QUARTERLY PROGRESS REPORT NO. 6
REMEDIAL INVESTIGATION
DELPHI FACILITY
1000 LEXINGTON AVENUE
ROCHESTER, NEW YORK
Registry Site No. 8-28-064
EPA ID No. NYD002215234

.

by

Haley & Aldrich of New York
Rochester, New York

for

Delphi Corporation
Rochester, New York

File No. 70014-054
September 2003

HALEY & ALDRICH

UNDERGROUND
ENGINEERING &
ENVIRONMENTAL
SOLUTIONS

Haley & Aldrich of New York
200 Town Centre Drive
Suite 2
Rochester, NY 14623-4264
Tel: 585.359.9000
Fax: 585.359.4650
www.HaleyAldrich.com

HALEY & ALDRICH

8 September 2003
File No. 70014-054

New York State Department of
Environmental Conservation
Division of Environmental Remediation
Region 8
6274 East Avon-Lima Road
Avon, New York 14414-9519

Attention: Regional Hazardous Waste Remediation Engineer

Subject: Remedial Investigation Quarterly Progress Report No. 6
Registry Site No. 8-28-064, EPA ID No. NYD002215234
Delphi Facility
1000 Lexington Avenue
Rochester, New York

Ladies and Gentlemen:

Please find enclosed two copies of Quarterly Progress Report No. 6 (Progress Report) for NYSDEC Registry Site No. 8-28-064. This is the sixth progress report covering Remedial Investigation (RI) activities performed at the Delphi Corporation (Delphi) facility located at 1000 Lexington Avenue in the City of Rochester, Monroe County, New York. The Delphi facility property is hereinafter referred to as the "site." The site location is shown on Figure 1 of this report.

This report covers RI activities performed during the period 1 June through 31 August 2003. Investigative activities performed during the reporting period included a site-wide groundwater-level measurement and groundwater-sampling event.

This Progress Report is submitted on behalf of Delphi. It has been prepared in accordance with the terms of an Order On Consent between NYSDEC and Delphi ("RI/FS Order," Index # B8-0531-98-06).

Please feel free to contact us if you have any questions regarding this report.

Sincerely yours,
HALEY & ALDRICH OF NEW YORK

Michael G. Beikirch
Staff Hydrogeologist

Thomas D. Wells
Senior Environmental Geologist

Jeffrey E. Loney
Vice President

Enclosures

c: Delphi Corporation - R. Eisenman, K. Jones
NYSDEC Environmental Enforcement Division, Buffalo - M. Desmond, Senior Attorney
NYSDEC Environmental Remediation Division, Albany - E. Belmore, Chief Western Section
MCDOH - R. Elliott
NYSDOH - Regional Toxics Coordinator

G:\Projects\70014\054\Qtly_Reports\No.6\Qtly Rpt #6.doc

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

I. INTRODUCTION

This report is the sixth Quarterly Progress Report covering remedial investigation (RI) activities performed at the Delphi Corporation facility located at 1000 Lexington Avenue in the City of Rochester, Monroe County, New York. The Delphi property is hereinafter referred to as the "site." The site location is shown on Figure 1.

This report has been prepared in accordance with the terms of an Order On Consent between the New York State Department of Environmental Conservation (NYSDEC) and Delphi for a remedial investigation and feasibility study of the Delphi site ("RI/FS Order," Index # B8-0531-98-06). The Delphi site is listed as Site # 8-28-064 on the New York State Registry of Inactive Hazardous Waste Disposal Sites, and it is identified under state and federal programs regulating management of hazardous waste by its U.S. Environmental Protection Agency (EPA) identification number NYD002215234.

Quarterly Report No. 6 covers RI activities performed during the period of 1 June 2003 through 31 August 2003. Activities performed during the reporting period include:

- a quarterly groundwater monitoring event,
- laboratory analysis of quarterly groundwater-monitoring samples collected during the reporting period,
- LNAPL sampling at PZ-129 and R-243 for PCB congeners analysis, and
- validation of laboratory data.

This report presents the results of the activities performed during this reporting period and describes the activities to be undertaken during the next period of the RI. The report includes text, tables summarizing sample data, and figures showing investigation locations and data summaries. Appendices containing field data and an explanation of actions taken as a result of the validation of laboratory analytical data are attached to the end of the report.

II. RI/FS ACTIVITIES COMPLETED

2.01 Remedial Investigation Activities

Remedial investigation activities performed during the reporting period included measurement of groundwater and NAPL levels in monitoring wells at the site and sampling of the eight new off-site monitoring wells. This event was performed on 28-29 July 2003, and represented the third groundwater sampling event of the RI. This event was performed in accordance with the RI/FS Work Plan specifications for the second new off-site wells quarterly event. The locations of all on-site and off-site wells are shown on the site plan presented in Figure 2.

Laboratory analysis of groundwater and light NAPL (LNAPL) samples from the eight new offsite wells was completed during this reporting period. Analytical data for this quarterly event was validated during this reporting period, and the field and analytical data for the event are presented in this report.

In addition, LNAPL in on-site piezometer PZ-129 and off-site monitoring well R-243 was sampled for PCB-congener analysis by a high-resolution gas chromatography/mass spectrometry method (HR-GC/MS) in accordance with Haley & Aldrich's 26 June 2003 letter to NYSDEC. PCBs-congener analysis of LNAPL samples from PZ-129 and R-243 was completed during the reporting period, but the analysis report was not received in time for data validation to be completed. This data has not been included in this report, but will be presented in the next quarterly progress report.

A. Water Level Measurements

Free-Col Laboratories performed water level measurements on 28 July 2003 in a single site-wide measurement event that included all on-site and off-site monitoring wells. Each of the monitoring wells was measured for groundwater and/or LNAPL level. In accordance with the Work Plan and Haley & Aldrich's 26 June 2003 letter to the Department, a number of existing monitoring wells and all new RI monitoring wells were also measured for the presence of dense non-aqueous phase liquid (DNAPL).

Groundwater and NAPL level measurements from July 2003 are presented in Appendix A, and the data are summarized on Table 8. Groundwater contour plans based on the July data are presented in Figures 3 through 5. These plans show groundwater elevations in the overburden/shallow-bedrock, intermediate-bedrock, and deep-bedrock groundwater zones.

B. Groundwater and LNAPL Sampling

Groundwater sampling was performed during the period of 28-29 July 2003. All eight newly-installed off-site monitoring wells were sampled either for groundwater or for LNAPL in accordance with the RI/FS Work Plan. Among the eight off-site wells,

LNAPL was encountered and sampled only at R-305, where it was present in sufficient volume for sampling. Groundwater samples were collected from the remaining seven wells where LNAPL was absent.

LNAPL sample collection for PCBs congeners analysis at wells PZ-129 and R-243 was performed simultaneously with the quarterly sampling event. As indicated in Haley & Aldrich's 26 June 2003 letter to the Department, this was a sampling effort intended to supplement LNAPL characterization activities. NYSDEC approved Delphi's proposal to initially sample and analyze LNAPL samples from two wells where PCBs had previously been detected by GC-only analysis of LNAPL. The analyses performed may be augmented with additional PCBs analyses by HR-GC/MS if the need for confirmation of PCBs by MS remains an issue, or by GC methods if further PCBs characterization or delineation is warranted.

Groundwater and NAPL samples at all ten locations were collected in accordance with the RI/FS Work Plan, Appendix G, Groundwater Sampling Procedures, and with the protocol outlined in the 26 June 2003 letter. Free-Col Laboratories of Meadville, Pennsylvania, collected all samples. For groundwater, conventional purging of 3 well volumes (or until the well went dry) was performed using dedicated pumps or disposable bailers prior to sampling, and for LNAPL a grab sample was collected directly from the oil layer.

Groundwater and NAPL sampling records are included in Appendix A.

2.02 Laboratory Analysis and Data Validation

Quarterly groundwater and LNAPL samples were submitted to the required project laboratories for analysis as specified in Table IV of the RI/FS Work Plan. All quarterly groundwater and LNAPL samples (from the eight off-site wells) were submitted to Free-Col Laboratories where all analyses were performed using USEPA SW-846 methods. LNAPL samples collected from PZ-129 and R-243 were submitted to Severn-Trent Laboratories of Knoxville, Tennessee for analysis of PCBs congeners by high-resolution GC/MS using U.S. EPA Method 1668A, in accordance with the 26 June 2003 letter.

Laboratory analytical reports for quarterly samples submitted during the July 2003 event were received during this reporting period. Haley & Aldrich validated the data presented in the analytical reports in accordance with the U.S. Environmental Protection Agency, **National Functional Guidelines for Organic Data Review** (EPA 540/R-99/008), **National Functional Guidelines for Inorganic Data Review, Final** (EPA 540-R-01/008), and method protocol criteria where applicable as prescribed by "Test Methods For Evaluating Solid Waste, SW-846, Update III, 1996". Laboratory analytical reports for the LNAPL samples from PZ-129 and R-243, also submitted during the July event, were not received in time for validation during this reporting period. A summary of the data for these samples is not presented in this report; it will be provided in the next quarterly progress report.

Complete copies of laboratory analysis reports are not presented with this report but are available for review by NYSDEC's project team. An electronic database of validated analytical results for the project samples collected and analyzed during this reporting period will be provided to the NYSDEC project manager under separate cover, and complete copies of laboratory analysis reports will be submitted with the final RI report.

The validated analytical results are summarized in Tables 1 through 7. Actions taken to qualify the validated analytical results are described in Appendix B. Copies of petroleum fingerprint chromatograms for LNAPL samples are presented in Appendix C.

III. UPCOMING RI/FS ACTIVITIES

The following RI/FS activities are planned for the upcoming reporting period of September through November 2003.

3.01 Groundwater and LNAPL Measurements

A site-wide groundwater and LNAPL level measurement event will be performed during the next reporting period and will include all Delphi on-site and off-site monitoring wells. These site-wide measurement events are required on a quarterly basis for at least the first two years of the RI/FS program.

3.02 Groundwater Sampling

The next scheduled groundwater-sampling event, the first "semi-annual" event, will include the eight newly-installed off-site wells sampled during this quarter, as well as all on-site newly-installed RI wells (approximately 37 wells). These samples will be analyzed in accordance with Table IV of the RI/FS Work Plan.

3.03 Sump Sampling

Basements and basement sumps will be evaluated and sampled in accordance with Section 5.5 E of the Work Plan.

3.04 Sewer Sampling

Sanitary and storm sewers beneath Plants 1 and 2 will be evaluated and sampled in accordance with Section 5.6 D of the Work Plan.

IV. CITIZEN PARTICIPATION ACTIVITIES

No Citizen Participation activities were performed during this reporting period. No Citizen Participation activities are planned for the next reporting period.

REFERENCES

Data Summary Report, Previous Remedial Investigations, Delphi Automotive Systems, 1000 Lexington Avenue, Rochester, New York, Site No. 8-28-064, Volume V. Haley & Aldrich of New York, September 1998.

RI/FS Work Plan, Delphi Automotive Systems Facility, 1000 Lexington Avenue, Rochester, Monroe County, New York, Registry Site No. 8-28-064, Volume V. Haley & Aldrich of New York, October 2001.

Quarterly Progress Report No. 1, Remedial Investigation, Delphi Facility, 1000 Lexington Avenue, Rochester, New York, Site No. 8-28-064, EPA Id No. NYD002215234. Haley & Aldrich of New York, May 2002.

Quarterly Progress Report No. 2, Remedial Investigation, Delphi Facility, 1000 Lexington Avenue, Rochester, New York, Site No. 8-28-064, EPA Id No. NYD002215234. Haley & Aldrich of New York, August 2002.

Quarterly Progress Report No. 3, Remedial Investigation, Delphi Facility, 1000 Lexington Avenue, Rochester, New York, Site No. 8-28-064, EPA Id No. NYD002215234. Haley & Aldrich of New York, November 2002.

Quarterly Progress Report No. 4, Remedial Investigation, Delphi Facility, 1000 Lexington Avenue, Rochester, New York, Site No. 8-28-064, EPA Id No. NYD002215234. Haley & Aldrich of New York, February 2003.

Quarterly Progress Report No. 5, Remedial Investigation, Delphi Facility, 1000 Lexington Avenue, Rochester, New York, Site No. 8-28-064, EPA Id No. NYD002215234. Haley & Aldrich of New York, June 2003.

G:\Projects\70014\054\Qtly_Reports\No.6\Qtly Rpt #6.doc

TABLE 1
SUMMARY OF GROUNDWATER ANALYSIS RESULTS - VOLATILE ORGANIC COMPOUNDS
DELPHI CORPORATION
ROCHESTER, NEW YORK

All results are in ppm (mg/L)

WELL NUMBER	R-302	R-303	R-304	R-306	R-307
SAMPLE DATE	28-Jul-03	28-Jul-03	28-Jul-03	28-Jul-03	28-Jul-03
LABORATORY SAMPLE ID	2003:0008751-5	2003:0008751-8	2003:0008751-7	2003:0008751-6	2003:0008751-1
LABORATORY	Free-Col	Free-Col	Free-Col	Free-Col	Free-Col
ANALYSIS METHOD	SW-846 8260B	SW-846 8260B	SW-846 8260B	SW-846 8260B	SW-846 8260B
1,1,1-Trichloroethane	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
1,1,2,2-Tetrachloroethane	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
1,1,2-Trichloroethane	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
1,1-Dichloroethane	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
1,2,4-Trimethylbenzene	0.002 U	0.002 U	0.002 U	0.11	0.002 U
1,2-Dichloroethane	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
1,2-Dichloropropane	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
1,3,5-Trimethylbenzene	0.002 U	0.002 U	0.002 U	0.024	0.002 U
2-Butanone	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2-Chloroethylvinylether	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
2-Hexanone	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4-Methyl-2-Pentanone	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Acetone	0.01 U	0.01 U	0.017	0.01 U	0.01 U
Benzene	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Bromodichloromethane	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Bromoform	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Bromomethane	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Carbon Disulfide	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Carbon Tetrachloride	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Chlorobenzene	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Chloroethane	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Chloroform	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Chloromethane	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
cis-1,2-Dichloroethene	0.002 U	0.007	0.005	0.016	0.002 U
cis-1,3-Dichloropropene	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Dibromochloromethane	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Ethylbenzene	0.002 U	0.002 U	0.002 U	0.007	0.002 U
Methylene chloride	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
n-Butylbenzene	0.002 U	0.002 U	0.002 U	0.019	0.002 U
sec-Butylbenzene	0.002 U	0.002 U	0.002 U	0.01	0.002 U
Styrene	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
tert-Butylbenzene	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Tetrachloroethene	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Toluene	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
trans-1,2-Dichloroethene	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
trans-1,3-Dichloropropene	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Trichloroethene	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Vinyl Acetate	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Vinyl Chloride	0.002 U	0.002 U	0.002	0.009	0.002 U
Xylenes, Total	0.002 U	0.002 U	0.002	0.01	0.002 U

TABLE 1
SUMMARY OF GROUNDWATER ANALYSIS RESULTS - VOLATILE ORGANIC COMPOUNDS
DELPHI CORPORATION
ROCHESTER, NEW YORK

All results are in ppm (mg/L)

WELL NUMBER	R-307 Dup.	SR-303	SR-304
SAMPLE DATE	28-Jul-03	28-Jul-03	28-Jul-03
LABORATORY SAMPLE ID	2003:0008751-2	2003:0008751-4	2003:0008751-3
LABORATORY	Free-Col	Free-Col	Free-Col
ANALYSIS METHOD	SW-846 8260B	SW-846 8260B	SW-846 8260B
1,1,1-Trichloroethane	0.002 U	0.002 U	0.002 U
1,1,2,2-Tetrachloroethane	0.002 U	0.002 U	0.002 U
1,1,2-Trichloroethane	0.002 U	0.002 U	0.002 U
1,1-Dichloroethane	0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	0.002 U	0.002 U	0.002 U
1,2,4-Trimethylbenzene	0.002 U	0.002 U	0.002 U
1,2-Dichloroethane	0.002 U	0.002 U	0.002 U
1,2-Dichloropropane	0.002 U	0.002 U	0.002 U
1,3,5-Trimethylbenzene	0.002 U	0.002 U	0.002 U
2-Butanone	0.01 U	0.01 U	0.01 U
2-Chloroethylvinylether	0.002 U	0.002 U	0.002 U
2-Hexanone	0.01 U	0.01 U	0.01 U
4-Methyl-2-Pentanone	0.01 U	0.01 U	0.01 U
Acetone	0.01 U	0.01 U	0.01 U
Benzene	0.002 U	0.002 U	0.002 U
Bromodichloromethane	0.002 U	0.002 U	0.002 U
Bromoform	0.002 U	0.002 U	0.002 U
Bromomethane	0.002 U	0.002 U	0.002 U
Carbon Disulfide	0.002 U	0.002 U	0.002 U
Carbon Tetrachloride	0.002 U	0.002 U	0.002 U
Chlorobenzene	0.002 U	0.002 U	0.002 U
Chloroethane	0.002 U	0.002 U	0.002 U
Chloroform	0.002 U	0.002 U	0.002 U
Chloromethane	0.002 U	0.002 U	0.002 U
cis-1,2-Dichloroethene	0.002 U	0.002 U	0.002 U
cis-1,3-Dichloropropene	0.002 U	0.002 U	0.002 U
Dibromochloromethane	0.002 U	0.002 U	0.002 U
Ethylbenzene	0.002 U	0.002 U	0.002 U
Methylene chloride	0.002 U	0.002 U	0.002 U
n-Butylbenzene	0.002 U	0.002 U	0.002 U
sec-Butylbenzene	0.002 U	0.002 U	0.002 U
Styrene	0.002 U	0.002 U	0.002 U
tert-Butylbenzene	0.002 U	0.002 U	0.002 U
Tetrachloroethene	0.002 U	0.002 U	0.002 U
Toluene	0.002 U	0.002 U	0.002 U
trans-1,2-Dichloroethene	0.002 U	0.002 U	0.002 U
trans-1,3-Dichloropropene	0.002 U	0.002 U	0.002 U
Trichloroethene	0.002 U	0.002 U	0.002 U
Vinyl Acetate	0.002 U	0.002 U	0.002 U
Vinyl Chloride	0.002 U	0.002 U	0.002 U
Xylenes, Total	0.002 U	0.002 U	0.002 U

TABLE 2
SUMMARY OF GROUNDWATER ANALYSIS RESULTS - SEMIVOLATILE ORGANIC COMPOUNDS
DELPHI CORPORATION
ROCHESTER, NEW YORK

All results are in ppm (mg/L)

WELL NUMBER	R-302	R-303	R-304	R-306	R-307	R-307 Dup.
SAMPLE DATE	28-Jul-03	28-Jul-03	28-Jul-03	28-Jul-03	28-Jul-03	28-Jul-03
LABORATORY SAMPLE ID	2003:0008751-5	2003:0008751-8	2003:0008751-7	2003:0008751-6	2003:0008751-1	2003:0008751-2
LABORATORY	Free-Col	Free-Col	Free-Col	Free-Col	Free-Col	Free-Col
ANALYSIS METHOD	SW-846 8270C	SW-846 8270C	SW-846 8270C	SW-846 8270C	SW-846 8270C	SW-846 8270C
1,2,4-Trichlorobenzene	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2-Dichlorobenzene	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,3-Dichlorobenzene	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,4-Dichlorobenzene	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
2,4,5-Trichlorophenol	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2,4,6-Trichlorophenol	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
2,4-Dichlorophenol	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
2,4-Dimethylphenol	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
2,4-Dinitrophenol	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
2,4-Dinitrotoluene	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
2,6-Dinitrotoluene	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
2-Chloronaphthalene	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
2-Chlorophenol	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
2-Methylnaphthalene	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2-Methylphenol	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
2-Nitroaniline	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2-Nitrophenol	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
3,3'-Dichlorobenzidine	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
3-Nitroaniline	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
4,6-dinitro-2-methylphenol	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4-Bromophenyl phenyl ether	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
4-Chloro-3-methylphenol	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
4-Chloroaniline	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4-Chlorophenyl phenyl ether	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
4-Methylphenol	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
4-Nitroaniline	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
4-Nitrophenol	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Acenaphthene	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Acenaphthylene	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Anthracene	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Benzo(a)anthracene	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Benzo(a)pyrene	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Benzo(b)fluoranthene	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Benzo(g,h,i)perylene	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Benzo(k)fluoranthene	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Benzoic Acid	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Benzyl Alcohol	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Bis(2-Chloroethoxy)Methane	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Bis(2-Chloroethyl)ether	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Bis(2-Chloroisopropyl)ether	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Bis(2-ethylhexyl)phthalate	0.002 U	0.002 U	0.002 U	0.006	0.002 U	0.002 U
Butyl Benzyl Phthalate	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Chrysene	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Di-n-butyl phthalate	0.003	0.002	0.002 U	0.008	0.002	0.003
Di-n-octyl phthalate	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Dibenz(a,h)anthracene	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Dibenzofuran	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Diethyl phthalate	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Dimethyl Phthalate	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Fluoranthene	0.002 U	0.002 U	0.002 U	0.004	0.002 U	0.002 U
Fluorene	0.002 U	0.002 U	0.002 U	0.003	0.002 U	0.002 U
Hexachlorobenzene	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Hexachlorobutadiene	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Hexachlorocyclopentadiene	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Hexachloroethane	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Indeno(1,2,3-cd)pyrene	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Isophorone	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
n-Nitrosodi-n-propylamine	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
n-Nitrosodiphenylamine	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Naphthalene	0.002 U	0.002 U	0.002 U	0.009	0.002 U	0.002 U
Nitrobenzene	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Pentachlorophenol	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Phenanthrene	0.002 U	0.002 U	0.002 U	0.017	0.002 U	0.002 U
Phenol	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Pyrene	0.002 U	0.002 U	0.002 U	0.003	0.002 U	0.002 U

TABLE 2
SUMMARY OF GROUNDWATER ANALYSIS RESULTS - SEMIVOLATILE ORGANIC COMPOUNDS
DELPHI CORPORATION
ROCHESTER, NEW YORK

All results are in ppm (mg/L)

WELL NUMBER	SR-303	SR-304
SAMPLE DATE	28-Jul-03	28-Jul-03
LABORATORY SAMPLE ID	2003:0008751-4	2003:0008751-3
LABORATORY	Free-Col	Free-Col
ANALYSIS METHOD	SW-846 8270C	SW-846 8270C
1,2,4-Trichlorobenzene	0.005 U	0.005 U
1,2-Dichlorobenzene	0.005 U	0.005 U
1,3-Dichlorobenzene	0.005 U	0.005 U
1,4-Dichlorobenzene	0.005 U	0.005 U
2,4,5-Trichlorophenol	0.01 U	0.01 U
2,4,6-Trichlorophenol	0.002 U	0.002 U
2,4-Dichlorophenol	0.002 U	0.002 U
2,4-Dimethylphenol	0.002 U	0.002 U
2,4-Dinitrophenol	0.03 U	0.03 U
2,4-Dinitrotoluene	0.002 U	0.002 U
2,6-Dinitrotoluene	0.002 U	0.002 U
2-Chloronaphthalene	0.002 U	0.002 U
2-Chlorophenol	0.002 U	0.002 U
2-Methylnaphthalene	0.01 U	0.01 U
2-Methylphenol	0.005 U	0.005 U
2-Nitroaniline	0.05 U	0.05 U
2-Nitrophenol	0.002 U	0.002 U
3,3'-Dichlorobenzidine	0.01 U	0.01 U
3-Nitroaniline	0.05 U	0.05 U
4,6-dinitro-2-methylphenol	0.01 U	0.01 U
4-Bromophenyl phenyl ether	0.002 U	0.002 U
4-Chloro-3-methylphenol	0.002 U	0.002 U
4-Chloroaniline	0.01 U	0.01 U
4-Chlorophenyl phenyl ether	0.002 U	0.002 U
4-Methylphenol	0.005 U	0.005 U
4-Nitroaniline	0.05 U	0.05 U
4-Nitrophenol	0.03 U	0.03 U
Acenaphthene	0.002 U	0.002 U
Acenaphthylene	0.002 U	0.002 U
Anthracene	0.002 U	0.002 U
Benzo(a)anthracene	0.002 U	0.002 U
Benzo(a)pyrene	0.002 U	0.002 U
Benzo(b)fluoranthene	0.002 U	0.002 U
Benzo(g,h,i)perylene	0.002 U	0.002 U
Benzo(k)fluoranthene	0.002 U	0.002 U
Benzoic Acid	0.05 U	0.05 U
Benzyl Alcohol	0.01 U	0.01 U
Bis(2-Chloroethoxy)Methane	0.002 U	0.002 U
Bis(2-Chloroethyl)ether	0.005 U	0.005 U
Bis(2-Chloroisopropyl)ether	0.002 U	0.002 U
Bis(2-ethylhexyl)phthalate	0.002 U	0.002 U
Butyl Benzyl Phthalate	0.002 U	0.002 U
Chrysene	0.002 U	0.002 U
Di-n-butyl phthalate	0.002	0.002
Di-n-octyl phthalate	0.002 U	0.002 U
Dibenz(a,h)anthracene	0.005 U	0.005 U
Dibenzofuran	0.01 U	0.01 U
Diethyl phthalate	0.002 U	0.002 U
Dimethyl Phthalate	0.002 U	0.002 U
Fluoranthene	0.002 U	0.002 U
Fluorene	0.002 U	0.002 U
Hexachlorobenzene	0.002 U	0.002 U
Hexachlorobutadiene	0.01 U	0.01 U
Hexachlorocyclopentadiene	0.01 U	0.01 U
Hexachloroethane	0.01 U	0.01 U
Indeno(1,2,3-cd)pyrene	0.002 U	0.002 U
Isophorone	0.002 U	0.002 U
n-Nitrosodi-n-propylamine	0.01 U	0.01 U
n-Nitrosodiphenylamine	0.01 U	0.01 U
Naphthalene	0.002 U	0.002 U
Nitrobenzene	0.005 U	0.005 U
Pentachlorophenol	0.01 U	0.01 U
Phenanthrene	0.002 U	0.002 U
Phenol	0.002 U	0.002 U
Pyrene	0.002 U	0.002 U

TABLE 3
SUMMARY OF GROUNDWATER ANALYSIS RESULTS - PCBs
DELPHI CORPORATION
ROCHESTER, NEW YORK

All results are in ppm (mg/L)

WELL NUMBER	R-306	R-306 Dup
SAMPLE DATE	28-Jul-03	28-Jul-03
LABORATORY SAMPLE ID	2003:0008751-6	2003:0008751-9
LABORATORY	Free-Col	Free-Col
ANALYSIS METHOD	SW-846 8082	SW-846 8082
Aroclor 1016	0.0002 U	0.0002 U
Aroclor 1221	0.0002 U	0.0002 U
Aroclor 1232	0.0002 U	0.0002 U
Aroclor 1242	0.0002 U	0.0002 U
Aroclor 1248	0.0002 U	0.0002 U
Aroclor 1254	0.0002 U	0.0002 U
Aroclor 1260	0.0002 U	0.0002 U

TABLE 4
SUMMARY OF GROUNDWATER ANALYSIS RESULTS
METALS and OTHER INORGANIC COMPOUNDS
DELPHI CORPORATION
ROCHESTER, NEW YORK

All results are in ppm (mg/L)

WELL NUMBER	R-302	R-303	R-304	R-306
SAMPLE DATE	28-Jul-03	28-Jul-03	28-Jul-03	28-Jul-03
LABORATORY SAMPLE ID	2003:0008751-5	2003:0008751-8	2003:0008751-7	2003:0008751-6
LABORATORY	Free-Col	Free-Col	Free-Col	Free-Col
ANALYSIS METHODS	SW-846 6000/7000	SW-846 6000/7000	SW-846 6000/7000	SW-846 6000/7000
Antimony	0.01 U	0.01 U	0.01 U	0.01 U
Arsenic	0.05 U	0.05 U	0.05 U	0.05 U
Beryllium	0.002 U	0.002 J	0.002 J	0.002 U
Cadmium	0.0001 U	0.0001 U	0.0001 U	0.0001 U
Chromium	0.05 U	0.05 U	0.05 U	0.05 U
Copper	0.01 U	0.04	0.07	0.01
Lead	0.001 U	0.038	0.039	0.001 U
Mercury	0.0001 U	0.0001 U	0.0001 U	0.0001 U
Nickel	0.04 U	0.04 U	0.04 U	0.04 U
Selenium	0.05 U	0.05 U	0.05 U	0.05 U
Silver	0.01 U	0.01 U	0.01 U	0.01 U
Thallium	0.1 U	0.1 U	0.1 U	0.1 U
Zinc	0.04	0.094	0.172	0.015

WELL NUMBER	R-307	R-307 Dup.	SR-303	SR-304
SAMPLE DATE	28-Jul-03	28-Jul-03	28-Jul-03	28-Jul-03
LABORATORY SAMPLE ID	2003:0008751-1	2003:0008751-2	2003:0008751-4	2003:0008751-3
LABORATORY	Free-Col	Free-Col	Free-Col	Free-Col
ANALYSIS METHODS	SW-846 6000/7000	SW-846 6000/7000	SW-846 6000/7000	SW-846 6000/7000
Antimony	0.01 U	0.01 U	0.01 U	0.01 U
Arsenic	0.05 U	0.05 U	0.05 U	0.05 U
Beryllium	0.002 U	0.002 U	0.002 U	0.002 U
Cadmium	0.0001 U	0.0001 U	0.0001 U	0.0001 U
Chromium	0.05 U	0.05 U	0.05 U	0.05 U
Copper	0.04	0.02	0.01	0.01 U
Lead	0.047	0.031	0.001 U	0.001 U
Mercury	0.0001 U	0.0001 U	0.0001 U	0.0001 U
Nickel	0.04 U	0.04 U	0.04 U	0.04 U
Selenium	0.05 U	0.05 U	0.05 U	0.05 U
Silver	0.01 U	0.01 U	0.01 U	0.01 U
Thallium	0.1 U	0.1 U	0.1 U	0.1 U
Zinc	0.186	0.124	0.042	0.016

TABLE 5
SUMMARY OF LNAPL ANALYSIS RESULTS - VOLATILE ORGANIC COMPOUNDS
DELPHI CORPORATION
ROCHESTER, NEW YORK

All results are in ppm (mg/kg)

WELL NUMBER	R-305	R-305 Dup.
SAMPLE DATE	28-Jul-03	28-Jul-03
LABORATORY SAMPLE ID	2003:0008752-1	2003:0008752-2
LABORATORY	Free-Col	Free-Col
ANALYSIS METHOD	SW-846 8260B	SW-846 8260B
1,1,1-Trichloroethane	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	0.2 U	0.2 U
1,1,2-Trichloroethane	0.2 U	0.2 U
1,1-Dichloroethane	0.2 U	0.2 U
1,1-Dichloroethene	0.2 U	0.2 U
1,2,4-Trimethylbenzene	91	72
1,2-Dichloroethane	0.2 U	0.2 U
1,2-Dichloropropane	0.2 U	0.2 U
1,3,5-Trimethylbenzene	15	11
2-Butanone	1 U	1 U
2-Chloroethylvinylether	0.2 U	0.2 U
2-Hexanone	1 U	1 U
4-Methyl-2-Pentanone	1 U	1 U
Acetone	1 U	1 U
Benzene	0.2 U	0.2 U
Bromodichloromethane	0.2 U	0.2 U
Bromoform	0.2 U	0.2 U
Bromomethane	0.2 U	0.2 U
Carbon Disulfide	0.2 U	0.2 U
Carbon Tetrachloride	0.2 U	0.2 U
Chlorobenzene	0.2 U	0.2 U
Chloroethane	0.2 U	0.2 U
Chloroform	0.2 U	0.2 U
Chloromethane	0.2 U	0.2 U
cis-1,2-Dichloroethene	4.4	3.5
cis-1,3-Dichloropropene	0.2 U	0.2 U
Dibromochloromethane	0.2 U	0.2 U
Ethylbenzene	1.9	1.7
Methylene chloride	0.2 U	0.2 U
n-Butylbenzene	17	13
sec-Butylbenzene	12	8.9
Styrene	0.2 U	0.2 U
tert-Butylbenzene	0.2 U	0.2 U
Tetrachloroethene	0.2 U	0.2 U
Toluene	1.3	1.2
trans-1,2-Dichloroethene	0.2 U	0.2 U
trans-1,3-Dichloropropene	0.2 U	0.2 U
Trichloroethene	0.2 U	0.2 U
Vinyl Acetate	0.2 U	0.2 U
Vinyl Chloride	3.4	2.9
Xylenes, Total	6.1	5.6

TABLES 6 and 7
SUMMARY OF LNAPL ANALYSIS RESULTS
PHYSICAL PARAMETERS and PCBs
DELPHI CORPORATION
ROCHESTER, NEW YORK

All results are in ppm (mg/kg)

PCBs

WELL NUMBER	R-305	R-305 Dup.
SAMPLE DATE	**28-Jul-03**	**28-Jul-03**
LABORATORY SAMPLE ID	2003:0008752-1	2003:0008752-2
LABORATORY	Free-Col	Free-Col
ANALYSIS METHOD	SW-846 8082	SW-846 8082
Aroclor 1016	2 U	2 U
Aroclor 1221	2 U	2 U
Aroclor 1232	2 U	2 U
Aroclor 1242	2 U	2 U
Aroclor 1248	2 U	2 U
Aroclor 1254	2 U	2 U
Aroclor 1260	2 U	2 U

PHYSICAL PARAMETERS

WELL NUMBER	R-305	R-305 Dup.
SAMPLE DATE	**28-Jul-03**	**28-Jul-03**
LABORATORY SAMPLE ID	2003:0008752-1	2003:0008752-2
LABORATORY	Free-Col	Free-Col
Flashpoint	>200	>200
Specific Gravity	0.86	0.86
Viscosity	97.4	97.26

TABLE 8
SUMMARY OF GROUNDWATER- AND LNAPL-LEVEL MEASUREMENTS
JULY 2003
DELPHI CORPORATION
ROCHESTER, NY
(Depths and thicknesses recorded in feet)

	JULY 28-29, 2003		
WELL NUMBER	**DEPTH TO WATER**	**DEPTH TO LNAPL**	**OIL THICKNESS**
DR-103	67.17		
DR-105	26.64		
DR-108	**Dry**		
DR-109	68.17		
DR-11	42.67		
DR-132	39.29		
DR-315	28.17		
MW-2	7.65		
OW-102	18.67	18.45	0.22
OW-105	17.33		
OW-314	13.13		
OW-316	10.80	9.47	1.33
OW-317	8.65	8.55	0.10
OW-322	6.09		
OW-323	5.89		
OW-324	11.32		
OW-327	14.80	14.00	0.80
OW-328	10.51	10.36	0.15
OW-6	8.83		
OW-7	15.66		
PZ-1	9.18	7.30	1.88
PZ-111	13.96		
PZ-112	13.37		
PZ-113	11.28		
PZ-114	13.93	7.29	6.64
PZ-115	12.51		
PZ-116	9.54		
PZ-117	8.87		
PZ-118	8.25		
PZ-119	8.36		
PZ-120	4.78		
PZ-121	8.48	7.76	0.72
PZ-122	5.56	5.53	0.03
PZ-123	11.52	10.24	1.28
PZ-124	8.17	5.90	2.27
PZ-125	8.26		
PZ-126	16.11		
PZ-127	7.01		
PZ-128	7.36		
PZ-129	15.20	14.90	0.30
PZ-130	25.62	17.67	7.95
PZ-132	11.58	11.51	0.07
PZ-133	24.15		

TABLE 8
SUMMARY OF GROUNDWATER- AND LNAPL-LEVEL MEASUREMENTS
JULY 2003
DELPHI CORPORATION
ROCHESTER, NY
(Depths and thicknesses recorded in feet)

	JULY 28-29, 2003		
WELL NUMBER	**DEPTH TO WATER**	**DEPTH TO LNAPL**	**OIL THICKNESS**
PZ-134	23.67		
PZ-135	30.21		
PZ-136	25.69	25.54	0.15
PZ-137	33.79	33.42	0.37
PZ-138	26.22		
PZ-139	30.58		
PZ-140	17.92		
PZ-141	11.33		
PZ-142	8.84		
PZ-143	18.31		
PZ-144	17.61		
R-101	25.28		
R-102	40.34		
R-103	39.19		
R-105	NM		
R-105-R	36.07		
R-106	17.99		
R-107	28.67		
R-108	27.19		
R-109	19.82		
R-11	29.90		
R-110	25.12		
R-131	39.73		
R-132	39.77		
R-2	31.20	29.62	1.58
R-234	27.65		
R-235	31.71	30.30	1.41
R-236	33.52	24.82	8.70
R-237	31.35	24.63	6.72
R-238	26.14	21.17	4.97
R-239	28.36		
R-240	36.09	35.36	0.73
R-241	29.79	26.78	3.01
R-242	26.32		
R-243	28.15	27.09	1.06
R-244	27.42	26.98	0.44
R-3	19.56		
R-301	14.21		
R-302	7.39		
R-303	19.15		
R-304	18.44		
R-305	27.37	23.37	4.00
R-306	31.28	31.27	0.01

TABLE 8
SUMMARY OF GROUNDWATER- AND LNAPL-LEVEL MEASUREMENTS
JULY 2003
DELPHI CORPORATION
ROCHESTER, NY
(Depths and thicknesses recorded in feet)

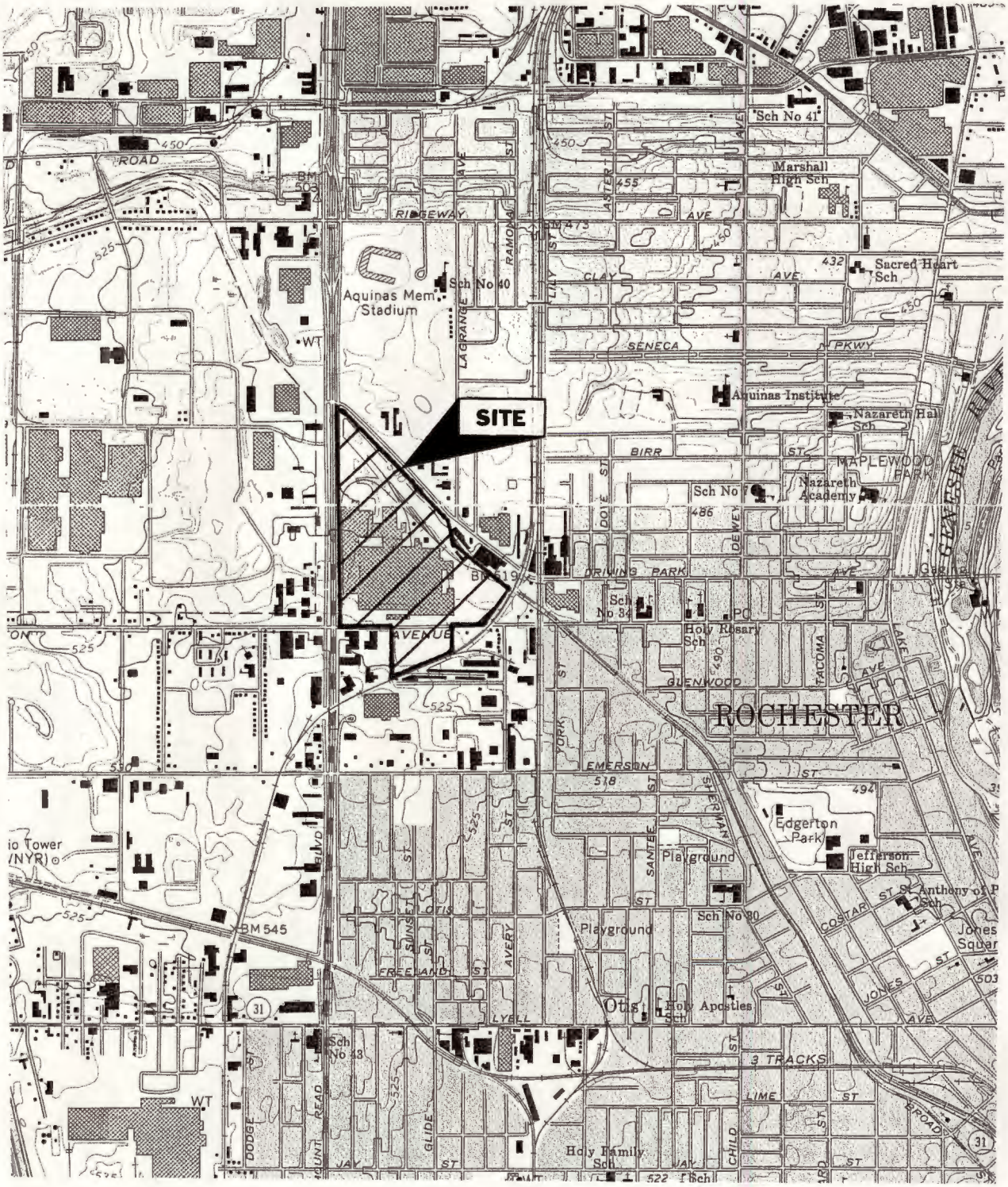
	JULY 28-29, 2003		
WELL NUMBER	**DEPTH TO WATER**	**DEPTH TO LNAPL**	**OIL THICKNESS**
R-307	24.93		
R-308	28.74		
R-309	32.30	24.95	7.35
R-314	40.67		
RW-101	10.36	10.25	0.11
RW-2	8.60	8.08	0.52
RW-3	7.46	7.31	0.15
RW-4	13.52		
SR-101	9.02		
SR-102	29.73	22.82	6.91
SR-103	33.60		
SR-105	31.23		
SR-107	18.23		
SR-11	21.78		
SR-110	17.28		
SR-131	20.62		
SR-132	18.03		
SR-2	10.49		
SR-208	11.60	10.85	0.75
SR-216	22.00	20.50	1.50
SR-230	21.70	20.35	1.35
SR-231	14.21		
SR-233	10.80		
SR-234	**Dry**		
SR-235	13.17		
SR-236	9.90	8.62	1.28
SR-245	15.75		
SR-3	9.44		
SR-301	19.99		
SR-303	10.96		
SR-304	15.82		
SR-308	13.57		
SR-310	19.20	8.93	10.27
SR-311	NE	10.68	12.40
SR-312	19.65	11.48	8.17
SR-313	19.45	13.66	5.79
SR-314	15.68		
SR-316	22.52	12.25	10.27
SR-317	20.43		
SR-318	28.20	19.64	8.56
SR-319	23.60	20.35	3.25
SR-320	18.10		
SR-321	17.79	14.85	2.94

TABLE 8
SUMMARY OF GROUNDWATER- AND LNAPL-LEVEL MEASUREMENTS
JULY 2003
DELPHI CORPORATION
ROCHESTER, NY
(Depths and thicknesses recorded in feet)

	JULY 28-29, 2003		
WELL NUMBER	**DEPTH TO WATER**	**DEPTH TO LNAPL**	**OIL THICKNESS**
SR-325	20.83		
SR-326	23.25	19.85	3.40
SR-8	**Dry**		
SR-9	**Dry**		
VM-209	NM		
VM-210	7.71	7.70	0.01
VM-211	NE	13.50	0.01
VM-212	NM		
VM-213	**Dry**		
VM-214	NM		
VM-215	NM		
VM-217	NM		
VM-218	10.62	9.58	1.04
VM-219	8.00		
VM-220	NM		
VM-221	NM		
VM-222	NM		
VM-223	NM		
VM-224	**Dry**		
VM-225	NM		
VM-226	NM		
VM-227	NM		
VM-228	**Dry**		
VM-229	NM		
WELL Z	24.22	24.21	

NOTES:
1. NM = Not Measured.
2. NE = Not Encountered.

G:\Projects\70014\054\Qtly_Reports\No.6\[GW and LNAPL meas - Table 8.xls]JanApr2003



QUADRANGLE LOCATION: ROCHESTER WEST, N.Y.

HALEY & ALDRICH

UNDERGROUND ENGINEERING & ENVIRONMENTAL SOLUTIONS

DELPHI CORPORATION
LEXINGTON AVENUE FACILITY RI/FS
ROCHESTER, NEW YORK

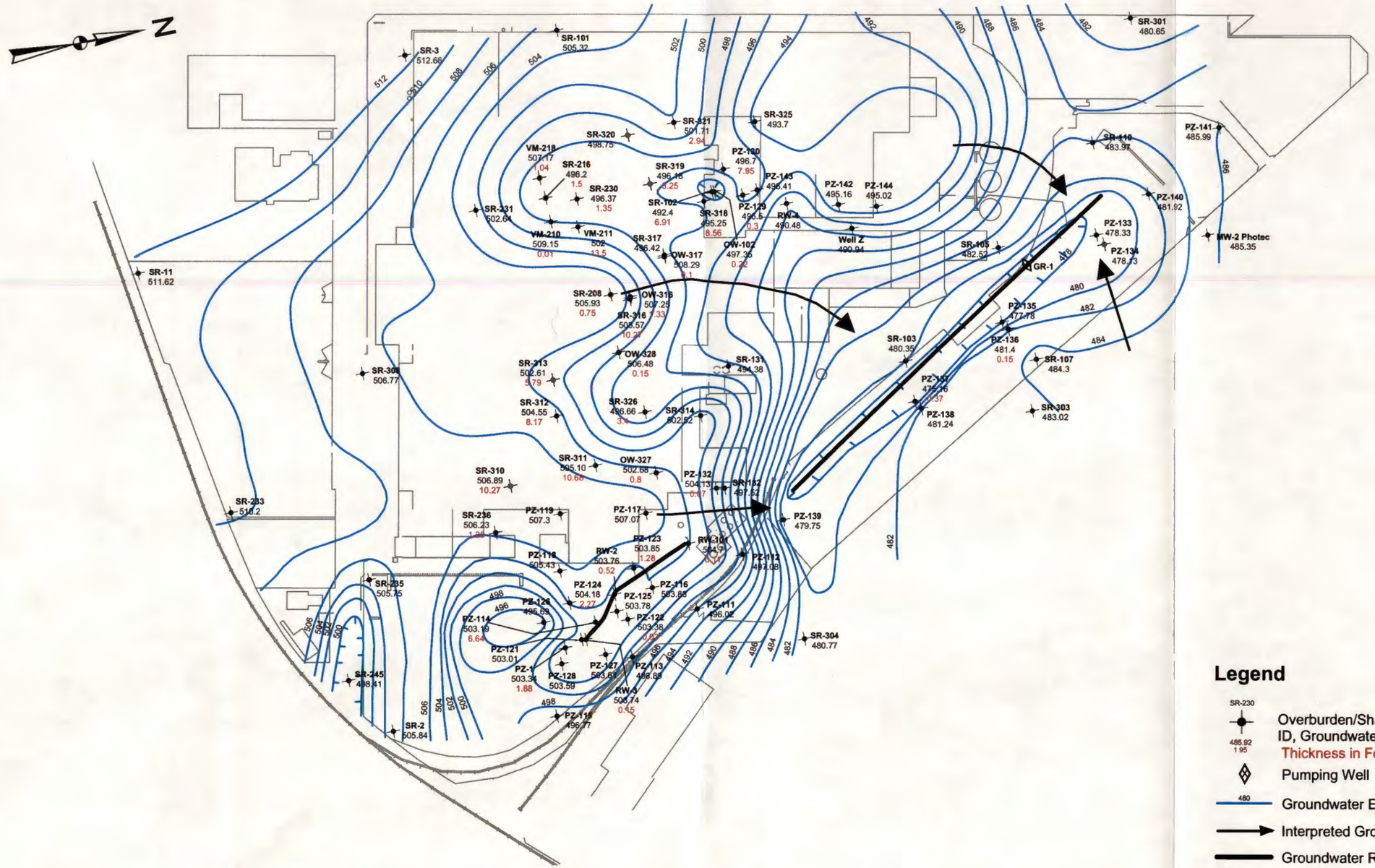
PROJECT LOCUS

SCALE: 1" = 2000'

MAY 2002

70014-054

FIGURE 1



Legend

- SR-230 / 485.92 / 1.95 — Overburden/Shallow-Bedrock Well Location, ID, Groundwater Elevation, and LNAPL Thickness in Feet
- Pumping Well
- 480 — Groundwater Elevation Contour Line
- Interpreted Groundwater Flow Direction
- Groundwater Recovery Trench

NOTES:

1. Depth to groundwater measured by Free-Col Laboratories, Inc. 28-29 July 2003. Migration control trench recovery well GR-1 was in operation during the July 2003 sampling event. Recovery well RW-2 within the Tank Farm Area gravel-filled trench was in operation during the water level measurement event.
2. Contours created with ESRI's ArcMap 8.2 Spatial Analyst extension using spline interpolation. Contours adjusted as necessary by H&A of New York to account for other known site features and conditions.
3. Contours reflect values interpolated between data points. Actual values between data points will vary.
4. Datum is Mean Sea Level (MSL). Contour interval is two feet. Elevations expressed in feet.
5. Arrows indicate interpreted groundwater flow direction.
6. Refer to text for additional information.

HALEY & ALDRICH
UNDERGROUND ENGINEERING & ENVIRONMENTAL SOLUTIONS

DELPHI CORPORATION
LEXINGTON AVENUE FACILITY RI
ROCHESTER, NEW YORK

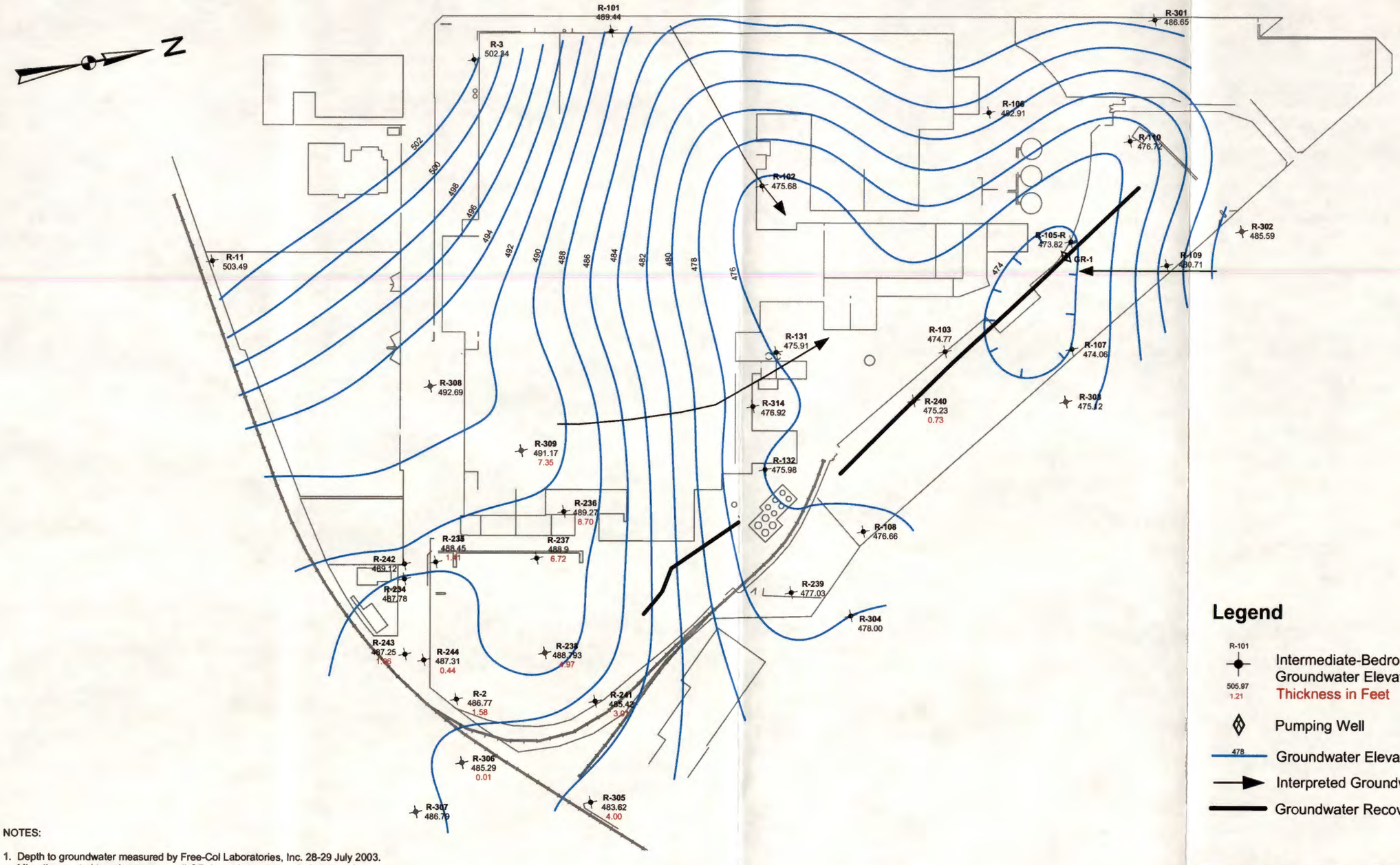
OVERBURDEN/SHALLOW-BEDROCK ZONE
GROUNDWATER ELEVATION CONTOUR PLAN
JULY 2003

SCALE : AS SHOWN

SEPTEMBER 2003

FIGURE 3

70014-054\ArcMap\Groundwater Contours\July 2003\July_2003_gwElevations over+shallow
70014-054\Database\compressed_RI-FS



Legend

- R-101 / 505.97 / 1.21 — Intermediate-Bedrock Well Location, ID, Groundwater Elevation, and LNAPL Thickness in Feet
- Pumping Well
- 478 — Groundwater Elevation Contour Line
- Interpreted Groundwater Flow Direction
- Groundwater Recovery Trench

NOTES:

1. Depth to groundwater measured by Free-Col Laboratories, Inc. 28-29 July 2003. Migration control trench recovery well GR-1 was in operation during the July 2003 sampling event.
2. Contours created with ESRI's ArcMap 8.2 Spatial Analyst extension using spline interpolation. Contours adjusted as necessary by H&A of New York to account for other known site features and conditions.
3. Contours reflect values interpolated between data points. Actual values between data points will vary.
4. Datum is Mean Sea Level (MSL). Contour interval is two feet. Elevations expressed in feet.
5. Arrows indicate interpreted groundwater flow direction.
6. Refer to text for additional information.

HALEY & ALDRICH
UNDERGROUND ENGINEERING & ENVIRONMENTAL SOLUTIONS

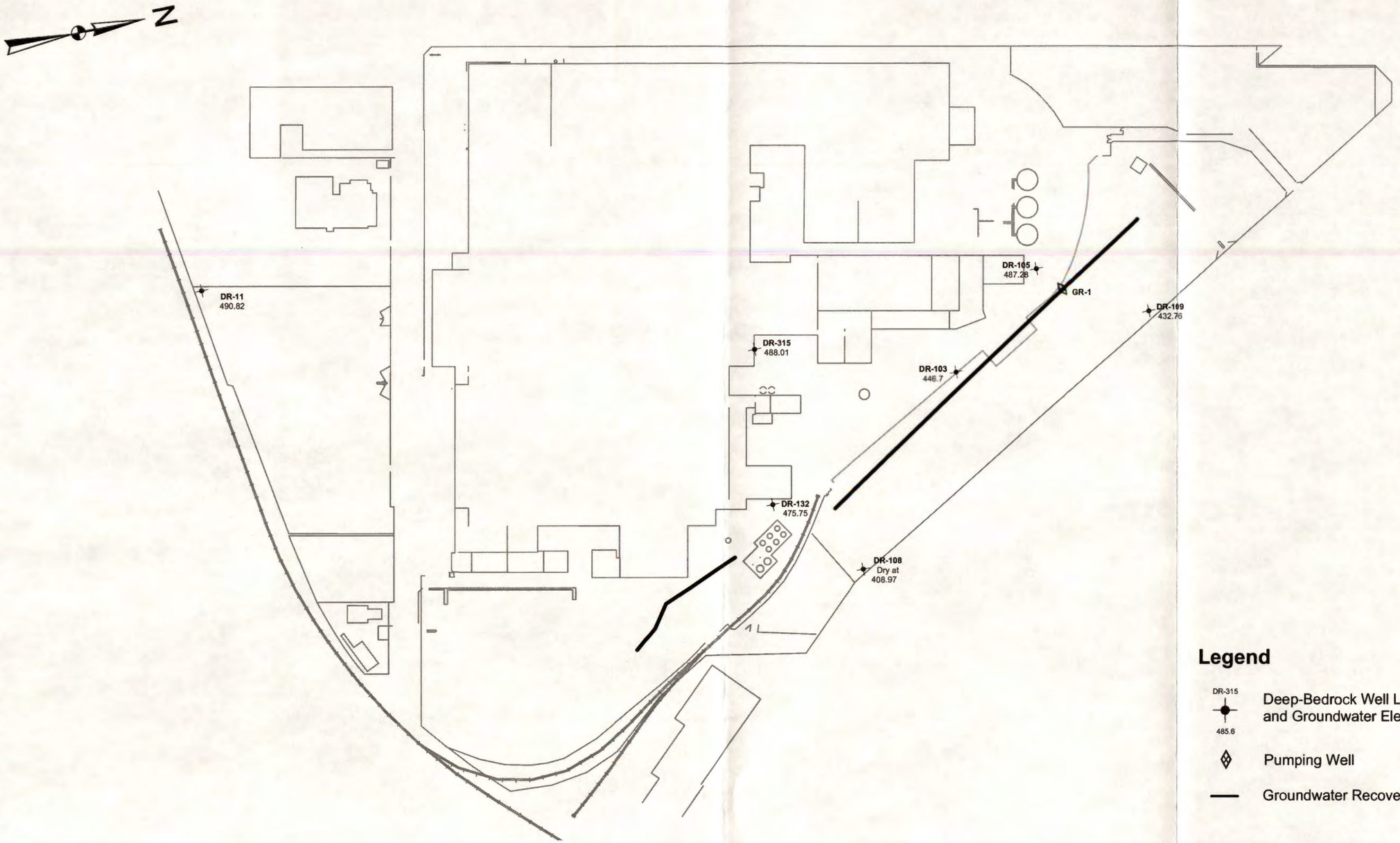
DELPHI CORPORATION
LEXINGTON AVENUE FACILITY RI
ROCHESTER, NEW YORK

INTERMEDIATE-BEDROCK ZONE
GROUNDWATER ELEVATION CONTOUR PLAN
JULY 2003

SCALE : AS SHOWN — SEPTEMBER 2003

FIGURE 4

70014-054\ArcMap\Groundwater Contours\July 2003\July_2003_gwElevations intermed
70014-054\Database\compressed_RI-FS



Legend

- DR-315 / 485.6 — Deep-Bedrock Well Location, ID, and Groundwater Elevation
- Pumping Well
- Groundwater Recovery Trench

NOTES:

1. Depth to groundwater measured by Free-Col Laboratories, Inc. 28-29 July 2003. Migration control trench recovery well GR-1 was in operation during the July 2003 sampling event.
2. Datum is Mean Sea Level (MSL). Groundwater elevations expressed in feet.
3. Refer to text for additional information.

HALEY & ALDRICH
UNDERGROUND ENGINEERING & ENVIRONMENTAL SOLUTIONS

DELPHI CORPORATION
LEXINGTON AVENUE FACILITY RI
ROCHESTER, NEW YORK

DEEP-BEDROCK ZONE
GROUNDWATER ELEVATION POSTING
APRIL 2003

SCALE: AS SHOWN SEPTEMBER 2003

FIGURE 5

70014-054\ArcMap\Groundwater Contours\July 2003\July_2003_gwElevations deep
70014-054\Database\compressed_RI-FS

APPENDIX A

Water Level Measurement Forms and Well Sampling Records

Delphi Energy & Engine Quarterly Groundwater Monitoring

Introduction

Delphi Energy & Engine of Rochester, New York contracted Free-Col Laboratories of Meadville, Pennsylvania, to conduct groundwater monitoring well sampling for their Lexington Avenue plant.

All samples were collected and transported by Richard Valesky, Bill Dart, and Steve Clark of Free-Col Laboratories. Sampling was conducted on July 28 and 29, 2003. Enclosed within is the report of the July 2003 sampling event.

Pre sampling Activities

Well Maintenance Check

Prior to the sampling event, a routine inspection of the condition of the protective casing and surface seal was performed. The protective casing was inspected for the integrity of the locking cap and the surface seal. In addition, each well was checked for any signs of damage or inadvertent entry. Observations of any irregularity were noted in the field logbook as well as the number and date.

Static Water Level Measurements

The depth of groundwater was measured with an electronic depth-indicating sounder. A Heron R2400 Oil-Water Interface Probe was used for static water level measurements. Hydrocarbon phases were measured and recorded in the field logbook. The probe was lowered in the well until the meter indicated that product or water was reached. When product (LNAPL) was indicated, the probe was slowly lowered again until water was indicated. The cable was held against the side of the well and a depth reading was taken. This procedure was followed three times or until a consistent value was obtained. The value was recorded to the nearest 0.01 foot in the field logbook. The probe was raised to the surface and together with the amount of cable that was wetted in the well, was decontaminated with a methanol wipe followed by a de-ionized water rinse.

Before leaving the well location, the volume of water in the well and the volume of the water required to purge three well volumes was calculated and entered into the field logbook (See Table I, Field Data).

Well Evacuation

The eight R and SR monitoring wells were purged using disposable polypropylene bailers. The bailer was attached to a nylon rope and the well was bailed until 3 well volumes were removed from the well or until the well was bailed dry. If a LNAPL was present, only the product was sampled. Two additional wells, PZ-129 and R-243, were sampled and the LNAPL samples were sent out to STL Knoxville for PCB's Congeners analysis.

Purge water was transferred to a 55-gallon drum and transported to the Wastewater Treatment Plant of Delphi Energy & Engine for disposal.

Well Sampling

Groundwater quality samples were obtained after evacuation of the well when sufficient volume was present. Samples for volatile organic compounds were sampled first during the sampling stage. When insufficient volume for sample collection occurred after purging, the well was sampled within 24 hours of well evacuation.

A nylon rope was attached to a disposable translucent polypropylene bailer equipped with a bottom check ball, The bailer was lowered to the middle of the open interval of the well or, if little water was in the well, to with in one foot of the bottom of the well and lifted slowly to the surface. The appropriate sample vials were filled slowly to avoid sample aeration. The remaining bottles were filled followed by the field parameter tests.

Field Measurements

A portion of the groundwater collected during the sampling procedure was subjected to the field tests of temperature, specific conductance, and pH. Tests for field parameters were conducted after all sample containers were filled. Groundwater for these tests was collected in a 250 ml glass container.

Temperature was taken first and measured with a thermometer calibrated in the laboratory. The values were recorded in the field logbook. The thermometer was decontaminated between samples with a de-ionized water rinse and placed in the field carrying case for transport to other sampling locations.

The pH was measured with an Orion pH meter that was calibrated to lab standards with pH values of 4.0, 7.0, and 10.0. The clean probe was inserted into the sample container, the reading recorded in the field logbook to the nearest 0.1 pH unit and the probe rinsed with de-ionized water and inserted into its carrying case.

The specific electrical conductance was measured using a Myron L Company conductivity meter. The meter was calibrated to 1470 µMHOS prior to sampling. The sample was placed in the meter and readings were taken and then recorded in the field logbook. The meter was decontaminated between samples with a de-ionized water rinse and placed in the field carrying case.

All meters were calibrated daily prior to sampling events. Calibration values of the pH meter and conductivity meter appear on Table III.

Equipment Decontamination

The sampling equipment (excluding the thermometer, pH and specific conductance meters) were decontaminated between sampling events using the following procedure:

1. An initial Alconox or equivalent detergent wash.
2. Clean water rinse.
3. Methanol rinse
4. De-ionized water rinse.
5. Air dry.

Decontamination wastewater was containerized and disposed with the purge water or disposed properly at the facility Wastewater Treatment Plant.

Duplicate Samples

A duplicate sample was collected at the same time and location as a field sample and collected at the frequency of one per matrix/method per day. The sample is used to assess precision including variability caused by the laboratory analysis and the sample collection procedure. A

duplicate was collected in immediate succession using identical sampling techniques, sample storage, transportation, and analysis. The duplicate was evenly split from the same bailer load and equally proportioned into each bottle for the split duplicate.

Sampling Notes

All sampling at Delphi Energy & Engine, Lexington Ave., was conducted on July 28 and July 29, 2003. During the sampling event, three wells were bailed dry and sampled when sufficient volume was present. These locations were wells: R-303, R-304, and R-306.

One well, R-305, was sampled for LNAPL. Well, R-306, indicated a thin LNAPL which was to thin to sample.

All other wells, not being required to sample, were measured for static water levels and presence of LNAPL layers.

All field data, purge data, and sampling data can be found on Tables I – IV, and copies of the original field logs can be furnished upon request.

TABLE I
DELPHI ENERGY & ENGINE
MONITORING WELLS FIELD DATA
7/28/2003

LOCATION	TIME	DEPTH TO WATER (FT)	DEPTH TO LNAPL (F)	DEPTH TO BOTTOM OF WELL (FT)	WELL VOLUME (GAL)	FIELD REMARKS
R-302	11:00	7.39		36.0	18.7	
SR-303	9:15	10.96		15.9	0.8	
R-303	9:20	19.15		34.4	10.0	
SR-304	9:30	15.82		16.0	0.1	
R-304	9:32	18.44		30.7	8.0	
R-305	10:25	27.37	23.37	28.5		Well cap loose
R-306	10:40	31.28	31.27	34.0	1.8	Well cap loose
R-307	10:55	24.93		34.3	6.1	
PZ-129	8:20	15.20	14.90	28.7		
R-243	9:00	28.15	27.09	34.1		

TABLE II
DELPHI ENERGY & ENGINE
MONITORING WELLS PURGE DATA
7/28/2003

LOCATION	START TIME	GALLONS PURGED	END TIME	WATER LEVEL AT END (FT)	APPEARANCE
R-302	13:30	58	14:00	30.48	Clear, ending slightly turbid
SR-303	12:35	3	12:40	11.71	Slightly turbid
R-303	12:35	10	12:55	Dry	Very turbid
SR-304	12:15	0.3	12:20	15.85	Clear
R-304	12:15	9	12:30	Dry	Clear, ending very turbid
R-306	11:40	6	11:55	Dry	Clear, ending very turbid, slight oil sheen
R-307	11:00	20	11:20	25.83	Clear, ending very turbid

TABLE III
DELPHI ENERGY & ENGINE
MONITORING WELLS SAMPLING DATA
7/28/2003

LOCATION	DATE	SAMPLING TIME	WATER LEVEL (FT)	APPEARANCE	TEMP (C)	pH	SPECIFIC CONDUCTANCE (µMHOS
R-302	7/28/2003	14:00	30.48	Clear to slightly turbid	14	6.7	1910
SR-303	7/28/2003	12:50	11.71	Clear	13	6.4	1550
R-303	7/28/2003	15:40	33.03	Very turbid	15	7.1	3230
SR-304	7/28/2003	12:30	15.85	Clear	15	6.4	3020
R-304	7/28/2003	15:30	27.92	Slightly turbid	15	9.0	6020
R-305	7/28/2003	12:00					
R-306	7/28/2003	15:10	31.34	Clear	13	7.0	2650
R-307	7/28/2003	11:20	25.83	Very turbid	13	7.0	2500
R-307 DUP	7/28/2003	11:20	25.83	Very turbid	13	7.0	2400
PZ-129	7/28/2003	8:20					
R-243	7/28/2003	9:00					

Field Equipment Calibration

pH (7.0)	7.0
pH (10.0)	10.0
pH (4.0)	4.1
Spec. Cond. (1470 µMHOS)	1470

TABLE IV
DELPHI ENERGY & ENGINE
MONITORING WELLS FIELD DATA
7/28 - 7/29/03

LOCATION	DEPTH TO WATER (FT)	DEPTH TO LNAPL (FT)	DEPTH TO BOTTOM OF WELL (FT)	DNAPL (FT)	WELL VOLUME (GAL)	FIELD REMARKS
VM-224	DRY					
VM-213	DRY					
SR-216	22.00	20.50				
VM-218	10.62	9.58				
VM-228	DRY					
VM-210	7.71	7.7				
VM-219	8.00					
SR-230	21.70	20.35				
VM-211	NO WATER	13.5				
SR-231	14.21					
PZ-142	8.84					
SR-321	17.79	14.85				
SR-320	18.10					
SR-319	23.60	20.35				
SR-317	20.43					
OW-317	8.65	8.55				
SR-316	22.52	12.25				
OW-316	10.80	9.47				
SR-208	11.60	10.85				
OW-328	10.51	10.36				
SR-326	23.25	19.85				
OW-327	14.80	14.00				
SR-311	NO WATER	10.68				
SR-310	19.20	8.93				
R-309	32.30	24.95				
SR-312	19.65	11.48				
SR-313	19.45	13.66				
RW-4	13.52					

TABLE IV (CONTD.)
DELPHI ENERGY & ENGINE
MONITORING WELLS FIELD DATA
7/28 - 7/29/03

LOCATION	DEPTH TO WATER (FT)	DEPTH TO LNAPL (FT)	DEPTH TO BOTTOM OF WELL (FT)	DNAPL (FT)	WELL VOLUME (GAL)	FIELD REMARKS
DR-11	42.67		87.25			
R-11	29.90		47.89			
SR-11	21.78		22.57			
SR-233	10.80		20.30			Lock broken
R-242	26.32		28.50			
SR-234	Dry		17.65			
R-234	27.65		38.90			
SR-235	13.17		17.55			
R-235	31.71	30.30	37.25			
SR-245	15.75		20.58			
R-244	27.42	26.98	35.50			
R-308	28.74		35.80			
SR-308	13.57		20.27			Lock won't lock
R-2	31.20	29.62	33.22			
SR-2	10.49		21.33			
R-238	26.14	21.17	29.50			
R-237	31.35	24.63	37.45			
OW-323	5.89		14.77			
R-239	28.36		45.90			
DR-108	Dry		93.93			
R-108	27.19		40.37			
SR-8	Dry		19.81			
PZ-139	30.58		32.02			
R-240	36.09	35.36	50.20			
PZ-137	33.79	33.42	36.24			
PZ-138	26.22		36.25			
DR-103	67.17		95.20			
R-103	39.19		52.37			
SR-103	33.60		34.72			
R-107	28.67		44.20			
OW-7	15.66		15.89			
SR-107	18.23		22.76			

TABLE IV (CONTD.)
DELPHI ENERGY & ENGINE
MONITORING WELLS FIELD DATA
7/28 - 7/29/03

LOCATION	DEPTH TO WATER (FT)	DEPTH TO LNAPL (FT)	DEPTH TO BOTTOM OF WELL (FT)	DNAPL (FT)	WELL VOLUME (GAL)	FIELD REMARKS
PZ-135	30.21		35.07			
PZ-136	25.69	25.54	35.10			
DR-109	68.17		76.17			
R-109	19.82		41.87			
SR-9	Dry		18.52			
PZ-133	24.15		30.02			Kink in casing
PZ-134	23.67		30.50			
R-105-R	36.07		51.43			
PZ-140	17.92		30.07			
PZ-141	11.33		23.24			
R-110	25.12		43.45			
SR-110	17.28		23.79			
R-301	14.21		34.25			
SR-301	19.99		25.07			
R-3	19.56		32.87			
SR-3	9.44		19.24			
R-101	25.28		35.95			
SR-101	9.02		16.20			
R-106	17.99		45.72			
OW-6	8.83		15.40			
DR-105	26.64		93.18			
OW-105	17.33		21.75			
SR-105	31.23		34.50			
OW-322	6.09		20.40			
DR-315	28.17					
R-131	39.73		51.14			
SR-131	20.62		30.50			
OW-324	11.32		18.92			
R-314	40.67		48.94			
SR-314	15.68		30.12			
OW-314	13.13		20.11			
R-132	39.77		49.07			
DR-132	39.29					
SR-132	18.03		30.96			
PZ-132	11.58	11.51	18.03			
PZ-112	13.37		18.00			
PZ-111	13.96		18.60			
RW-101	10.36	10.25				
RW-2	8.60	8.08				
PZ-123	11.52	10.24	16.98			
PZ-116	9.54		15.25			

TABLE IV (CONTD.)
DELPHI ENERGY & ENGINE
MONITORING WELLS FIELD DATA
7/28 - 7/29/03

LOCATION	DEPTH TO WATER (FT)	DEPTH TO LNAPL (FT)	DEPTH TO BOTTOM OF WELL (FT)	DNAPL (FT)	WELL VOLUME (GAL)	FIELD REMARKS
PZ-125	8.26		15.84			
PZ-122	5.56	5.53	17.14			
PZ-113	11.28		14.65			
PZ-115	12.51		21.00			
R-241	29.79	26.78	38.75			
PZ-128	7.36		14.87			
PZ-127	7.01		15.91			
PZ-1	9.18	7.30	9.45			
PZ-121	8.48	7.76	15.11			
RW-3	7.46	7.31				
PZ-114	13.93	7.29	14.54			
PZ-124	8.17	5.90	16.21			
PZ-126	16.11		16.43			
PZ-118	8.25		15.88			
PZ-119	8.36		15.43			
PZ-120	4.78		11.97			
PZ-117	8.87		15.77			
R-236	33.52	24.82	35.44			
SR-236	9.90	8.62	18.47			
PZ-144	17.61		24.34			
RW-Z	24.22	24.21				
R-102	40.34		52.49			
SR-102	29.73	22.82	31.23			
OW-102	18.67	18.45	18.67			
SR-318	28.20	19.64	29.93			
SR-325	20.83		32.88			
PZ-130	25.62	17.67	27.27			
PZ-143	18.31		26.78			
MW-2	7.65					Photec Well

APPENDIX B

Explanation of Data Validation Actions for Laboratory Analysis Results (Metals only)

HALEY & ALDRICH

METALS

Blank Sample Analysis.
Action: In accordance with cited USEPA guidelines, positive sample results should be reported unless the concentration of the compound in the project sample is less than or equal to 10 times (10X) the amount in any blank for the target analytes. If the concentration in the sample is less than 10X the amount in any blank sample, qualify the results as "U", non-detect.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Sample Analysis.
Action: If the MS %R is <30%, results > the MDL are qualified as "J" and non-detects as "R. If the MS %R is 30-74%, results > the MDL are qualified as "J" and non-detects as "UJ. If the MS %R is >125%, results > the MDL are qualified as "J" and non-detects should not be qualified. If the MS/MSD is from a project sample apply the qualifiers to affected samples of the same matrix. If the MS/MSD is a LAB sample use professional judgement.

APPENDIX C

Petroleum Fingerprint Chromatograms for LNAPL Sample

11618 Cotton Road
Meadville, PA 16335
phone 814-724-6242 fax 814-333-1466

Free-Col Laboratories
A Division of Modern Industries

Fax

Company: H+A From: Sara Agnew, ext. 314

To: Mike B. Pages: 2

Fax: 585-359-4650 Date: 9-8-03

Re: Report (s) Requested Chromatograms CC:

☐ Urgent ☐ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

• Comments:

Have a nice day.

calibur\data\0308\030806\8752-1
V50ml
08/06/03 10:20:03 AM

T: 0.00 - 29.50

NL:
5.54E7
TIC MS
8752-1

R-305
7/29/03