50	50	60	70	80	90
Bottom Depth (Feet)	50	60	70	70	70	70	80	90	100
Bedrock unit(s) monitored	Gates Dolostone		Gates Dolostone (bottom at 63.8') to top of Rochester Formation shale member				Rochester Formation shale member		
Compounds Detected	Concentrations in parts per million (ppm), equivalent to milligrams per liter								
Benzene	<0.005	<0.005	<0.005	<0.005	0.009	0.360	0.390	0.150	0.280
Toluene	0.030	<0.005	<0.005	<0.005	0.008	0.380	0.400	0.110	0.240
Ethylbenzene	<0.005	<0.005	<0.005	<0.005	<0.005	0.014	0.018	0.005	0.008
Total Xylene (o,m,p)	<0.005	<0.005	<0.005	<0.005	<0.005	0.152	0.198	0.052	0.094
Acetone	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.056	<0.020
2-Butanone (MEK)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Carbon Disulfide	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Chloroform	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	<0.005	<0.005	<0.005
1,1-Dichloroethane	<0.005	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
cis-1,2-Dichloroethylene	<0.005	0.007	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Vinyl chloride	<0.005	0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

Summary of Hydrocarbon Detections in Groundwater Samples from FEI Sampling Events
Concentrations in mg/L (PPM)

	SHALLOW AND INTERMEDIATE PERIMETER WELLS										
Well Number	MW-210	MW-211	MW-1	MW-212	DB-309-2			MW-209	MW-5	MW-6	MW-309-1
Sample Date	06/25/99	06/22/99	06/22/99	06/29/99	12/18/96	04/29/98	06/29/99	06/28/99	06/23/99	06/23/99	06/23/99
VOCs identified as COCs											
Acetone	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
2-Butanone (MEK)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Carbon Disulfide	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Ethylbenzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Xylene (o)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Xylene (m,p)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Xylene (o,m,p)	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Additional Volatile Hydrocarbons											
Methane	0.004	0.003	0.086	0.002			2.000	0.005	0.066	0.350	0.025
Ethane	<0.001	<0.001	0.003	0.001			0.530	0.004	0.038	1.000	0.002
Propane	<0.001	<0.001	<0.002	<0.001			<0.05	**0.002**	<0.002	<0.002	<0.001
Ethylene	<0.001	<0.001	<0.002	<0.001			<0.05	<0.001	<0.002	<0.002	<0.001
Pentene	<0.010	<0.010	<0.010	<0.010			<0.010	<0.010	<0.010	<0.010	<0.010

	SHALLOW WELLS IN ...										
	AOR #1										AOR #2
Well Number	MW-201	MW-202		MW-203	MW-213	PZ-401-1	PZ-401-2	PZ-401-3	PZ-401-4	PZ-401-5	MW-2
Sample Date	06/24/99	12/17/96	06/22/99	06/22/99	06/29/99	06/24/99	06/24/99	06/28/99	06/22/99	06/22/99	06/29/99
Acetone	<0.020	<0.020	<0.020	<0.020	**0.025**	<0.020	<0.020	<0.020	<0.200	<2.000	<0.020
2-Butanone (MEK)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.100	<1.000	<0.010
Carbon Disulfide	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.100	<1.000	<0.010
Benzene	<0.005	**0.008**	<0.005	<0.005	<0.005	**0.009**	<0.005	<0.005	**0.065**	<0.500	<0.005
Ethylbenzene	<0.005	**0.070**	**0.009**	<0.005	<0.005	**0.048**	<0.005	<0.005	**1.900**	**5.900**	<0.005
Toluene	<0.005	<0.005	<0.005	<0.005	<0.005	**0.011**	<0.005	<0.005	<0.050	<0.500	<0.005
Xylene (o)	<0.005	**0.010**	<0.005	<0.005	<0.005	**0.038**	<0.005	<0.005	**0.340**	<0.500	<0.005
Xylene (m,p)	<0.005	**0.140**	**0.087**	<0.005	**0.016**	**0.120**	<0.005	<0.005	**6.100**	**20.000**	<0.005
Total Xylene (o,m,p)	*ND*	*0.150*	*0.087*	*ND*	*0.016*	*0.158*	*ND*	*ND*	*6.440*	*20.000*	*ND*
Methane	0.910	0.350	1.600	0.730	0.220	3.700	0.500	1.800	4.300	6.900	0.720
Ethane	<0.025	<0.001	<0.05	<0.025	<0.005	<0.100	<0.02	<0.05	<0.100	<0.250	<0.025
Propane	<0.025	<0.001	<0.05	<0.025	<0.005	<0.100	<0.02	<0.05	<0.100	<0.250	<0.025
Ethylene	<0.025	<0.001	<0.05	<0.025	<0.005	<0.100	<0.02	<0.05	<0.100	<0.250	<0.025
Pentene	<0.010	NA	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.100	<1.000	<0.010

	DEEP BEDROCK WELLS									
Well Number	DB-309-1				DB-309-3			DB-409-1		
Sample Date	12/18/96	04/28/98	06/23/99		12/18/96	04/28/98	06/25/99	12/18/96	04/28/98	06/28/99
Acetone	**0.083**	<0.020	<0.020	<0.040	**0.089**	<0.020	**0.020**	<0.020	<0.020	<0.020
2-Butanone (MEK)	**0.037**	<0.010	<0.010	<0.020	<0.010	<0.010	**0.016**	<0.010	<0.010	<0.010
Carbon Disulfide	**0.020**	**0.016**	<0.010	<0.020	**0.020**	<0.010	<0.010	<0.010	<0.010	<0.010
Benzene	**0.470**	**0.130**	**0.047**	**0.052**	**0.640**	**0.046**	**0.270**	<0.005	<0.005	**0.009**
Ethylbenzene	**0.014**	**0.018**	**0.014**	**0.015**	**0.020**	<0.005	**0.013**	<0.005	<0.005	<0.005
Toluene	**0.280**	**0.110**	**0.007**	<0.010	**0.430**	**0.037**	**0.240**	<0.005	<0.005	**0.008**
Xylene (o)	**0.029**	**0.017**	<0.005	<0.010	**0.045**	<0.005	**0.036**	<0.005	<0.005	<0.005
Xylene (m,p)	**0.084**	**0.065**	**0.008**	<0.010	**0.150**	**0.015**	**0.100**	<0.005	<0.005	<0.005
Total Xylene (o,m,p)	*0.113*	*0.082*	*0.008*	*<0.010*	*0.195*	*0.015*	*0.136*	*ND*	*ND*	*ND*
Methane	1.600		4.100	NA	3.400		1.500	0.750		9.200
Ethane	2.100		5.600	NA	5.000		1.300	0.860		8.500
Propane	**1.700**		**4.000**	NA	**4.300**		**0.860**	**0.480**		**5.500**
Ethylene	<0.020		<0.200	NA	<0.050		<0.05	<0.020		<0.250
Pentene	NA		<0.010	<0.010	NA		<0.010	NA		<0.010

4.2 Risk Assessment Comparison

As part of the Baseline Study a quantitative risk assessment was performed to determine the human health risks posed by chemicals detected in site soil and groundwater. The risk assessment was performed using generally-accepted risk assessment practices based on guidelines established by the EPA. The risks assessed were those related to industrial site uses and the assessment was based on estimates of potential exposures likely to occur within the Site.

Exposures were assessed for the most exposed individual (MEI) using the maximum contaminant concentrations detected. This is a more-protective approach than the standard EPA approach of assessing the reasonable maximum exposures (RME) to chemical concentrations calculated using the 95% upper confidence limit on the mean (UCLM). A more-protective approach was not more applicable to site conditions than the standard RME approach; rather, the more-protective approach of assessing maximum exposures was used to promote agreement between GM and ITT concerning the meaning and significance of the conclusions of the risk assessment. The principal conclusion drawn from the risk assessment was that risks to site workers from potential on-site exposure to chemicals detected in soil and groundwater at the site were within the range of risk levels considered to be acceptable by the U.S. EPA.

The Baseline Study assessed potential risks from exposure to site groundwater by using the maximum concentration of each contaminant detected in all samples from the February 1995 groundwater sampling event. The risk assessment data set did not, however, include the higher concentrations of four chlorinated volatile organic compounds detected in a 1994 groundwater sample from deep bedrock test boring DB-309-2. These concentrations were excluded from consideration because pathways by which a potential exposure to the deep bedrock groundwater from this location were not expected.

The concentrations used in the Baseline Study risk calculations (the maximum concentrations from the February 1995 event) are summarized on Table II. Table II presents a comparison of the maximum February 1995 event concentrations to the maximum concentrations detected in subsequent FEI events. Table II also presents a recalculation of the estimates of risk from exposure to site groundwater using the maximum concentration detected in all samples collected to date, including the 1994 DB-309-2 sample with higher concentrations of chlorinated VOCs. None of the other Baseline Study assessment parameters were changed in the recalculation.

As shown on Table II, the recalculation yielded an estimate of cancer risk from potential exposure to groundwater 2.4 times higher than the cancer risk estimate of 3.8×10^{-6} presented in the Baseline Study. The recalculation yielded an estimate of non-cancer risk from potential exposure to groundwater 3.9 times higher than the Baseline Study estimate of the non-cancer hazard index of 0.13. Using the numbers yielded by the recalculation would not have changed the conclusions of the Baseline Study that estimated risks to site workers from site contamination are within the range of risks considered acceptable by the U. S. EPA.

4.3 Nature and Extent of LNAPL

The presence of PCB Aroclor 1254 had been indicated by Baseline Study laboratory analyses of the LNAPL in MW-303-1. As shown on Table IB, Part 1, PCBs have not been detected at

concentrations above 50 ppm in LNAPL samples from MW-303-1 since August 1995, and PCBs have not been detected above detection limits in the LNAPL since January 1997. Most recently, PCBs were not detected in the MW-303-1 groundwater sample or in any of the LNAPL samples collected during the comprehensive, site-wide sampling event performed at the site in June 1999. As reported in the March 1997 FEI work plan, FEI soil sampling conducted in AOR #3 did not detect the presence of PCBs.

TICs had been reported for the ASP analyses of Baseline Study groundwater samples from monitoring wells MW-202 in AOR #1 and MW-3 in AOR #4. At the time the wells were sampled for ASP analysis, LNAPL was not present in either well. However, LNAPL had been observed in AOR #1, and LNAPL had previously been observed and has since been collected in AOR #3. The VOC and SVOC TICs reported in the samples from MW-202 and MW-3 had included various aromatic petroleum hydrocarbons and other unknowns.

The VOC and SVOC TICs reported in the FEI LNAPL samples from MW-204, MW-303-1, PZ402-5, and PZ-403-5 were all similar and included various aromatic petroleum hydrocarbons and other unknown hydrocarbons and unknowns. The TICs reported appear to be petroleum compounds present in the cutting and stamping oils used in metal-machining operations at the facility. As shown on Table IB, Part 2, there were many slight differences in the TICs reported for the four separate analyses of the product from PZ-402-5. This condition appears to indicate that the slight differences between the compounds tentatively identified in the samples from each of the four wells may be due to inaccuracies in the tentative identification of the compounds reported rather than actual differences in the composition of the LNAPLs.

The current piezometer network does not define the lateral limit of the LNAPL plume or plumes west of AOR #1, north of AOR #3, or southwest of AOR #2. However, the available data appear to indicate that there is a relatively limited volume of recoverable LNAPL present in the subsurface at the site. The available data on the extent of LNAPL at the site includes the following:

- previous measurements of groundwater and LNAPL levels in the piezometers and monitoring wells at the site.
- the record of periodic manual bailing of product from MW-303-1 in AOR #3, and the subsequent operation of an automated passive recovery system at MW-303-1.
- the record of the interface-vacuum-extraction testing performed in AORs 1, 2, and 4.
- the recent observations of manual oil recovery testing using a passive skimmer and sorbent socks in all LNAPL wells at the site.

Results of LNAPL-recovery testing indicate that in the LNAPL plume present in AORs #2 and #3, less recoverable oil is present in the outer portions of the plume than is present at the apparent center of the plume. During the recent testing of passive recovery methods, regular changeouts of saturated sorbent socks significantly reduced or eliminated the thickness of LNAPL in all AOR #2 and #3 wells except MW-303-1 and PZ-402-5. MW-303-1 and PZ-402-5 are located in the center of the AOR #2/3 plume near the Oil Reclaim Area tank vault and the Crane Bay scrap dock.

In AOR #4, the thickness of LNAPL in PZ-404-4 decreased from more than two feet at the start of LNAPL-recovery testing in October 1998 to less than 1 inch in June 1999. LNAPL has since been absent or present at less than 1-inch thickness in PZ-404-4. PZ-404-4 is the only well in AOR #4 in which LNAPL has been detected.

Although passive methods may prove to be sufficient for the recovery of remaining LNAPL in AOR #4, the LNAPL-recovery methods tested to date would, apparently, not prove to be effective in either the rapid or complete removal of all LNAPL in AORs #1, 2, or 3. Considering the apparent extent of LNAPL present, more-effective means of complete recovery may not be available or practical. Alternative the feasibility of LNAPL recovery methods should, however, be studied after the remedial investigation of LNAPL extent is completed.

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5. RCRA Facility Questionnaire, ITT Automotive Electrical Systems, Inc., 1555 Lyell Avenue. Rochester, New York, EPA ID No. NYD 002 215 226. Haley & Aldrich of New York, January 1998.

6. Response to Comments, Former GM Delco Chassis Division Facility, 1555 Lyell Avenue. Rochester, New York, Site # 8-28-099. Haley & Aldrich of New York, December 1998. (2 volumes).

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Table I A
Summary of Analytical Results for Groundwater Samples from FEI Sampling Events
Former GM Delco Chassis Division Site
Rochester, New York

Concentration in mg/L (ppm)

Well Number	OW-104			OW-105				
Sample Date	12/19/96	04/29/98	06/25/99	12/19/96		04/29/98		06/25/99
Sample Type	GW	GW	GW	GW	Dupl.	GW	Dupl.	GW
VOCs identified as COCs								
Acetone	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Benzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2-Butanone (MEK)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Carbon Disulfide	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Chloroethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloroform	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1-Dichloroethane	0.013	0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
cis-1,2-Dichloroethylene	<0.005	0.005	0.006	<0.005	<0.005	<0.005	<0.005	<0.005
trans-1,2-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Ethylbenzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
4-Methyl-2 pentanone (MIBK)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Tetrachloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1,1-Trichloroethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Trichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Vinyl chloride	0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Xylene (o)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Xylene (m,p)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Xylene (o,m,p)	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Additional Volatile Hydrocarbons	NA	NA	NA	NA	NA	NA	NA	NA
Ethane								
Ethylene								
Methane								
Propane								
Pentene								
SVOCs identified as COCs								
4-Methylphenol	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCBs	NA	NA	NA	NA	NA	NA	NA	NA
Metals identified as COCs								
Arsenic	<0.01	0.018	0.016	<0.01	<0.01	0.015	0.015	<0.01
Barium	0.303	0.244	0.113	0.226	0.221	0.260	0.244	0.232
Cadmium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chromium	0.012	0.017	0.011	<0.01	<0.01	0.028	0.025	<0.01
Hexavalent Chromium	NA	<0.01	<0.01	NA	NA	<0.01	<0.01	<0.01
Lead	<0.05	<0.05	<0.05	<0.05	<0.05	0.141	0.140	<0.05

NOTES:

1. All groundwater analytes are reported.
2. Abbrevations: GW - Groundwater. DUPL. - Duplicate.
   NA - Not analyzed. < - Less than detection limit.
3. Analytical methods were as follows for all samples except 6/99 sample from PZ-402-4:
   VOCs (site-specific list shown) and pentene by U.S. EPA Method 8260,
   4-Methylphenol by U.S. EPA Method 8270, PCBs by EPA Method 8082,
   ethane, methane, propane, and ethylene by modified EPA Method 8015.
   arsenic, barium, cadmium, chromium, and lead by EPA Method 6010B,
   and hexavalent Cr by EPA Method 7196A.
   Refer to page 17 of this table for results and methods for the 6/99 sample from PZ-402-4

Table I A
Summary of Analytical Results for Groundwater Samples from FEI Sampling Events
Former GM Delco Chassis Division Site
Rochester, New York

Concentration in mg/L (ppm)

Well Number	OW-107			MW-1			MW-2		
Sample Date	12/19/96	04/29/98	06/30/99	12/17/96	04/29/98	06/22/99	12/17/96	04/30/98	06/29/99
Sample Type	GW	GW	GW	GW	GW	GW	GW	GW	GW
VOCs identified as COCs									
Acetone	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Benzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2-Butanone (MEK)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Carbon Disulfide	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Chloroethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloroform	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1-Dichloroethane	<0.005	<0.005	<0.005	0.021	0.005	0.005	<0.005	<0.005	<0.005
1,1-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
cis-1,2-Dichloroethylene	0.043	0.040	0.034	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
trans-1,2-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Ethylbenzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
4-Methyl-2 pentanone (MIBK)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Tetrachloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1,1-Trichloroethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Trichloroethylene	0.014	0.013	0.014	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Vinyl chloride	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Xylene (o)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Xylene (m,p)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Xylene (o,m,p)	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Additional Volatile Hydrocarbons	NA	NA	NA	NA	NA		NA	NA	
Ethane						0.003			<0.025
Ethylene						<0.002			<0.025
Methane						0.086			0.720
Propane						<0.002			<0.025
Pentene						<0.010			<0.010
SVOCs identified as COCs									
4-Methylphenol	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.1
PCBs	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals identified as COCs									
Arsenic	0.031	0.016	0.028	<0.01	0.051	<0.01	0.015	0.015	<0.01
Barium	0.299	0.195	0.295	0.179	0.268	0.225	0.765	0.402	0.442
Cadmium	<0.005	<0.005	0.008	<0.005	<0.005	0.005	0.026	0.015	0.013
Chromium	0.038	<0.01	0.031	<0.01	0.033	<0.01	0.081	<0.01	<0.01
Hexavalent Chromium	NA	<0.01	<0.01	NA	NA	NA	NA	NA	NA
Lead	0.086	<0.05	0.084	<0.05	0.074	<0.05	0.174	<0.05	<0.05

Table I A
Summary of Analytical Results for Groundwater Samples from FEI Sampling Events
Former GM Delco Chassis Division Site
Rochester, New York

Concentration in mg/L (ppm)

Well Number	MW-4			MW-5			MW-6		
Sample Date	12/17/96	04/28/98	06/29/99	12/17/96	04/28/98	06/23/99	12/17/96	04/28/98	06/23/99
Sample Type	GW	GW	GW	GW	GW	GW	GW	GW	GW
VOCs identified as COCs									
Acetone	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.110	<0.020	<0.020
Benzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2-Butanone (MEK)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Carbon Disulfide	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Chloroethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloroform	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1-Dichloroethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
cis-1,2-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
trans-1,2-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Ethylbenzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
4-Methyl-2 pentanone (MIBK)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Tetrachloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1,1-Trichloroethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Trichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Vinyl chloride	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Xylene (o)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.006	<0.005	<0.005
Xylene (m,p)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.012	<0.005	<0.005
Total Xylene (o,m,p)	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*0.018*	*ND*	*ND*
Additional Volatile Hydrocarbons	NA	NA	NA	NA	NA		NA	NA	
Ethane						0.038			1.000
Ethylene						<0.002			<0.002
Methane						0.066			0.350
Propane						<0.002			<0.002
Pentene						<0.010			<0.010
SVOCs identified as COCs									
4-Methylphenol	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCBs	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals identified as COCs									
Arsenic	<0.01	0.015	<0.01	<0.01	0.017	<0.01	<0.01	0.011	<0.01
Barium	0.356	0.367	0.375	0.027	0.042	0.025	0.244	0.041	<0.02
Cadmium	0.007	<0.005	<0.005	0.029	<0.005	<0.005	<0.005	<0.005	<0.005
Chromium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexavalent Chromium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Table I A
Summary of Analytical Results for Groundwater Samples from FEI Sampling Events
Former GM Delco Chassis Division Site
Rochester, New York

Concentration in mg/L (ppm)

Well Number	MW-7			MW-201			MW-202		
Sample Date	12/17/96	04/28/98	06/24/99	12/17/96	04/30/98	06/24/99	12/17/96	04/29/98	06/22/99
Sample Type	GW	GW	GW	GW	GW	GW	GW	GW	GW
VOCs identified as COCs					NA				
Acetone	<0.020	<0.020	<0.020	<0.020		<0.020	<0.020	<0.020	<0.020
Benzene	<0.005	<0.005	<0.005	<0.005		<0.005	0.008	0.013	<0.005
2-Butanone (MEK)	<0.010	<0.010	<0.010	<0.010		<0.010	<0.010	<0.010	<0.010
Carbon Disulfide	<0.010	<0.010	<0.010	<0.010		<0.010	<0.010	<0.010	<0.010
Chloroethane	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	0.011
Chloroform	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
1,1-Dichloroethane	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
1,1-Dichloroethylene	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
cis-1,2-Dichloroethylene	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
trans-1,2-Dichloroethylene	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Ethylbenzene	<0.005	<0.005	<0.005	<0.005		<0.005	0.070	0.110	0.009
4-Methyl-2 pentanone (MIBK)	<0.010	<0.010	<0.010	<0.010		<0.010	<0.010	<0.010	<0.010
Tetrachloroethylene	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Toluene	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
1,1,1-Trichloroethane	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Trichloroethylene	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Vinyl chloride	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Xylene (o)	<0.005	<0.005	<0.005	<0.005		<0.005	0.010	0.017	<0.005
Xylene (m,p)	<0.005	<0.005	<0.005	<0.005		<0.005	0.140	0.220	0.087
Total Xylene (o,m,p)	*ND*	*ND*	*ND*	*ND*		*ND*	*0.150*	*0.237*	*0.087*
Additional Volatile Hydrocarbons	NA	NA	NA	NA	NA			NA	
Ethane						<0.025	<0.001		<0.05
Ethylene						<0.025	<0.001		<0.05
Methane						0.910	0.350		1.600
Propane						<0.025	<0.001		<0.05
Pentene						<0.010	NA		<0.010
SVOCs identified as COCs					NA				
4-Methylphenol	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01
PCBs	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals identified as COCs					NA				
Arsenic	0.011	0.022	<0.01	<0.01		<0.01	<0.01	0.016	<0.01
Barium	0.948	0.398	0.375	0.233		0.205	0.538	0.305	0.446
Cadmium	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Chromium	0.030	0.014	<0.01	0.019		<0.01	0.014	<0.01	<0.01
Hexavalent Chromium	NA	NA	NA	NA		<0.01	NA	NA	NA
Lead	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05

NOTES:

1. All groundwater analytes are reported.
2. Abbrevations: GW - Groundwater. DUPL. - Duplicate.
   NA - Not analyzed. < - Less than detection limit.
3. Analytical methods were as follows for all samples except 6/99 sample from PZ-402-4:
VOCs (site-specific list shown) and pentene by U.S. EPA Method 8260,
4-Methylphenol by U.S. EPA Method 8270, PCBs by EPA Method 8082,
ethane, methane, propane, and ethylene by modified EPA Method 8015.
arsenic, barium, cadmium, chromium, and lead by EPA Method 6010B,
and hexavalent Cr by EPA Method 7196A.

Refer to page 17 of this table for results and methods for the 6/99 sample from PZ-402-4

Table I A
Summary of Analytical Results for Groundwater Samples from FEI Sampling Events
Former GM Delco Chassis Division Site
Rochester, New York

Concentration in mg/L (ppm)

Well Number	MW-203			MW-204		MW-205			
Sample Date	12/17/96	04/29/98	06/22/99	12/20/96	04/30/98	12/17/96	04/28/98	06/28/99	
Sample Type	GW	GW	GW	GW	GW	GW	GW	GW	Dupl.
VOCs identified as COCs									
Acetone	<0.020	<0.020	<0.020	0.041	0.024	<0.020	<0.020	<0.020	<0.020
Benzene	0.016	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2-Butanone (MEK)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Carbon Disulfide	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Chloroethane	0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloroform	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1-Dichloroethane	0.011	0.009	<0.005	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
cis-1,2-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.019	0.009	0.009
trans-1,2-Dichloroethylene	<0.010	<0.005	<0.005	<0.005	<0.005	0.015	<0.005	<0.005	<0.005
Ethylbenzene	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
4-Methyl-2 pentanone (MIBK)	<0.005	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Tetrachloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1,1-Trichloroethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Trichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Vinyl chloride	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Xylene (o)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Xylene (m,p)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Xylene (o,m,p)	*0.005*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Additional Volatile Hydrocarbons	NA	NA		NA	NA	NA	NA	NA	NA
Ethane			<0.025						
Ethylene			<0.025						
Methane			0.730						
Propane			<0.025						
Pentene			<0.010						
SVOCs identified as COCs									
4-Methylphenol	<0.01	<0.01	<0.01	<0.1	<1	<0.01	<0.01	<0.011	<0.011
PCBs	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals identified as COCs									
Arsenic	0.062	0.044	<0.01	0.052	0.023	0.078	0.041	<0.01	<0.01
Barium	0.820	0.684	0.462	1.330	0.939	1.590	1.340	0.486	0.620
Cadmium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.05
Chromium	0.249	0.246	0.051	0.018	<0.01	0.153	0.076	0.022	0.034
Hexavalent Chromium	NA	NA	NA	NA	NA	NA	<0.01	<0.01	<0.01
Lead	0.185	0.258	0.055	<0.05	<0.05	0.149	0.124	0.050	0.659

Table I A
Summary of Analytical Results for Groundwater Samples from FEI Sampling Events
Former GM Delco Chassis Division Site
Rochester, New York

Concentration in mg/L (ppm)

Well Number	MW-206			MW-207			MW-208		
Sample Date	12/17/96	04/28/98	06/24/99	12/19/96	04/29/98	06/25/99	12/20/96	05/01/98	06/29/99
Sample Type	GW	GW	GW	GW	GW	GW	GW	GW	GW
VOCs identified as COCs									
Acetone	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	<0.020	<0.020
Benzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2-Butanone (MEK)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Carbon Disulfide	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Chloroethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloroform	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1-Dichloroethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
cis-1,2-Dichloroethylene	<0.005	<0.005	<0.005	0.012	0.015	0.009	<0.005	<0.005	<0.005
trans-1,2-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Ethylbenzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
4-Methyl-2 pentanone (MIBK)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Tetrachloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1,1-Trichloroethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Trichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Vinyl chloride	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Xylene (o)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Xylene (m,p)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Xylene (o,m,p)	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Additional Volatile Hydrocarbons	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethane									
Ethylene									
Methane									
Propane									
Pentene									
SVOCs identified as COCs									
4-Methylphenol	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.1	<0.01
PCBs	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals identified as COCs									
Arsenic	0.028	0.023	<0.01	0.061	0.041	0.023	0.046	<0.01	<0.01
Barium	0.830	0.236	0.258	0.293	0.276	0.222	0.216	0.042	0.232
Cadmium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chromium	0.774	0.017	0.013	0.083	0.054	<0.01	<0.01	<0.01	<0.01
Hexavalent Chromium	NA	<0.01	<0.01	NA	<0.01	<0.01	NA	NA	NA
Lead	0.093	<0.05	<0.05	0.712	0.357	0.062	<0.05	<0.05	<0.05

Table I A
Summary of Analytical Results for Groundwater Samples from FEI Sampling Events
Former GM Delco Chassis Division Site
Rochester, New York

Concentration in mg/L (ppm)

Well Number	MW-209				MW-210		
Sample Date	12/18/96	04/28/98		06/28/99	12/18/96	04/28/98	06/25/99
Sample Type	GW	GW	Dupl.	GW	GW	GW	GW
VOCs identified as COCs							
Acetone	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Benzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2-Butanone (MEK)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Carbon Disulfide	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Chloroethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloroform	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1-Dichloroethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
cis-1,2-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
trans-1,2-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Ethylbenzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
4-Methyl-2 pentanone (MIBK)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Tetrachloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1,1-Trichloroethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Trichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Vinyl chloride	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Xylene (o)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Xylene (m,p)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Xylene (o,m,p)	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Additional Volatile Hydrocarbons	NA	NA	NA		NA	NA	
Ethane				0.004			<0.001
Ethylene				<0.001			<0.001
Methane				0.005			0.004
Propane				0.002			<0.001
Pentene				<0.010			<0.010
SVOCs identified as COCs							
4-Methylphenol	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCBs	NA	NA	NA	NA	NA	NA	NA
Metals identified as COCs							
Arsenic	<0.01	0.016	0.021	<0.01	0.178	0.066	<0.01
Barium	0.189	0.212	0.282	0.139	1.480	0.419	0.099
Cadmium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chromium	<0.01	<0.01	<0.01	<0.01	0.351	0.057	<0.01
Hexavalent Chromium	NA	NA	NA	NA	NA	NA	NA
Lead	<0.05	<0.05	<0.05	<0.05	0.283	0.065	<0.05

NOTES:

1. All groundwater analytes are reported.
2. Abbrevations: GW - Groundwater. DUPL. - Duplicate.
   NA - Not analyzed. < - Less than detection limit.
3. Analytical methods were as follows for all samples except 6/99 sample from PZ-402-4:
   VOCs (site-specific list shown) and pentene by U.S. EPA Method 8260,
   4-Methylphenol by U.S. EPA Method 8270, PCBs by EPA Method 8082,
   ethane, methane, propane, and ethylene by modified EPA Method 8015.
   arsenic, barium, cadmium, chromium, and lead by EPA Method 6010B,
   and hexavalent Cr by EPA Method 7196A.

Refer to page 17 of this table for results and methods for the 6/99 sample from PZ-402-4

Table I A
Summary of Analytical Results for Groundwater Samples from FEI Sampling Events
Former GM Delco Chassis Division Site
Rochester, New York

Concentration in mg/L (ppm)

Well Number	MW-211			MW-212			MW-213	
Sample Date	12/17/96	04/29/98	06/22/99	12/18/96	04/29/98	06/29/99	12/19/96	06/29/99
Sample Type	GW	GW	GW	GW	GW	GW	GW	GW
VOCs identified as COCs								
Acetone	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.025
Benzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2-Butanone (MEK)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Carbon Disulfide	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Chloroethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloroform	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1-Dichloroethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.042	0.009
1,1-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
cis-1,2-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
trans-1,2-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Ethylbenzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.006	<0.005
4-Methyl-2 pentanone (MIBK)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Tetrachloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.012	<0.005
1,1,1-Trichloroethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.076	<0.005
Trichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Vinyl chloride	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Xylene (o)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.100	<0.005
Xylene (m,p)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.180	0.016
Total Xylene (o,m,p)	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*0.280*	*0.016*
Additional Volatile Hydrocarbons	NA	NA		NA	NA		NA	
Ethane			<0.001			0.001		<0.005
Ethylene			<0.001			<0.001		<0.005
Methane			0.003			0.002		0.220
Propane			<0.001			<0.001		<0.005
Pentene			<0.010			<0.010		<0.010
SVOCs identified as COCs								
4-Methylphenol	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.072
PCBs	NA	NA	NA	NA	NA	NA	NA	NA
Metals identified as COCs								
Arsenic	0.016	0.012	<0.01	0.028	0.031	<0.01	0.012	0.067
Barium	0.221	0.062	0.100	0.227	0.103	0.067	0.989	0.669
Cadmium	<0.005	<0.005	0.015	<0.005	<0.005	<0.005	<0.005	0.072
Chromium	0.051	<0.01	<0.01	0.093	0.033	<0.01	<0.01	0.068
Hexavalent Chromium	NA	<0.01	<0.01	NA	NA	NA	NA	NA
Lead	0.071	<0.05	<0.05	0.237	0.109	0.060	<0.05	0.238

Table I A
Summary of Analytical Results for Groundwater Samples from FEI Sampling Events
Former GM Delco Chassis Division Site
Rochester, New York

Concentration in mg/L (ppm)

Well Number	MW-303-1			MW-306-1			
Sample Date	12/20/96	04/30/98	05/01/98	12/17/96		04/27/98	06/23/99
Sample Type	GW	GW	GW	GW	Dupl.	GW	GW
VOCs identified as COCs			NA				
Acetone	0.032	<0.020		<0.020	<0.020	<0.020	<0.020
Benzene	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
2-Butanone (MEK)	0.050	<0.010		<0.010	<0.010	<0.010	<0.010
Carbon Disulfide	<0.010	<0.010		<0.010	<0.010	<0.010	<0.010
Chloroethane	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Chloroform	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
1,1-Dichloroethane	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
1,1-Dichloroethylene	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
cis-1,2-Dichloroethylene	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
trans-1,2-Dichloroethylene	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Ethylbenzene	<0.005	<0.005		0.008	0.007	0.009	<0.005
4-Methyl-2 pentanone (MIBK)	<0.010	<0.010		<0.010	<0.010	<0.010	<0.010
Tetrachloroethylene	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Toluene	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
1,1,1-Trichloroethane	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Trichloroethylene	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Vinyl chloride	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Xylene (o)	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Xylene (m,p)	<0.005	<0.005		0.036	0.036	0.078	<0.005
Total Xylene (o,m,p)	*ND*	*ND*		*0.036*	*0.036*	*0.078*	*ND*
Additional Volatile Hydrocarbons	NA	NA	NA	NA	NA	NA	NA
Ethane							
Ethylene							
Methane							
Propane							
Pentene							
SVOCs identified as COCs			NA				
4-Methylphenol	<0.1	<0.1		<0.01	<0.01	<0.01	<0.01
PCBs	NA	NA	<0.001	NA	NA	NA	NA
Metals identified as COCs			NA				
Arsenic	0.053	0.027		0.018	0.015	0.027	<0.01
Barium	0.316	0.408		0.600	0.524	0.450	0.218
Cadmium	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Chromium	0.014	<0.01		0.045	0.038	0.021	<0.01
Hexavalent Chromium	NA	NA	NA	NA	NA	NA	NA
Lead	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05

Table I A
Summary of Analytical Results for Groundwater Samples from FEI Sampling Events
Former GM Delco Chassis Division Site
Rochester, New York

Concentration in mg/L (ppm)

Well Number	MW-307-1				MW-309-1			MW-309-2		
Sample Date	12/18/96	04/28/98	06/28/99		12/18/96	04/28/98	06/23/99	12/17/96	04/27/98	06/28/99
Sample Type	GW	GW	GW	Dupl.	GW	GW	GW	GW	GW	GW
VOCs identified as COCs										
Acetone	<0.020	0.025	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Benzene	0.020	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2-Butanone (MEK)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Carbon Disulfide	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Chloroethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloroform	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1-Dichloroethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
cis-1,2-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
trans-1,2-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Ethylbenzene	0.018	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
4-Methyl-2 pentanone (MIBK)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Tetrachloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	0.012	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1,1-Trichloroethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Trichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Vinyl chloride	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Xylene (o)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Xylene (m,p)	0.026	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Xylene (o,m,p)	*0.026*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Additional Volatile Hydrocarbons	NA	NA	NA	NA	NA	NA		NA	NA	NA
Ethane							0.002			
Ethylene							<0.001			
Methane							0.025			
Propane							<0.001			
Pentene							<0.010			
SVOCs identified as COCs										
4-Methylphenol	<1.00	<0.1	<0.01	<0.010	<0.01	<0.01	<0.011	<0.01	<0.01	<0.01
PCBs	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals identified as COCs										
Arsenic	<0.01	0.017	<0.01	<0.01	<0.01	0.013	<0.01	<0.01	0.015	<0.01
Barium	<0.02	<0.02	<0.02	0.621	0.044	0.073	0.067	0.104	0.031	0.024
Cadmium	<0.005	<0.005	<0.005	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chromium	0.021	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexavalent Chromium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

NOTES:

1. All groundwater analytes are reported.
2. Abbrevations: GW - Groundwater. DUPL. - Duplicate.
   NA - Not analyzed. < - Less than detection limit.
3. Analytical methods were as follows for all samples except 6/99 sample from PZ-402-4:
   VOCs (site-specific list shown) and pentene by U.S. EPA Method 8260,
   4-Methylphenol by U.S. EPA Method 8270, PCBs by EPA Method 8082,
   ethane, methane, propane, and ethylene by modified EPA Method 8015.
   arsenic, barium, cadmium, chromium, and lead by EPA Method 6010B,
   and hexavalent Cr by EPA Method 7196A.

Refer to page 17 of this table for results and methods for the 6/99 sample from PZ-402-4

Table I A
Summary of Analytical Results for Groundwater Samples from FEI Sampling Events
Former GM Delco Chassis Division Site
Rochester, New York

Concentration in mg/L (ppm)

Well Number	MW-309-3			PZ-401-1	PZ-401-2	PZ-401-3	PZ-401-4	PZ-401-5
Sample Date	12/17/96	04/30/98	06/23/99	06/24/99	06/24/99	06/28/99	06/22/99	06/22/99
Sample Type	GW	GW	GW	GW	GW	GW	GW	GW
VOCs identified as COCs								
Acetone	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.200	<2.000
Benzene	<0.005	<0.005	<0.005	0.009	<0.005	<0.005	0.065	<0.500
2-Butanone (MEK)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.100	<1.000
Carbon Disulfide	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.100	<1.000
Chloroethane	<0.005	<0.005	<0.005	0.042	<0.005	0.016	<0.050	<0.500
Chloroform	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.050	<0.500
1,1-Dichloroethane	<0.005	<0.005	<0.005	0.044	<0.005	0.014	<0.050	<0.500
1,1-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.050	<0.500
cis-1,2-Dichloroethylene	<0.005	<0.005	<0.005	0.055	<0.005	<0.005	<0.050	<0.500
trans-1,2-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.050	<0.500
Ethylbenzene	<0.005	<0.005	<0.005	0.048	<0.005	<0.005	1.900	5.900
4-Methyl-2 pentanone (MIBK)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.100	<1.000
Tetrachloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.100	<1.000
Toluene	<0.005	<0.005	<0.005	0.011	<0.005	<0.005	<0.050	<0.500
1,1,1-Trichloroethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.050	<0.500
Trichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.050	<0.500
Vinyl chloride	<0.005	<0.005	<0.005	0.013	<0.005	<0.005	<0.050	<0.500
Xylene (o)	<0.005	<0.005	<0.005	0.038	<0.005	<0.005	0.340	<0.500
Xylene (m,p)	<0.005	<0.005	<0.005	0.120	<0.005	<0.005	6.100	20.000
Total Xylene (o,m,p)	*ND*	*ND*	*ND*	*0.158*	*ND*	*ND*	*6.440*	*20.000*
Additional Volatile Hydrocarbons	NA	NA	NA					
Ethane				<0.100	<0.02	<0.05	<0.100	<0.250
Ethylene				<0.100	<0.02	<0.05	<0.100	<0.250
Methane				3.700	0.500	1.800	4.300	6.900
Propane				<0.100	<0.02	<0.05	<0.100	<0.250
Pentene				<0.010	<0.010	<0.010	<0.100	<1.000
SVOCs identified as COCs								
4-Methylphenol	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCBs	NA	NA	NA	NA	NA	NA	NA	NA
Metals identified as COCs								
Arsenic	<0.01	0.016	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Barium	0.294	0.190	0.255	<0.02	0.435	0.799	0.672	0.615
Cadmium	<0.005	<0.005	0.011	<0.005	<0.005	0.071	<0.005	0.010
Chromium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.018
Hexavalent Chromium	NA	NA	NA	NA	NA	NA	NA	NA
Lead	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Table I A
Summary of Analytical Results for Groundwater Samples from FEI Sampling Events
Former GM Delco Chassis Division Site
Rochester, New York

Concentration in mg/L (ppm)

Well Number	PZ-402-1	PZ-402-2		PZ-402-3	PZ-402-4
Sample Date	06/23/99	04/30/98	06/22/99	06/23/99	06/30/99
Sample Type	GW	GW	GW	GW	GW
VOCs identified as COCs					See Pg. 17
Acetone	<0.020	<0.020	<0.020	<0.020	
Benzene	<0.005	<0.005	<0.005	<0.005	
2-Butanone (MEK)	<0.010	<0.010	<0.010	<0.010	
Carbon Disulfide	<0.010	<0.010	<0.010	<0.010	
Chloroethane	<0.005	<0.005	<0.005	<0.005	
Chloroform	<0.005	<0.005	<0.005	<0.005	
1,1-Dichloroethane	<0.005	0.200	0.055	<0.005	
1,1-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	
cis-1,2-Dichloroethylene	<0.005	0.460	0.046	<0.005	
trans-1,2-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	
Ethylbenzene	<0.005	<0.005	<0.005	<0.005	
4-Methyl-2 pentanone (MIBK)	<0.010	<0.010	<0.010	<0.010	
Tetrachloroethylene	<0.005	<0.005	<0.005	<0.005	
Toluene	<0.005	<0.005	<0.005	<0.005	
1,1,1-Trichloroethane	<0.005	0.082	0.006	<0.005	
Trichloroethylene	<0.005	<0.005	<0.005	<0.005	
Vinyl chloride	<0.005	<0.005	0.009	<0.005	
Xylene (o)	<0.005	<0.005	<0.005	<0.005	
Xylene (m,p)	<0.005	<0.005	<0.005	<0.005	
Total Xylene (o,m,p)	*ND*	*ND*	*ND*	*ND*	
Additional Volatile Hydrocarbons	NA	NA	NA	NA	NA
Ethane					
Ethylene					
Methane					
Propane					
Pentene					
SVOCs identified as COCs					See Pg. 17
4-Methylphenol	<0.01	<0.01	<0.01	<0.01	
PCBs	NA	NA	NA	NA	See Pg. 17
Metals identified as COCs					NA
Arsenic	<0.01	0.024	<0.01	<0.01	
Barium	0.441	0.226	0.270	0.428	
Cadmium	<0.005	<0.005	<0.005	<0.005	
Chromium	<0.01	0.027	0.016	<0.01	
Hexavalent Chromium	NA	NA	NA	NA	
Lead	<0.05	0.070	0.062	<0.05	

Table I A
Summary of Analytical Results for Groundwater Samples from FEI Sampling Events
Former GM Delco Chassis Division Site
Rochester, New York

Concentration in mg/L (ppm)

Well Number	PZ-402-1	PZ-402-2		PZ-402-3	PZ-402-4
Sample Date	06/23/99	04/30/98	06/22/99	06/23/99	06/30/99
Sample Type	GW	GW	GW	GW	GW
VOCs identified as COCs					See Pg. 17
Acetone	<0.020	<0.020	<0.020	<0.020	
Benzene	<0.005	<0.005	<0.005	<0.005	
2-Butanone (MEK)	<0.010	<0.010	<0.010	<0.010	
Carbon Disulfide	<0.010	<0.010	<0.010	<0.010	
Chloroethane	<0.005	<0.005	<0.005	<0.005	
Chloroform	<0.005	<0.005	<0.005	<0.005	
1,1-Dichloroethane	<0.005	0.200	0.055	<0.005	
1,1-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	
cis-1,2-Dichloroethylene	<0.005	0.460	0.046	<0.005	
trans-1,2-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	
Ethylbenzene	<0.005	<0.005	<0.005	<0.005	
4-Methyl-2 pentanone (MIBK)	<0.010	<0.010	<0.010	<0.010	
Tetrachloroethylene	<0.005	<0.005	<0.005	<0.005	
Toluene	<0.005	<0.005	<0.005	<0.005	
1,1,1-Trichloroethane	<0.005	0.082	0.006	<0.005	
Trichloroethylene	<0.005	<0.005	<0.005	<0.005	
Vinyl chloride	<0.005	<0.005	0.009	<0.005	
Xylene (o)	<0.005	<0.005	<0.005	<0.005	
Xylene (m,p)	<0.005	<0.005	<0.005	<0.005	
Total Xylene (o,m,p)	*ND*	*ND*	*ND*	*ND*	
Additional Volatile Hydrocarbons	NA	NA	NA	NA	NA
Ethane					
Ethylene					
Methane					
Propane					
Pentene					
SVOCs identified as COCs					See Pg. 17
4-Methylphenol	<0.01	<0.01	<0.01	<0.01	
PCBs	NA	NA	NA	NA	See Pg. 17
Metals identified as COCs					NA
Arsenic	<0.01	0.024	<0.01	<0.01	
Barium	0.441	0.226	0.270	0.428	
Cadmium	<0.005	<0.005	<0.005	<0.005	
Chromium	<0.01	0.027	0.016	<0.01	
Hexavalent Chromium	NA	NA	NA	NA	
Lead	<0.05	0.070	0.062	<0.05	

Table I A
Summary of Analytical Results for Groundwater Samples from FEI Sampling Events
Former GM Delco Chassis Division Site
Rochester, New York

Concentration in mg/L (ppm)

Well Number	PZ-403-1	PZ-403-2	PZ-403-3	PZ-403-4	PZ-403-6	PZ-403-7	PZ-403-8
Sample Date	06/30/99	06/30/99	06/29/99	06/30/99	06/30/99	06/29/99	06/30/99
Sample Type	GW	GW	GW	GW	GW	GW	GW
VOCs identified as COCs							
Acetone	<0.020	<0.020	0.065	<0.020	<0.020	<0.020	<0.020
Benzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2-Butanone (MEK)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Carbon Disulfide	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Chloroethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloroform	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1-Dichloroethane	<0.005	<0.005	<0.005	<0.005	<0.005	0.010	0.009
1,1-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
cis-1,2-Dichloroethylene	<0.005	<0.005	0.065	<0.005	<0.005	<0.005	0.260
trans-1,2-Dichloroethylene	<0.005	<0.005	0.005	<0.005	<0.005	<0.005	0.010
Ethylbenzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
4-Methyl-2 pentanone (MIBK)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Tetrachloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1,1-Trichloroethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Trichloroethylene	<0.005	<0.005	0.006	<0.005	<0.005	<0.005	0.032
Vinyl chloride	<0.005	<0.005	0.077	<0.005	<0.005	<0.005	0.016
Xylene (o)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Xylene (m,p)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Xylene (o,m,p)	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Additional Volatile Hydrocarbons	NA	NA	NA	NA	NA	NA	NA
Ethane							
Ethylene							
Methane							
Propane							
Pentene							
SVOCs identified as COCs							
4-Methylphenol	<0.01	<0.01	<0.01	<0.01	<0.200	<0.011	<0.01
PCBs	<0.500	<0.500	NA	NA	<0.5	NA	<0.5
Metals identified as COCs							
Arsenic	<0.01	0.021	<0.01	<0.01	<0.01	<0.01	0.019
Barium	0.102	0.123	0.057	0.851	0.276	0.395	0.306
Cadmium	<0.005	<0.005	0.054	<0.005	<0.005	<0.005	<0.005
Chromium	0.012	0.142	0.032	<0.01	<0.01	<0.01	0.015
Hexavalent Chromium	NA	NA	NA	NA	NA	NA	NA
Lead	<0.05	0.127	0.077	<0.05	<0.05	<0.05	<0.05

Table I A
Summary of Analytical Results for Groundwater Samples from FEI Sampling Events
Former GM Delco Chassis Division Site
Rochester, New York

Concentration in mg/L (ppm)

Well Number	PZ-404-1	PZ-404-2	PZ-404-4			PZ-404-5	PZ-404-6	PZ-404-7
Sample Date	06/22/99	06/22/99	12/19/96	04/30/98	06/29/99	06/28/99	06/23/99	06/28/99
Sample Type	GW	GW	GW	GW	GW	GW	GW	GW
VOCs identified as COCs								
Acetone	<0.020	<0.020	0.200	<20	0.640	<0.020	<0.020	0.770
Benzene	<0.005	<0.005	<0.005	<5	<0.050	<0.005	<0.005	<0.05
2-Butanone (MEK)	<0.010	<0.010	0.022	<10	<0.100	<0.010	<0.010	<0.10
Carbon Disulfide	<0.010	<0.010	2.200	<10	1.900	<0.010	<0.010	0.720
Chloroethane	<0.005	<0.005	<0.005	<5	<0.050	<0.005	<0.005	<0.05
Chloroform	<0.005	<0.005	<0.005	<5	<0.050	<0.005	<0.005	<0.05
1,1-Dichloroethane	<0.005	<0.005	<0.005	<5	<0.050	<0.005	<0.005	<0.05
1,1-Dichloroethylene	<0.005	<0.005	<0.005	<5	<0.050	<0.005	<0.005	<0.05
cis-1,2-Dichloroethylene	<0.005	<0.005	<0.005	<5	<0.050	<0.005	<0.005	<0.05
trans-1,2-Dichloroethylene	<0.005	<0.005	<0.005	<5	<0.050	<0.005	<0.005	<0.05
Ethylbenzene	<0.005	<0.005	<0.005	<5	<0.050	<0.005	<0.005	<0.05
4-Methyl-2 pentanone (MIBK)	0.014	<0.010	2.700	150.0	35.000	<0.010	<0.010	3.300
Tetrachloroethylene	<0.005	<0.005	<0.005	<5	<0.050	<0.005	<0.005	<0.05
Toluene	<0.005	<0.005	<0.005	<5	<0.050	<0.005	<0.005	<0.05
1,1,1-Trichloroethane	<0.005	<0.005	<0.005	<5	<0.050	<0.005	<0.005	<0.05
Trichloroethylene	<0.005	<0.005	<0.005	<5	<0.050	<0.005	<0.005	<0.05
Vinyl chloride	<0.005	<0.005	<0.005	<5	<0.050	<0.005	<0.005	<0.05
Xylene (o)	<0.005	<0.005	<0.005	<5	<0.050	<0.005	<0.005	<0.05
Xylene (m,p)	<0.005	<0.005	<0.005	<5	<0.050	<0.005	<0.005	<0.05
Total Xylene (o,m,p)	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Additional Volatile Hydrocarbons	NA	NA	NA	NA	NA	NA	NA	NA
Ethane								
Ethylene								
Methane								
Propane								
Pentene								
SVOCs identified as COCs								
4-Methylphenol	<0.01	<0.01	0.140	1.80	0.940	<0.01	<0.01	0.180
PCBs	NA	NA	<0.0005	NA	NA	NA	NA	NA
Metals identified as COCs								
Arsenic	<0.01	<0.01	0.020	<0.01	<0.01	<0.01	<0.01	<0.01
Barium	0.295	0.372	0.248	0.365	0.116	0.087	0.092	0.109
Cadmium	<0.005	<0.005	<0.005	0.005	<0.005	<0.005	<0.005	<0.005
Chromium	<0.01	0.014	0.022	0.026	<0.01	<0.01	<0.01	<0.01
Hexavalent Chromium	NA	NA	NA	NA	NA	NA	NA	NA
Lead	<0.05	<0.05	0.444	0.269	0.057	<0.05	<0.05	<0.05

Table I A
Summary of Analytical Results for Groundwater Samples from FEI Sampling Events
Former GM Delco Chassis Division Site
Rochester, New York

Concentration in mg/L (ppm)

Well Number	MW-99-1	MW-99-2	MW-99-3	DB-309-1			
Sample Date	06/24/99	06/24/99	06/24/99	12/18/96	04/28/98	06/23/99	
Sample Type	GW	GW	GW	GW	GW	GW	Dupl.
VOCs identified as COCs							
Acetone	<0.020	0.022	<0.020	0.083	<0.020	<0.020	<0.040
Benzene	<0.005	<0.005	<0.005	0.470	0.130	0.047	0.052
2-Butanone (MEK)	<0.010	<0.010	<0.010	0.037	<0.010	<0.010	<0.020
Carbon Disulfide	<0.010	<0.010	<0.010	0.020	0.016	<0.010	<0.020
Chloroethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.010
Chloroform	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.010
1,1-Dichloroethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.010
1,1-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.010
cis-1,2-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.010
trans-1,2-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.010
Ethylbenzene	<0.005	<0.005	<0.005	0.014	0.018	0.014	0.015
4-Methyl-2 pentanone (MIBK)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020
Tetrachloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.010
Toluene	<0.005	<0.005	<0.005	0.280	0.110	0.007	<0.010
1,1,1-Trichloroethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.010
Trichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.010
Vinyl chloride	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.010
Xylene (o)	<0.005	<0.005	<0.005	0.029	0.017	<0.005	<0.010
Xylene (m,p)	<0.005	<0.005	<0.005	0.084	0.065	0.008	<0.010
Total Xylene (o,m,p)	*ND*	*ND*	*ND*	*0.113*	*0.082*	*0.008*	*<0.010*
Additional Volatile Hydrocarbons	NA	NA	NA		NA		
Ethane				2.100		5.600	NA
Ethylene				<0.020		<0.200	NA
Methane				1.600		4.100	NA
Propane				1.700		4.000	NA
Pentene				NA		<0.010	<0.010
SVOCs identified as COCs							
4-Methylphenol	<0.01	<0.01	<0.011	0.013	<0.01	<0.01	<0.010
PCBs	NA	NA	NA	NA	NA	NA	NA
Metals identified as COCs							
Arsenic	<0.01	<0.01	0.089	0.074	0.024	<0.01	<0.01
Barium	0.424	0.706	1.120	0.361	0.080	0.036	0.040
Cadmium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chromium	<0.01	0.032	0.125	0.029	0.020	0.012	0.013
Hexavalent Chromium	NA	NA	NA	NA	NA	NA	NA
Lead	<0.05	<0.05	0.219	<0.05	<0.05	<0.05	<0.05

Table I A
Summary of Analytical Results for Groundwater Samples from FEI Sampling Events
Former GM Delco Chassis Division Site
Rochester, New York

Concentration in mg/L (ppm)

Well Number	DB-309-2			DB-309-3			DB-409-1		
Sample Date	12/18/96	04/29/98	06/29/99	12/18/96	04/28/98	06/25/99	12/18/96	04/28/98	06/28/99
Sample Type	GW	GW	GW	GW	GW	GW	GW	GW	GW
VOCs identified as COCs									
Acetone	<0.020	<0.020	<0.020	0.089	<0.020	0.020	<0.020	<0.020	<0.020
Benzene	<0.005	<0.005	<0.005	0.640	0.046	0.270	<0.005	<0.005	0.009
2-Butanone (MEK)	<0.010	<0.010	<0.010	<0.010	<0.010	0.016	<0.010	<0.010	<0.010
Carbon Disulfide	<0.010	<0.010	<0.010	0.020	<0.010	<0.010	<0.010	<0.010	<0.010
Chloroethane	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloroform	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1-Dichloroethane	0.110	0.130	0.100	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
cis-1,2-Dichloroethylene	0.083	0.160	0.150	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
trans-1,2-Dichloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Ethylbenzene	<0.005	<0.005	<0.005	0.020	<0.005	0.013	<0.005	<0.005	<0.005
4-Methyl-2 pentanone (MIBK)	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Tetrachloroethylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	<0.005	<0.005	<0.005	0.430	0.037	0.240	<0.005	<0.005	0.008
1,1,1-Trichloroethane	0.034	0.042	0.021	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Trichloroethylene	0.100	0.088	0.045	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Vinyl chloride	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Xylene (o)	<0.005	<0.005	<0.005	0.045	<0.005	0.036	<0.005	<0.005	<0.005
Xylene (m,p)	<0.005	<0.005	<0.005	0.150	0.015	0.100	<0.005	<0.005	<0.005
Total Xylene (o,m,p)	*ND*	*ND*	*ND*	*0.195*	*0.015*	*0.136*	*ND*	*ND*	*ND*
Additional Volatile Hydrocarbons	NA	NA			NA			NA	
Ethane			0.530	5.000		1.300	0.860		8.500
Ethylene			<0.05	<0.050		<0.05	<0.020		<0.250
Methane			2.000	3.400		1.500	0.750		9.200
Propane			<0.05	4.300		0.860	0.480		5.500
Pentene			<0.010	NA		<0.010	NA		<0.010
SVOCs identified as COCs									
4-Methylphenol	<0.10	<0.01	<0.011	<0.01	<0.01	<0.023	<0.01	<0.01	<0.01
PCBs	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals identified as COCs									
Arsenic	<0.01	0.017	<0.01	0.040	0.012	<0.01	<0.005	0.014	<0.01
Barium	<0.02	<0.02	<0.02	0.486	0.057	0.542	<0.005	<0.02	<0.02
Cadmium	<0.005	<0.005	<0.005	<0.005	<0.005	0.009	<0.005	<0.005	<0.005
Chromium	<0.01	<0.01	<0.01	0.018	0.011	0.202	<0.005	<0.01	<0.01
Hexavalent Chromium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	<0.05	<0.05	<0.05	<0.05	<0.05	0.127	<0.005	<0.05	<0.05

Table I A
Summary of Analytical Results for Groundwater Samples from FEI Sampling Events
Former GM Delco Chassis Division Site
Rochester, New York

Concentrations in mg/L (PPM)

Well Number	PZ-402-4
Sample Date	06/30/99
Sample Type	GW
TCL VOCs detected	NONE (all <0.050 mg/L)
Volatile TICs identified	*NONE*
TCL SVOCs detected	NONE (all <0.260 mg/L, most <0.110
Semi-Volatile TICs identified	
p-tert-butyl-benzoic acid	0.240 JN
unknown acid	0.082 J
unknown	0.110 J
unknown	0.075 J
unknown	0.079 J
unknown	0.110 J
unknown	0.150 J
unknown	0.120 J
unknown	0.095 J
unknown	0.110 J
unknown	0.300 J
unknown	0.130 J
PCBs detected	NONE (all <0.005 mg/L)

Notes:
The sample was analyzed for
TCL VOCs by NYSASP method 95-1,
for TCL SVOCs by NYSASP method 95-2,
and for TCL PCBs by NYSASP method 95-3.
< = Not detected above the detection limit shown
TICs = tentatively identified compounds
J = an estimated value for the concentration of a TIC
where the estimated concentration is based on the
assumption that instrument response for the compound
detected is the same as the response for the compound
as which the detected compound has been tentatively identified.

Table I B, Part 1
Summary of Analytical Results for All Previous LNAPL Samples
Former GM Delco Chassis Division Site
Rochester, New York

Concentrations in mg/kg (PPM)

Well Number	MW-204									MW-208		MW-213		
Sample Date	09/15/94	01/09/95	02/24/95		12/20/96	01/24/97		04/30/98	06/29/99	12/20/96	01/24/97	12/19/96	01/24/97	04/30/98
Sample Type	LNAPL	LNAPL	LNAPL	Dupl.	LNAPL	LNAPL	Dupl.	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL
PCBs	<50		<50	<5	<0.250	<2.5	<10	<2.5	<5	<0.250	<2.5	<0.250	<2.5	<2.5
TCL VOCs detected				NA	NA	NA	NA	NA	(DL = 20)	NA	NA	NA	NA	NA
Trichloroethene	0.85	<0.005	ND						<20					
2-Hexanone	<0.01	<0.01	110						<20					
Total Xylene (o,m,p)	6	<0.005	9.4						<20					
TCL SVOCs detected	NONE (all ND)	NA	NA	NA	NA	NA	NA	NA	(DL=1,000 to 2,500)	NA	NA	NA	NA	NA
Bis (2-Ethylhexyl) phthlate									260 J					
Barium	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Well Number	MW-303-1											
Sample Date	01/09/95	02/23/95		08/11/95	12/20/96	01/24/97			04/30/98		05/01/98	06/30/99
Sample Type	LNAPL	LNAPL	Dupl.	LNAPL	LNAPL	LNAPL	Dupl.	Tripl.	LNAPL	Dupl.	LNAPL	LNAPL
PCBs	75 (Ar. 1254)	<50	54 (Ar. 1254)	66 (Ar. 1254)	<2.5	<2.5	<10	6.6 *	<2.5	<2.5	<2.5	<5
TCL VOCs detected			NA	NA	NA	NA	NA	NA	NA	NA	NA	(DL = 5)
2-Hexanone	NA	58										<5
Ethylbenzene	3.9	ND										<5
Total Xylene (o,m,p)	1.8	ND										2
TCL SVOCs detected	NA	NONE (all ND)	NA	NA	NA	NA	NA	NA	NA	NA	NA	(DL=1,000 to 2,500)
Butyl benzyl phthalate												110 J
Bis (2-Ethylhexyl) phthlate												510 J
Barium	NA	6.22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Well Number	PZ-402-5								PZ-403-5				PZ-403-6				PZ-404-4	
Sample Date	12/19/96	01/24/97		05/01/98	06/29/99				01/24/97		05/01/98	06/30/99	12/19/96	01/24/97		05/01/98	12/19/96	04/30/98
Sample Type	LNAPL	LNAPL	Dupl.	LNAPL	LNAPL	Dupl. A	Dupl. B	Dupl. C	LNAPL	Dupl.	LNAPL	LNAPL	LNAPL	LNAPL	Dupl.	LNAPL	LNAPL	LNAPL
PCBs	<0.250	<2.5	<10	<2.5	<5	<5	<5	<5	<2.5	<10	<2.5	<5	<0.250	<2.5	<10	<2.5	<0.250	<2.5
TCL VOCs detected	NA	NA	NA	NA	(DL = 5)	(DL = 5)	(DL = 5)	(DL = 5)	NA	NA	NA	(DL = 5)	NA	NA	NA	NA	NA	NA
Carbon disulfide					1.3 J	<5	<5	<5				<5						
Toluene					27	27	25	19				<5						
Ethylbenzene					2.7 J	2.7 J	2.6 J	1.9 J				<5						
Total Xylene (o,m,p)					13	15	13	9.9				2.4						
TCL SVOCs detected	NA	NA	NA	NA	(DL=1,000 to 2,500)				NA	NA	NA	(DL=1,000 to 2,500)	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate					180 J	190 J	200 J	160 J				<1000						
Bis (2-Ethylhexyl) phthlate					130 J	110 J	160 J	<1000				<1000						

Notes:

Samples collected for PCB analysis from 1994 through January 1997 were analyzed for PCB Aroclors by U. S. EPA method 8080, except for the January 1997 triplicate sample from MW-303-1, which was analyzed for PCB congeners by modified EPA method 680.

Selected 1994 and 1995 samples were analyzed for TCL VOCs by EPA method 8240 and for TCL SVOCs by method 8270.

Barium analysis of February 1995 samples was by EPA method 6010.

April 1998 samples were analyzed for PCB Aroclors by EPA method 8082.

June 1999 samples were analyzed for TCL VOCs by NYSASP method 95-1, for TCL SVOCs by NYSASP method 95-2, and for PCB Aroclors by NYSASP method 95-3. Refer to Part 2 of this table (next 2 pages) for a summary of VOC and SVOC TICs identified in the June 1999 samples.

NA - Not analyzed. Dupl. - Duplicate LNAPL sample. Tripl. = triplicate.

< - Not detected above the detection limit shown. ND = Not detected.

RT = Retention Time.

J = indicates an estimated value for an identified compound where the estimated concentration is less than the sample quantitation limit but greater than zero.

Table I B, Part 2
Summary of Analytical Results for TICs in LNAPL Samples
Former GM Delco Chassis Division Site
Rochester, New York

Concentrations in mg/kg (PPM)

Well Number	MW-204	MW-303-1	PZ-402-5				PZ-403-5
Sample Date	06/29/99	06/30/99	06/29/99				06/30/99
Sample Type	LNAPL	LNAPL	LNAPL	Dupl. A	Dupl. B	Dupl. C	LNAPL
PCBs	<5	<5	<5	<5	<5	<5	<5
TCL VOCs detected	(DL = 20)	(DL = 5)	(DL = 5)	(DL = 5)	(DL = 5)	(DL = 5)	(DL = 5)
Carbon disulfide	<20	<5	1.3 J	<5	<5	<5	<5
Toluene	<20	<5	27	27	25	19	<5
Ethylbenzene	<20	<5	2.7 J	2.7 J	2.6 J	1.9 J	<5
Total Xylene (o,m,p)	<20	2	13	15	13	9.9	2.4
Volatile TICs identified							
2,4,4-trimethyl-1-pentene	270 J	180 J					
2,4,4-trimethyl-2-pentene	40 J						
2,3,4-trimethyl-2-pentene (RT = 16.04)						3.7 J	
Trans-3,4,4-trimethyl-2-pent...(CAS 39761-64-3, RT = 16.03 - 16.06)		43 J	4 J	4.2 J	4.3 J		4.4 J
(1,1,3-trimethy) cyclohexane (RT = 20.62)						3.2 J	
unknown hydorcarbon (RT = 20.89)			8.5 J				
Nonane	14 J	8 J	7.3 J	9.1 J	8.6 J	5.8 J	6.2 J
Propyl-cyclohexane	12 J						
3,6-dimethyl-octane			5.1 J	5.6 J	5.8 J		6.4 J
(1-ethyl-2-methy) cyclohexane (RT = 23.57)						4.1 J	
unknown hydorcarbon (RT = 23.85 - 23.88)		5.2 J	3 J	3.7 J	3.3 J		4 J
(1-ethylmethy) cyclohexane (RT = 24.36)			11 J				
unknown hydorcarbon (RT = 24.35 - 24.37)		26 J		13 J	12 J	10 J	21 J
3-methyl-nonane (RT = 24.74 - 24.75)		5.7 J					3.7 J
1,2,3-trimethylbenzene (RT = 24.99)				3.5 J			
1-ethyl-3-methyl-benzene (RT = 25.00)	13 J		2.5 J				
unknown hydorcarbon (RT = 25.01)							3.3 J
unknown hydorcarbon (RT = 25.39 - 25.42)			5.8 J	6.9 J	7 J	4.4 J	8.4 J
unknown hydorcarbon (RT = 25.82 - 25.85)		15 J	3.1 J	4.3 J	3.9 J	6.8 J	6.5 J
Propyl-benzene		11 J	6.2 J	6.2 J	6.3 J	8 J	5.2 J
1-ethyl-2-methyl-benzene (RT = 26.25 - 26.26)	26 J		27 J	22 J	29 J	18 J	28 J
unknown hydorcarbon (RT = 26.27)		16 J					
unknown hydorcarbon (RT = 26.37 - 26.38)				7.1 J		11 J	
1-ethyl-2-methyl-benzene (RT = 27.01 - 27.03)			6.2		4.1 J		
1-ethyl-4-methyl-benzene (RT = 27.03)							7.1 J
1,2,3-trimethylbenzene (RT = 27.03)				5.6 J		5.7 J	
1,2,3-trimethylbenzene (RT = 27.36 -27.37)				32 J	40 J	23 J	
1,2,4-trimethylbenzene (RT = 27.37)			38 J				
1,3,5-timethylbenzene (RT = 27.38)							41 J
unknown hydorcarbon (RT = 27.62)		21 J		9.6 J		5.2 J	
(1-methylpropyl)-benzene (RT = 27.82)							5.9 J
Butyl-cyclohexane	13 J						
1-methyl-3-propyl-benzene	13 J						
1-ethyl-3,5-dimethyl-benzene	18 J						
Alpha benzeneacetaldehyde (RT = 27.82)		6.3 J	5 J	4.6 J	5.2 J		
unknown hydorcarbon (RT = 27.83)						3.6 J	
1-methyl-2-(1methy...)-benzene (CAS 527-84-4)							3.3 J
1-methyl-2-(1methy...)-benzene (CAS 527-84-4, RT = 28.04)			4.8 J				
1-methyl-3-(1methy...)-benzene (CAS 535-77-3, RT = 28.04)						4 J	
1-methyl-4-(1methy...)-benzene (CAS 99-87-6, RT = 28.02 - 28.04)		5.7 J		4.8 J	4.9 J		5.4 J
1-methyl-4-(1methy...)-benzene (CAS 99-87-6, RT = 28.14 - 28.16)			7.3 J				
unknown hydorcarbon (RT = 28.14 - 28.16)				7.4 J	7.7 J	5.6 J	
1,2,4-trimethylbenzene (RT = 28.58)					29 J		
1,2,3-trimethylbenzene (RT = 28.59 - 28.60)			26 J	29 J			
1,3,5-trimethylbenzene (RT = 28.60)						19 J	
Undecane		12 J					20 J
unknown cycloalkane	15 J						
unknown hydorcarbon	18 J						
unknown hydorcarbon	26 J						

Table I B, Part 2
Summary of Analytical Results for TICs in LNAPL Samples
Former GM Delco Chassis Division Site
Rochester, New York

Concentrations in mg/kg (PPM)

Well Number	MW-204	MW-303-1	PZ-402-5				PZ-403-5
Sample Date	06/29/99	06/30/99	06/29/99				06/30/99
Sample Type	LNAPL	LNAPL	LNAPL	Dupl. A	Dupl. B	Dupl. C	LNAPL
TCL SVOCs detected	(DL=1,000 to 2,500)	(DL=1,000 to 2,500)	(DL=1,000 to 2,500)				(DL=1,000 to 2,500)
Butyl benzyl phthalate	<1,000	110 J	180 J	190 J	200 J	160 J	<1000
Bis (2-Ethylhexyl) phthlate	260 J	510 J	130 J	110 J	160 J	<1000	<1000
Semi-Volatile TICs identified							
unknown (RT = 13.56)	320 J						
unknown (RT = 15.76)			460 J				
unknown (RT = 17.09 - 17.10)			380 J			430 J	
unknown (RT = 17.26)	380 J						
unknown (RT = 18.48)						470 J	
unknown (RT = 18.83)	400 J						
unknown (RT = 19.32)					530 J		
unknown (RT = 19.56)							350 J
unknown (RT = 21.70 - 21.72)	550 J	510 J					450 J
unknown (RT = 22.37)							290 J
unknown (RT = 22.51)							310 J
unknown (RT = 22.74)						340 J	
unknown (RT = 23.07 - 23.08)	550 J	520 J		490 J		490 J	
unknown (RT = 23.22)				320 J		330 J	
unknown (RT = 24.04 -24.06)	340 J	630 J			370 J	420 J	
unknown	440 J		490 J	480 J	410 J	550 J	350 J
unknown (RT = 25.23 - 25.24)	640 J		760 J	580 J	430 J		530 J
unknown (RT = 26.37 - 26.39)	470 J	540 J	430 J	480 J	480 J	440 J	380 J
unknown (RT = 27.12)				390 J			
unknown (RT = 27.62 - 27.63)	1000 J	1600 J			1200 J	850 J	1300 J
unknown (RT = 29.24 -29.27)			330 J	380 J	690 J		560 J

Notes: December 1996 and January 1997 samples were analyzed for PCB Aroclors by U. S. EPA method 8080, except for the January 1997 triplicate sample from MW-303-1, which was analyzed for PCB congeners by modified EPA method 680. April 1998 samples were analyzed for PCB Aroclors by EPA method 8082. June 1999 samples were analyzed for TCL VOCs by NYSASP method 95-1, for TCL SVOCs by NYSASP method 95-2, and for PCB Aroclors by NYSASP method 95-3.

NA - Not analyzed. Dupl. - Duplicate LNAPL sample.
< - Not detected above the detection limit shown
RT = Retention Time
J = indicates an estimated value either for an identified compound, where the estimated concentration is less than the sample quantitation limit but greater than zero, or for a compound which does not meet identification criteria (a TIC), where the estimated concentration is based on the assumption that instrument response for the compound detected is the same as the response for the compound as which the detected compound has been tentatively identified.

TABLE II

COMPARISON OF RELATIVE RISKS
FOR GROUNDWATER DATASETS FROM BASELINE STUDY AND FEI SAMPLING EVENTS
FORMER GM DELCO CHASSIS DIVISION SITE
ROCHESTER, NEW YORK

Summary of Maximum Concentrations Detected in Groundwater

Concentrations in Parts Per Million (PPM)

	Baseline Study Dataset (All wells, 2/95)	Most Recent Data (All wells, 6/99)	All FEI Data (All wells, 12/96, 4/98, and 6/99)	Baseline Study + All FEI Data (All wells, 2/95, 12/96, 4/98, and 6/99)	**Max. to date:** Baseline + FEI Data + Test boring DB-309-2, 25 - 37 ft. (1994)
VOCs identified as COCs					
Acetone	2.700	0.770	0.770	2.700	2.700
Benzene	0.430	0.270	**0.640**	**0.640**	**0.640**
2-Butanone (MEK)	0.050	0.016	0.050	0.050	0.050
Carbon Disulfide	6.100	1.900	2.200	6.100	6.100
Chloroethane	0.046	0.042	0.042	0.046	0.046
1,1-Dichloroethane	0.079	**0.100**	**0.200**	**0.200**	**1.100**
Total 1,2-Dichloroethylene	0.051	0.330	**0.460**	**0.460**	**3.500**
Ethylbenzene	0.180	**5.900**	**5.900**	**5.900**	**5.900**
4-Methyl-2 pentanone (MIBK)	50.000	37.000	**150.000**	**150.000**	**150.000**
Tetrachloroethylene	0.030	ND	ND	0.030	0.030
Toluene	0.290	0.240	**0.430**	**0.430**	**0.430**
1,1,1-Trichloroethane	0.022	0.021	**0.082**	**0.082**	**0.900**
Trichloroethylene	0.082	0.045	**0.100**	**0.100**	**5.200**
Vinyl chloride	0.010	**0.077**	**0.077**	**0.077**	**0.077**
Total Xylene (o,m,p)	0.420	**20.000**	**20.000**	**20.000**	**20.000**
SVOCs identified as COCs					
4-Methylphenol	1.100	0.940	**1.800**	**1.800**	**1.800**
Metals identified as COCs					
Arsenic	0.041	0.232	**0.178**	**0.178**	**0.178**
Barium	1.130	1.120	**1.590**	**1.590**	**1.590**
Cadmium	0.017	0.072	**0.072**	**0.072**	**0.072**
Chromium	0.170	0.317	**0.774**	**0.774**	**0.774**
Lead	0.620	0.238	**0.712**	**0.712**	**0.712**

TABLE II
COMPARISON OF RELATIVE RISKS
FOR GROUNDWATER DATASETS FROM BASELINE STUDY AND FEI SAMPLING EVENTS
FORMER GM DELCO CHASSIS DIVISION SITE
ROCHESTER, NEW YORK

Estimate of relative risks posed by compounds detected in June 1999 groundwater samples

- based on maximum concentrations detected
- using same Reference doses (Rfd) and Cancer Slope Factors (CSF) as used in Baseline Study

		Baseline Study Dataset		6/99 Maximum Conc.	
	Oral Rfd (mg/kg-d)	Max. conc. /Rfd	Relative non-cancer risk	Max. conc. /Rfd	Relative non-cancer risk
VOCs identified as COCs					
Acetone	0.1	27.00	2.29%	7.70	0.43%
Benzene	NA				
2-Butanone (MEK)	0.6	0.08	0.01%	0.03	0.00%
Carbon Disulfide	0.1	61.00	5.18%	19.00	1.06%
Chloroethane	NA				
1,1-Dichloroethane	0.1	0.79	0.07%	1.00	0.06%
Total 1,2-Dichloroethylene	0.01	5.10	0.43%	33.00	1.85%
Ethylbenzene	0.1	1.80	0.15%	59.00	3.30%
4-Methyl-2 pentanone (MIBK)	0.08	625.00	53.11%	462.50	25.90%
Tetrachloroethylene					
Toluene	0.2	1.45	0.12%	1.20	0.07%
1,1,1-Trichloroethane	NA				
Trichloroethylene	0.006	13.67	1.16%	7.50	0.42%
Vinyl chloride	NA				
Total Xylene (o,m,p)	2	0.21	0.02%	10.00	0.56%
SVOCs identified as COCs					
4-Methylphenol	0.005	220.00	18.69%	188.00	10.53%
Metals identified as COCs					
Arsenic	0.0003	136.67	11.61%	773.33	43.30%
Barium	0.07	16.14	1.37%	16.00	0.90%
Cadmium	0.0005	34.00	2.89%	144.00	8.06%
Chromium	0.005	34.00	2.89%	63.40	3.55%
Lead	NA				
TOTALS:		1176.91	100%	1785.66	100%

		Baseline Study Dataset		6/99 Maximum Conc.	
	Oral CSF (mg/kg-d)-1	Max. conc. X CSF	Relative cancer risk	Max. conc. X CSF	Relative cancer risk
VOCs identified as COCs					
Acetone	NA				
Benzene	0.029	0.01247	79.62%	0.00783	30.23%
2-Butanone (MEK)	NA				
Carbon Disulfide	NA				
Chloroethane	NA				
1,1-Dichloroethane	NA				
Total 1,2-Dichloroethylene	NA				
Ethylbenzene	NA				
4-Methyl-2 pentanone (MIBK)	NA				
Tetrachloroethylene	NA				
Toluene	NA				
1,1,1-Trichloroethane	NA				
Trichloroethylene	0.000902	0.000073964	0.47%	0.00004059	0.16%
Vinyl chloride	0.019	0.00019	1.21%	0.001463	5.65%
Total Xylene (o,m,p)	NA				
SVOCs identified as COCs					
4-Methylphenol	NA				
Metals identified as COCs					
Arsenic	0.0714	0.0029274	18.69%	0.0165648	63.96%
Barium	NA				
Cadmium	NA				
Chromium	NA				
Lead	NA				
TOTALS:		0.015661364	100%	0.02589839	100%

Estimated risk from exposures to maximum 6/99 concentrations relative to risk calculated in Baseline Study from 1995 data			
Non-cancer:	152% of risk based on 1995 data	Cancer:	165%

TABLE II
COMPARISON OF RELATIVE RISKS
FOR GROUNDWATER DATASETS FROM BASELINE STUDY AND FEI SAMPLING EVENTS
FORMER GM DELCO CHASSIS DIVISION SITE
ROCHESTER, NEW YORK

Estimate of relative risks posed by compounds detected in all FEI groundwater samples

- based on maximum concentrations detected
- using same Reference doses (Rfd) and Cancer Slope Factors (CSF) as used in Baseline Study

	Oral Rfd (mg/kg-d)	Baseline Study Dataset		All FEI Data		Oral CSF (mg/kg-d)-1	Baseline Study Dataset		All FEI Data	
		Max. conc. /Rfd	Relative non-cancer risk	Max. conc. /Rfd	Relative non-cancer risk		Max. conc. X CSF	Relative cancer risk	Max. conc. X CSF	Relative cancer risk
VOCs identified as COCs										
Acetone	0.1	27.00	2.29%	7.70	0.23%	NA				
Benzene	NA					0.029	0.01247	79.62%	0.01856	56.55%
2-Butanone (MEK)	0.6	0.08	0.01%	0.08	0.00%	NA				
Carbon Disulfide	0.1	61.00	5.18%	22.00	0.66%	NA				
Chloroethane	NA					NA				
1,1-Dichloroethane	0.1	0.79	0.07%	2.00	0.06%	NA				
Total 1,2-Dichloroethylene	0.01	5.10	0.43%	46.00	1.39%	NA				
Ethylbenzene	0.1	1.80	0.15%	59.00	1.78%	NA				
4-Methyl-2 pentanone (MIBK)	0.08	625.00	53.11%	1875.00	56.55%	NA				
Tetrachloroethylene						NA				
Toluene	0.2	1.45	0.12%	2.15	0.06%	NA				
1,1,1-Trichloroethane	NA					NA				
Trichloroethylene	0.006	13.67	1.16%	16.67	0.50%	0.000902	0.000073964	0.47%	0.0000902	0.27%
Vinyl chloride	NA					0.019	0.00019	1.21%	0.001463	4.46%
Total Xylene (o,m,p)	2	0.21	0.02%	10.00	0.30%	NA				
SVOCs identified as COCs										
4-Methylphenol	0.005	220.00	18.69%	360.00	10.86%	NA				
Metals identified as COCs										
Arsenic	0.0003	136.67	11.61%	593.33	17.89%	0.0714	0.0029274	18.69%	0.0127092	38.72%
Barium	0.07	16.14	1.37%	22.71	0.69%	NA				
Cadmium	0.0005	34.00	2.89%	144.40	4.35%	NA				
Chromium	0.005	34.00	2.89%	154.80	4.67%	NA				
Lead	NA					NA				
TOTALS:		1176.91	100%	3315.85	100%	TOTALS:	0.015661364	100%	0.0328224	100%

Estimated risk from exposures to maximum FEI concentrations relative to risk calculated in Baseline Study from 1995 data			
Non-cancer:	282% of risk based on 1995 data	Cancer:	210%

TABLE II
COMPARISON OF RELATIVE RISKS
FOR GROUNDWATER DATASETS FROM BASELINE STUDY AND FEI SAMPLING EVENTS
FORMER GM DELCO CHASSIS DIVISION SITE
ROCHESTER, NEW YORK

Estimate of relative risks posed by compounds detected in all Baseline Study and FEI groundwater samples except the 1994 sample from test boring DB-309-2, 25-37 ft.

- based on maximum concentrations detected using same Reference doses (Rfd) and Cancer Slope Factors (CSF) as used in Baseline Study

		Baseline Study Dataset		Baseline + All FEI Data			Baseline Study Dataset		Baseline + All FEI Data	
	Oral Rfd (mg/kg-d)	Max. conc. /Rfd	Relative non-cancer risk	Max. conc. /Rfd	Relative non-cancer risk	Oral CSF (mg/kg-d)-1	Max. conc. X CSF	Relative cancer risk	Max. conc. X CSF	Relative cancer risk
VOCs identified as COCs										
Acetone	0.1	27.00	2.29%	27.00	0.80%	NA				
Benzene	NA					0.029	0.01247	79.62%	0.01856	56.55%
2-Butanone (MEK)	0.6	0.08	0.01%	0.08	0.00%	NA				
Carbon Disulfide	0.1	61.00	5.18%	61.00	1.81%	NA				
Chloroethane	NA					NA				
1,1-Dichloroethane	0.1	0.79	0.07%	2.00	0.06%	NA				
Total 1,2-Dichloroethylene	0.01	5.10	0.43%	46.00	1.36%	NA				
Ethylbenzene	0.1	1.80	0.15%	59.00	1.75%	NA				
4-Methyl-2 pentanone (MIBK)	0.08	625.00	53.11%	1875.00	55.57%	NA				
Tetrachloroethylene						NA				
Toluene	0.2	1.45	0.12%	2.15	0.06%	NA				
1,1,1-Trichloroethane	NA					NA				
Trichloroethylene	0.006	13.67	1.16%	16.67	0.49%	0.000902	0.000073964	0.47%	0.0000902	0.27%
Vinyl chloride	NA					0.019	0.00019	1.21%	0.001463	4.46%
Total Xylene (o,m,p)	2	0.21	0.02%	10.00	0.30%	NA				
SVOCs identified as COCs										
4-Methylphenol	0.005	220.00	18.69%	360.00	10.67%	NA				
Metals identified as COCs										
Arsenic	0.0003	136.67	11.61%	593.33	17.58%	0.0714	0.0029274	18.69%	0.0127092	38.72%
Barium	0.07	16.14	1.37%	22.71	0.67%	NA				
Cadmium	0.0005	34.00	2.89%	144.40	4.28%	NA				
Chromium	0.005	34.00	2.89%	154.80	4.59%	NA				
Lead	NA					NA				
TOTALS:		1176.91	100%	3374.15	100%	TOTALS:	0.015661364	100%	0.0328224	100%

Estimated risk from exposures to maximum Baseline/ FEI concentrations relative to risk calculated in Baseline Study from 1995 data			
Non-cancer:	287% of risk based on 1995 data	Cancer:	210%

TABLE II

COMPARISON OF RELATIVE RISKS
FOR GROUNDWATER DATASETS FROM BASELINE STUDY AND FEI SAMPLING EVENTS
FORMER GM DELCO CHASSIS DIVISION SITE
ROCHESTER, NEW YORK

Estimate of relative risks posed by maximum contaminant concentrations detected in groundwater to date

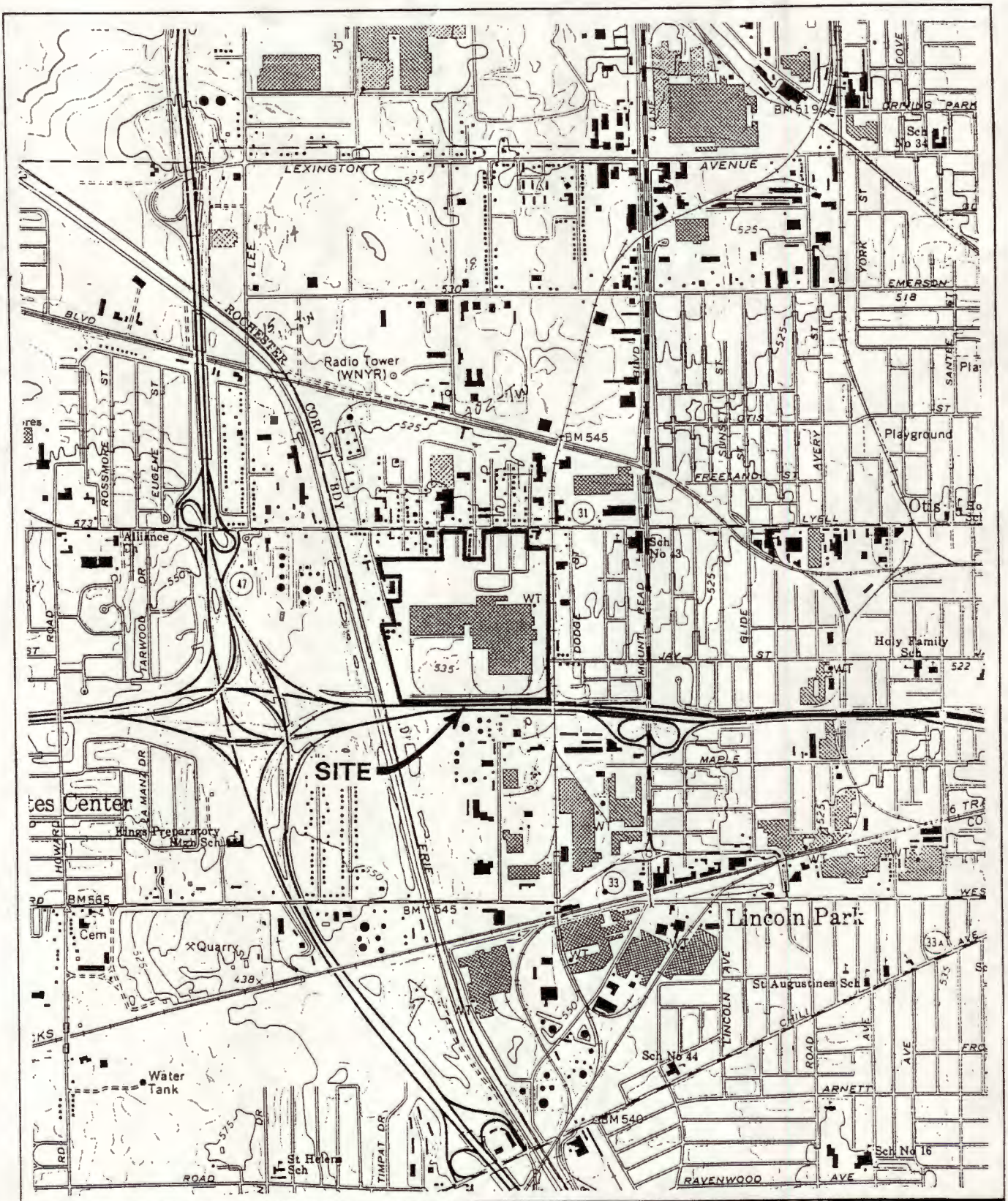
- based on maximum concentrations detected
- using same Reference doses (Rfd) and Cancer Slope Factors (CSF) as used in Baseline Study

	Oral Rfd (mg/kg-d)	Baseline Study Dataset: Max. conc. /Rfd	Baseline Study Dataset: Relative non-cancer risk	Max. Conc. Detected to Date: Max. conc. /Rfd	Max. Conc. Detected to Date: Relative non-cancer risk
VOCs identified as COCs					
Acetone	0.1	27.00	2.29%	27.00	0.60%
Benzene	NA				
2-Butanone (MEK)	0.6	0.08	0.01%	0.08	0.00%
Carbon Disulfide	0.1	61.00	5.18%	61.00	1.34%
Chloroethane	NA				
1,1-Dichloroethane	0.1	0.79	0.07%	11.00	0.24%
Total 1,2-Dichloroethylene	0.01	5.10	0.43%	350.00	7.71%
Ethylbenzene	0.1	1.80	0.15%	59.00	1.30%
4-Methyl-2 pentanone (MIBK)	0.08	625.00	53.11%	1875.00	41.33%
Tetrachloroethylene					
Toluene	0.2	1.45	0.12%	2.15	0.05%
1,1,1-Trichloroethane	NA				
Trichloroethylene	0.006	13.67	1.16%	866.67	19.10%
Vinyl chloride	NA				
Total Xylene (o,m,p)	2	0.21	0.02%	10.00	0.22%
SVOCs identified as COCs					
4-Methylphenol	0.005	220.00	18.69%	360.00	7.93%
Metals identified as COCs					
Arsenic	0.0003	136.67	11.61%	593.33	13.08%
Barium	0.07	16.14	1.37%	22.71	0.50%
Cadmium	0.0005	34.00	2.89%	144.40	3.18%
Chromium	0.005	34.00	2.89%	154.80	3.41%
Lead	NA				
TOTALS:		1176.91	100%	4537.15	100%

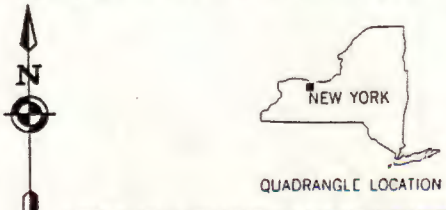
	Oral CSF (mg/kg-d)-1	Baseline Study Dataset: Max. conc. X CSF	Baseline Study Dataset: Relative cancer risk	Max. Conc. Detected to Date: Max. conc. X CSF	Max. Conc. Detected to Date: Relative cancer risk
VOCs identified as COCs					
Acetone	NA				
Benzene	0.029	0.01247	79.62%	0.01856	49.60%
2-Butanone (MEK)	NA				
Carbon Disulfide	NA				
Chloroethane	NA				
1,1-Dichloroethane	NA				
Total 1,2-Dichloroethylene	NA				
Ethylbenzene	NA				
4-Methyl-2 pentanone (MIBK)	NA				
Tetrachloroethylene	NA				
Toluene	NA				
1,1,1-Trichloroethane	NA				
Trichloroethylene	0.000902	7.3964E-05	0.47%	0.0046904	12.53%
Vinyl chloride	0.019	0.00019	1.21%	0.001463	3.91%
Total Xylene (o,m,p)	NA				
SVOCs identified as COCs					
4-Methylphenol	NA				
Metals identified as COCs					
Arsenic	0.0714	0.0029274	18.69%	0.0127092	33.96%
Barium	NA				
Cadmium	NA				
Chromium	NA				
Lead	NA				
TOTALS:		0.01566136	100%	0.0374226	100%

Estimated risk from exposures to maximum concentrations detected in all groundwater samples collected to date relative to risk calculated in Baseline Study from 1995 data			
Non-cancer:	386% of risk based on 1995 data	Cancer:	239%

169669



LATITUDE: 43° 09' 37"W LONGITUDE: 77° 40' 05"N



USGS QUADRANGLE: ROCHESTER WEST, N.Y.

H & A OF NEW YORK

Geotechnical Engineers & Environmental Consultants

FORMER GM – DELCO CHASSIS FACILITY
SITE # 8-28-099
ROCHESTER, NEW YORK

SITE LOCATION

SCALE: 1 IN. = 2000 FT.

FILE NO. 70436-40

MAKEPEACE

FIGURE 1

APPENDIX A

April 1998 Groundwater Sampling Event - Laboratory Analysis Data Summary Report

HALEY & ALDRICH

Columbia Analytical Services inc.

A FULL SERVICE ENVIRONMENTAL LABORATORY

June 1, 1998

RECEIVED
JUN 0 2 1998
H & A OF NEW YORK

Mr. Tom Wells
Haley & Aldrich, Inc.
189 North Water Street
Rochester, NY 14604

PROJECT:ITT-70436-232DEN(MO359)
Submission #:9804000458

Dear Mr. Wells

Enclosed are the analytical results of the analyses requested. All data has been reviewed prior to report submission. Should you have any questions please contact me at (716) 288-5380.

Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

Michael K. Perry

Michael Perry
Laboratory Director

Enc.

This package has been reviewed by Columbia Analytical Services' QA Department/Laboratory Director prior to report submittal. MVP 6/1/98

1 Mustard St. • Suite 250 • Rochester, NY 14609 • Tele:(716)288-5380 • Fax:(716)288-8475
65 Ramapo Valley Rd. • Suite 16 • Mahwah, NJ 07430 • Tele:(201)512-3292 • Fax:(201)512-3362

CASE NARRATIVE

COMPANY: Haley & Aldrich, Inc.
ITT
SUBMISSION #: 9804000458

H & A water samples were collected on 4/27/98 - 5/01/98, and 5/06/98 and received at CAS in good condition the same day as sampled.

VOLATILE ORGANICS

Thirty-four water samples, a Field Blank and three Trip Blanks were analyzed for a site specific list of volatile organics by SW-846 method 8260B.

All Tuning criteria for BFB were within limits.

All the initial and continuing calibration criteria were met for all analytes.

All surrogate standard recoveries were within acceptance limits except 4-Bromofluorobenzene on sample DB-309-1. This analysis was repeated and the surrogate recovery was confirmed.

The Matrix Spike/Matrix Spike Duplicate recoveries; the Blank Spike recoveries; and the RPD were all within QC limits.

The Laboratory Blanks associated with these analyses were free of contamination.

No other analytical or QC problems were encountered.

SEMIVOLATILE ORGANICS

Thirty-four water samples and a Field Blank were analyzed for 4-Methyphenol by SW-846 method 8070C.

All Tuning criteria for DFTPP were within limits.

The initial and continuing calibration criteria were met for all analytes.

All surrogate standard recoveries were within acceptance limits on all samples.

The Matrix Spike/Matrix Spike Duplicate recoveries; the Blank Spike recoveries; and the RPD were all within QC limits.

No analytical or QC problems were encountered.

PCB ANALYSIS

Ten oil samples and one water sample were analyzed for PCBs by SW-846 method 8082.

The initial and continuing calibration criteria were met for all analytes.

All surrogate standard recoveries were within acceptance limits on all samples.

The Blank Spike recoveries were within QC limits.

No other analytical or QC problems were encountered.

INORGANIC ANALYSIS

Thirty-four water samples and a Field Blank were analyzed for RCRA metals using SW-846 ICP method 6010 except for Mercury by 7470. Eight water samples and a Field Blank were analyzed for Hexavalent Chromium using SW-846 method 7196A

The Matrix Spike recoveries; the Blank Spike recoveries; and the RPD were all within QC limits.

No analytical or QC problems were encountered with any of these analyses

Columbia Analytical Services Inc.

Effective 04/01/96

CAS LIST OF QUALIFIERS

(The basis of this proposal are the EPA-CLP Qualifiers)

U - Indicates compound was analyzed for but was not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.

J - Indicates an estimated value. For further explanation see case narrative / cover letter.

B - This flag is used when the analyte is found in the associated blank as well as in the sample.

E - This flag identifies compounds whose concentrations exceed the calibration range.

A - This flag indicates that a TIC is a suspected aldol-condensation product.

N - Spiked sample recovery not within control limits.
(Flag the entire batch - Inorganic analysis only)

* - Duplicate analysis not within control limits.
(Flag the entire batch - Inorganic analysis only)

- Also used to qualify Organics QC data outside limits.

D - Spike diluted out.

S - Reported value determined by Method of Standard Additions. (MSA)

X - As specified in the case narrative.

CAS Lab ID # for State Certifications

NY ID # in Rochester:	10145	NJ ID # in Rochester:	73004
CT ID # in Rochester:	PH0556	RI ID # in Rochester:	158
MA ID # in Rochester:	M-NY032		

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
Reported: 06/01/98
Reported Units = MG/L

aley & Aldrich, Inc.
ITT-70436-232DEN(MO359)
UBMISSION #: 9804000458

ORDER NUMBER		208769	208776	208788	208789
AMPLE ID:		MW-206	MW-205	MW-211	MW-207
ATE SAMPLED:		04/28/98	04/28/98	04/29/98	04/29/98
DATE RECEIVED:	PQL	04/28/98	04/28/98	04/29/98	04/29/98
HEXAVALENT CHROMIUM	0.0100	0.0100 U	0.0100 U	0.0100 U	0.0100 U

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
Reported: 06/01/98
Reported Units = MG/L

Haley & Aldrich, Inc.
ITT-70436-232DEN(MO359)
SUBMISSION #: 9804000458

ORDER NUMBER		208790	208791	208792	208799
SAMPLE ID:		OW-104	OW-105	OW-107	DUP1-4
DATE SAMPLED:		04/29/98	04/29/98	04/29/98	04/29/98
DATE RECEIVED:	PQL	04/29/98	04/29/98	04/29/98	04/29/98
HEXAVALENT CHROMIUM	0.0100	0.0100 U	0.0100 U	0.0100 U	0.0100 U

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
Reported: 06/01/98
Reported Units = MG/L

aley & Aldrich, Inc.
ITT-70436-232DEN(M0359)
UBMISSION #: 9804000458

ORDER NUMBER		209240
AMPLE ID:		FIELD BLANK
ATE SAMPLED:		04/30/98
DATE RECEIVED:	PQL	04/30/98
HEXAVALENT CHROMIUM	0.0100	0.0100 U

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
Reported: 06/01/98
Reported Units = MG/L

Haley & Aldrich, Inc.
ITT-70436-232DEN(M0359)
SUBMISSION #: 9804000458

ORDER NUMBER		208760	208761	208762	208763
SAMPLE ID:		MW-309-2	MW-306-1	MW-307-1	MW-309-1
DATE SAMPLED:		04/27/98	04/27/98	04/28/98	04/28/98
DATE RECEIVED:	PQL	04/28/98	04/28/98	04/28/98	04/28/98
ARSENIC	0.0100	0.0149	0.0268	0.0167	0.0127
BARIUM	0.0200	0.0312	0.450	0.0200 U	0.0732
CADMIUM	0.00500	0.00500 U	0.00500 U	0.00500 U	0.00500 U
CHROMIUM	0.0100	0.0100 U	0.0207	0.0100 U	0.0100 U
LEAD	0.0500	0.0500 U	0.0500 U	0.0500 U	0.0500 U

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
Reported: 06/01/98
Reported Units = MG/L

aley & Aldrich, Inc.
ITT-70436-232DEN(M0359)
SUBMISSION #: 9804000458

ORDER NUMBER		208764	208765	208766	208767
AMPLE ID:		DB-309-1	MW-7	MW-6	MW-5
ATE SAMPLED:		04/28/98	04/28/98	04/28/98	04/28/98
DATE RECEIVED:	PQL	04/28/98	04/28/98	04/28/98	04/28/98
ARSENIC	0.0100	0.0237	0.0219	0.0105	0.0169
BARIUM	0.0200	0.0799	0.398	0.0409	0.0416
ADMIUM	0.00500	0.00500 U	0.00500 U	0.00500 U	0.00500 U
HROMIUM	0.0100	0.0195	0.0137	0.0100 U	0.0100 U
LEAD	0.0500	0.0500 U	0.0500 U	0.0500 U	0.0500 U

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
Reported: 06/01/98
Reported Units = MG/L

Haley & Aldrich, Inc.
ITT-70436-232DEN(MO359)
SUBMISSION #: 9804000458

ORDER NUMBER		208768	208769	208770	208771
SAMPLE ID:		MW-4	MW-206	MW-210	DB-309-3
DATE SAMPLED:		04/28/98	04/28/98	04/28/98	04/28/98
DATE RECEIVED:	PQL	04/28/98	04/28/98	04/28/98	04/28/98
ARSENIC	0.0100	0.0149	0.0225	0.0660	0.0118
BARIUM	0.0200	0.367	0.236	0.419	0.0571
CADMIUM	0.00500	0.00500 U	0.00500 U	0.00500 U	0.00500 U
CHROMIUM	0.0100	0.0100 U	0.0170	0.0568	0.0106
LEAD	0.0500	0.0500 U	0.0500 U	0.0647	0.0500 U

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
Reported: 06/01/98
Reported Units = MG/L

Haley & Aldrich, Inc.
ITT-70436-232DEN(MO359)
SUBMISSION #: 9804000458

ORDER NUMBER		208772	208773	208775	208776
SAMPLE ID:		DB-409-1	MW-209	DUP1-2	MW-205
DATE SAMPLED:		04/28/98	04/28/98	04/28/98	04/28/98
DATE RECEIVED:	PQL	04/28/98	04/28/98	04/28/98	04/28/98
ARSENIC	0.0100	0.0144	0.0164	0.0212	0.0413
BARIUM	0.0200	0.0200 U	0.212	0.282	1.34
CADMIUM	0.00500	0.00500 U	0.00500 U	0.00500 U	0.00500 U
CHROMIUM	0.0100	0.0100 U	0.0100 U	0.0100 U	0.0763
LEAD	0.0500	0.0500 U	0.0500 U	0.0500 U	0.124

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
Reported: 06/01/98
Reported Units = MG/L

Haley & Aldrich, Inc.
ITT-70436-232DEN(M0359)
SUBMISSION #: 9804000458

ORDER NUMBER		208788	208789	208790	208791
SAMPLE ID:		MW-211	MW-207	OW-104	OW-105
DATE SAMPLED:		04/29/98	04/29/98	04/29/98	04/29/98
DATE RECEIVED:	PQL	04/29/98	04/29/98	04/29/98	04/29/98
ARSENIC	0.0100	0.0121	0.0414	0.0176	0.0153
BARIUM	0.0200	0.0621	0.276	0.244	0.260
CADMIUM	0.00500	0.00500 U	0.00500 U	0.00500 U	0.00500 U
CHROMIUM	0.0100	0.0100 U	0.0541	0.0168	0.0279
LEAD	0.0500	0.0500 U	0.357	0.0500 U	0.141

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
Reported: 06/01/98
Reported Units = MG/L

aley & Aldrich, Inc.
ITT-70436-232DEN(M0359)
UBMISSION #: 9804000458

ORDER NUMBER		208792	208793	208794	208795
AMPLE ID:		OW-107	MW-1	MW-203	MW-202
ATE SAMPLED:		04/29/98	04/29/98	04/29/98	04/29/98
DATE RECEIVED:	PQL	04/29/98	04/29/98	04/29/98	04/29/98
ARSENIC	0.0100	0.0158	0.0513	0.0440	0.0158
BARIUM	0.0200	0.195	0.268	0.684	0.305
ADMIUM	0.00500	0.00500 U	0.00500 U	0.00500 U	0.00500 U
CHROMIUM	0.0100	0.0100 U	0.0334	0.246	0.0100 U
LEAD	0.0500	0.0500 U	0.0740	0.258	0.0500 U

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
Reported: 06/01/98
Reported Units = MG/L

aley & Aldrich, Inc.
ITT-70436-232DEN(M0359)
UBMISSION #: 9804000458

ORDER NUMBER		208796	208797	208798	209227
AMPLE ID:		DB-309-2	MW-212	DUP1-1	MW-2
ATE SAMPLED:		04/29/98	04/29/98	04/29/98	04/30/98
DATE RECEIVED:	PQL	04/29/98	04/29/98	04/29/98	04/30/98
ARSENIC	0.0100	0.0165	0.0311	0.0143	0.0148
BARIUM	0.0200	0.0200 U	0.103	0.244	0.402
ADMIUM	0.00500	0.00500 U	0.00500 U	0.00500 U	0.0147
HROMIUM	0.0100	0.0100 U	0.0332	0.0250	0.0100 U
LEAD	0.0500	0.0500 U	0.109	0.140	0.0500 U

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
Reported: 06/01/98
Reported Units = MG/L

Haley & Aldrich, Inc.
ITT-70436-232DEN(MO359)
SUBMISSION #: 9804000458

ORDER NUMBER		209228	209229	209230	209237
SAMPLE ID:		PZ402-2	MW309-3	PZ404-4	MW-204
DATE SAMPLED:		04/30/98	04/30/98	04/30/98	04/30/98
DATE RECEIVED:	PQL	04/30/98	04/30/98	04/30/98	04/30/98
ARSENIC	0.0100	0.0237	0.0162	0.0100 U	0.0226
BARIUM	0.0200	0.226	0.190	0.365	0.939
CADMIUM	0.00500	0.00500 U	0.00500 U	0.00522	0.00500 U
CHROMIUM	0.0100	0.0268	0.0100 U	0.0263	0.0100 U
LEAD	0.0500	0.0702	0.0500 U	0.269	0.0500 U

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
Reported: 06/01/98
Reported Units = MG/L

aley & Aldrich, Inc.
ITT-70436-232DEN(MO359)
UBMISSION #: 9804000458

ORDER NUMBER		209238	209240	209986
AMPLE ID:		MW-303-1	FIELD BLANK	MW-208
ATE SAMPLED:		04/30/98	04/30/98	05/01/98
DATE RECEIVED:	PQL	04/30/98	04/30/98	05/01/98
ARSENIC	0.0100	0.0272	0.0100 U	0.0100 U
BARIUM	0.0200	0.408	0.0200 U	0.0422
ADMIUM	0.00500	0.00500 U	0.00500 U	0.00500 U
CHROMIUM	0.0100	0.0100 U	0.0100 U	0.0100 U
LEAD	0.0500	0.0500 U	0.0500 U	0.0500 U

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
Reported: 06/01/98

Haley & Aldrich, Inc.
ITT-70436-232DEN(MO359)
SUBMISSION #: 9804000458

ORDER NUMBER	208769	208776	208788	208789
SAMPLE ID:	MW-206	MW-205	MW-211	MW-207
DATE SAMPLED:	04/28/98	04/28/98	04/29/98	04/29/98
DATE RECEIVED:	04/28/98	04/28/98	04/29/98	04/29/98
HEXAVALENT CHROMIUM	04/28/98	04/28/98	04/30/98	04/30/98

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
Reported: 06/01/98

Haley & Aldrich, Inc.
ITT-70436-232DEN(MO359)
SUBMISSION #: 9804000458

ORDER NUMBER	208790	208791	208792	208799
SAMPLE ID:	OW-104	OW-105	OW-107	DUP1-4
DATE SAMPLED:	04/29/98	04/29/98	04/29/98	04/29/98
DATE RECEIVED:	04/29/98	04/29/98	04/29/98	04/29/98
HEXAVALENT CHROMIUM	04/30/98	04/30/98	04/30/98	04/30/98

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
Reported: 06/01/98

Haley & Aldrich, Inc.
ITT-70436-232DEN(M0359)
SUBMISSION #: 9804000458

ORDER NUMBER	209240
SAMPLE ID:	FIELD BLANK
DATE SAMPLED:	04/30/98
DATE RECEIVED:	04/30/98

HEXAVALENT CHROMIUM	04/30/98

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
Reported: 06/01/98

Haley & Aldrich, Inc.
ITT-70436-232DEN(M0359)
SUBMISSION #: 9804000458

ORDER NUMBER	208760	208761	208762	208763
SAMPLE ID:	MW-309-2	MW-306-1	MW-307-1	MW-309-1
DATE SAMPLED:	04/27/98	04/27/98	04/28/98	04/28/98
DATE RECEIVED:	04/28/98	04/28/98	04/28/98	04/28/98
ARSENIC	05/07/98	05/07/98	05/07/98	05/07/98
BARIUM	05/07/98	05/07/98	05/07/98	05/07/98
CADMIUM	05/07/98	05/07/98	05/07/98	05/07/98
CHROMIUM	05/07/98	05/07/98	05/07/98	05/07/98
LEAD	05/07/98	05/07/98	05/07/98	05/07/98

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
Reported: 06/01/98

Haley & Aldrich, Inc.
ITT-70436-232DEN(MO359)
SUBMISSION #: 9804000458

ORDER NUMBER	208764	208765	208766	208767
SAMPLE ID:	DB-309-1	MW-7	MW-6	MW-5
DATE SAMPLED:	04/28/98	04/28/98	04/28/98	04/28/98
DATE RECEIVED:	04/28/98	04/28/98	04/28/98	04/28/98
ARSENIC	05/07/98	05/07/98	05/07/98	05/07/98
BARIUM	05/07/98	05/07/98	05/07/98	05/07/98
CADMIUM	05/07/98	05/07/98	05/07/98	05/07/98
CHROMIUM	05/07/98	05/07/98	05/07/98	05/07/98
LEAD	05/07/98	05/07/98	05/07/98	05/07/98

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
Reported: 06/01/98

Haley & Aldrich, Inc.
ITT-70436-232DEN(MO359)
SUBMISSION #: 9804000458

ORDER NUMBER	208768	208769	208770	208771
SAMPLE ID:	MW-4	MW-206	MW-210	DB-309-3
DATE SAMPLED:	04/28/98	04/28/98	04/28/98	04/28/98
DATE RECEIVED:	04/28/98	04/28/98	04/28/98	04/28/98
ARSENIC	05/07/98	05/07/98	05/07/98	05/07/98
BARIUM	05/07/98	05/07/98	05/07/98	05/07/98
CADMIUM	05/07/98	05/07/98	05/07/98	05/07/98
CHROMIUM	05/07/98	05/07/98	05/07/98	05/07/98
LEAD	05/07/98	05/07/98	05/07/98	05/07/98

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
Reported: 06/01/98

Haley & Aldrich, Inc.
ITT-70436-232DEN(MO359)
SUBMISSION #: 9804000458

ORDER NUMBER	208772	208773	208775	208776
SAMPLE ID:	DB-409-1	MW-209	DUP1-2	MW-205
DATE SAMPLED:	04/28/98	04/28/98	04/28/98	04/28/98
DATE RECEIVED:	04/28/98	04/28/98	04/28/98	04/28/98
ARSENIC	05/07/98	05/07/98	05/07/98	05/07/98
BARIUM	05/07/98	05/07/98	05/07/98	05/07/98
CADMIUM	05/07/98	05/07/98	05/07/98	05/07/98
CHROMIUM	05/07/98	05/07/98	05/07/98	05/07/98
LEAD	05/07/98	05/07/98	05/07/98	05/07/98

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
Reported: 06/01/98

Haley & Aldrich, Inc.
ITT-70436-232DEN(M0359)
SUBMISSION #: 9804000458

ORDER NUMBER	208788	208789	208790	208791
SAMPLE ID:	MW-211	MW-207	OW-104	OW-105
DATE SAMPLED:	04/29/98	04/29/98	04/29/98	04/29/98
DATE RECEIVED:	04/29/98	04/29/98	04/29/98	04/29/98
ARSENIC	05/07/98	05/07/98	05/07/98	05/07/98
BARIUM	05/07/98	05/07/98	05/07/98	05/07/98
CADMIUM	05/07/98	05/07/98	05/07/98	05/07/98
CHROMIUM	05/07/98	05/07/98	05/07/98	05/07/98
LEAD	05/07/98	05/07/98	05/07/98	05/07/98

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
Reported: 06/01/98

Haley & Aldrich, Inc.
ITT-70436-232DEN(M0359)
SUBMISSION #: 9804000458

ORDER NUMBER	208792	208793	208794	208795
SAMPLE ID:	OW-107	MW-1	MW-203	MW-202
DATE SAMPLED:	04/29/98	04/29/98	04/29/98	04/29/98
DATE RECEIVED:	04/29/98	04/29/98	04/29/98	04/29/98
ARSENIC	05/08/98	05/08/98	05/08/98	05/08/98
BARIUM	05/08/98	05/08/98	05/08/98	05/08/98
CADMIUM	05/08/98	05/08/98	05/08/98	05/08/98
CHROMIUM	05/08/98	05/08/98	05/08/98	05/08/98
LEAD	05/08/98	05/08/98	05/08/98	05/08/98

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
Reported: 06/01/98

Haley & Aldrich, Inc.
ITT-70436-232DEN(M0359)
SUBMISSION #: 9804000458

ORDER NUMBER	208796	208797	208798	209227
SAMPLE ID:	DB-309-2	MW-212	DUP1-1	MW-2
DATE SAMPLED:	04/29/98	04/29/98	04/29/98	04/30/98
DATE RECEIVED:	04/29/98	04/29/98	04/29/98	04/30/98
ARSENIC	05/08/98	05/08/98	05/08/98	05/08/98
BARIUM	05/08/98	05/08/98	05/08/98	05/08/98
CADMIUM	05/08/98	05/08/98	05/08/98	05/08/98
CHROMIUM	05/08/98	05/08/98	05/08/98	05/08/98
LEAD	05/08/98	05/08/98	05/08/98	05/08/98

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
Reported: 06/01/98

Haley & Aldrich, Inc.
ITT-70436-232DEN(MO359)
SUBMISSION #: 9804000458

ORDER NUMBER	209228	209229	209230	209237
SAMPLE ID:	PZ402-2	MW309-3	PZ404-4	MW-204
DATE SAMPLED:	04/30/98	04/30/98	04/30/98	04/30/98
DATE RECEIVED:	04/30/98	04/30/98	04/30/98	04/30/98
ARSENIC	05/08/98	05/08/98	05/08/98	05/08/98
BARIUM	05/08/98	05/08/98	05/08/98	05/08/98
CADMIUM	05/08/98	05/08/98	05/08/98	05/08/98
CHROMIUM	05/08/98	05/08/98	05/08/98	05/08/98
LEAD	05/08/98	05/08/98	05/08/98	05/08/98

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
Reported: 06/01/98

Haley & Aldrich, Inc.
ITT-70436-232DEN(MO359)
SUBMISSION #: 9804000458

ORDER NUMBER	209238	209240	209986
SAMPLE ID:	MW-303-1	FIELD BLANK	MW-208
DATE SAMPLED:	04/30/98	04/30/98	05/01/98
DATE RECEIVED:	04/30/98	04/30/98	05/01/98
ARSENIC	05/08/98	05/08/98	05/11/98
BARIUM	05/08/98	05/08/98	05/11/98
CADMIUM	05/08/98	05/08/98	05/11/98
CHROMIUM	05/08/98	05/08/98	05/11/98
LEAD	05/08/98	05/08/98	05/11/98

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
METHOD 8260
REPORTED UNITS: UG/L

Haley & Aldrich, Inc.
ITT-70436-232DEN(M0359)
SUBMISSION #: 9804000458

ORDER NUMBER		208760	208761	208762	208763
SAMPLE ID:		MW-309-2	MW-306-1	MW-307-1	MW-309-1
DATE SAMPLED:		04/27/1998	04/27/1998	04/28/1998	04/28/1998
DATE RECEIVED:	PQL	04/28/1998	04/28/1998	04/28/1998	04/28/1998
DATE ANALYZED:		5/ 7/98	5/ 7/98	5/ 7/98	5/ 7/98
DILUTION:		1.0	1.0	1.0	1.0
ACETONE	20	20 U	20 U	25	20 U
BENZENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
2-BUTANONE (MEK)	10	10 U	10 U	10 U	10 U
CARBON DISULFIDE	10	10 U	10 U	10 U	10 U
CHLOROETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
CHLOROFORM	5.0	5.0 U	5.0 U	5.0 U	5.0 U
1,1-DICHLOROETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
1,1-DICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
ETHYLBENZENE	5.0	5.0 U	8.9	5.0 U	5.0 U
4-METHYL-2-PENTANONE (MIBK)	10	10 U	10 U	10 U	10 U
TETRACHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
TOLUENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
1,1,1-TRICHLOROETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
TRICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
VINYL CHLORIDE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
M+P-XYLENE	5.0	5.0 U	78	5.0 U	5.0 U
O-XYLENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U

SURROGATE RECOVERIES	LIMITS				
4-BROMOFLUOROBENZENE	86 - 115	114	100	114	113
TOLUENE-D8	88 - 110	97	96	100	96
DIBROMOFLUOROMETHANE	86 - 118	102	97	102	100

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
METHOD 8260
REPORTED UNITS: UG/L

Haley & Aldrich, Inc.
ITT-70436-232DEN(MO359)
SUBMISSION #: 9804000458

ORDER NUMBER		208764	208765	208766	208767
SAMPLE ID:		DB-309-1	MW-7	MW-6	MW-5
DATE SAMPLED:		04/28/1998	04/28/1998	04/28/1998	04/28/1998
DATE RECEIVED:	PQL	04/28/1998	04/28/1998	04/28/1998	04/28/1998
DATE ANALYZED:		5/ 7/98	5/ 7/98	5/ 7/98	5/ 7/98
DILUTION:		1.0	1.0	1.0	1.0
ACETONE	20	20 U	20 U	20 U	20 U
BENZENE	5.0	130	5.0 U	5.0 U	5.0 U
2-BUTANONE (MEK)	10	10 U	10 U	10 U	10 U
CARBON DISULFIDE	10	16	10 U	10 U	10 U
CHLOROETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
CHLOROFORM	5.0	5.0 U	5.0 U	5.0 U	5.0 U
1,1-DICHLOROETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
1,1-DICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
ETHYLBENZENE	5.0	18	5.0 U	5.0 U	5.0 U
4-METHYL-2-PENTANONE (MIBK)	10	10 U	10 U	10 U	10 U
TETRACHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
TOLUENE	5.0	110	5.0 U	5.0 U	5.0 U
1,1,1-TRICHLOROETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
TRICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
VINYL CHLORIDE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
M+P-XYLENE	5.0	65	5.0 U	5.0 U	5.0 U
O-XYLENE	5.0	17	5.0 U	5.0 U	5.0 U

SURROGATE RECOVERIES	LIMITS				
4-BROMOFLUOROBENZENE	86 - 115	121 *	115	112	112
TOLUENE-D8	88 - 110	102	98	97	99
DIBROMOFLUOROMETHANE	86 - 118	103	101	99	100

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
METHOD 8260
REPORTED UNITS: UG/L

Haley & Aldrich, Inc.
ITT-70436-232DEN(M0359)
SUBMISSION #: 9804000458

ORDER NUMBER		208768	208769	208770	208771
SAMPLE ID:		MW-4	MW-206	MW-210	DB-309-3
DATE SAMPLED:		04/28/1998	04/28/1998	04/28/1998	04/28/1998
DATE RECEIVED:	PQL	04/28/1998	04/28/1998	04/28/1998	04/28/1998
DATE ANALYZED:		5/ 7/98	5/ 7/98	5/ 7/98	5/ 7/98
DILUTION:		1.0	1.0	1.0	1.0
ACETONE	20	20 U	20 U	20 U	20 U
BENZENE	5.0	5.0 U	5.0 U	5.0 U	46
2-BUTANONE (MEK)	10	10 U	10 U	10 U	10 U
CARBON DISULFIDE	10	10 U	10 U	10 U	10 U
CHLOROETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
CHLOROFORM	5.0	5.0 U	5.0 U	5.0 U	5.0 U
1,1-DICHLOROETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
1,1-DICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
ETHYLBENZENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
4-METHYL-2-PENTANONE (MIBK)	10	10 U	10 U	10 U	10 U
TETRACHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
TOLUENE	5.0	5.0 U	5.0 U	5.0 U	37
1,1,1-TRICHLOROETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
TRICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
VINYL CHLORIDE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
M+P-XYLENE	5.0	5.0 U	5.0 U	5.0 U	15
O-XYLENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U

SURROGATE RECOVERIES	LIMITS				
4-BROMOFLUOROBENZENE	86 - 115	114	111	112	115
TOLUENE-D8	88 - 110	98	96	98	100
DIBROMOFLUOROMETHANE	86 - 118	101	96	101	101

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
METHOD 8260
REPORTED UNITS: UG/L

Haley & Aldrich, Inc.
ITT-70436-232DEN(M0359)
SUBMISSION #: 9804000458

ORDER NUMBER		208772	208773	208775	208776
SAMPLE ID:		DB-409-1	MW-209	DUP1-2	MW-205
DATE SAMPLED:		04/28/1998	04/28/1998	04/28/1998	04/28/1998
DATE RECEIVED:	PQL	04/28/1998	04/28/1998	04/28/1998	04/28/1998
DATE ANALYZED:		5/ 7/98	5/ 8/98	5/ 8/98	5/ 8/98
DILUTION:		1.0	1.0	1.0	1.0
ACETONE	20	20 U	20 U	20 U	20 U
BENZENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
2-BUTANONE (MEK)	10	10 U	10 U	10 U	10 U
CARBON DISULFIDE	10	10 U	10 U	10 U	10 U
CHLOROETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
CHLOROFORM	5.0	5.0 U	5.0 U	5.0 U	5.0 U
1,1-DICHLOROETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
1,1-DICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	19
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
ETHYLBENZENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
4-METHYL-2-PENTANONE (MIBK)	10	10 U	10 U	10 U	10 U
TETRACHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
TOLUENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
1,1,1-TRICHLOROETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
TRICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
VINYL CHLORIDE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
M+P-XYLENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
O-XYLENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U

SURROGATE RECOVERIES	LIMITS				
4-BROMOFLUOROBENZENE	86 - 115	110	112	110	114
TOLUENE-D8	88 - 110	98	98	99	98
DIBROMOFLUOROMETHANE	86 - 118	102	102	102	101

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
METHOD 8260
REPORTED UNITS: UG/L

Haley & Aldrich, Inc.
ITT-70436-232DEN(MO359)
SUBMISSION #: 9804000458

ORDER NUMBER		208779	208788	208789	208790
SAMPLE ID:		TRIP BLANK	MW-211	MW-207	OW-104
DATE SAMPLED:		04/28/1998	04/29/1998	04/29/1998	04/29/1998
DATE RECEIVED:	PQL	04/28/1998	04/29/1998	04/29/1998	04/29/1998
DATE ANALYZED:		5/ 8/98	5/11/98	5/11/98	5/11/98
DILUTION:		1.0	1.0	1.0	1.0
ACETONE	20	20 U	20 U	20 U	20 U
BENZENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
2-BUTANONE (MEK)	10	10 U	10 U	10 U	10 U
CARBON DISULFIDE	10	10 U	10 U	10 U	10 U
CHLOROETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
CHLOROFORM	5.0	5.0 U	5.0 U	5.0 U	5.0 U
1,1-DICHLOROETHANE	5.0	5.0 U	5.0 U	5.0 U	9.5
1,1-DICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	5.0 U	15	5.1
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
ETHYLBENZENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
4-METHYL-2-PENTANONE (MIBK)	10	10 U	10 U	10 U	10 U
TETRACHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
TOLUENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
1,1,1-TRICHLOROETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
TRICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
VINYL CHLORIDE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
M+P-XYLENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
O-XYLENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U

SURROGATE RECOVERIES	LIMITS				
4-BROMOFLUOROBENZENE	86 - 115	114	114	109	107
TOLUENE-D8	88 - 110	98	97	96	96
DIBROMOFLUOROMETHANE	86 - 118	101	99	100	100

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
METHOD 8260
REPORTED UNITS: UG/L

Haley & Aldrich, Inc.
ITT-70436-232DEN(M0359)
SUBMISSION #: 9804000458

ORDER NUMBER		208791	208792	208793	208794
SAMPLE ID:		OW-105	OW-107	MW-1	MW-203
DATE SAMPLED:		04/29/1998	04/29/1998	04/29/1998	04/29/1998
DATE RECEIVED:	PQL	04/29/1998	04/29/1998	04/29/1998	04/29/1998
DATE ANALYZED:		5/11/98	5/12/98	5/12/98	5/12/98
DILUTION:		1.0	1.0	1.0	1.0
ACETONE	20	20 U	20 U	20 U	20 U
BENZENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
2-BUTANONE (MEK)	10	10 U	10 U	10 U	10 U
CARBON DISULFIDE	10	10 U	10 U	10 U	10 U
CHLOROETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
CHLOROFORM	5.0	5.0 U	5.0 U	5.0 U	5.0 U
1,1-DICHLOROETHANE	5.0	5.0 U	5.0 U	5.4	9.3
1,1-DICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	40	5.0 U	5.0 U
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
ETHYLBENZENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
4-METHYL-2-PENTANONE (MIBK)	10	10 U	10 U	10 U	10 U
TETRACHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
TOLUENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
1,1,1-TRICHLOROETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
TRICHLOROETHENE	5.0	5.0 U	13	5.0 U	5.0 U
VINYL CHLORIDE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
M+P-XYLENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
O-XYLENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
SURROGATE RECOVERIES	LIMITS				
4-BROMOFLUOROBENZENE	86 - 115	103	104	106	107
TOLUENE-D8	88 - 110	95	94	94	97
DIBROMOFLUOROMETHANE	86 - 118	99	98	101	101

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
METHOD 8260
REPORTED UNITS: UG/L

Haley & Aldrich, Inc.
ITT-70436-232DEN(MO359)
SUBMISSION #: 9804000458

ORDER NUMBER		208795	208796	208797	208798
SAMPLE ID:		MW-202	DB-309-2	MW-212	DUP1-1
DATE SAMPLED:		04/29/1998	04/29/1998	04/29/1998	04/29/1998
DATE RECEIVED:	PQL	04/29/1998	04/29/1998	04/29/1998	04/29/1998
DATE ANALYZED:		5/12/98	5/12/98	5/12/98	5/12/98
DILUTION:		1.0	1.0	1.0	1.0
ACETONE	20	20 U	20 U	20 U	20 U
BENZENE	5.0	13	5.0 U	5.0 U	5.0 U
2-BUTANONE (MEK)	10	10 U	10 U	10 U	10 U
CARBON DISULFIDE	10	10 U	10 U	10 U	10 U
CHLOROETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
CHLOROFORM	5.0	5.0 U	5.0 U	5.0 U	5.0 U
1,1-DICHLOROETHANE	5.0	5.0 U	130	5.0 U	5.0 U
1,1-DICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	160	5.0 U	5.0 U
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
ETHYLBENZENE	5.0	110	5.0 U	5.0 U	5.0 U
4-METHYL-2-PENTANONE (MIBK)	10	10 U	10 U	10 U	10 U
TETRACHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
TOLUENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
1,1,1-TRICHLOROETHANE	5.0	5.0 U	42	5.0 U	5.0 U
TRICHLOROETHENE	5.0	5.0 U	88	5.0 U	5.0 U
VINYL CHLORIDE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
M+P-XYLENE	5.0	220	5.0 U	5.0 U	5.0 U
O-XYLENE	5.0	17	5.0 U	5.0 U	5.0 U
SURROGATE RECOVERIES	LIMITS				
4-BROMOFLUOROBENZENE	86 - 115	103	105	111	109
TOLUENE-D8	88 - 110	96	96	99	96
DIBROMOFLUOROMETHANE	86 - 118	100	100	101	101

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
METHOD 8260
REPORTED UNITS: UG/L

Haley & Aldrich, Inc.
ITT-70436-232DEN(M0359)
SUBMISSION #: 9804000458

ORDER NUMBER		208800	209227	209228	209229
SAMPLE ID:		TRIP BLANK	MW-2	PZ402-2	MW309-3
DATE SAMPLED:		04/29/1998	04/30/1998	04/30/1998	04/30/1998
DATE RECEIVED:	PQL	04/29/1998	04/30/1998	04/30/1998	04/30/1998
DATE ANALYZED:		5/12/98	5/12/98	5/12/98	5/12/98
DILUTION:		1.0	1.0	1.0	1.0
ACETONE	20	20 U	20 U	20 U	20 U
BENZENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
2-BUTANONE (MEK)	10	10 U	10 U	10 U	10 U
CARBON DISULFIDE	10	10 U	10 U	10 U	10 U
CHLOROETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
CHLOROFORM	5.0	5.0 U	5.0 U	5.0 U	5.0 U
1,1-DICHLOROETHANE	5.0	5.0 U	5.0 U	200	5.0 U
1,1-DICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	5.0 U	460	5.0 U
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
ETHYLBENZENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
4-METHYL-2-PENTANONE (MIBK)	10	10 U	10 U	10 U	10 U
TETRACHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
TOLUENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
1,1,1-TRICHLOROETHANE	5.0	5.0 U	5.0 U	82	5.0 U
TRICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
VINYL CHLORIDE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
M+P-XYLENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
O-XYLENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
SURROGATE RECOVERIES	LIMITS				
4-BROMOFLUOROBENZENE	86 - 115	113	109	113	115
TOLUENE-D8	88 - 110	99	98	100	98
DIBROMOFLUOROMETHANE	86 - 118	104	100	104	105

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
METHOD 8260
REPORTED UNITS: UG/L

Haley & Aldrich, Inc.
ITT-70436-232DEN(M0359)
SUBMISSION #: 9804000458

ORDER NUMBER		209230	209237	209238	209240
SAMPLE ID:		PZ404-4	MW-204	MW-303-1	FIELD BLANK
DATE SAMPLED:		04/30/1998	04/30/1998	04/30/1998	04/30/1998
DATE RECEIVED:	PQL	04/30/1998	04/30/1998	04/30/1998	04/30/1998
DATE ANALYZED:		5/13/98	5/13/98	5/13/98	5/13/98
DILUTION:		1000.0	1.0	1.0	1.0
ACETONE	20	20000 U	24	20 U	20 U
BENZENE	5.0	5000 U	5.0 U	5.0 U	5.0 U
2-BUTANONE (MEK)	10	10000 U	10 U	10 U	10 U
CARBON DISULFIDE	10	10000 U	10 U	10 U	10 U
CHLOROETHANE	5.0	5000 U	5.0 U	5.0 U	5.0 U
CHLOROFORM	5.0	5000 U	5.0 U	5.0 U	5.0 U
1,1-DICHLOROETHANE	5.0	5000 U	5.0 U	5.0 U	5.0 U
1,1-DICHLOROETHENE	5.0	5000 U	5.0 U	5.0 U	5.0 U
CIS-1,2-DICHLOROETHENE	5.0	5000 U	5.0 U	5.0 U	5.0 U
TRANS-1,2-DICHLOROETHENE	5.0	5000 U	5.0 U	5.0 U	5.0 U
ETHYLBENZENE	5.0	5000 U	5.0 U	5.0 U	5.0 U
4-METHYL-2-PENTANONE (MIBK)	10	150000	10 U	10 U	10 U
TETRACHLOROETHENE	5.0	5000 U	5.0 U	5.0 U	5.0 U
TOLUENE	5.0	5000 U	5.0 U	5.0 U	5.0 U
1,1,1-TRICHLOROETHANE	5.0	5000 U	5.0 U	5.0 U	5.0 U
TRICHLOROETHENE	5.0	5000 U	5.0 U	5.0 U	5.0 U
VINYL CHLORIDE	5.0	5000 U	5.0 U	5.0 U	5.0 U
M+P-XYLENE	5.0	5000 U	5.0 U	5.0 U	5.0 U
O-XYLENE	5.0	5000 U	5.0 U	5.0 U	5.0 U

SURROGATE RECOVERIES	LIMITS				
4-BROMOFLUOROBENZENE	86 - 115	110	111	110	112
TOLUENE-D8	88 - 110	97	98	98	99
DIBROMOFLUOROMETHANE	86 - 118	102	102	103	104

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
METHOD 8260
REPORTED UNITS: UG/L

Haley & Aldrich, Inc.
ITT-70436-232DEN(M0359)
SUBMISSION #: 9804000458

ORDER NUMBER		209243	209986
SAMPLE ID:		TRIP BLANK	MW-208
DATE SAMPLED:		04/30/1998	05/01/1998
DATE RECEIVED:	PQL	04/30/1998	05/01/1998
DATE ANALYZED:		5/13/98	5/13/98
DILUTION:		1.0	1.0
ACETONE	20	20 U	20 U
BENZENE	5.0	5.0 U	5.0 U
2-BUTANONE (MEK)	10	10 U	10 U
CARBON DISULFIDE	10	10 U	10 U
CHLOROETHANE	5.0	5.0 U	5.0 U
CHLOROFORM	5.0	5.0 U	5.0 U
1,1-DICHLOROETHANE	5.0	5.0 U	5.0 U
1,1-DICHLOROETHENE	5.0	5.0 U	5.0 U
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	5.0 U
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	5.0 U
ETHYLBENZENE	5.0	5.0 U	5.0 U
4-METHYL-2-PENTANONE (MIBK)	10	10 U	10 U
TETRACHLOROETHENE	5.0	5.0 U	5.0 U
TOLUENE	5.0	5.0 U	5.0 U
1,1,1-TRICHLOROETHANE	5.0	5.0 U	5.0 U
TRICHLOROETHENE	5.0	5.0 U	5.0 U
VINYL CHLORIDE	5.0	5.0 U	5.0 U
M+P-XYLENE	5.0	5.0 U	5.0 U
O-XYLENE	5.0	5.0 U	5.0 U

SURROGATE RECOVERIES	LIMITS		
4-BROMOFLUOROBENZENE	86 - 115	112	114
TOLUENE-D8	88 - 110	99	99
DIBROMOFLUOROMETHANE	86 - 118	104	103

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
METHOD 8270
REPORTED UNITS: UG/L

Haley & Aldrich, Inc.
ITT-70436-232DEN(M0359)
SUBMISSION #: 9804000458

ORDER NUMBER		208760	208761	208762	208763
SAMPLE ID:		MW-309-2	MW-306-1	MW-307-1	MW-309-1
DATE SAMPLED:		04/27/1998	04/27/1998	04/28/1998	04/28/1998
DATE RECEIVED:	PQL	04/28/1998	04/28/1998	04/28/1998	04/28/1998
DATE EXTRACTED:		05/04/98	05/04/98	05/04/98	05/04/98
DATE ANALYZED:		5/ 8/98	5/ 8/98	5/ 8/98	5/11/98
DILUTION:		1.0	1.0	10.2	1.0
4-METHYLPHENOL	10	10 U	10 U	100 U	10 U
SURROGATE RECOVERIES	LIMITS				
PHENOL-d6	10 - 94	64	70	96	75
2-FLUOROPHENOL	21 - 110	54	66	90	63
2,4,6-TRIBROMOPHENOL	10 - 123	83	62	121	81

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
METHOD 8270
REPORTED UNITS: UG/L

Haley & Aldrich, Inc.
ITT-70436-232DEN(MO359)
SUBMISSION #: 9804000458

ORDER NUMBER		208764	208765	208766	208767
SAMPLE ID:		DB-309-1	MW-7	MW-6	MW-5
DATE SAMPLED:		04/28/1998	04/28/1998	04/28/1998	04/28/1998
DATE RECEIVED:	PQL	04/28/1998	04/28/1998	04/28/1998	04/28/1998
DATE EXTRACTED:		05/04/98	05/04/98	05/04/98	05/04/98
DATE ANALYZED:		5/11/98	5/ 8/98	5/ 8/98	5/ 9/98
DILUTION:		1.0	1.0	1.0	1.0
4-METHYLPHENOL	10	10 U	10 U	10 U	10 U
SURROGATE RECOVERIES	LIMITS				
PHENOL-d6	10 - 94	70	80	73	68
2-FLUOROPHENOL	21 - 110	57	66	61	59
2,4,6-TRIBROMOPHENOL	10 - 123	78	60	60	87

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
METHOD 8270
REPORTED UNITS: UG/L

Haley & Aldrich, Inc.
ITT-70436-232DEN(M0359)
SUBMISSION #: 9804000458

ORDER NUMBER			208768	208769	208770	208771
SAMPLE ID:			MW-4	MW-206	MW-210	DB-309-3
DATE SAMPLED:			04/28/1998	04/28/1998	04/28/1998	04/28/1998
DATE RECEIVED:		PQL	04/28/1998	04/28/1998	04/28/1998	04/28/1998
DATE EXTRACTED:			05/04/98	05/04/98	05/05/98	05/05/98
DATE ANALYZED:			5/ 8/98	5/ 8/98	5/14/98	5/15/98
DILUTION:			1.0	1.0	1.0	1.0
4-METHYLPHENOL		10	10 U	10 U	10 U	10 U
SURROGATE RECOVERIES	LIMITS					
PHENOL-d6	10 - 94		67	63	55	79
2-FLUOROPHENOL	21 - 110		58	53	49	61
2,4,6-TRIBROMOPHENOL	10 - 123		88	86	73	63

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
METHOD 8270
REPORTED UNITS: UG/L

Haley & Aldrich, Inc.
ITT-70436-232DEN(MO359)
SUBMISSION #: 9804000458

ORDER NUMBER		208772	208773	208775	208776
SAMPLE ID:		DB-409-1	MW-209	DUP1-2	MW-205
DATE SAMPLED:		04/28/1998	04/28/1998	04/28/1998	04/28/1998
DATE RECEIVED:	PQL	04/28/1998	04/28/1998	04/28/1998	04/28/1998
DATE EXTRACTED:		05/04/98	05/04/98	05/04/98	05/04/98
DATE ANALYZED:		5/ 8/98	5/ 8/98	5/ 8/98	5/ 8/98
DILUTION:		1.0	1.0	1.0	1.0
4-METHYLPHENOL	10	10 U	10 U	10 U	10 U
SURROGATE RECOVERIES	LIMITS				
PHENOL-d6	10 - 94	63	54	62	74
2-FLUOROPHENOL	21 - 110	56	46	52	65
2,4,6-TRIBROMOPHENOL	10 - 123	84	67	88	92

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
METHOD 8270
REPORTED UNITS: UG/L

Haley & Aldrich, Inc.
ITT-70436-232DEN(M0359)
SUBMISSION #: 9804000458

ORDER NUMBER		208788	208789	208790	208791
SAMPLE ID:		MW-211	MW-207	OW-104	OW-105
DATE SAMPLED:		04/29/1998	04/29/1998	04/29/1998	04/29/1998
DATE RECEIVED:	PQL	04/29/1998	04/29/1998	04/29/1998	04/29/1998
DATE EXTRACTED:		05/04/98	05/04/98	05/04/98	05/04/98
DATE ANALYZED:		5/ 8/98	5/ 8/98	5/ 9/98	5/ 9/98
DILUTION:		1.0	1.0	1.0	1.0
4-METHYLPHENOL	10	10 U	10 U	10 U	10 U
SURROGATE RECOVERIES	LIMITS				
PHENOL-d6	10 - 94	64	62	69	67
2-FLUOROPHENOL	21 - 110	56	55	59	58
2,4,6-TRIBROMOPHENOL	10 - 123	88	83	83	90

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
METHOD 8270
REPORTED UNITS: UG/L

Haley & Aldrich, Inc.
ITT-70436-232DEN(M0359)
SUBMISSION #: 9804000458

ORDER NUMBER		208792	208793	208794	208795
SAMPLE ID:		OW-107	MW-1	MW-203	MW-202
DATE SAMPLED:		04/29/1998	04/29/1998	04/29/1998	04/29/1998
DATE RECEIVED:	PQL	04/29/1998	04/29/1998	04/29/1998	04/29/1998
DATE EXTRACTED:		05/04/98	05/04/98	05/05/98	05/05/98
DATE ANALYZED:		5/ 9/98	5/ 9/98	5/15/98	5/16/98
DILUTION:		1.0	1.0	1.0	1.0
4-METHYLPHENOL	10	10 U	10 U	10 U	10 U
SURROGATE RECOVERIES	LIMITS				
PHENOL-d6	10 - 94	67	71	78	72
2-FLUOROPHENOL	21 - 110	61	62	66	57
2,4,6-TRIBROMOPHENOL	10 - 123	88	91	63	64

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
METHOD 8270
REPORTED UNITS: UG/L

Haley & Aldrich, Inc.
ITT-70436-232DEN(MO359)
SUBMISSION #: 9804000458

ORDER NUMBER			208796	208797	208798	209227
SAMPLE ID:			DB-309-2	MW-212	DUP1-1	MW-2
DATE SAMPLED:			04/29/1998	04/29/1998	04/29/1998	04/30/1998
DATE RECEIVED:		PQL	04/29/1998	04/29/1998	04/29/1998	04/30/1998
DATE EXTRACTED:			05/05/98	05/05/98	05/05/98	05/05/98
DATE ANALYZED:			5/14/98	5/14/98	5/15/98	05/15/98
DILUTION:			1.0	1.0	1.0	10.0
4-METHYLPHENOL		10	10 U	10 U	10 U	100 U
SURROGATE RECOVERIES	LIMITS					
PHENOL-d6	10 - 94		69	60	72	91
2-FLUOROPHENOL	21 - 110		58	51	59	68
2,4,6-TRIBROMOPHENOL	10 - 123		70	75	56	81

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
METHOD 8270
REPORTED UNITS: UG/L

Haley & Aldrich, Inc.
ITT-70436-232DEN(MO359)
SUBMISSION #: 9804000458

ORDER NUMBER		209228	209229	209230	209237
SAMPLE ID:		PZ402-2	MW309-3	PZ404-4	MW-204
DATE SAMPLED:		04/30/1998	04/30/1998	04/30/1998	04/30/1998
DATE RECEIVED:	PQL	04/30/1998	04/30/1998	04/30/1998	04/30/1998
DATE EXTRACTED:		05/05/98	05/05/98	05/05/98	05/05/98
DATE ANALYZED:		5/18/98	5/14/98	5/16/98	5/15/98
DILUTION:		1.0	1.0	102.0	100.0
4-METHYLPHENOL	10	10 U	10 U	1800	1000 U
SURROGATE RECOVERIES	LIMITS				
PHENOL-d6	10 - 94	59	68	D	D
2-FLUOROPHENOL	21 - 110	51	58	D	D
2,4,6-TRIBROMOPHENOL	10 - 123	61	82	D	D

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
METHOD 8270
REPORTED UNITS: UG/L

Haley & Aldrich, Inc.
ITT-70436-232DEN(M0359)
SUBMISSION #: 9804000458

ORDER NUMBER			209238	209240	209986
SAMPLE ID:			MW-303-1	FIELD BLANK	MW-208
DATE SAMPLED:			04/30/1998	04/30/1998	05/01/1998
DATE RECEIVED:		PQL	04/30/1998	04/30/1998	05/01/1998
DATE EXTRACTED:			05/05/98	05/05/98	05/05/98
DATE ANALYZED:			5/15/98	5/14/98	5/16/98
DILUTION:			10.0	1.0	10.0
4-METHYLPHENOL		10	100 U	10 U	100 U
SURROGATE RECOVERIES	LIMITS				
PHENOL-d6	10 - 94		89	77	91
2-FLUOROPHENOL	21 - 110		66	64	86
2,4,6-TRIBROMOPHENOL	10 - 123		67	43	91

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
METHOD 8082 PCB'S
REPORTED UNITS: UG/KG

Haley & Aldrich, Inc.
ITT-70436-232DEN(MO359)
SUBMISSION #: 9804000458

ORDER NUMBER		209236	209241	209654	209655
SAMPLE ID:		MW-213	DUPL 3	MW-204	MW-303-1
DATE SAMPLED:		04/30/1998	04/30/1998	04/30/1998	04/30/1998
DATE RECEIVED:	PQL	04/30/1998	04/30/1998	04/30/1998	04/30/1998
DATE EXTRACTED:		05/06/98	05/06/98	05/06/98	05/06/98
DATE ANALYZED:		5/07/98	5/07/98	5/07/98	5/07/98
DILUTION:		10.0	10.0	10.0	10.0
PERCENT SOLID (%):					
PCB 1016	250	2500 U	2500 U	2500 U	2500 U
PCB 1221	250	2500 U	2500 U	2500 U	2500 U
PCB 1232	250	2500 U	2500 U	2500 U	2500 U
PCB 1242	250	2500 U	2500 U	2500 U	2500 U
PCB 1248	250	2500 U	2500 U	2500 U	2500 U
PCB 1254	250	2500 U	2500 U	2500 U	2500 U
PCB 1260	250	2500 U	2500 U	2500 U	2500 U

SURROGATE RECOVERIES	LIMITS				
DECACHLOROBIPHENYL	30 - 150	96	101	93	89
TETRACHLORO-META-XYLENE	30 - 150	134	66	65	93

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
METHOD 8082 PCB'S
REPORTED UNITS: UG/KG

Haley & Aldrich, Inc.
ITT-70436-232DEN(M0359)
SUBMISSION #: 9804000458

ORDER NUMBER		209981	209983	209984	209985
SAMPLE ID:		PZ-404-4	PZ-402-5	PZ-403-5	PZ-403-6
DATE SAMPLED:		05/01/1998	05/01/1998	05/01/1998	05/01/1998
DATE RECEIVED:	PQL	05/01/1998	05/01/1998	05/01/1998	05/01/1998
DATE EXTRACTED:		05/06/98	05/06/98	05/06/98	05/06/98
DATE ANALYZED:		5/07/98	5/07/98	5/07/98	5/07/98
DILUTION:		10.0	10.0	10.0	10.0
PERCENT SOLID (%):					
PCB 1016	250	2500 U	2500 U	2500 U	2500 U
PCB 1221	250	2500 U	2500 U	2500 U	2500 U
PCB 1232	250	2500 U	2500 U	2500 U	2500 U
PCB 1242	250	2500 U	2500 U	2500 U	2500 U
PCB 1248	250	2500 U	2500 U	2500 U	2500 U
PCB 1254	250	2500 U	2500 U	2500 U	2500 U
PCB 1260	250	2500 U	2500 U	2500 U	2500 U

SURROGATE RECOVERIES	LIMITS				
DECACHLOROBIPHENYL	30 - 150	111	98	101	88
TETRACHLORO-META-XYLENE	30 - 150	126	129	137	101

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
METHOD 8082 PCB'S
REPORTED UNITS: UG/KG

Haley & Aldrich, Inc.
ITT-70436-232DEN(M0359)
SUBMISSION #: 9804000458

ORDER NUMBER		210418	210543
SAMPLE ID:		PZ 303-1	PZ-402-4
DATE SAMPLED:		05/01/1998	05/06/1998
DATE RECEIVED:	PQL	05/01/1998	05/06/1998
DATE EXTRACTED:		05/06/98	05/12/98
DATE ANALYZED:		5/07/98	5/23/98
DILUTION:		10.0	10.0
PERCENT SOLID (%):			
PCB 1016	250	2500 U	2500 U
PCB 1221	250	2500 U	2500 U
PCB 1232	250	2500 U	2500 U
PCB 1242	250	2500 U	2500 U
PCB 1248	250	2500 U	2500 U
PCB 1254	250	2500 U	2500 U
PCB 1260	250	2500 U	2500 U

SURROGATE RECOVERIES	LIMITS		
DECACHLOROBIPHENYL	30 - 150	97	72
TETRACHLORO-META-XYLENE	30 - 150	98	74

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY
METHOD 8082 PCB'S
REPORTED UNITS: UG/L

Haley & Aldrich, Inc.
ITT-70436-232DEN(M0359)
SUBMISSION #: 9804000458

ORDER NUMBER		209982
SAMPLE ID:		PZ-303-1
DATE SAMPLED:		05/01/1998
DATE RECEIVED:	PQL	05/01/1998
DATE EXTRACTED:		05/06/98
DATE ANALYZED:		5/14/98
DILUTION:		1.0
PCB 1016	1.0	1.0 U
PCB 1221	1.0	1.0 U
PCB 1232	1.0	1.0 U
PCB 1242	1.0	1.0 U
PCB 1248	1.0	1.0 U
PCB 1254	1.0	1.0 U
PCB 1260	1.0	1.0 U

SURROGATE RECOVERIES	LIMITS	
DECACHLOROBIPHENYL	30 - 150	54
TETRACHLORO-META-XYLENE	30 - 150	70

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260
Reported: 06/01/98

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 213869 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 26769

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 05/07/98			
ANALYTICAL DILUTION: 1.0			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	104	%
TOLUENE-D8	(88 - 110 %)	95	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	98	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260
Reported: 06/01/98

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 213873 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 26769

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 05/07/98			
ANALYTICAL DILUTION: 1.0			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	105	%
TOLUENE-D8	(88 - 110 %)	97	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	100	%

VOLATILE ORGANICS
METHOD 8260
Reported: 06/01/98

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 213876 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 26771

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 05/11/98			
ANALYTICAL DILUTION: 1.0			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	98	%
TOLUENE-D8	(88 - 110 %)	94	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	97	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260
Reported: 06/01/98

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 213880 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 26771

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 05/12/98			
ANALYTICAL DILUTION: 1.0			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	97	%
TOLUENE-D8	(88 - 110 %)	93	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	97	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260
Reported: 06/01/98

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 213891 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 26771

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 05/13/98			
ANALYTICAL DILUTION: 1.0			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	107	%
TOLUENE-D8	(88 - 110 %)	96	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	101	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8270
Reported: 06/01/98

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 210916 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 26210

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 05/04/98			
DATE ANALYZED : 05/08/98			
ANALYTICAL DILUTION: 1.0			
4-METHYLPHENOL	10	10 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
PHENOL-d6	(10 - 94 %)	66	%
2-FLUOROPHENOL	(21 - 110 %)	62	%
2,4,6-TRIBROMOPHENOL	(10 - 123 %)	77	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8270
Reported: 06/01/98

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 211799 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 26372

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 05/05/98			
DATE ANALYZED : 05/14/98			
ANALYTICAL DILUTION: 1.0			
4-METHYLPHENOL	10	10 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
PHENOL-d6	(10 - 94 %)	64	%
2-FLUOROPHENOL	(21 - 110 %)	55	%
2,4,6-TRIBROMOPHENOL	(10 - 123 %)	78	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8082 PCB'S
Reported: 06/01/98

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 211795 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 26370

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 05/06/98			
DATE ANALYZED : 05/14/98			
ANALYTICAL DILUTION: 1.0			
PCB 1016	1.0	1.0 U	UG/L
PCB 1221	1.0	1.0 U	UG/L
PCB 1232	1.0	1.0 U	UG/L
PCB 1242	1.0	1.0 U	UG/L
PCB 1248	1.0	1.0 U	UG/L
PCB 1254	1.0	1.0 U	UG/L
PCB 1260	1.0	1.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(30 - 150 %)	81	%
TETRACHLORO-META-XYLENE	(30 - 150 %)	77	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8082 PCB'S
Reported: 06/01/98

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 210493 **Sample Matrix:** NON-AQUEOUS
Date Received: **Submission #:** **Analytical Run** 26151

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 05/06/98			
DATE ANALYZED : 05/07/98			
ANALYTICAL DILUTION: 10.0			
PCB 1016	250	2500 U	UG/KG
PCB 1221	250	2500 U	UG/KG
PCB 1232	250	2500 U	UG/KG
PCB 1242	250	2500 U	UG/KG
PCB 1248	250	2500 U	UG/KG
PCB 1254	250	2500 U	UG/KG
PCB 1260	250	2500 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(30 - 150 %)	150	%
TETRACHLORO-META-XYLENE	(30 - 150 %)	150	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8082 PCB'S
Reported: 06/01/98

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 213045 **Sample Matrix:** NON-AQUEOUS
Date Received: **Submission #:** **Analytical Run** 26610

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 05/12/98			
DATE ANALYZED : 05/23/98			
ANALYTICAL DILUTION: 10.0			
PCB 1016	250	2500 U	UG/KG
PCB 1221	250	2500 U	UG/KG
PCB 1232	250	2500 U	UG/KG
PCB 1242	250	2500 U	UG/KG
PCB 1248	250	2500 U	UG/KG
PCB 1254	250	2500 U	UG/KG
PCB 1260	250	2500 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(30 - 150 %)	90	%
TETRACHLORO-META-XYLENE	(30 - 150 %)	93	%

COLUMBIA ANALYTICAL SERVICES

INORGANIC QUALITY CONTROL SUMMARY

Report Date : 06/01/98
CAS Order # : 208761 - MW-306-1
Client : Haley & Aldrich, Inc.
ITT-70436-232DEN(MO359)
Reported Units: MG/L
Run # : 26215

	PRECISION			ACCURACY			
	ORIGINAL	DUPLICATE	RPD	FOUND	ADDED	% REC.	LIMITS
ARSENIC	0.0268	0.0287	7	0.0655	0.0400	97	75 - 125
BARIUM	0.450	0.458	2	2.48	2.00	102	75 - 125
CADMIUM	0.00500 U	0.00500 U	NC	0.0519	0.0500	104	75 - 125
CHROMIUM	0.0207	0.0221	7	0.218	0.200	99	75 - 125
LEAD	0.0500 U	0.0500 U	NC	0.509	0.500	102	75 - 125

COLUMBIA ANALYTICAL SERVICES

INORGANIC BLANK SPIKE SUMMARY

CAS Submission #: 9804000458
Client: Haley & Aldrich, Inc.
ITT-70436-232DEN(MO359)

BLANK SPIKES

	BLANK	FOUND	ADDED	% REC	LIMITS	RUN	UNITS
ARSENIC	0.0100 U	0.0337	0.0400	84	80 - 120	26215	MG/L
BARIUM	0.0200 U	2.12	2.00	106	80 - 120	26215	MG/L
CADMIUM	0.00500 U	0.0504	0.0500	101	80 - 120	26215	MG/L
CHROMIUM	0.0100 U	0.199	0.200	99	80 - 120	26215	MG/L
LEAD	0.0500 U	0.510	0.500	102	80 - 120	26215	MG/L
ARSENIC	0.0100 U	0.0390	0.0400	98	80 - 120	26218	MG/L
BARIUM	0.0200 U	2.14	2.00	107	80 - 120	26218	MG/L
CADMIUM	0.00500 U	0.0541	0.0500	108	80 - 120	26218	MG/L
CHROMIUM	0.0100 U	0.210	0.200	105	80 - 120	26218	MG/L
LEAD	0.0500 U	0.537	0.500	107	80 - 120	26218	MG/L

COLUMBIA ANALYTICAL SERVICES

INORGANIC BLANK SPIKE SUMMARY

CAS Submission #: 9804000458
Client: Haley & Aldrich, Inc.
ITT-70436-232DEN(MO359)

BLANK SPIKES

	BLANK	FOUND	ADDED	% REC	LIMITS	RUN	UNITS
BARIUM	0.0200 U	2.04	2.00	102	80 - 120	26250	MG/L
CADMIUM	0.00500 U	0.0514	0.0500	103	80 - 120	26250	MG/L
CHROMIUM	0.0100 U	0.197	0.200	98	80 - 120	26250	MG/L
ARSENIC	0.0100 U	0.0370	0.0400	92	80 - 120	26293	MG/L
BARIUM	0.0200 U	2.21	2.00	110	80 - 120	26293	MG/L
CADMIUM	0.00500 U	0.0549	0.0500	110	80 - 120	26293	MG/L
CHROMIUM	0.0100 U	0.226	0.200	113	80 - 120	26293	MG/L
HEXAVALENT CHROMIUM	0.0300 U	0.0536	0.0500	107	70 - 130	25878	MG/L
HEXAVALENT CHROMIUM	0.0300 U	0.0498	0.0500	100	70 - 130	25969	MG/L

COLUMBIA ANALYTICAL SERVICES

QUALITY CONTROL SUMMARY MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY
WATER

Spiked Order No. : 208761 Haley & Aldrich, Inc.

Client ID: MW-306-1

Test: 8260

Analytical Units: UG/L

Run Number : 26769

ANALYTE	SPIKE ADDED	SAMPLE CONCENT.	MATRIX SPIKE FOUND	MATRIX SPIKE % REC.	MATRIX SPIKE DUP. FOUND	MATRIX SPIKE DUP. % REC.	MATRIX SPIKE DUP. RPD	QC LIMITS RPD	QC LIMITS REC.
BENZENE	50.0	0	53.0	106	47.0	94	12	11	76 - 127
1,1-DICHLOROETHENE	50.0	0	47.0	94	43.0	86	9	14	61 - 145
TOLUENE	50.0	0	51.0	102	45.0	90	13	13	76 - 125
TRICHLOROETHENE	50.0	0	54.0	108	48.0	96	12	14	71 - 120

COLUMBIA ANALYTICAL SERVICES

QUALITY CONTROL SUMMARY MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY
WATER

Spiked Order No. : 208788 Haley & Aldrich, Inc.

Client ID: MW-211

Test: 8260

Analytical Units: UG/L

Run Number : 26771

			MATRIX SPIKE		MATRIX SPIKE DUP.			QC LIMITS	
ANALYTE	SPIKE ADDED	SAMPLE CONCENT.	FOUND	% REC.	FOUND	% REC.	RPD	RPD	REC.
BENZENE	50.0	0	49.0	98	55.0	110	12	11	76 - 127
1,1-DICHLOROETHENE	50.0	0	45.0	90	49.0	98	9	14	61 - 145
TOLUENE	50.0	0	48.0	96	53.0	106	10	13	76 - 125
TRICHLOROETHENE	50.0	0	48.0	96	51.0	102	6	14	71 - 120

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD: 8260

LABORATORY REFERENCE SPIKE SUMMARY

REFERENCE ORDER #: 213870 ANALYTICAL RUN # : 26769

DATE ANALYZED : 5/ 7/98
ANALYTICAL DILUTION: 1.0

ANALYTE	TRUE VALUE	% RECOVERY	QC LIMITS
ACETONE	20	99	21 - 165
BENZENE	20	96	37 - 151
2-BUTANONE (MEK)	20	83	25 - 162
CARBON DISULFIDE	20	79	45 - 148
CHLOROETHANE	20	84	53 - 149
CHLOROFORM	20	86	51 - 138
1,1-DICHLOROETHANE	20	88	59 - 155
1,1-DICHLOROETHENE	20	87	10 - 234
CIS-1,2-DICHLOROETHENE	20	89	54 - 156
TRANS-1,2-DICHLOROETHENE	20	92	54 - 156
ETHYLBENZENE	20	99	37 - 162
4-METHYL-2-PENTANONE (MIBK)	20	94	46 - 157
TETRACHLOROETHENE	20	88	64 - 148
TOLUENE	20	94	47 - 150
1,1,1-TRICHLOROETHANE	20	88	52 - 162
TRICHLOROETHENE	20	92	71 - 157
VINYL CHLORIDE	20	87	10 - 251
O-XYLENE	40	92	71 - 135
M+P-XYLENE	40	97	71 - 135

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD: 8260

LABORATORY REFERENCE SPIKE SUMMARY

REFERENCE ORDER #: 213877 ANALYTICAL RUN # : 26771

DATE ANALYZED : 5/11/98
ANALYTICAL DILUTION: 1.0

ANALYTE	TRUE VALUE	% RECOVERY	QC LIMITS
ACETONE	20	76	21 - 165
BENZENE	20	105	37 - 151
2-BUTANONE (MEK)	20	100	25 - 162
CARBON DISULFIDE	20	84	45 - 148
CHLOROETHANE	20	97	53 - 149
CHLOROFORM	20	95	51 - 138
1,1-DICHLOROETHANE	20	93	59 - 155
1,1-DICHLOROETHENE	20	94	10 - 234
CIS-1,2-DICHLOROETHENE	20	99	54 - 156
TRANS-1,2-DICHLOROETHENE	20	101	54 - 156
ETHYLBENZENE	20	102	37 - 162
4-METHYL-2-PENTANONE (MIBK)	20	97	46 - 157
TETRACHLOROETHENE	20	93	64 - 148
TOLUENE	20	100	47 - 150
1,1,1-TRICHLOROETHANE	20	97	52 - 162
TRICHLOROETHENE	20	101	71 - 157
VINYL CHLORIDE	20	92	10 - 251
O-XYLENE	40	95	71 - 135
M+P-XYLENE	40	100	71 - 135

COLUMBIA ANALYTICAL SERVICES

QUALITY CONTROL SUMMARY MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY
WATER

Spiked Order No. : 208761 Haley & Aldrich, Inc.

Client ID: MW-306-1

Test: 8270

Analytical Units: UG/L

Run Number : 26210

			MATRIX SPIKE		MATRIX SPIKE DUP.			QC LIMITS	
ANALYTE	SPIKE ADDED	SAMPLE CONCENT.	FOUND	% REC.	FOUND	% REC.	RPD	RPD	REC.
4-METHYLPHENOL	100	0	76.0	76	63.0	63	19	30	10 - 160

COLUMBIA ANALYTICAL SERVICES

QUALITY CONTROL SUMMARY BLANK SPIKE RECOVERY

WATER

Spiked Order No. : 208760

Client ID:

Test: 8270

Analytical Units: UG/L

Run Number : 26210

ANALYTE	SPIKE ADDED	SAMPLE CONCENT.	BLANK SPIKE FOUND	BLANK SPIKE % REC.	QC LIMITS REC.
4-METHYLPHENOL	100	0	71.0	71	10 - 160

COLUMBIA ANALYTICAL SERVICES

QUALITY CONTROL SUMMARY BLANK SPIKE RECOVERY

WATER

Spiked Order No. : 209227

Client ID:

Test: 8270

Analytical Units: UG/L

Run Number : 26372

ANALYTE	SPIKE ADDED	SAMPLE CONCENT.	BLANK SPIKE FOUND	BLANK SPIKE % REC.	QC LIMITS REC.
4-METHYLPHENOL	100	0	63.0	63	10 - 160

UALITY CONTROL SUMMARY BLANK SPIKE RECOVERY

NON-AQUEOUS

Spiked Order No. : 209985

Client ID:

Test: 8082 PCB'S

Analytical Units: UG/KG

Run Number : 26151

ANALYTE	SPIKE ADDED	SAMPLE CONCENT.	BLANK SPIKE FOUND	BLANK SPIKE % REC.	QC LIMITS REC.
PCB 1260	50000	0	65000	130	50 - 150

HALEY & ALDRICH OF NEW YORK
189 North Water Street
Rochester, New York 14604
(716) 232-7386

ANALYSIS REQUEST FORM AND CHAIN-OF-CUSTODY

Page 1 of 2 — Nº 1453
Delivery Date: 4/28/98

Project Name: ITT
H&A File No.: _____ - ____
H&A Rep.: Jim Marchener
Work Order No.

Laboratory: CAS
Address: 1, Mustard st, Rochester
Client Rep.:

Project Manager: Tom Wells
Final Report Due Date:
Turnaround Time: days

SAMPLE INFORMATION / ANALYSIS REQUESTED / PRESERVATIVE

H&A Sample ID	Laboratory ID	Sample Date	Sample Time	Sample Depth	Sample Matrix	metals	VOC 8260	semi VOC 8270	Hexavalent chrome			Total	PRESERVATIVE pH<2.0 HN03 (N)	pH<2.0 HCl (C)	pH<2.0 H_2SO_4 (S)	pH>10 Na0h/ZA (Z)	pH 7.0 4C (T)
1. mw-309-2	208760	4/27/98	1525	—	GW	X	X	X				34	X	X			X
2. mw-306-1	761	4/27/98	1440									34					
3. mw-307-1	762	4/28/98	0840									34					
4. mw-309-1	763		0915									4					
5. DB-309-1	764		0945														
6. mw-7	765		1000														
7. mw-6	766		~~1015~~														
8. mw-5	767		~~1100~~														
9. mw-4	768		1055														
10. mw-25b	769		12:20						X			5					
11. mw-21C	770		13:15														
12. DB-309-3	771		13:15														
13. ~~DB-309-2~~ DB-409-1	772		14:40														
14. mw-209	773		14:55														
15. Dup1-2	775																

Sampler Comments/Site Observations

Sample Conditions
Custody Seal: Intact:
Cooler Temp.:
Any Broken Containers
Preservation
No. of Samples: (N) (C) (S) (Z) (T)
(List all pH measurements outside criteria in the Comments Section by H&A No./Cont./pres.)

Broken Containers
List Type/Sample No.

Comments:

9804-458

Sampled and Relinquished By: Kellie Gregoire	Samples Received By: Tom Hastings
Signature: Kellie J. Gregoire	Signature: Tom Hastings
Company Name: H&A	Company Name: CAS
Date: 4/28/98 Time: 17:33	Date: 4/28/98 Time: 17:33
Samples Relinquished By:	Samples Received By:
Signature:	Signature:
Company Name:	Company name:
Date: Time:	Date: Time:
Samples Relinquished By:	Samples Received By:
Signature:	Signature:
Company Name:	Company Name:
Date: Time:	Date: Time:

HALEY & ALDRICH

HALEY & ALDRICH OF NEW YORK
189 North Water Street
Rochester, New York 14604
(716) 232-7386

ANALYSIS REQUEST FORM AND CHAIN-OF-CUSTODY

Page 2 of 2 — Nº 1454

Delivery Date: 4/28/98

Project Name: ITT

Laboratory: CAS

Project Manager: Tom Wells

H&A File No.: _____ - _____

Address: Linden St Rochester

Final Report Due Date:

H&A Rep.: Jim Mosshauer

Turnaround Time: days

Work Order No.

Client Rep.:

SAMPLE INFORMATION

ANALYSIS REQUESTED

PRESERVATIVE

H&A Sample ID	Laboratory ID	Sample Date	Sample Time	Sample Depth	Sample Matrix	VOA 8260	Semi VOA 8270	Hex-Cr, Cn, Fe	Metals			Total	pH<2.0 HN03 (N)	pH<2.0 HCl (C)	pH<2.0 H_2SO_4 (S)	pH>10 NaOh/ZA (Z)	pH 7.0 4C (T)
1. Tr. Blank	208779	4/28/98	—	—	LW	X						2		L			L
2. MW-205	208776	L	16:05	—	GW	X	X	X	X			5	X	X			X
3.																	
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	
11.																	
12.																	
13.																	
14.																	
15.																	

LG 4/28/98

Sampler Comments/Site Observations

Sample Conditions | Broken Containers

Custody Seal: Intact: | List Type/Sample No.

Cooler Temp.:

Any Broken Containers

Preservation

No. of Samples: (N) (C) (S) (Z) (T)

(List all pH measurements outside criteria in the Comments Section by H&A No./Cont./pres.)

Comments:

Sampled and Relinquished By: Kellie Gregoire	Samples Received By: Tom Hastings
Signature: Kellie Gregoire	Signature: Tom Hastings
Company Name: H&A	Company Name: CAS
Date: 4/28/98 Time: 17:33	Date: 4/28/98 Time: 17:33
Samples Relinquished By:	Samples Received By:
Signature:	Signature:
Company Name:	Company name:
Date: Time:	Date: Time:
Samples Relinquished By:	Samples Received By:
Signature:	Signature:
Company Name:	Company Name:
Date: Time:	Date: Time:

HALEY & ALDRICH OF NEW YORK
189 North Water Street
Rochester, New York 14604
(716) 232-7386

ANALYSIS REQUEST FORM AND CHAIN-OF-CUSTODY

Page 1 of 1 — Nº 1449
Delivery Date: 4/29/98

Project Name: ITT
H&A File No.: 76436 - 232
H&A Rep.: Jim Marshner
Work Order No.

Laboratory: CAS
Address: 1 Mustard St. Rochester, N.Y.
Client Rep.:

Project Manager: Tom Wells
Final Report Due Date:
Turnaround Time: 5 tender days

SAMPLE INFORMATION / ANALYSIS REQUESTED / PRESERVATIVE

H&A Sample ID	Laboratory ID	Sample Date	Sample Time	Sample Depth	Sample Matrix	Cattle Header	VOA	Semi-Vol	Metals			Total	pH<2.0 HN03 (N)	pH<2.0 HCl (C)	pH<2.0 H_2SO_4 (S)	pH>10 NaOh/ZA (Z)	pH 7.0 4C (T)
1. MW-2N	208788	4/29/98	8:58	—	GW	X	X	X	X			5	X	X			X
2. MW-207	789		9:48			X	X	X	X			5	↓	↓			↓
3. OW-104	790		10:35			X	X	X	X			5					
4. OW-105	791		10:10			X	X	X	X			5					
5. OW-107	792		11:22			X	X	X	X			5					
6. MW-1	793		1330				X	X	X			4					
7. MW-203	794		1335				X	X	X			4					
8. MW-202	795		14:25				X	X	X			4					
9. DB-307-2	996		16:20				X	X	X			4					
10. MW-212	797		16:05				X	X	X			4	↓	↓			↓
11.	—	—	—	—	—	—	—	—	—			—	—	—			—
12.	—	—	—	—	—	—	—	—	—			—	—	—			—
13. Trip Blank	800		—				X					2	X	X			
14. Dupl-1	798		—				X	X	X			4	X	X			X
15. Dupl-4	799		—			X						1					

Sampler Comments/Site Observations

Sample Conditions
Custody Seal: Intact:
Cooler Temp.:
Any Broken Containers
Preservation
No. of Samples: (N) (C) (S) (Z) (T)
(List all pH measurements outside criteria in the Comments Section by H&A No./Cont./pres.)

Broken Containers
List Type/Sample No.

Comments:

9804-458.

Sampled and Relinquished By: Kellie Gregoire	Samples Received By: Tom Hastings
Signature: Kellie L. Gregoire	Signature: Tom Hastings
Company Name: Haley & Aldrich	Company Name: CAS
Date: 4/29/98 Time: 17:45	Date: 4/29/98 Time: 17:45
Samples Relinquished By:	Samples Received By:
Signature:	Signature:
Company Name:	Company name:
Date: Time:	Date: Time:
Samples Relinquished By:	Samples Received By:
Signature:	Signature:
Company Name:	Company Name:
Date: Time:	Date: Time:

HALEY & ALDRICH OF NEW YORK
189 North Water Street
Rochester, New York 14604
(716) 232-7386

ANALYSIS REQUEST FORM AND CHAIN-OF-CUSTODY

Page 1 of ___ **Nº 1470**
Delivery Date: 4/30/98

Project Name: ITT
H&A File No.: _____ - ____
H&A Rep.: Jim Marshner
Work Order No.

Laboratory: CAS
Address: 1 Mustard St, Rochester, N.Y.
Client Rep.:

Project Manager: Tom Wells
Final Report Due Date:
Turnaround Time: standard days

SAMPLE INFORMATION / ANALYSIS REQUESTED / PRESERVATIVE

H&A Sample ID	Laboratory ID	Sample Date	Sample Time	Sample Depth	Sample Matrix	VOA 8240	Semi VOA 8270	Metals	PCB's 8080	Cr+6		Total	pH<2.0 HN03 (N)	pH<2.0 HCl (C)	pH<2.0 H_2SO_4 (S)	pH>10 NaOh/ZA (Z)	pH 7.0 4C (T)
1. MW-2	209227	4/30/98	9:45	—	GW	X	X	X				4	X	X			X
2. PZ 402-2	228		9:45			X	X	X		J.M.		4					
3. MW-309-3	MW-309-3 229		10:25			X	X	X	ok as per J.M.			4					
4. MW-204-13	209236		12:35			X	X	X	X			5					
5. MW-201*	239		12:55			X	X	X	X	X		6					
6. PZ-404-4	230		13:40			X	X	X				4					
7. MW-209	237		14:50			X	X	X	X			5					
8. MW-303-1	238		15:45			X	X	X	X			5					
9.																	
10.																	
11.																	
12.									KLG 4/30/98								
13. Field Blank	240					X	X	X	X	X		6	X	X			X
14. Dup 3	241								X			1	X				
15. Trip Blank	243					X						1	X				

Sampler Comments/Site Observations
MW-201 - PCB' analysis on hold

Sample Conditions
Custody Seal: Intact:
Cooler Temp.:
Any Broken Containers
Preservation
Broken Containers
List Type/Sample No.

No. of Samples: (N) (C) (S) (Z) (T)
(List all pH measurements outside criteria in the Comments Section by H&A No./Cont./pres.)

Comments:

4-458
(Quote #307)

Sampled and Relinquished By: Kellie Gregoire	Samples Received By: Tom Hastings
Signature: K. Ellen Gregoire	Signature: Tom Hastings
Company Name: H&A	Company Name: CAS
Date: 4/30/98 Time: 17:15	Date: 4/30/98 Time: 17:15
Samples Relinquished By:	Samples Received By:
Signature:	Signature:
Company Name:	Company name:
Date: Time:	Date: Time:
Samples Relinquished By:	Samples Received By:
Signature:	Signature:
Company Name:	Company Name:
Date: Time:	Date: Time:

COLUMBIA ANALYTICAL SERVICES, INC.
1 Mustard St., Suite 250, P.O. Box 90859, Rochester, NY 14609-0859
(716) 288-5380 • FAX (716) 288-8475

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

(800) 695-7222

DATE ______ PAGE ____ OF ____

PROJECT NAME Former GM Delco Chassis Facility
PROJECT MANAGER/CONTACT Tom Wells
COMPANY/ADDRESS Haley & Aldrich
189 N. Water St Rochester, N.Y. 14604
TEL (716) 327-5531 FAX (716) 232-6768
SAMPLER'S SIGNATURE [signature]

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	# OF CONTAINERS	GC/MS VOA's ☒ 8260 ☐ 624	GC/MS SVOA's ☒ 8270A ☐ 625	GC VOA's ☐ 8010/8020 ☐ 601/602	PESTICIDES/PCB's ☒ 8080 ☐ 608	STAR'S LIST 8021 VOA's ☐ TOTAL ☐ TCLP	STAR'S LIST 8270 SVOA's ☐ TOTAL ☐ TCLP	TCLP ☐ METALS ☐ VOA's ☐ SVOA's ☐ H/P	WASTE CHARACTERIZATION ☐ React ☐ Corros. ☐ Ignit.	METALS, TOTAL (LIST BELOW) Site List	METALS, DISSOLVED (LIST BELOW)	PCB's in Oil							PRESERVATION pH < 2.0	pH > 12	Other
PZ-404-4	5/1/98	0900	209981	OIL	1											X									
PZ-303-1	5/1/98	1245	209982	AQ	1				X																
PZ-402-5	5/1/98	1150	209983	OIL	1											X									
PZ-403-5	5/1/98	1140	209984	OIL	1											X									
PZ-403-6	5/1/98	1130	209985	OIL	1											X									
MW-208	5/1/98	1230	209986	AQ	4	X	X							X											

RELINQUISHED BY:
Signature [signature]
Printed Name Jim Marschner
Firm Haley & Aldrich
Date/Time 5/1/98 3:45

RECEIVED BY:
Signature Tom Hastings
Printed Name Tom Hastings
Firm CAS
Date/Time 5/1/98 15:45

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

TURNAROUND REQUIREMENTS
__ 24 hr. __ 48 hr. __ 5 day
__ Standard (10-15 working days)
__ Provide Verbal Preliminary Results
__ Provide FAX Preliminary Results
Requested Report Date ______

REPORT REQUIREMENTS
__ 1. Routine Report
__ 2. Routine Rep. w/CASE Narrative
__ 3. EPA Level III Validatable Package
__ 4. N.J. Reduced Deliverables Level IV
__ 5. NY ASP/CLP Deliverables
__ 6. Site specific QC.

INVOICE INFORMATION:
P.O. #:
Bill To: ______

SAMPLE RECEIPT:
Shipping Via: ______
Shipping #: ______
Temperature: ______
Submission No: 4-458

SPECIAL INSTRUCTIONS/COMMENTS:
METALS
ORGANICS: ☐ TCL ☐ PPL ☐ AE Only ☐ BN Only ☐ Special List

65 RAMAPO VALLEY ROAD 201-512-3292
MAHWAH, NJ 07430 FAX 201-512-3362

309 WEST RIDLEY AVE. 610-521-3083
RIDLEY PARK, PA 19078 FAX 610-521-4589

[redacted] [redacted]OLU[redacted]A A[redacted]YTI[redacted] SE[redacted]CES, INC. [redacted]

1 Mustard St., Suite 250, P.O. Box 90859, Rochester, NY 14609-0859
(716) 288-5380 • FAX (716) 288-8475

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

(800) 695-7222

DATE ______ PAGE ____ OF ____

PROJECT NAME GM FORMER DELCO CHASSIS FACILITY
PROJECT MANAGER/CONTACT TOM WELLS
COMPANY/ADDRESS HALEY & ALDRICH
189 N. WATER ST ROCHESTER, N.Y. 14604
TEL (716) 327-5531 FAX (716) 232-6768
SAMPLER'S SIGNATURE [signature]

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	# OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624	GC/MS SVOA's ☐ 8270A ☐ 625	GC VOA's ☐ 8010/8020 ☐ 601/602	PESTICIDES/PCB's ☐ 8080 ☐ 608	STAR'S LIST 8021 VOA's ☐ TOTAL ☐ TCLP	STAR'S LIST 8270 SVOA's ☐ TOTAL ☐ TCLP	TCLP ☐ METALS ☐ VOA's ☐ SVOA's ☐ H/P	WASTE CHARACTERIZATION ☐ React ☐ Corros. ☐ Ignit.	METALS, TOTAL (LIST BELOW)	METALS, DISSOLVED (LIST BELOW)	PCBs in OIL							PRESERVATION pH < 2.0	pH > 12	Other
PZ-402-4	5/6/98	1230	2105343	OIL	1											X									

RELINQUISHED BY:
Signature [signature]
Printed Name JIM MARSCHNER
Firm HALEY & ALDRICH
Date/Time 5/6/98 1545HRS

RECEIVED BY:
Signature Tom Hastings
Printed Name Tom Hastings
Firm
Date/Time 5/6/98 15:45

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

TURNAROUND REQUIREMENTS
__ 24 hr. __ 48 hr. __ 5 day
__ Standard (10-15 working days)
__ Provide Verbal Preliminary Results
__ Provide FAX Preliminary Results
Requested Report Date ______

REPORT REQUIREMENTS
__ 1. Routine Report
__ 2. Routine Rep. w/CASE Narrative
__ 3. EPA Level III Validatable Package
__ 4. N.J. Reduced Deliverables Level IV
__ 5. NY ASP/CLP Deliverables
__ 6. Site specific QC.

INVOICE INFORMATION:
P.O. #:
Bill To:

SAMPLE RECEIPT:
Shipping Via: Client
Shipping #:
Temperature: NA
Submission No: 9805-483 4-458

SPECIAL INSTRUCTIONS/COMMENTS:
METALS Test #2707
ORGANICS: ☐ TCL ☐ PPL ☐ AE Only ☐ BN Only ☐ Special List

separated oil from water - water stored in SMO cooler RG 5/7/98

65 RAMAPO VALLEY ROAD
MAHWAH, NJ 07430
201-512-3292
FAX 201-512-3362

309 WEST RIDLEY AVE.
RIDLEY PARK, PA 19078
610-521-3083
FAX 610-521-4589

[redacted]

COLUMBIA ANALYTICAL SERVICES, INC.
1 Mustard St., Suite 250, P.O. Box 90859, Rochester, NY 14609-0859
(716) 288-5380 • FAX (716) 288-8475

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

(800) 695-7222

DATE _____ PAGE _____ OF _____

PROJECT NAME Former GM Delco Chassis Facility
PROJECT MANAGER/CONTACT Tom Hastings
COMPANY/ADDRESS Haley & Aldrich
189 N. Water St Rochester, NY 14604
TEL (716) 327-5531 FAX (716) 232-6768
SAMPLER'S SIGNATURE [signature]

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	# OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624	GC/MS SVOA's ☒ 8270A ☐ 625	GC VOA's ☐ 8010/8020 ☐ 601/602	PESTICIDES/PCB's ☒ 8080 ☐ 608	STAR'S LIST 8021 VOA's ☐ TOTAL ☐ TCLP	STAR'S LIST 8270 SVOA's ☐ TOTAL ☐ TCLP	TCLP ☐ METALS ☐ VOA's ☐ SVOA's ☐ H/P	WASTE CHARACTERIZATION ☐ React ☐ Corros. ☐ Ignit.	METALS, TOTAL (LIST BELOW) SITE LIST	METALS, DISSOLVED (LIST BELOW)	PCB's in Oil	PRESERVATION pH < 2.0	PRESERVATION pH > 12	PRESERVATION Other
PZ-404-4	5/1/98	0900	209981	Oil	1											X			
PZ-303-1	5/1/98	1245	209982	AQ	1				X										
PZ-402-S	5/1/98	1150	209983	Oil	1											X			
PZ-403-S	5/1/98	1140	209984	Oil	1											X			
PZ-403(6	5/1/98	1130	209985	Oil	1											X			
MW-208	5/1/98	1230	209986	AQ	4	X	X							X					

RELINQUISHED BY:
Signature [signature]
Printed Name Jim Mahoney
Firm Haley & Aldrich
Date/Time 5/1/98 3:45

RECEIVED BY:
Signature [signature]
Printed Name Tom Hastings
Firm CTS
Date/Time 5/1/98 15:40

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

TURNAROUND REQUIREMENTS
___ 24 hr. ___ 48 hr. ___ 5 day
___ Standard (10-15 working days)
___ Provide Verbal Preliminary Results
___ Provide FAX Preliminary Results
Requested Report Date _____

REPORT REQUIREMENTS
___ 1. Routine Report
___ 2. Routine Rep. w/CASE Narrative
___ 3. EPA Level III Validatable Package
___ 4. N.J. Reduced Deliverables Level IV
___ 5. NY ASP/CLP Deliverables
___ 6. Site specific QC.

INVOICE INFORMATION:
P.O. #:
Bill To:

SAMPLE RECEIPT:
Shipping Via:
Shipping #:
Temperature:
Submission No: 4-458

SPECIAL INSTRUCTIONS/COMMENTS:
METALS
ORGANICS: ☐ TCL ☐ PPL ☐ AE Only ☐ BN Only ☐ Special List

65 RAMAPO VALLEY ROAD
MAHWAH, NJ 07430
201-512-3292
FAX 201-512-3362

309 WEST RIDLEY AVE.
RIDLEY PARK, PA 19078
610-521-3083
FAX 610-521-4589

[redacted] [redacted] [redacted] [redacted] [redacted] [redacted] [redacted] [redacted] [redacted] [redacted] [redacted] [redacted] [redacted] [redacted] [redacted] [redacted]

COLUMBIA ANALYTICAL SERVICES, INC.
1 Mustard St., Suite 250, P.O. Box 90859, Rochester, NY 14609-0859
(716) 288-5380 • FAX (716) 288-8475

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

(800) 695-7222

DATE _____ PAGE _____ OF _____

PROJECT NAME GM FORMER DELCO CHASSIS FACILITY
PROJECT MANAGER/CONTACT TOM WELLS
COMPANY/ADDRESS HALEY & ALDRICH
189 N. WATER ST ROCHESTER N.Y. 14604
TEL (716) 327-5531 FAX (716) 232-6768
SAMPLER'S SIGNATURE

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	# OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624	GC/MS SVOA's ☐ 8270A ☐ 625	GC VOA's ☐ 8010/8020 ☐ 601/602	PESTICIDES/PCB's ☐ 8080 ☐ 608	STAR'S LIST 8021 VOA's ☐ TOTAL ☐ TCLP	STAR'S LIST 8270 SVOA's ☐ TOTAL ☐ TCLP	TCLP ☐ METALS ☐ VOA's ☐ SVOA's ☐ H/P	WASTE CHARACTERIZATION ☐ React ☐ Corros. ☐ Ignit.	METALS, TOTAL (LIST BELOW)	METALS, DISSOLVED (LIST BELOW)	PCB's IN OIL							PRESERVATION pH < 2.0	pH > 12	Other
PZ-402-4	5/6/98	1230	210543	OIL	1											X									

RELINQUISHED BY:
Signature
Printed Name JIM MARSCHALEK
Firm HALEY & ALDRICH
Date/Time 5/6/98 1545HRS

RECEIVED BY:
Signature
Printed Name Tom Hastings
Firm CAS
Date/Time 5/6/98 15:45

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

TURNAROUND REQUIREMENTS
__ 24 hr. __ 48 hr. __ 5 day
__ Standard (10-15 working days)
__ Provide Verbal Preliminary Results
__ Provide FAX Preliminary Results
Requested Report Date _____

REPORT REQUIREMENTS
__ 1. Routine Report
__ 2. Routine Rep. w/CASE Narrative
__ 3. EPA Level III Validatable Package
__ 4. N.J. Reduced Deliverables Level IV
__ 5. NY ASP/CLP Deliverables
__ 6. Site specific QC.

INVOICE INFORMATION:
P.O. #:
Bill To:

SAMPLE RECEIPT:
Shipping Via: Client
Shipping #:
Temperature: NA
Submission No: 9805-408
4-458

SPECIAL INSTRUMENTS/COMMENTS:
METALS Tot #2707
ORGANICS: ☐ TCL ☐ PPL ☐ AE Only ☐ BN Only ☐ Special List
* separated oil from water - water stored in SMD cooler 5/7/98

65 RAMAPO VALLEY ROAD
MAHWAH, NJ 07430
201-512-3292
FAX 201-512-3362

309 WEST RIDLEY AVE.
RIDLEY PARK, PA 19078
610-521-3083
FAX 610-521-4589