QUARTERLY PROGRESS REPORT NO. 8 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 March 2004



UNDERGROUND **ENGINEERING & ENVIRONMENTAL** SOLUTIONS

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5 March 2004 File No. 70014-054

RECEIVED MAR 1 0 2004 DERIMAZ: WASTE REMED REGION B 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:

Ladies and Gentlemen:

sanitary sewer sampling.

Index # B8-0531-98-06).

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

Please find enclosed two copies of Quarterly Progress Report No. 8 for NYSDEC Registry

Site No. 8-28-064. This is the eighth 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 December 2003 through 29 February 2004. Investigative activities performed during the reporting period included a

quarterly groundwater-level measurement and groundwater-sampling event and follow-up

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,"

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Washington District of Columbia NYSDEC 5 March 2004 Page 2

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

Sincerely yours, HALEY & ALDRICH OF NEW YORK

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 MCDOH - R. Elliott
 NYSDOH - Regional Toxics Coordinator

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I. INTRODUCTION

This report is the eighth 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.8 covers RI activities performed during the period of 1 December 2003 through 29 February 2004. Activities performed during the reporting period included:

- a groundwater monitoring event that included quarterly sampling of seven recentlyinstalled off-site wells and measurement of water levels in all onsite and offsite wells;
- sampling of wastewater at selected sanitary sewer locations;
- laboratory analysis of samples collected during the reporting period; and
- validation of laboratory data.

The following additional activity, which was outside the scope of the RI but had results that are relevant to the RI, was performed by Delphi during the reporting period:

 analysis of a grab sample of pre-treatment discharge from the groundwater migration control system.

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 a quarterly groundwater-monitoring event and follow-up sampling of sanitary sewer flows at three locations within the site.

The groundwater-monitoring event was performed on 20-22 January 2004. The monitoring event was the fifth such event of the RI. It was performed in accordance with the RI/FS Work Plan groundwater-monitoring specifications and schedule, and represented the third of the planned quarterly sampling events. The monitoring performed included measurement of groundwater and NAPL levels in all readily-accessible on- and off-site wells and sampling of seven of the eight recently-installed off-site wells. Monitoring-well locations are shown on the site plan presented in Figure 2. The field data for the January event are presented in the tables and appendices of this report.

Sampling of sanitary sewer wastewater was initiated in October 2003, and selective follow-up sampling of sanitary sewers was conducted on 4 December 2003 and on 14 January and 12 February 2004. Wastewater samples were collected from the "East Roadway (Sanitary)", "T-23 (Intermediate)", and "BB-23" locations on the main trunk of the sanitary sewer. Sewer sampling locations are shown on Figure 2.

Laboratory analysis of groundwater and wastewater samples from this quarter was completed and the analytical data was validated during this reporting period. The analytical data and validation results for these samples are presented in the tables and appendices of this report.

A. Water Level Measurements

Free-Col Laboratories performed water level measurements on 20-22 January 2004 in a single site-wide measurement event that included all readily-accessible 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 were also measured for the presence of dense non-aqueous phase liquid (DNAPL). In accordance with the Work Plan, DNAPL is no longer measured for in the new RI monitoring wells since it had not been detected in those wells for two consecutive quarters.

Groundwater and NAPL level measurements from January 2004 are presented in Appendix A, and the data are summarized on Table 1. Groundwater contour plans based on the January data are presented in Figures 3 through 5. Figures 3 through 5 show groundwater elevations in the overburden/shallow-bedrock, intermediatebedrock, and deep-bedrock groundwater zones, respectively.



B. Groundwater Sampling

Groundwater sampling was performed during 20-22 January 2004. Seven of the eight recently-installed off-site monitoring wells were sampled for groundwater in accordance with the RI/FS Work Plan. New off-site well R-305, which contained an LNAPL layer, was not sampled this quarter.

Groundwater samples were collected in accordance with the RI/FS Work Plan, Appendix G, Groundwater Sampling Procedures, and with the protocol outlined in the 26 June and 11 September 2003 letters. Free-Col Laboratories of Meadville, Pennsylvania collected and analyzed all samples. Conventional purging of three well volumes (or until the well went dry) was performed using disposable bailers prior to sampling. Groundwater sampling records are presented in Appendix A.

C. Sewer Sampling

Sanitary wastewater sampling was performed monthly during the reporting period to follow up a detection of PCB Aroclor 1248 in the October 2003 sample from the "East Roadway" sanitary sewer location. Samples were collected on 4 December 2003 at the "East Roadway" location and on 14 January and 12 February 2004 at the "East Roadway", "T-23 (Intermediate)", and "BB-23" locations. The "T-23" location, a sanitary sewer cleanout identified after the November 2003 sanitary sewer sampling event, was first sampled in December 2003. Sample locations are shown on Figure 2.

Wastewater samples were collected by lowering a sample-collection device such as a disposable bailer down into the sewer at the manhole or cleanout. Each wastewater sample was submitted to Free-Col Laboratories for PCB analysis by EPA method 8082. Due to a laboratory accident the February "East Roadway" sample was lost and therefore not analyzed.

Splits of the February 2004 samples were submitted to Severn-Trent Laboratories of Knoxville, Tennessee (STL) for verification analysis using USEPA Method 8082 with a gel permeation chromatography cleanup to remove potential non-PCB interferences.

D. Caprolactam Evaluation

Sample analysis for the April 2003 groundwater sampling event detected the semivolatile organic compound caprolactam in groundwater samples from a number of wells at the site. Caprolactam was detected in samples from 30 wells at concentrations ranging from 0.01 to 8.9 mg/L (parts-per-million, or ppm).

Caprolactam use is common in plastics-manufacturing and was not known to be related to Delphi's present or past site operations. The concentrations of caprolactam detected appear to be unrelated to concentrations of other semivolatile or volatile



compounds detected in the samples, and the distribution of wells with caprolactam detections appears to have been unrelated to site area or hydrogeologic unit.

At the suggestion of NYSDEC, Delphi pursued an evaluation to determine whether caprolactam might originate from plastic sampling equipment used to collect the groundwater samples. Delphi had Free-Col laboratories conduct a bench-scale testing program in which two sample setups were prepared for analysis of caprolactam. In the first sample setup, a one-liter laboratory bottle was filled with lab-grade water containing a segment of frayed (but clean and unused) nylon rope of the type currently used by Free-Col in Delphi sampling events. The second sample setup consisted of a plastic sample bailer of the type used by Free-Col filled with lab-grade water and a segment of the sample rope.

Each sample was handled under standard chain-of-custody conditions. Both sample setups were held for approximately 24 hours with occasional gentle agitation. Samples of the water from both sample setups was then collected and analyzed for caprolactam using USEPA Method 8270C. Analysis indicated caprolactam was present in both samples at estimated concentrations of 0.98 mg/L (ppm) in the bailer/rope setup and 4.2 ppm in the rope-only setup.

The results of the bench test indicate that the detections of caprolactam in site samples are attributable to the nylon rope that is used during well purging and sampling. Delphi is looking into options for a suitable replacement of the nylon rope currently used.

E. Laboratory Analysis and Data Validation

Groundwater and wastewater samples submitted to Free-Col Laboratories were analyzed using USEPA SW-846 methods. Laboratory analytical reports for samples submitted to Free-Col during the reporting period 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". The validated analytical results are summarized in Tables 2 through 6. Actions taken to qualify the validated analytical results are described in Appendix B.

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 results of the STL analyses of February 2004 sanitary wastewater samples were not received this reporting period but should be available for inclusion in the next Progress Report.

2.02 Migration Control System Grab Sample Analysis

In October 2003, concurrent with but unrelated to the RI semi-annual sampling event, Delphi collected a grab sample of discharge from the groundwater migration control system. The sample was collected from the piping leading from the pumping wells in the migration control trench to Delphi's groundwater treatment system. The purpose of the sampling and analysis was to determine whether the groundwater migration control system was a source of low concentrations of PCBs that had been detected in Delphi's treated groundwater discharge.

It was assumed that traces of LNAPL recovered by the groundwater migration control system were a potential source of the PCBs detected. Therefore, sample collection focused on obtaining both water and LNAPL. The sampling port used to collect the October 2003 sample is positioned at the top of the 6-inch diameter influent line to the treatment system from the migration control wells. The sample was collected without first flushing the sample port in order to obtain any LNAPL that had accumulated in it.

The sample was submitted to STL for analysis of PCB congeners using USEPA highresolution gas chromatography/ mass spectrometry method 1668A, the same method used for previous analysis of LNAPL samples collected from PZ-129 and R-243 in July 2003. The preliminary analytical data for this sample are presented in this report. A summary of the results is presented in Table 7, and a chart showing the distribution of congeners detected in the sample is attached to Table 7.



III. UPCOMING RI/FS ACTIVITIES

The following RI/FS activities are planned for the upcoming reporting period of March through May 2004.

3.01 Groundwater and LNAPL Measurements

A site-wide groundwater- and NAPL-level measurement event will be performed during the next reporting period at all on-site and off-site monitoring wells. 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 will consist of the second annual sampling event. Samples will be analyzed in accordance with Table IV of the RI/FS Work Plan and relevant follow-up correspondence with the Department.

3.03 Sump Sampling

An evaluation of basements and basement sumps is continuing, and sampling will be planned and performed in the next reporting period in accordance with Section 5.5 E of the Work Plan.

3.04 Follow-Up Sewer Sampling and Inspection

An evaluation of the potential source of PCBs detected in the East Roadway location samples will be conducted. The sewer lines and laterals in the area will be assessed to identify if and where additional cleanouts are present. If additional sampling locations are identified, and they represent locations that may provide meaningful information (e.g. sampling point not located too close to the lateral's starting point), a plan for sampling at a representative number of these locations will be developed. Pending results of the STL analyses of February wastewater samples from the East Roadway, T-23, and BB-23 locations, the need for further sampling at these locations will be evaluated. Sampling at appropriate locations will continue for up to three months.

An evaluation of the need for further sewer sampling and inspection and/or videotaping of the sanitary and storm sewers beneath Plants 1 and 2 is continuing based on a review of the sewer sample analytical data received during this (and the next) quarter, in accordance with Section 5.6 D of the Work Plan.

3.05 Supplemental Off-site Groundwater Investigation

Continued evaluation of a supplemental investigation of the extent of groundwater contamination in the area of well R-305 will be conducted, and a plan submitted to NYSDEC for its review and approval.



3.06 Sewer Tunnel Assessment

Section 5.3.C of the RI/FS Work Plan calls for an evaluation of the potential for the Lexington Avenue and the Driving Park Avenue municipal sewer tunnels to act as pathways for offsite migration of site contaminants. With the installation of planned RI wells completed and the RI groundwater monitoring program in progress, the data needed to begin the evaluation is now available. During the next quarter, RI groundwater data will be assessed to determine whether and where to inspect the sewers between the Delphi site and the junction of the sewer tunnel legs east of the site. Inspections, if performed, will assist in determining if there are any features in the tunnels that may lead to discharge or migration of contaminants into or along the sewers.

3.07 Migration Control System

Delphi's separate evaluation of the presence of PCBs in the groundwater migration control system discharge will continue. Activities and results of that evaluation that are relevant to the RI will be covered in subsequent Progress Reports.



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.



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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.

Quarterly Progress Report No. 6, Remedial Investigation, Delphi Facility, 1000 Lexington Avenue, Rochester, New York, Site No. 8-28-064, EPA ID No. NYD002215234. Haley & Aldrich of New York, September 2003.

Quarterly Progress Report No. 7, Remedial Investigation, Delphi Facility, 1000 Lexington Avenue, Rochester, New York, Site No. 8-28-064, EPA ID No. NYD002215234. Haley & Aldrich of New York, December 2003.

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	JANUARY 20-22, 2004				
WELL NUMBER	DEPTH TO WATER	DEPTH TO LNAPL	OIL THICKNESS		
DR-103	64.84				
DR-105	26.03				
DR-108	Dry				
DB-109	67.44				
DB-11	41.46	-			
DR-132	32.65		-		
DR-315	23.34				
MW-2 Photec	6.19				
OW-102	18.09				
OW-105	21.75				
OW-314	12.42				
OW-316	11.17	9.57	1.60		
OW-317	8.64	8.42	0.22		
OW-322	6.91				
OW-323	5.19				
OW-324	11.11	1			
OW-327	15.07	13.24	1.83		
OW-328	10.58	10.49	0.09		
OW-6	8.43		8.43		
OW-7	Dry	I			
P7-1	7.32	7.30	0.02		
P7-111	13.86				
P7-112	13.16				
P7-113	11.15				
P7-114	10.48	6.36	4.12		
P7-115	12.49	0.00			
P7-116	8.75				
P7-117	8.19				
P7-118	8.24				
P7-119	8.28				
P7-120	4.90				
P7-121	7.81	6.76	1.05		
P7-122	Nor	IM			
P7-123	9.96	9.33	0.63		
P7-124	8.68	6.31	2.37		
P7-125	7.23				
P7-126	13.84				
P7-127	7.40				
P7-128	5.90				
P7-129	14.54	14.33	0.21		
P7-130	25.64	17.01	8.63		
P7-132	10.82	17.01	0.00		
P7-132	10.52				

	JANUARY 20-22, 2004					
WELL NUMBER	DEPTH TO WATER	DEPTH TO LNAPL	OIL THICKNESS			
PZ-134	19.23					
PZ-135	25.88					
PZ-136	24.12					
PZ-137	26.87					
PZ-138	24.50	24.48	0.02			
PZ-139	29.24	-				
PZ-140	15.79					
PZ-141	11.17					
PZ-142	8.54					
PZ-143	17.72					
PZ-144	17.48					
B-101	18.39					
R-102	32.80	-				
R-103	31.95					
B-105	N	Μ				
B-105-B	27.41					
R-106	10.86					
B-107	20.65	An and a second and a second and a second and a second a				
B-108	22.24					
B-109	17.04					
R-11	27.88					
B-110	16.96					
B-131	33.08					
B-132	33.54					
B-2	29.95	28.46	1.49			
B-234	26.69					
B-235	31.21	29.68	1.53			
B-236	34.14	23.93	10.21			
R-237	35.18	23.99	11.19			
R-238	25.77	22.33	3.44			
R-239	23.82					
R-240	28.89	28.53	0.36			
R-241	29.15	26.21	2.94			
R-242	26.01					
R-243	26.69	25.88	0.81			
R-244	26.90	25.95	0.95			
R-3	18.81					
R-301	8.32					
R-302	6.08					
R-303	15.25					
B-304	14.02					
B-305	30.58	21.95	8.63			
B-306	29.87	29.85	0.02			

	JANUARY 20-22, 2004				
WELL NUMBER	DEPTH TO WATER	DEPTH TO LNAPL	OIL THICKNESS		
R-307	23.24				
R-308	28.21				
R-309	32.25	24.47	7.78		
B-314	34.58				
RW-101	9.54				
BW-2	7.20	7.02	0.18		
BW-3	6.72	6.02	0.70		
RW-4	8.12				
SB-101	8.25				
SB-102	29.97	21.37	8.60		
SB-103	32.34				
SB-105	30.81				
SB-107	18.20				
SB-11	21.35				
SB-110	15.54				
SB-131	18.91				
SB-132	18.38				
SB-2	9.55				
SB-208	11.54	10.86	0.68		
SB-216	22.16	20.11	2.05		
SB-230	21.52	19.90	1.62		
SB-231	13.69				
SR-233	7.57				
SR-234	Dry				
CD_025	11.63				
SR-236	11.87	8.32	3.55		
SR-245	15.35	0.02			
SR-3	8.93				
SR-301	15.64				
SR-303	10.58				
SR-304	15.06				
SR-308	13.03				
SR-310	19.01	9.20	9.81		
SR-311	NF	10.61			
SR-312	18.11	11.94			
SR-313	18.99	13.73	5.26		
SR-314	15.10	10.70	ULU		
SB-316	22.80	11.86	10.94		
SR-317	19.28	19.16	0.12		
CD 219	27.60	18.68	8.92		
SD 210	27.00	18.70	4.85		
SD-319	17 71	10.79	4.00		
SR-320	1/./1	14 50	4.05		
SH-321	18.63	14.58	4.05		

	JANUARY 20-22, 2004				
WELL NUMBER	DEPTH TO WATER	DEPTH TO LNAPL	OIL THICKNESS		
SR-325	20.28				
SR-326	23.49	19.77	3.72		
SR-8	Dry				
SR-9	17.55				
VM-209	N	M			
VM-210	7.99				
VM-211	NE	10.25			
VM-212	N	Μ			
VM-213	Drv				
VM-214	N				
VM-215	N	NM			
VM-217	N	Μ	1.1.1		
VM-218	7.82	7.81	0.01		
VM-219	7.70				
VM-220	N	Μ			
VM-221	N				
VM-222	N	M			
VM-223	N	Μ .			
VM-224	Dry	danna			
VM-225	N	M			
VM-226	N	M			
VM-227	N	M			
VM-228	Dry				
VM-229	N	IM			
WELL Z	22.10				

NOTES:

1. NM = Not Measured.

2. NE = Not Encountered.

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TABLE 2 SUMMARY OF SANITARY SEWER SAMPLE ANALYSIS RESULTS - PCBs DELPHI CORPORATION

WELL NUMBER	East Roadway	East Roadway	T-23 Sanitary	BB-23 Sanitary	T-23 (Intermed.) Sanitary	BB-23 Sanitary
SAMPLE DATE	04-Dec-03	14-Jan-04	14-Jan-04	14-Jan-04	12-Feb-04	12-Feb-04
LABORATORY SAMPLE ID	2003:0014251-1	2004:0000408-1	2004:0000408-2	2004:0000408-3	2004:0001355-2	2004:0001355-3
LABORATORY ANALYSIS METHOD	Free-Col SW-846 8082	Free-Col SW-846 8083				
Aroclor 1016	0.0002 U	0.002 UJ	0.001 U	0.002 UJ	0.0002 UJ	0.0002 UJ
Aroclor 1221	0.0002 U	0.002 UJ	0.001 U	0.002 UJ	0.0002 UJ	0.0002 UJ
Aroclor 1232	0.0002 U	0.002 UJ	0.001 U	0.002 UJ	0.0002 UJ	0.0002 UJ
Aroclor 1242	0.0002 U	0.002 UJ	0.001 U	0.002 UJ	0.0002 UJ	0.0002 UJ
Aroclor 1248	0.0021	0.002 UJ	0.001 U	0.002 UJ	0.0002 UJ	0.0002 UJ
Aroclor 1254	0.0002 U	0.002 UJ	0.001 U	0.002 UJ	0.0002 UJ	0.0002 UJ
Aroclor 1260	0.0002 U	0.002 UJ	0.001 U	0.002 UJ	0.0002 UJ	0.0002 UJ

TABLE 3 SUMMARY OF JANUARY 2004 GROUNDWATER ANALYSIS RESULTS - VOCs DELPHI CORPORATION

WELL NUMBER	B-302	R-303	R-304	R-306	R-306 Dup.
SAMPLE DATE	20-Jan-04	21-Jan-04	21-Jan-04	20-Jan-04	20-Jan-04
LABORATORY SAMPLE ID	2004:0000691-6	2004:0000691-4	2004:0000691-2	2004:0000691-7	2004:0000691-8
LABORATORY	Free-Col	Free-Col	Free-Col	Free-Col	Free-Col
ANALYSIS METHOD	SW-846 8260B				
1.1.1-Trichloroethane	0.002 U	0.002 U	0.002 U	0.02 U	0.02 U
1.1.2.2-Tetrachloroethane	0.002 U	0.002 U	0.002 U	0.02 U	0.02 U
1.1.2-Trichloroethane	0.002 U	0.002 U	0.002 U	0.02 U	0.02 U
1.1-Dichloroethane	0.002 U	0.002 U	0.002 U	0.02 U	0.02 U
1.1-Dichloroethene	0.002 U	0.002 U	0.002 U	0.02 U	0.02 U
1.2.4-Trimethylbenzene	0.002 U	0.002 U	0.002 U	0.27	0.26
1.2-Dichloroethane	0.002 U	0.002 U	0.002 U	0.02 U	0.02 U
1.2-Dichloropropane	0.002 U	0.002 U	0.002 U	0.02 U	0.02 U
1,3,5-Trimethylbenzene	0.002 U	0.002 U	0.002 U	0.02	0.02
2-Butanone	0.01 U	0.01 U	0.01 U	0.1 U	0.1 U
2-Chloroethylvinylether	0.002 U	0.002 U	0.002 U	0.02 U	0.02 U
2-Hexanone	0.01 U	0.01 U	0.01 U	0.1 U	0.1 U
4-Methyl-2-Pentanone	0.01 U	0.01 U	0.01 U	0.1 U	0.1 U
Acetone	0.01 U	0.01 U	0.01 U	0.1 U	0.1 U
Benzene	0.002 U	0.002 U	0.002 U	0.02 U	0.02 U
Bromodichloromethane	0.002 U	0.002 U	0.002 U	0.02 U	0.02 U
Bromoform	0.002 U	0.002 U	0.002 U	0.02 U	0.02 U
Bromomethane	0.002 U	0.002 U	0.002 U	0.02 U	0.02 U
Carbon Disulfide	0.002 U	0.002 U	0.002 U	0.02 U	0.02 U
Carbon Tetrachloride	0.002 U	0.002 U	0.002 U	0.02 U	0.02 U
Chlorobenzene	0.002 U	0.002 U	0.002 U	0.02 U	0.02 U
Chloroethane	0.002 U	0.002 U	0.002 U	0.02 U	0.02 U
Chloroform	0.002 U	0.002 U	0.002 U	0.02 U	0.02 U
Chloromethane	0.002 U	0.002 U	0.002 U	0.02 U	0.02 U
cis-1,2-Dichloroethene	0.002 U	0.005	0.003	0.06	0.05
cis-1,3-Dichloropropene	0.002 U	0.002 U	0.002 U	0.02 U	0.02 U
Dibromochloromethane	0.002 U	0.002 U	0.002 U	0.02 U	0.02 U
Ethylbenzene	0.002 U	0.002 U	0.002 U	0.02 U	0.02 U
Methylene chloride	0.002 U	0.002 U	0.002 U	0.02 U	0.02 U
n-Butylbenzene	0.002 U	0.002 U	0.002 U	0.02 U	0.02 U
sec-Butylbenzene	0.002 U	0.002 U	0.002 U	0.02 U	0.02 U
Styrene	0.002 U	0.002 U	0.002 U	0.02 U	0.02 U
tert-Butylbenzene	0.002 U	0.002 U	0.002 U	0.02 U	0.02 U
Tetrachloroethene	0.002 U	0.002 U	0.002 U	0.02 U	0.02 U
Toluene	0.002 U	0.002 U	0.002 U	0.02 U	0.02 U
trans-1,2-Dichloroethene	0.002 U	0.002 U	0.002 U	0.02 U	0.02 U
trans-1,3-Dichloropropene	0.002 U	0.002 U	0.002 U	0.02 U	0.02 U
Trichloroethene	0.002 U	0.002 U	0.002 U	0.02 U	0.02 U
Vinyl Acetate	0.002 U	0.002 U	0.002 U	0.02 U	0.02 U
Vinyl Chloride	0.002 U	0.002 U	0.002 U	. 0.03	0.03
Xylenes, Total	0.002 U	0.002 U	0.002 U	0.02 U	0.02 U

TABLE 3 SUMMARY OF JANUARY 2004 GROUNDWATER ANALYSIS RESULTS - VOCs DELPHI CORPORATION

WELL NUMBER	R-307	SR-303	SR-304	Trip Blank
SAMPLE DATE	20-Jan-04	20-Jan-04	20-Jan-04	20-Jan-04
LABORATORY SAMPLE ID	2004:0000691-1	2004:0000691-5	2004:0000691-3	2004:0000691-9
LABORATORY	Free-Col	Free-Col	Free-Col	Free-Col
ANALYSIS METHOD	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
1.1.2.2-Tetrachloroethane	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
1.1-Dichloroethane	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
1.2.4-Trimethylbenzene	0.002 U	0.002 U	0.002 U	0.002 U
1.2-Dichloroethane	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
1.3.5-Trimethylbenzene	0.002 U	0.002 U	0.002 U	0.002 U
2-Butanone	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
2-Hexanone	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
Acetone	0.01 U	0.01 U	0.01 U	0.01 U
Benzene	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
Bromoform	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
Carbon Disulfide	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
Chlorobenzene	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
Chloroform	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
cis-1,2-Dichloroethene	0.002 U	0.002 U	0.002	0.002 U
cis-1,3-Dichloropropene	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
Ethylbenzene	0.002 U	0.002 U	0.002 U	0.002 U
Methylene chloride	0.002 U	0.002 U	0.002 U	0.002 U
n-Butylbenzene	0.002 U	0.002 U	0.002 U	0.002 U
sec-Butylbenzene	0.002 U	0.002 U	0.002 U	0.002 U
Styrene	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
Tetrachloroethene	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
trans-1,2-Dichloroethene	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
Trichloroethene	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
Vinyl Chloride	0.002 U	0.002 U	0.002 U	0.002 U
Xylenes, Total	0.002 U	0.002 U	0.002 U	0.002 U

TABLE 4 SUMMARY OF JANUARY 2004 GROUNDWATER ANALYSIS RESULTS - SVOCs DELPHI COPRORATION

WELL NUMBER SAMPLE DATE	R-306 20-Jan-04	R-306 Dup. 20-Jan-04
LABORATORY SAMPLE ID	2004:0000691-7	2004:0000691-8
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 0
2,4,5-Trichlorophenol	0.01 0	0.01 0
2,4,6-Trichlorophenol	0.002 0	0.002 0
2,4-Dichlorophenol	0.002 U	0.002 0
2,4-Dimethylphenol	0.002 0	0.002 0
2,4-Dinitrophenol	0.03 0	0.030
2,4-Dinitrotoluene	0.002 0	0.002.0
2,6-Dinitrololuene	0.002 U	0.002.0
2-Chlorophonol	0.002.0	0.002.0
2 Mothylpaphthalana	0.002.0	0.002.0
2-Methylnaphillalene	0.00511	0.00511
2-Nitroaniline	0.0511	0.0511
2-Nitronhenol	0.00211	0.00211
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-Chioro-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 0
Bis(2-Chloroisopropyl)ether	0.002 U	0.002 U
Bis(2-etnyinexyi)phthalate	0.002 0	0.002.0
Character Philipade	0.002 0	0.002 0
Di-n-bubi obthalate	0.002.0	0.002.0
Di-n-octyl obthalate	0.002.0	0.002.0
Dihenz(a h)anthracene	0.005 U	0.002.0
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	0.022	0.02
Nitrobenzene	0.005 U	0.005 U
Pentachlorophenol	0.01 U	0.01 U
Phenanthrene	0.023	0.024
Phenol	0.002 U	0.002 U
Pyrene	0.004	0.004

TABLE 5 SUMMARY OF JANUARY 2004 GROUNDWATER ANALYSIS RESULTS - PCBs DELPHI CORPORATION

WELL NUMBER	R-306	R-306 Dup.
SAMPLE DATE	20-Jan-04	20-Jan-04
LABORATORY SAMPLE ID	2004:0000691-7	2004:0000691-8
LABORATORY	Free-Col	Free-Col
ANALYSIS METHOD	SW-846 8082	SW-846 8082
Aroclor 1016	0.01 U	0.01 U
Aroclor 1221	0.01 U	0.01 U
Aroclor 1232	0.01 U	0.01 U
Aroclor 1242	0.01 U	0.01 U
Aroclor 1248	0.01 U	0.01 U
Aroclor 1254	0.01 U	0.01 U
Aroclor 1260	0.01 U	0.01 U

TABLE 6 SUMMARY OF JANUARY 2004 GROUNDWATER ANALYSIS RESULTS - METALS DELPHI CORPORATION

WELL NUMBER	R-302	R-303	R-304	R-306
SAMPLE DATE	20-Jan-04	21-Jan-04	21-Jan-04	20-Jan-04
LABORATORY SAMPLE ID	2004:0000691-6	2004:0000691-4	2004:0000691-2	2004:0000691-7
LABORATORY	Free-Col	Free-Col	Free-Col	Free-Col
ANALYSIS METHOD	SW-846 6010B	SW-846 6010B	SW-846 6010B	SW-846 6010B
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	0.0001	0.0001 U	0.0003
Chromium	0.05 U	0.05 U	0.05 U	0.05 U
Copper	0.01 U	0.02	0.01	0.01
Lead	0.003	0.006	0.003	0.015
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	0.017	0.029	0.034	0.019

TABLE 6 SUMMARY OF JANUARY 2004 GROUNDWATER ANALYSIS RESULTS - METALS DELPHI CORPORATION

WELL NUMBER	R-306 Dup.	R-307	SR-303	SR-304
SAMPLE DATE	20-Jan-04	20-Jan-04	20-Jan-04	20-Jan-04
LABORATORY SAMPLE ID	2004:0000691-8	2004:0000691-1	2004:0000691-5	2004:0000691-3
LABORATORY	Free-Col	Free-Col	Free-Col	Free-Col
ANALYSIS METHOD	SW-846 6010B	SW-846 6010B	SW-846 6010B	SW-846 6010B
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	0.0002	0.0001	0.0001 U	0.0001 U
Chromium	0.05 U	0.05 U	0.05.U	0.05 U
Copper	0.02	0.01	0.01 U	0.01 U
Lead	0.008	0.026	0.004	0.004
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	0.015	0.034	0.036	0.018

NOTES:

1. All results are presented in units of mg/L (parts-per-million, ppm).

2. Free-Col denotes Free-Col Laboratories.

3. Data Qualifiers:

U - The analyte was analyzed for but not detected above the quantitation limit.

J - The analyte was positively identified but the value is an approximate concentration only.

4. Data Qualifier References:

OSWER 9240.1-05A-P, PB99-963506, EPA540/R-99/008, October 1999,

USEPA Contract Laboratory Program, National Functional Guidelines For Organic Data Review. Office of Emergency and Remedial Response, USEPA, Washington, D.C.

OSWER 9240.1-35, EPA 540-R-01-008, July 2002,

USEPA Contract Laboratory Program, National Functional Guidelines For Inorganic Data Review. Office of Emergency and Remedial Response, USEPA, Washington, D.C.

5. NA - indicates sample not analyzed.

All results are in ppb (ug/L)

Sample Location		Migration Control System		
	Matrix	Water & LNAPL		
	SAMPLE DATE 21-Oct-03			
LAB SAMPLE ID H3J310		H3J310267-001		
	LABORATORY	STL Knoxville		
Cor	centration units	ug/L		
ANAL	YSIS METHOD	EPA 1668A		
IUPAC	Number of			
Congener #	chlorines:			
Congener #.	dinomico.	01		
1				
2	1	U		
3	1	U		
4	2	0.091		
5	2	QJ		
6	2	Q		
7	2	QJ		
8	2	В		
0	2	Q.I		
10	2	11		
10	2	<u> </u>		
11	2	0		
12	2	QBCJ		
13	2	· C12		
14	2	U		
15	2	QB		
16	3	2.000		
17	3	2.380		
18	3	BC		
10	2	0.291		
19	3	0.201		
20	3	BC		
21	3	BC		
22	3	B		
23	3	U		
24	3	U		
25	3	0.285		
26	3	1010 C		
20	2	0.241		
21	0	0.241		
28	3	BC20		
29	3	C26		
30	3	BC18		
31	3	В		
32	3	2.020		
33	3	BC21		
34	3	QJ		
35	3	0.011 J		
36	3	11		
00	0	1 000		
3/	3	1.090		
38	3	QJ		
39	3	0.134		
40	4	BC		
41	4	BC40		
42	4	В		
43	4	0.574 C		
44	4	BC		
45	4	00		
40	4	1 170		
40	4	DC44		
4/	4	BC44		
48	4	В		
49	4	BC		
50	4	2.710 C		
51	4	QC45		
52	4	B		
53	4	C50		
54	1	0.025 1		
54	4	0.025 J		
55	4	0		
56	4	В		
57	4	0.054		
58	4	0.016 J		
59	4	1.320 C		
60	4	B		
61	1	BCE		
60	4	CEO		
02	4	059		
63	4	<u>v</u>		
64	4	В		

All results are in ppb (ug/L)

Sample Location		Migration Control System		
4	Matrix	Water & LNAPL		
	SAMPLE DATE	21-Oct-03		
L	AB SAMPLE ID	H3J310267-001		
	LABORATORY	STL Knoxville		
Cor	ncentration units	ug/L		
ANAL	YSIS METHOD	EPA 1668A		
LIPAC	Number of			
Conceptor #:	ablarines'			
iongener	Critoni lea.	Poul		
65	4	BC44		
66	4	В		
67	4	0.352		
68	4	Q		
69	4	BC49		
70	4	BEC61		
71	4	BC40		
72	4	0.063		
73	4	C43		
74		BEC61		
74	4	C50		
75	4	009		
76	4	BEGOI		
77	4	1.190		
78	4	U		
79	4	0.084		
80	4	U		
81	4	0.059		
82	5	2.050		
83	5	Q		
84	5	2,990		
85	5	2 590 C		
00	5	6 550 C		
00	5	0.000 0		
87	5	1 000		
88	5	1.830 0		
89	5	0.391		
90	5	6.470 C		
91	5	C88		
92	5	1.110		
93	5	0.155 C		
94	5	0.091		
95	5	5.580		
96	5	0.190		
97	5	C86		
08	5	0.627 C		
90	5	4 350 C		
100	E	4.000 0		
100	5	C90		
101	5	090		
102	5	698		
103	5	0.054		
104	5	U		
105	5	3.530		
106	5	U		
107	5	0.420		
108	5	0.243 C		
109	5	C86		
110	5	BC		
111	5	U		
112	5	C99		
112	5	C90		
114	5	0200		
114	E	0.209 BC110		
115	5	DUTIU		
116	5	085		
117	5	C85		
118	5	В		
119	5	C86		
120	5	0.010 J		
121	5	U		
122	5	0.174		
103	5	0 197		
120	E	C108		
124	5	C96		
120	5	000		
126	5	0.030		
127	5	U		

All results are in ppb (ug/L)

Sa	mple Location	Migration Control System		
	Matrix	Water & LNAPL		
	SAMPLE DATE 21-Oct			
L	AB SAMPLE ID	H3J310267-001		
	LABORATORY	STL Knoxville		
Cor	centration units	ug/L		
ANAL	YSIS METHOD	EPA 1668A		
IUPAC	Number of			
Congener #:	chlorines:			
100	0	0.216 C		
120	6	1 250 C		
129	0	0.094		
130	6	0.024		
101	6	0.024 3		
102	6	0.014		
134	6	0.084 C		
135	6	0.364 C		
136	6	0.157		
137	6	0.157 C		
138	6	C129		
139	6	0.025 CJ		
140	6	C139J		
141	6	0,267		
142	6	U		
143	6	C134		
144	6	0.061		
145	6	U		
146	6	0.138		
147	6	0.867 C		
148	6	U		
149	6	C147		
150	6	U		
151	6	C135		
152	6	U		
153	6	0.876 C		
154	6	0.008 J		
155	6	U		
156	6	0.147 C		
157	6	C156		
158	6	0.132		
159	6	0.014 J		
160	6	U		
161	6	U		
162	6	U		
163	6	C129		
164	6	C137		
165	6	U		
166	6	C128		
167	6	0.048		
108	0	0153		
170	7	0.050		
170	7	0.202		
170	7	0.060 C		
172	7	0.000		
174	7	0.989		
175	7	0.010 1		
176	7	0.035		
177	7	0.163		
178	7	0.052		
179	7	0.109		
180	7	0.728 C		
181	7	11		
182	7	0		
183	7	0.188 C		
184	7	11		
185	7	C183		
186	7	11		
187	7	0.302		
188	7	U		
189	7	QJ		
100	7	0.073		

ł

All results are in ppb (ug/L)

Sample Location		Migration Control System	
Matrix SAMPLE DATE		Water & LNAPL	
		21-Oct-03	
L	AB SAMPLE ID	H3J310267-00	01
	LABORATORY	STL Knoxville	9
Cor	centration units	ua/L	
ANAL	YSIS METHOD	EPA 1668A	
IUPAC Congener #:	Number of chlorines;		
191	7	0.014	J
192	7		U
193	7		C180
194	8	0.221	
195	8	0.074	
196	8	0.086	
197	8	0.025	С
198	8	0.173	С
199	8		C198
200	8		C197
201	8	0.020	J
202	8	0.024	J
203	8	0.106	
204	8	Contraction of the local distance of the loc	U
205	8	ta an	QJ
206	9	0.055	
207	9	0.008	J
208	9		QJ
209	10		U
Total		66.204	

Qualifiers explanation for Table 7:

J - an estimated amount below the estimated minimum level

at which an analyte can be measured reliably.
E - an estimated amount that exceeds the calibration range.
B - The analyte is present in the associated method blank at a reportable level, and detections reported in the project sample are therefore not reported here.
Q - Data does not meet all the qualitative criteria for a positive identification,

and Q-qualified results are not reported here. C - Coeluting isomer

(number indicates the lowest-numbered congener in the coelution set).

PCB Congeners Detected



Congener Number (IUPAC)



FIGURE 1



LEGEND:

+ R-315 485.6 10.2	
GR-1	

SHALLOW BEDROCK OR OVERBURDEN WELL LOCATION ID GROUNDWATER ELEVATION LNAPL THICKNESS (IN FT. - IF PRESENT)

BLASTED BEDROCK TRENCH RECOVERY WELL

GROUNDWATER CONTOUR 2-FT INTERVAL GROUNDWATER RECOVERY TRENCH

GR GR

GROUNDWATER FLOW DIRECTION

NOTES:

- 1. DEPTH TO GROUNDWATER MEASURED BY FREE-COL LABORATORIES, INC. 20-24 JANUARY 2004. MIGRATION CONTROL TRENCH RECOVERY WELL GR-2 WAS IN OPERATION DURING THE JANUARY 2004 SAMPLING EVENT. GRAVEL-FILLED TRENCH PUMPING WELL RW-2 WAS NOT IN OPERATION DURING THE MEASUREMENT PERIOD DUE TO A FROZEN PUMP.
- 2. DATUM IS MEAN SEA LEVEL (MSL). GROUNDWATER ELEVATIONS EXPESSED IN FEET
- 3. REFER TO TEXT FOR ADDITIONAL INFORMATION.

0 1	50 300 600 Feet	
HALEY & ALDRICH	DELPHI CORPORATION LEXINGTON AVENUE FACILITY RIFS ROCHESTER, NEW YORK SHALLOW BEDROCK A GROUNDWATER CON JANUARY 2004	AND OVERBURDEN TOUR MAP
	SCALE AS SHOWN	MARCH 2004



LEGEND:

+	R-31 485.6 10.2
GR-1	

498

15 SHALLOW BEDROCK OR OVERBURDEN WELL ID 6 GROUNDWATER ELEVATION PRODUCT THICKNESS (IN FT. - IF PRESENT)

BLASTED BEDROCK TRENCH RECOVERY WELL **GROUNDWATER CONTOUR 2-FT INTERVAL** GROUNDWATER RECOVER TRENCH

GROUNDWATER FLOW DIRECTION

NOTES:

- 1. DEPTH TO GROUNDWATER MEASURED BY FREE-COL LABORATORIES, INC. 20-24 JANUARY 2004. MIGRATION CONTROL TRENCH RECOVERY WELL GR-2 WAS IN OPERATION DURING THE JANUARY 2004 SAMPLING EVENT. GRAVEL-FILLED TRENCH PUMPING WELL RW-2 WAS NOT IN OPERATION DURING THE MEASUREMENT PERIOD DUE TO A FROZEN PUMP.
- 2. DATUM IS MEAN SEA LEVEL (MSL). GROUNDWATER ELEVATIONS EXPESSED IN FEET
- 3. REFER TO TEXT FOR ADDITIONAL INFORMATION.

0	150	200	600	
	130	300	000	
		Feet		
HALE	EY & UCH	DELPHI CORPO LEXINGTON AV ROCHESTER, N	RATION ENUE FACILITY RIFS EW YORK	
		INTERME GROUND JANUARY	DIATE BEDROCK WATER CONTOUR 2004	MAP
		SCALE AS SHO	WN	MARCH 2004



LEGEND:

+ R-315 485.6 SHALLOW BEDROCK OR OVERBURDEN WELL ID GROUNDWATER ELEVATION PRODUCT THICKNESS (IN FT. - IF PRESENT)

GR-1

BLASTED BEDROCK TRENCH RECOVERY WELL GROUNDWATER RECOVERY TRENCH

NOTES:

- 1. DEPTH TO GROUNDWATER MEASURED BY FREE-COL LABORATORIES, INC. 20-24 JANUARY 2004. MIGRATION CONTROL TRENCH RECOVERY WELL GR-2 WAS IN OPERATION DURING THE JANUARY 2004 SAMPLING EVENT. GRAVEL-FILLED TRENCH PUMPING WELL RW-2 WAS NOT IN OPERATION DURING THE MEASUREMENT PERIOD DUE TO A FROZEN PUMP.
- 2. DATUM IS MEAN SEA LEVEL (MSL). GROUNDWATER ELEVATIONS EXPESSED IN FEET
- 3. REFER TO TEXT FOR ADDITIONAL INFORMATION.

0 150	300 600	
	Feet	
HALEY & ALDRICH	DELPHI CORPORATION LEXINGTON AVENUE FACILITY RIFS ROCHESTER, NEW YORK	
	DEEP BEDROCK GROUNDWATER POSTING M/ JANUARY 2004	ĄР
	SCALE AS SHOWN	MARCH 2004

APPENDIX A

Water Level Measurement Forms and Well Sampling Records



TABLE I DELPHI ENERGY & ENGINE MONITORING WELLS FIELD DATA 1/20/2004

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LOCATION	TIME	DEPTH TO WATER (FT)	DEPTH TO LNAPL (FT)	DEPTH TO BOTTOM OF WELL (FT)	WELL VOLUME (GAL)	FIELD REMARKS
R-302	16:15	6.08		36.0	20.0	
SR-303	9:30	10.58		15.9	0.9	
R-303	9:25	15.25		34.4	12.5	
SR-304	10:10	15.06		16.0	0.2	
R-304	10:00	14.02		30.7	11.0	
R-306	13:10	29.87	29.85	34.0	0.7	
R-307	11:00	23.24		34.3	7.2	

TABLE II DELPHI ENERGY & ENGINE MONITORING WELLS PURGE DATA 1/20/2004

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LOCATION	START TIME	GALLONS PURGED	END TIME	WATER LEVEL AT END (FT)	APPEARANCE
R-302	16:25	60	17:00	20.18	Moderately trubid, ending slightly turbid
SR-303	15:00	3	15:10	10.58	Very turbid, ending clear
R-303	15:00	13	15:30	Dry	Very turbid
SR-304	14:25	0.6	14:35	15.07	Clear
R-304	14:25	11	14:50	Dry	Moderately turbid, ending very turbid
R-306	13:10	3	13:25	30.22	Slightly turbid with slight oil sheen
R-307	11:10	22	11:30	25.44	Slightly turbid, ending very turbid

TABLE III DELPHI ENERGY & ENGINE MONITORING WELLS SAMPLING DATA 1/20 - 1/21/04

LOCATION	DATE	SAMPLING TIME	WATER LEVEL (FT)	APPEARANCE	TEMP (C)	рН	SPECIFIC CONDUCTANCE (µMHOS
R-302	1/20/2004	17:00	20.18	Slightly turbid	11	7.2	2150
SR-303	1/20/2004	15:10 ·	10.58	Clear	11	7.1	1240
R-303	1/21/2004	8:15	32.18	Slightly turbid	12	7.6	6100
SR-304	1/20/2004	14:35	15.07	Clear	11	7.0	3190
R-304	1/21/2004	8:35	26.03	Clear	12	8.2	7120
R-306	1/20/2004	13:30	30.22	Clear	11	6.6	2900
R-306 Dup	1/20/2004	13:30	30.22	Clear	11	6.7	2940
R-307	1/20/2004	11:35	25.44	Moderately turbid	13	5.0	5400

Field Equipment Calibration

	1/20/2004	1/21/2004
pH (7.0)	7.0	7.0
pH (10.0)	10.0	10.0
pH (4.0)	4.0	4.0
Spec. Cond. (1470 µMHOS)	1470	1470

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TABLE IV DELPHI ENERGY & ENGINE MONITORING WELLS FIELD DATA 1/20/2004

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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	22.16	20.11				
VM-218	7.82	7.81				
VM-228	DRY					
VM-210	7.99					
VM-219	7.70					
SR-230	21.52	19.90		i de la compañía de la		
VM-211	NO WATER	10.25				
SR-231	13.69					
PZ-142	8.54					
SR-321	18.63	14.58				
SR-320	17.71					
SR-319	23.64	18.79				
SR-317	19.28	19.16				
OW-317	8.64	8.42				
SR-316	22.80	11.86				
OW-316	11.17	9.57				
SR-208	11.54	10.86				
OW-328	10.58	10.49				
SR-326	23.49	19.77				
OW-327	15.07	13.24				
SR-311	NO WATER	10.61				
SR-310	19.01	9.20				
R-309	32.25	24.47				
SR-312	18.11	11.94				
SR-313	18.99	13.73				
RW-4	8.12				- mark	

TABLE IV (CONTD.) DELPHI ENERGY & ENGINE MONITORING WELLS FIELD DATA 1/20 - 1/22/04

LOCATION	DEPTH TO WATER (FT)	DEPTH TO LNAPL (FT)	DEPTH TO BOTTOM OF WELL (FT)	DNAPL (FT)	WELL VOLUME (GAL)	FIELD REMARKS
DR-11	41.46	<u> </u>	87.25			
R-11	27.88	7	47.89			
SR-11	21.35		22.57			
SR-233	7.57		20.30			
R-242	26.01		28.50			
SR-234	Dry		17.65			
R-234	26.69		38.90			
SR-235	11.63		17.55			
R-235	31.21	29.68	37.25			
SR-245	15.35		20.58			
R-243	26.69	25.88	28.15			
R-244	26.90	25.95	35.50			
R-308	28.21		35.80			
SR-308	13.03		20.27			
R-2	29.95	28.46	33.22			
SR-2	9.55		21.33			
R-238	25.77	22.33	29.50			
R-237	35.18	23.99	37.45			
OW-323	5.19		14.77			
R-305	30.58	21.95	28.50			
R-239	23.82		45.90			
DR-108	Dry		93.93			
R-108	22.24		40.37			
SR-8	Dry		19.81			
PZ-139	29.24	-	32.02			
R-240	28.89	28.53	50.20			
PZ-137	26.87		36.24			
PZ-138	24.50	24.48	36.25			
DR-103	64.84		95.20			
R-103	31.95		52.37			
SR-103	32.34		34.72			
R-107	20.65		44.20			
OW-7	Dry		15.89			
SR-107	18.20	and the second	22.76			

TABLE IV (CONTD.) DELPHI ENERGY & ENGINE MONITORING WELLS FIELD DATA 1/20 - 1/22/04

LOCATION	DEPTH TO WATER	DEPTH TO LNAPL	DEPTH TO BOTTOM OF WELL (FT)	DNAPL (FT)	WELL VOLUME	FIELD REMARKS
P7-135	25.88	((1))	35.07		(une)	
P7-136	24.12		35.10			
DB-109	67.44		76.17			
B-109	17.04	4	41.87			
SP-0	17.55	-	18.52		-	
D7-122	19.50		30.02		-	Kink in casing
P7-134	19.00		30.50		-	jj
P-105-P	27 41		51.43		1	
P7-140	15 79		30.07			
D7.141	11 17		23.24			
P_110	16.96		43.45		1	
6P-110	15.54		23.79		-	
D 201	9.22		34.25		-	
CD 201	15.64		25.07			
50-301	10.04		20.07		-	
H-3	10.01		10.24		-	
D 101	19 20		35.95		-	
60 101	9.05		16.20	-	-	
5R-101	10.25		15.20		-	
H-100	9.42		45.72		-	
DD 405	0.43		02.19	-		
DH-105	20.03		93.10			
0W-105	21.75		21.75	-	-	
SH-105	30.81		34.50			
UW-322	0.91		20.40		-	
DH-315	23.34		51.14			
R-131	19.01		31.14		-	
SH-131	10.91		19.02			
D 014	04.59		10.52		-	
H-314	34.30		20.12			
SH-314	10.10		20.11			1
D 122	22.42		49.07		-	
H-132	22.65		45.07	-		
DR-132	32.00		20.06		-	
D7 100	10.00	Film	18.02	-	-	
PZ-132	12.16	Full	18.00			
PZ-112	12.00		18.60		-	
D7 447	9.10		15.77		-	
PZ-11/	0.19		13.77		-	
HW-101	3.04	7.00				
HW-2	7.20	7.02	10.00			
PZ-123	9.96	9.33	10.98			
PZ-116	8.75		15.25			1

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TABLE IV (CONTD.) DELPHI ENERGY & ENGINE MONITORING WELLS FIELD DATA 1/20 - 1/22/04

I

LOCATION	DEPTH TO WATER	DEPTH TO LNAPL	DEPTH TO BOTTOM OF WELL (ET)	DNAPL (FT)	WELL VOLUME	
PZ-125	7.23	(11)	15.84			
PZ-122			17.14			Not accessible
PZ-113	11.15		14.65			
PZ-115	12.49		21.00			
R-241	29.15	26.21	38.75			
PZ-128	5.90		14.87			
PZ-127	7.40		15.91			
PZ-1	7.32	7.30	9.45			
PZ-121	7.81	6.76	15.11			
RW-3	6.72	6.02				
PZ-114	10.48	6.36	14.54			
PZ-124	8.68	6.31	16.21			
PZ-126	13.84		16.43			
PZ-118	8.24	-	15.88			
PZ-119	8.28		15.43			
PZ-120	4.90		11.97			
R-236	34.14	23.93	35.44			
SR-236	11.87	8.32	18.47			
PZ-144	17.48		24.34			
RW-Z	22.10					
R-102	32.80		52.49			
SR-102	29.97	21.37	31.23			
OW-102	18.09	17.98	18.67			
SR-318	27.60	18.68	29.93			
SR-325	20.28		32.88			
PZ-129	14.54	14.33	28.74			
PZ-130	25.64	17.01	27.27		1	1
PZ-143	17.72		26.78		-	
MW-2	6.19					Photec Well
						1
						-
				-		
-						

APPENDIX B

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



APPENDIX B

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

The sample analysis results in this progress report have had the following qualifications made as a result of data validation actions. Refer also to the notes presented at the end of Table 7 for information on qualifiers for results of analyses of PCB congeners in LNAPL.

PCBS

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Sample Analysis.

<u>Action</u>: If the MS/MSD %R is greater than the upper acceptance limit, associated target analyte positive results are qualified "J" and non-detects should not be qualified. If the MS/MSD %R is less than the lower acceptance limit, associated target analyte positive results are qualified "J" and non-detects are qualified "R". If the MS/MSD is a LAB sample do not qualify project samples.