



**CONESTOGA-ROVERS
& ASSOCIATES**

14496 Sheldon Road, Suite #200
Plymouth, Michigan 48170
Telephone: (734) 453-5123 Fax: (734) 453-5201
www.CRAworld.com

MEMORANDUM

TO: Scott Adamowski REF. NO.: 17358-23

FROM: Thomas Kinney/ Marie Mathé/50/Det. DATE: January 10, 2005

C.C.:

RE: LNAPL Sampling Event
GMPT - Willow Run Facility
Ypsilanti, Michigan

DRAFT PRIVILEGED AND CONFIDENTIAL

This memorandum summarizes the results of the light non-aqueous phase liquid (LNAPL) characterization study that was completed at General Motors Power Train (GMPT) Willow Run (Site) located in Ypsilanti, Michigan. The study was completed by CRA between January and March, 2004. This memorandum is presented in the following sections:

- 1.0 INTRODUCTION
- 2.0 LNAPL SAMPLING
- 3.0 RESULTS
- 4.1 RELEVANT CRITERIA/STANDARDS
- 4.2 ANALYTICAL RESULTS
- 4.3 LNAPL TYPE
- 4.4 LABORATORY VALIDATION
- 5.0 LNAPL THICKNESS OVER TIME

1.0 INTRODUCTION

USE DISCUSSION RE: KNOWN LNAPL PLUME FROM PROPOSAL/CHANGE ORDER number 5
23h Performance of Comprehensive LNAPL Characterization Study

Based on a recent finding of PCB's in a utility conduit, the apparent lack of characteristic data for the LNAPL, and the ongoing design of LNAPL recovery systems, it was decided to complete a LNAPL characterization across the facility. For this effort, up to 20 wells will be sampled and analyzed for chemistry as well as physical characteristics to verify that current and future management of LNAPL is being performed in an acceptable manner.

Testing of the LNAPL will allow ENCORE to: 1) evaluate potential risks to human health and the environment, 2) evaluate the likely source(s) of the LNAPL, and 3) select the most appropriate treatment/disposal for the recovered LNAPL. Specifically, the tasks associated with this effort will be

Collect LNAPL samples from representative monitoring wells from throughout each LNAPL plume. LNAPL samples will be collected from up to 20 wells: ten wells in the Bay E-28/Bay K-35 Area LNAPL plume located beneath the center of the plant; eight wells in the ATF/Subtest/Chip House Area LNAPL plume located at the eastern edge of the plant; and one well from the Dyno Area LNAPL plume located near the northwestern portion of the plant.

The LNAPL samples will be analyzed for VOCs, SVOCs, TAL Inorganics, and PCBs. The LNAPL samples will also be tested for fingerprinting analyses.

Complete a memorandum summarizing the results. The memorandum will include a sample location map and tabulated laboratory results.

The tasks will be carried out in accordance with all LLC Consultant and ENCORE/General Motors WFG and GMPTG (Willow Run) safety protocols with the goal of no lost time injuries during work on site. The numbered tasks constitute the WBS as shown on the ENCORE tracking form.

2.0 LNAPL SAMPLING

On January 20, 2004, LNAPL samples were collected from monitoring and recovery wells CRA-013R, CRA-041R, CRA-075M, CRA-080M, CRA-086M, CRA-096M, CRA-102M, CRA-111R, CRA-202M, CRA-210M-B, CRA-229M, CRA-241M, CRA-244R and CRA-408M-S. Due to slow recharge and small quantities of LNAPL recovered CRA-408M, CRA-075M and CRA-096M were sampled daily from January 20 to 23, 2004. On March 30 and 31, 2004 samples were collected from CRA-215M-B, CRA-002R-B, CRA-202M, CRA-003R, CRA-235R-B, CRA-001M, CRA-004M, CRA-005R-A, CRA-006R-B, CRA-025R, CRA-111R, CRA-092M, CRA-086M-B, CRA-080M, CRA-015R, CRA-016R, CRA-301M, CRA-300M, CRA-012R-B and CRA-138M. Sample locations are shown on Figure 1.

The static water and product levels were measured and recorded for the wells intended for sampling. Well caps were unlocked and removed allowing the liquid levels in the wells to stabilize. Static liquid levels were measured using an oil/water interface meter, from the top of each riser. Recorded static levels are presented in Table 1. Figure 2 shows a LNAPL thickness contour map.

A 2-inch polyethylene disposable bailer, dedicated to each location, was used to collect LNAPL samples. A ¾-inch polyethylene disposable bailer was used to collect LNAPL from CRA-408M.

Samples were collected in laboratory-supplied containers, labeled, packed on ice and shipped under chain of custody (COC) protocol. Collected LNAPL on January 20, 2004 was analyzed for target compound list (TCL) volatile organic carbons (VOCs), TCL semi-volatile organic carbons (SVOCs), total analyte list (TAL) Metals, TCL polychlorinated biphenyls (PCBs), Flash Point, Viscosity, Molecular Weight, Specific Gravity and a hydrocarbon fuel scan and samples collected on March 30 and 31, 2004 were analyzed for TCL PCBs. The samples were sent to Severn-Trent Laboratories in North Canton, Ohio, to be analyzed within a standard two-week time frame. Unique sample identifications were assigned to each collected sample and are presented in Table 2, attached with this memorandum. Duplicate samples were collected at CRA-111R and CRA-202M.

Once sampling was completed all PPE and garbage was disposed of on Site. All wells were sealed and locked when possible.

3.0 RESULTS

The analytical results that exceed TSCA or RCRA criteria are presented on Figure 3. The PCB results and PCB concentration contour lines are shown on Figure 4. A summary of analytical results is presented in Table 3. The laboratory analytical results are presented in Appendix A.

4.1 RELEVANT CRITERIA/STANDARDS

[note from TK for editing purposes: re-write (V8)]

Analytical results were evaluated against cleanup criteria established in Part 7 of administrative rules promulgated December 13, 2002, pursuant to Part 201, Environmental Remediation, 1994 PA 451 as amended. Part 213 Operational Memorandum 4 "Tier 1 Lookup Tables for Risk-Based Corrective Action at Leaking Underground Storage Tank Sites" were revised on December 21, 2002 and are the same as Part 201 Criteria.

The relevant criteria for the Site are based on review of the exposure pathway guide sheets presented in the "DEQ Training Material for Part 201, Cleanup Criteria", with consideration given to Site-specific conditions. The following are relevant and applicable Part 201 Generic Industrial-Commercial II, III and IV Criteria (Ind/Comm) for the Site based on current and future potentially complete exposure pathways, and are used for comparison purposes only:

- TSCA; and
- RCRA.

4.2 ANALYTICAL RESULTS

CRA-013R, CRA-075M, CRA-096M, CRA-102M, CRA-202M, CRA-241M, CRA-244R and CRA-408M-S exceeded the Maximum Concentration for Toxicity Characteristics for lead concentrations.

CRA-080M and CRA-086M exceeded the Maximum Concentration for Toxicity Characteristics for Arsenic concentrations.

CRA-202M exceeded the Maximum Concentration for Toxicity Characteristics for Barium concentrations.

CRA-408M-S exceeded the Maximum Concentration for Toxicity Characteristics for 1,2-Dichloroethane and Benzene concentrations.

4.3 LNAPL TYPE

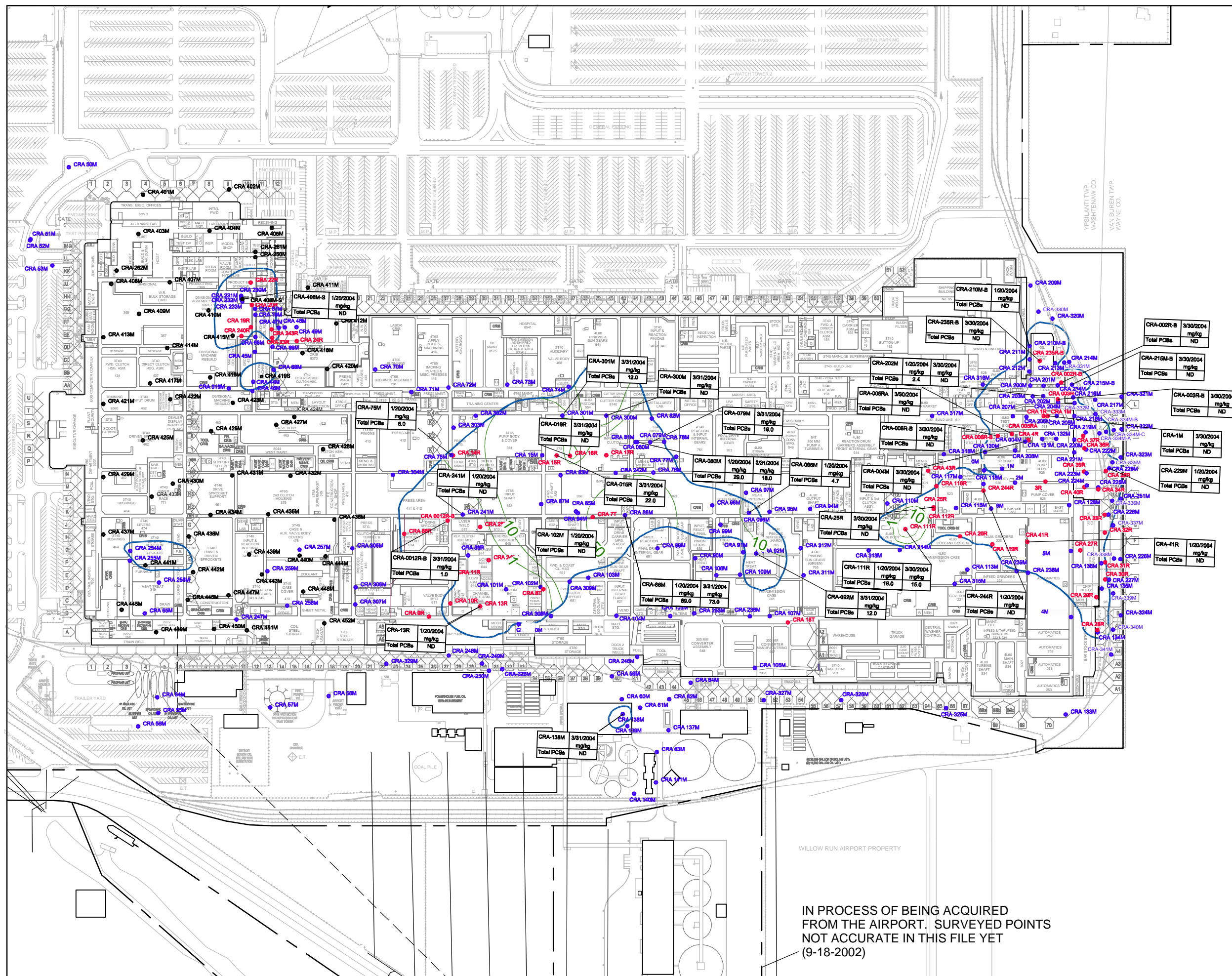
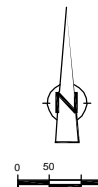
Petroleum distillate is the predominant estimated oil type, based on carbon range and molecular weight. Physical parameters for LNAPL are presented in Table 4.

4.4 LABORATORY VALIDATION




Insert reference to validation memos (48 and 57) and attach validation memo as appendices.

5.0 LNAPL THICKNESS OVER TIME

Significant increases in NAPL thicknesses of between 0.05 and 0.5 feet were observed in monitoring and recovery wells from winter 2001 to March 2004. Other wells showed less significant increases of less than 0.05 feet over the same period of time. Figure 2 highlights these locations. Tables 5 and 6 show the locations where an increase in NAPL thickness occurred over time and Figures 5 and 6 show graphically the NAPL thickness over time for these locations.

[illegible]

LEGEND

- | | | |
|---|-----------------|----------------------------------|
|  | CRA-251M | MONITORING WELLS |
|  | CRA 29R | RECOVERY WELL |
|  | CRA 18T | RECOVERY TRENCH |
| | | APPROXIMATE LNAPL PLUME BOUNDARY |
| | | PCB CONCENTRATION CONTOURS |

NOTE: RESULTS FROM MARCH 2004 ARE PRELIMINARY
AND HAVE NOT BEEN VALIDATED

CRA-41R	1/20/20 mg/kg
Total PCBs	ND

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.



Approved _____

DRAFT

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PREPARED AT THE REQUEST OF COUNSEL

DRAWING STATUS

Status	Date	Initial

LNAPL PLUME - PCB CONCENTRATIONS

GMPT WILLOW RUN FACILITY
YPSILANTI, MICHIGAN



Source Reference

Project Manager: F.B.	Reviewed By: T.K.	Date: APRIL 2004	
Scale: 1"=150'	Project N°: 17358-23	Report N°: MEMO050	Drawing N°: figure 4.

17358-23(MEMO050)GN-DE002.JAN 13/2005

IN PROCESS OF BEING ACQUIRED
FROM THE AIRPORT. SURVEYED POINTS
NOT ACCURATE IN THIS FILE YET
(9-18-2002)

FIGURE 5

LNAPL THICKNESS OVER TIME LESS THEN 0.5 FEET
GMPT WILLOW RUN SITE
YPSILANTI, MICHIGAN

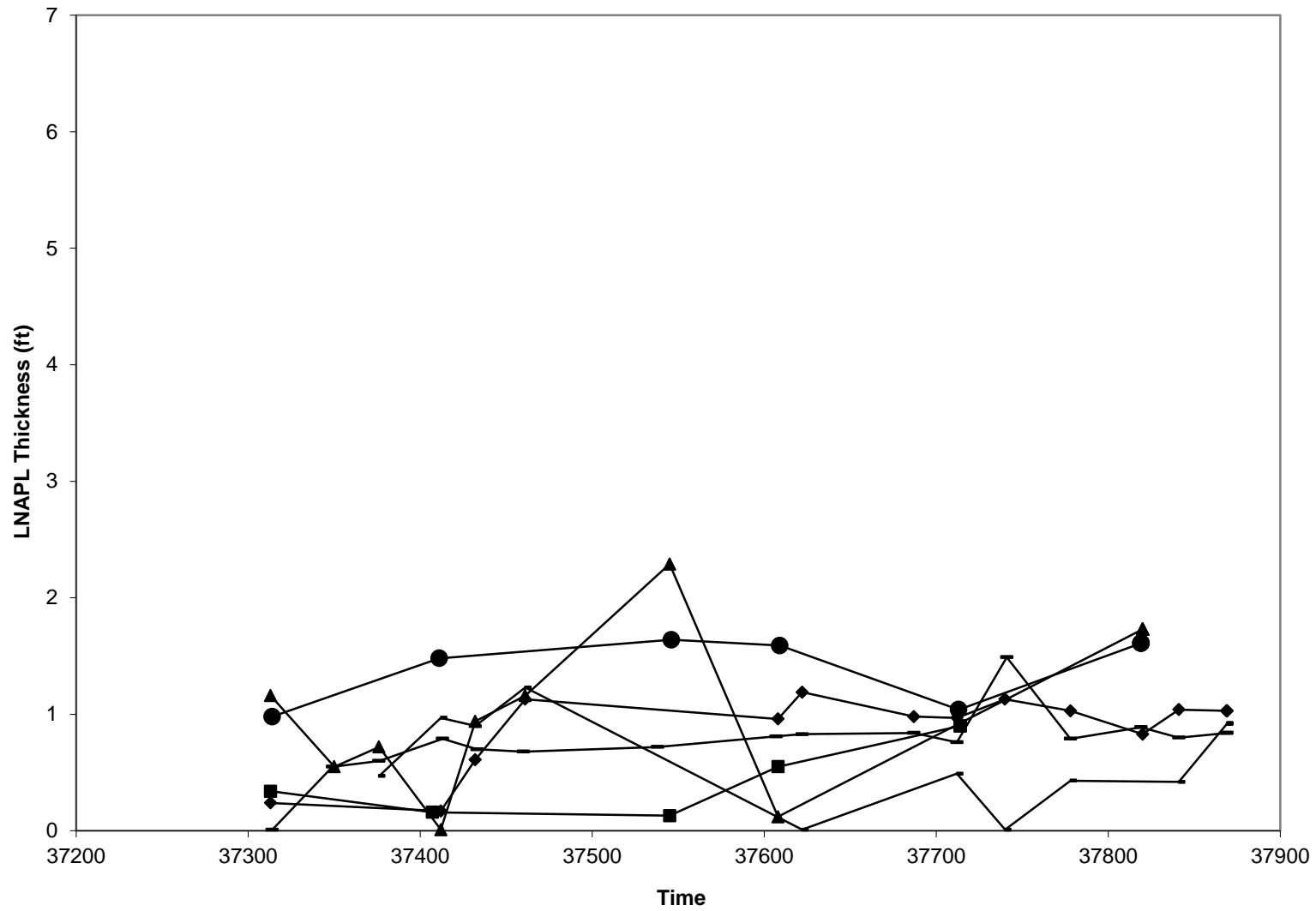


FIGURE 6
LNAPL THICKNESS OVER TIME GREATER THEN 1.0 FEET
GMPT WILLOW RUN SITE
YPSILANTI, MICHIGAN

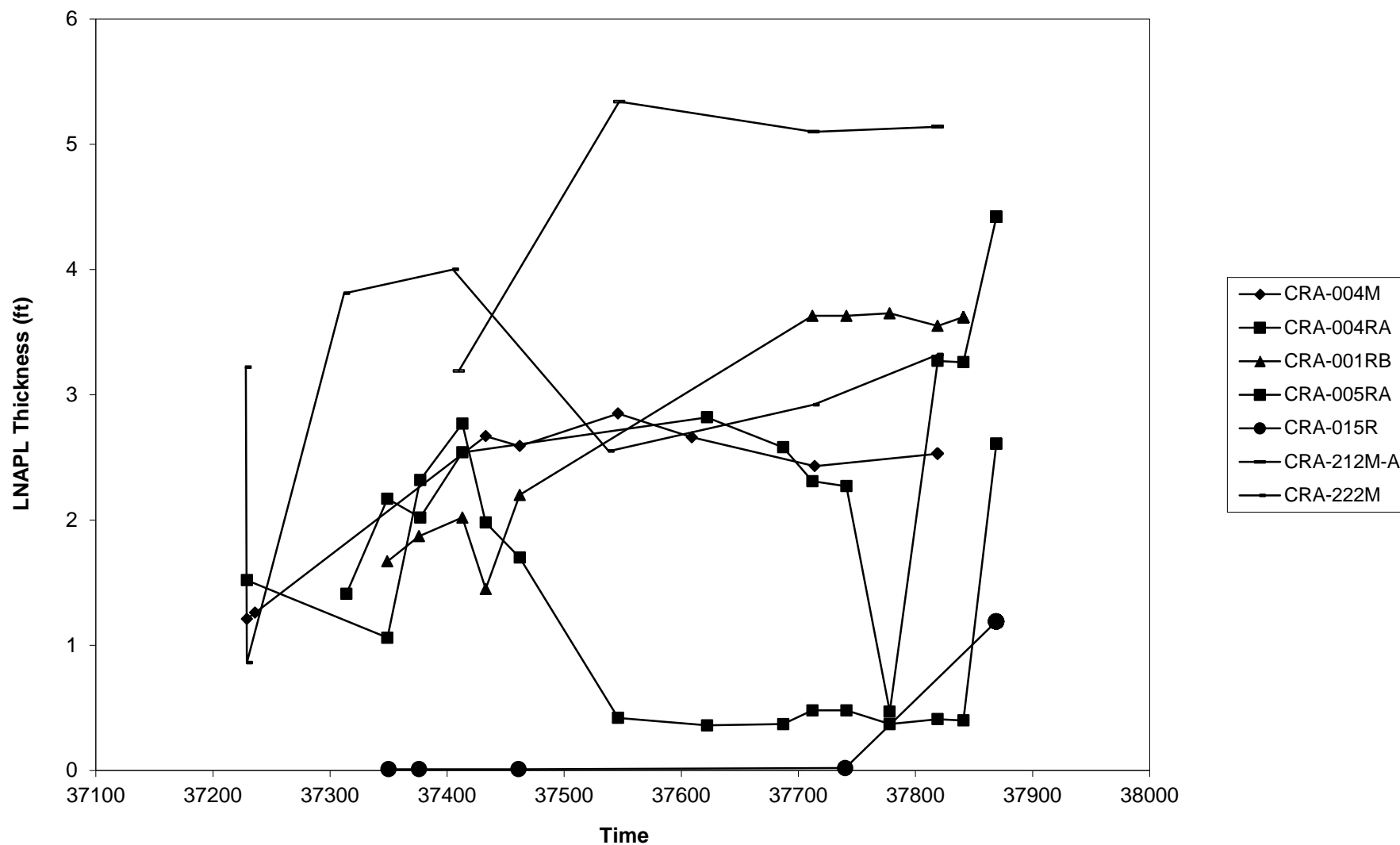


TABLE 1
LNAPL THICKNESS
JANUARY 20, 2004
GENERAL MOTORS CORPORATION
GMPT - WILLOW RUN
YPSILANTI, MICHIGAN

<i>Well Location</i>	<i>Date</i>	<i>Depth to Water (ft below top of riser)</i>	<i>Depth to LNAPL (ft below top of riser)</i>	<i>LNAPL Thickness (feet)</i>
CRA-202M	1/20/2004	6.00	5.41	0.59
CRA-210M	1/20/2004	5.81	5.10	0.71
CRA-119R	1/20/2004	5.92	5.85	0.07
CRA-111R	1/20/2004	7.70	6.79	0.91
CRA-041R	1/20/2004	7.76	6.23	1.53
CRA-236M	1/20/2004	8.30	---	
CRA-096M	1/20/2004	8.40	8.16	0.24
CRA-086M	1/20/2004	8.99	7.58	1.41
CRA-102M	1/20/2004	8.06	9.00	0.94
CRA-013R	1/20/2004	9.05	7.86	1.19
CRA-241M	1/20/2004	8.32	7.48	0.84
CRA-075M	1/20/2004	7.27	6.84	0.43
CRA-408M	1/20/2004	8.17	7.45	0.72
CRA-020R	1/20/2004	10.62	10.61	0.01
CRA-301M	1/20/2004	7.13	6.72	0.41
CRA-080M	1/20/2004	8.43	6.65	1.78
CRA-229M	1/20/2004	8.06	6.15	1.91
CRA-134M	1/20/2004	6.47	6.45	0.02
CRA-120M	1/20/2004	6.07	5.88	0.19
CRA-244R	1/20/2004	12.75	9.66	3.09
CRA-094M	3/31/2004	7.66		
CRA-095M	3/31/2004	8.23		
CRA-092M	3/31/2004	8.78	8.47	0.31
CRA-086M-B	3/31/2004	9.14	7.7	1.44
CRA-097M	3/31/2004	8.1	8.02	0.08
CRA-236M	3/31/2004	8.38		
CRA-107M	3/31/2004	9.52		
CRA-079M	3/31/2004	8.75	6.99	1.76
CRA-017R	3/31/2004	9.695	9.69	0.01
CRA-015R	3/31/2004	7.85	7.38	0.47
CRA-016R	3/31/2004	8.25	7.32	0.93
CRA-301M	3/31/2004	7.22	6.95	0.27
CRA-300M	3/31/2004	8.68	6.9	1.78
CRA-027R	3/31/2004	6.23	6.14	0.09
CRA-010R	3/31/2004	9.8	9.75	0.05
CRA-012RB	3/31/2004	8.6	8.1	0.50
CRA-138M	3/31/2004	10.21	9.83	0.38

TABLE 1
 LNAPL THICKNESS
 JANUARY 20, 2004
 GENERAL MOTORS CORPORATION
 GMPT - WILLOW RUN
 YPSILANTI, MICHIGAN

<i>Well Location</i>	<i>Date</i>	<i>Depth to Water (ft below top of riser)</i>	<i>Depth to LNAPL (ft below top of riser)</i>	<i>LNAPL Thickness (feet)</i>
CRA-106M	3/31/2004	8.18		
CRA-124M	3/31/2004	6.52		
CRA-006RB	3/30/2004	7.13	5.91	1.22
CRA-116R	3/30/2004	6.28	6.17	0.11
CRA-025R	3/30/2004	6.63	6.28	0.35
CRA-111R	3/30/2004	7.31	6.82	0.49
CRA-026R	3/30/2004	6.12	6.05	0.07
CRA-119R	3/30/2004			
CRA-215M-B	3/30/2004	6.58	6.15	0.43
CRA-002RB	3/30/2004	7.33	5.17	2.16
CRA-202M	3/30/2004	7.71	5.58	2.13
CRA-003RB	3/30/2004	6.26	5.15	1.11
CRA-235RB	3/30/2004	5.88	5.17	0.71
CRA-001M	3/30/2004	7.44	5.38	2.06
CRA-004M	3/30/2004	5.93	5.62	0.31
CRA-005RA	3/30/2004	5.81	5.4	0.41

TABLE 2
SAMPLE KEY
JANUARY 20, MARCH 30 AND MARCH 31, 2004
NAPL SAMPLING EVENT
GENERAL MOTORS CORPORATION
GMPT - WILLOW RUN
YPSILANTI, MICHIGAN

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Time	Date	Sample Identification	Sample Location	QA/QC	Analysis
820	1/20/2004	O-17358-012004-MM-512	CRA-202M		VOCs, SVOCs, SELECT TAL METALS, PCBs, FLASH POINT, VISCOSITY, SPECIFIC GRAVITY, HYDROCARBON FUEL SCAN
835	1/20/2004	O-17358-012004-MM-513	CRA-210M-B		VOCs, SVOCs, SELECT TAL METALS, PCBs, FLASH POINT, VISCOSITY, SPECIFIC GRAVITY, HYDROCARBON FUEL SCAN
925	1/20/2004	O-17358-012004-MM-514	CRA-111R		VOCs, SVOCs, SELECT TAL METALS, PCBs, FLASH POINT, VISCOSITY, SPECIFIC GRAVITY, HYDROCARBON FUEL SCAN
930	1/20/2004	O-17358-012004-MM-515	CRA-111R	duplicate	VOCs, SVOCs, SELECT TAL METALS, PCBs, FLASH POINT, VISCOSITY, SPECIFIC GRAVITY, HYDROCARBON FUEL SCAN
950	1/20/2004	O-17358-012004-MM-516	CRA-41R		VOCs, SVOCs, SELECT TAL METALS, PCBs, FLASH POINT, VISCOSITY, SPECIFIC GRAVITY, HYDROCARBON FUEL SCAN
1015	1/20/2004	O-17358-012004-MM-517	CRA-96M		VOCs, SVOCs, SELECT TAL METALS, PCBs, FLASH POINT, VISCOSITY, SPECIFIC GRAVITY, HYDROCARBON FUEL SCAN
1025	1/20/2004	O-17358-012004-MM-518	CRA-86M	MS/MSD	VOCs, SVOCs, SELECT TAL METALS, PCBs, FLASH POINT, VISCOSITY, SPECIFIC GRAVITY, HYDROCARBON FUEL SCAN
1040	1/20/2004	O-17358-012004-MM-519	CRA-102M		VOCs, SVOCs, SELECT TAL METALS, PCBs, FLASH POINT, VISCOSITY, SPECIFIC GRAVITY, HYDROCARBON FUEL SCAN
1055	1/20/2004	O-17358-012004-MM-520	CRA-13R		VOCs, SVOCs, SELECT TAL METALS, PCBs, FLASH POINT, VISCOSITY, SPECIFIC GRAVITY, HYDROCARBON FUEL SCAN
1105	1/20/2004	O-17358-012004-MM-521	CRA-241M		VOCs, SVOCs, SELECT TAL METALS, PCBs, FLASH POINT, VISCOSITY, SPECIFIC GRAVITY, HYDROCARBON FUEL SCAN
1115	1/20/2004	O-17358-012004-MM-522	CRA-75M		VOCs, SVOCs, SELECT TAL METALS, PCBs, FLASH POINT, VISCOSITY, SPECIFIC GRAVITY, HYDROCARBON FUEL SCAN
1155	1/20/2004	O-17358-012004-MM-523	CRA-80M		VOCs, SVOCs, SELECT TAL METALS, PCBs, FLASH POINT, VISCOSITY, SPECIFIC GRAVITY, HYDROCARBON FUEL SCAN
1415	1/20/2004	O-17358-012004-MM-524	CRA-408M		VOCs, SVOCs, SELECT TAL METALS, PCBs, FLASH POINT, VISCOSITY, SPECIFIC GRAVITY, HYDROCARBON FUEL SCAN
1455	1/20/2004	O-17358-012004-MM-525	CRA-229M		VOCs, SVOCs, SELECT TAL METALS, PCBs, FLASH POINT, VISCOSITY, SPECIFIC GRAVITY, HYDROCARBON FUEL SCAN

**TABLE 2
SAMPLE KEY
JANUARY 20, MARCH 30 AND MARCH 31, 2004
NAPL SAMPLING EVENT
GENERAL MOTORS CORPORATION
GMPT - WILLOW RUN
YPSILANTI, MICHIGAN**

**PRIVILEGED AND CONFIDENTIAL
PREPARED AT THE REQUEST OF COUNSEL**

Time	Date	Sample Identification	Sample Location	QA/QC	Analysis
					VOCs, SVOCs, SELECT TAL METALS, PCBs, FLASH POINT, VISCOSITY, SPECIFIC GRAVITY, HYDROCARBON FUEL SCAN
1600	1/20/2004	O-17358-012004-MM-526	CRA-244R		
1302	3/30/2004	O-17358-033004-MM-540	CRA-215M-B		PCBs
1322	3/30/2004	O-17358-033004-MM-541	CRA-002R-B		PCBs
1336	3/30/2004	O-17358-033004-MM-542	CRA-202M		PCBs
1338	3/30/2004	O-17358-033004-MM-543	CRA-202M	duplicate	PCBs
1410	3/30/2004	O-17358-033004-MM-544	CRA-003R-B		PCBs
1424	3/30/2004	O-17358-033004-MM-545	CRA-235R-B		PCBs
1440	3/30/2004	O-17358-033004-MM-546	CRA-001M		PCBs
1451	3/30/2004	O-17358-033004-MM-547	CRA-004M		PCBs
1501	3/30/2004	O-17358-033004-MM-548	CRA-005R-A		PCBs
1526	3/30/2004	O-17358-033004-MM-549	CRA-006R-B		PCBs
1543	3/30/2004	O-17358-033004-MM-550	CRA-025R		PCBs
1611	3/30/2004	O-17358-033004-MM-551	CRA-111R		PCBs
923	3/31/2004	O-17358-033104-MM-552	CRA-092M		PCBs

TABLE 2
SAMPLE KEY
JANUARY 20, MARCH 30 AND MARCH 31, 2004
NAPL SAMPLING EVENT
GENERAL MOTORS CORPORATION
GMPT - WILLOW RUN
YPSILANTI, MICHIGAN

Time	Date	Sample Identification	Sample Location	QA/QC	Analysis
939	3/31/2004	O-17358-033104-MM-553	CRA-086M-B	MS/MSD	PCBs
1043	3/31/2004	O-17358-033104-MM-554	CRA-079M		PCBs
1150	3/31/2004	O-17358-033104-MM-557	CRA-301M		PCBs
1152	3/31/2004	O-17358-033104-MM-558	CRA-300M		PCBs
1440	3/31/2004	O-17358-033104-MM-559	CRA-012R-B		PCBs
1508	3/31/2004	O-17358-033104-MM-560	CRA-138M		PCBs

Notes:

Collected samples were sent to STL North Canton, Ohio to be analyzed within a standard two week time-frame under chain-of-custody (COC) protocol.

MS/MSD - Matrix Spike/ Matrix Spike Duplicate
QA/QC - Quality Assurance/ Quality Control
VOC - Volatile Organic Compound

TABLE 3
LNAPL ANALYTICAL RESULTS
GENERAL MOTORS CORPORATION
GMPT - WILLOW RUN
YPSILANTI, MICHIGAN

Michigan Act 451, Part 201 Generic Residential & Industrial Criteria ⁽¹⁾						CRA-001M	CRA-002RB	CRA-003RB	CRA-004M	CRA-005RA	CRA-006RB	CRA-012RB	CRA-13R	CRA-015R	CRA-016R	CRA-025R
Maximum Concentration for Toxicity Characteristic (2)	TSCA ⁽³⁾	Groundwater Contact Criteria	Industrial & Commercial II, III, & IV Groundwater to Volatilization to Indoor Air Inhalation Criteria	Flammability and Explosivity Screening Levels	Acute Inhalation Screening Levels											
(mg/L) a	(mg/kg) b	(mg/L) c	(mg/L) d	(mg/L) e	(mg/L) f	O-17358-033004-MM-546 3/30/2004	O-17358-033004-MM-541 3/30/2004	O-17358-033004-MM-544 3/30/2004	O-17358-033004-MM-547 3/30/2004	O-17358-033004-MM-548 3/30/2004	O-17358-033004-MM-549 3/30/2004	O-17358-033104-MM-559 3/31/2004	O-17358-012004-MM-520 1/20/2004	O-17358-033104-MM-555 3/31/2004	O-17358-033104-MM-556 3/31/2004	O-17358-033004-MM-550 3/30/2004
VOC (mg/kg)																
1,1,1-Trichloroethane	---	---	1300	1300	ID	1300	---	---	---	---	---	---	ND(1.4)	---	---	---
1,1,2,2-Tetrachloroethane	---	---	4.7	77	ID	ID	---	---	---	---	---	---	ND(1.4)	---	---	---
1,1,2-Trichloroethane	---	---	21	110	ID	ID	---	---	---	---	---	---	ND(1.4)	---	---	---
1,1-Dichloroethane	---	---	2400	2300	380	ID	---	---	---	---	---	---	ND(1.4)	---	---	---
1,1-Dichloroethene	0.7	---	11	1.3	97	140	---	---	---	---	---	---	ND(1.4)	---	---	---
1,2,4-Trichlorobenzene	---	---	19	300	---	300	---	---	---	---	---	---	ND(2.7)	---	---	---
1,2-Dibromo-3-chloropropane (DBCP)	---	---	0.39	1.2	---	ID	---	---	---	---	---	---	ND(2.7)	---	---	---
1,2-Dibromoethane (Ethylene Dibromide)	---	---	0.025	15	ID	ID	---	---	---	---	---	---	ND(1.4)	---	---	---
1,2-Dichlorobenzene	---	---	160	160	---	160	---	---	---	---	---	---	ND(2.7)	---	---	---
1,2-Dichloroethane	0.5	---	19	59	2500	ID	---	---	---	---	---	---	ND(1.4)	---	---	---
1,2-Dichloropropane	---	---	16	36	550	2800	---	---	---	---	---	---	ND(1.4)	---	---	---
1,3-Dichlorobenzene	---	---	2	ID	ID	ID	---	---	---	---	---	---	ND(2.7)	---	---	---
1,4-Dichlorobenzene	7.5	---	6.4	74	---	ID	---	---	---	---	---	---	ND(2.7)	---	---	---
2-Butanone (Methyl Ethyl Ketone)	200.0	---	240000	240000	ID	240000	---	---	---	---	---	---	ND(5.7)	---	---	---
2-Hexanone	---	---	5200	8700	---	ID	---	---	---	---	---	---	ND(5.7)	---	---	---
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	---	---	13000	20000	ID	20000	---	---	---	---	---	---	ND(5.7)U	---	---	---
Acetone	---	---	31000	1000000	15000	1000000	---	---	---	---	---	---	ND(5.7)U	---	---	---
Benzene	0.5	---	11	35	68	---	---	---	---	---	---	---	ND(1.4)	---	---	---
Bromodichloromethane	---	---	14	37	ID	ID	---	---	---	---	---	---	ND(1.4)	---	---	---
Bromoform	---	---	140	3100	ID	ID	---	---	---	---	---	---	ND(1.4)	---	---	---
Bromomethane (Methyl Bromide)	---	---	70	9	ID	ID	---	---	---	---	---	---	ND(2.7)	---	---	---
Carbon disulfide	---	---	1200	550	13	ID	---	---	---	---	---	---	ND(1.4)	---	---	---
Carbon tetrachloride	0.5	---	4.6	2.4	ID	96	---	---	---	---	---	---	ND(1.4)	---	---	---
Chlorobenzene	100.0	---	86	470	160	ID	---	---	---	---	---	---	ND(1.4)	---	---	---
Chloroethane	---	---	440	5700	110	ID	---	---	---	---	---	---	ND(2.7)	---	---	---
Chloroform (Trichloromethane)	6.0	---	150	180	ID	ID	---	---	---	---	---	---	ND(1.4)	---	---	---
Chloromethane (Methyl Chloride)	---	---	490	45	36	210	---	---	---	---	---	---	ND(2.7)	---	---	---
cis-1,2-Dichloroethene	---	---	200	210	530	ID	---	---	---	---	---	---	ND(0.71)	---	---	---
Cyclohexane	---	---	---	---	---	---	---	---	---	---	---	---	ND(5.7)	---	---	---
Dibromochloromethane	---	---	18	110	ID	ID	---	---	---	---	---	---	ND(1.4)	---	---	---
Dichlorodifluoromethane (CFC-12)	---	---	300	300	ID	ID	---	---	---	---	---	---	ND(2.7)	---	---	---
Ethylbenzene	---	---	170	170	43	170	---	---	---	---	---	---	0.25 J	---	---	---
Isopropylbenzene	---	---	56	56	29	ID	---	---	---	---	---	---	ND(2.7)	---	---	---
Methyl acetate	---	---	---	---	---	---	---	---	---	---	---	---	ND(2.7)U	---	---	---
Methyl cyclohexane	---	---	---	---	---	---	---	---	---	---	---	---	0.11 J	---	---	---
Methyl Tert Butyl Ether	---	---	610	47000	ID	ID	---	---	---	---	---	---	ND(5.7)	---	---	---
Methylene chloride	---	---	220	1400	ID	ID	---	---	---	---	---	---	ND(1.4)	---	---	---
Styrene	---	---	9.7	310	140	310	---	---	---	---	---	---	ND(1.4)	---	---	---
Tetrachloroethene	0.7	---	12	170	ID	200	---	---	---	---	---	---	ND(1.4)	---	---	---
Toluene	---	---	530	530	61	ID	---	---	---	---	---	---	0.081 J	---	---	---
trans-1,2-Dichloroethene	---	---	220	200	230	ID	---	---	---	---	---	---	ND(0.71)	---	---	---
Trichloroethene	0.5	---	22	97	ID	1100	---	---	---	---	---	---	ND(1.4)	---	---	---
Trichlorofluoromethane (CFC-11)	---	---	1100	1100	ID	1100	---	---	---	---	---	---	ND(2.7)	---	---	---
Trifluorotrichloroethane (Freon 113)	---	---	170	170	ID	170	---	---	---	---	---	---	ND(5.7)	---	---	---
Vinyl chloride	0.2	---	1	13	33	ID	---	---	---	---	---	---	ND(2.7)	---	---	---
Xylene (total)	---	---	190	190	70	190	---	---	---	---	---	---	0.95 J	---	---	---
cis-1,3-Dichloropropene	---	---	---	---	---	---	---	---	---	---	---	---	ND(1.4)	---	---	---
trans-1,3-Dichloropropene	---	---	---	---	---	---	---	---	---	---	---	---	ND(1.4)	---	---	---
1,3-Dichloropropene - Total	---	---	5.5	26	130	ID	---	---	---	---	---	---	---	---	---	---

TABLE 3
LNAPL ANALYTICAL RESULTS
GENERAL MOTORS CORPORATION
GMPT - WILLOW RUN
YPSILANTI, MICHIGAN

Michigan Act 451, Part 201 Generic Residential & Industrial Criteria ⁽¹⁾						CRA-001M	CRA-002RB	CRA-003RB	CRA-004M	CRA-005RA	CRA-006RB	CRA-012RB	CRA-13R	CRA-015R	CRA-016R	CRA-025R
Maximum Concentration for Toxicity Characteristic ⁽²⁾	TSCA ⁽³⁾	Groundwater Contact Criteria	Industrial & Commercial II, III, & IV Groundwater to Volatilization to Indoor Air Inhalation Criteria	Flammability and Explosivity Screening Levels	Acute Inhalation Screening Levels											
(mg/L) a	(mg/kg) b	(mg/L) c	(mg/L) d	(mg/L) e	(mg/L) f	O-17358-033004-MM-546 3/30/2004	O-17358-033004-MM-541 3/30/2004	O-17358-033004-MM-544 3/30/2004	O-17358-033004-MM-547 3/30/2004	O-17358-033004-MM-548 3/30/2004	O-17358-033004-MM-549 3/30/2004	O-17358-033104-MM-559 3/31/2004	O-17358-012004-MM-520 1/20/2004	O-17358-033104-MM-555 3/31/2004	O-17358-033104-MM-556 3/31/2004	O-17358-033004-MM-550 3/30/2004
<u>SVOC (mg/Kg)</u>																
2,4,5-Trichlorophenol	400.0	---	170	NLV	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
2,4,6-Trichlorophenol	2.0	---	10	NLV	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
2,4-Dichlorophenol	0.13	---	48	NLV	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
2,4-Dimethylphenol	---	---	520	NLV	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
2,4-Dinitrophenol	---	---	---	---	---	---	---	---	---	---	---	---	ND(1900)	---	---	---
2,4-Dinitrotoluene	---	---	8.6	NLV	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
2,6-Dinitrotoluene	---	---	---	---	---	---	---	---	---	---	---	---	ND(400)	---	---	---
2-Chloronaphthalene	---	---	6.7	ID	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
2-Chlorophenol	---	---	94	ID	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
2-Methylnaphthalene	---	---	25	ID	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
2-Methylphenol	200.0	---	810	NLV	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
2-Nitroaniline	---	---	---	---	---	---	---	---	---	---	---	---	ND(1900)	---	---	---
2-Nitrophenol	---	---	79	NLV	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
3,3'-Dichlorobenzidine	---	---	0.18	NLV	ID	---	---	---	---	---	---	---	ND(1900)	---	---	---
3-Nitroaniline	---	---	---	---	---	---	---	---	---	---	---	---	ND(1900)	---	---	---
4,6-Dinitro-2-methylphenol	---	---	9.5	NLV	ID	---	---	---	---	---	---	---	ND(1900)	---	---	---
4-Bromophenyl phenyl ether	---	---	---	---	---	---	---	---	---	---	---	---	ND(400)	---	---	---
4-Chloro-3-methylphenol	---	---	79	NLV	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
4-Chloroaniline	---	---	---	---	---	---	---	---	---	---	---	---	ND(400)	---	---	---
4-Chlorophenyl phenyl ether	---	---	---	---	---	---	---	---	---	---	---	---	ND(400)	---	---	---
4-Methylphenol	200.0	---	810	NLV	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
4-Nitroaniline	---	---	---	---	---	---	---	---	---	---	---	---	ND(1900)	---	---	---
4-Nitrophenol	---	---	---	---	---	---	---	---	---	---	---	---	ND(1900)	---	---	---
Acenaphthene	---	---	4.2	ID	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
Acenaphthylene	---	---	3.9	ID	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
Acetophenone	---	---	6100	ID	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
Anthracene	---	---	0.043	ID	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
Atrazine	---	---	5.4	NLV	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
Benzaldehyde	---	---	---	---	---	---	---	---	---	---	---	---	ND(400)	---	---	---
Benzo(a)anthracene	---	---	0.0094	NLV	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
Benzo(a)pyrene	---	---	0.002	NLV	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
Benzo(b)fluoranthene	---	---	0.002	ID	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
Benzo(g,h,i)perylene	---	---	0.005	NLV	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
Benzo(k)fluoranthene	---	---	0.005	NLV	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
Biphenyl	---	---	---	---	---	---	---	---	---	---	---	---	ND(400)	---	---	---
bis(2-Chloroethoxy)methane	---	---	---	---	---	---	---	---	---	---	---	---	ND(400)	---	---	---
bis(2-Chloroethyl)ether	---	---	5.7	210	17000	---	---	---	---	---	---	---	ND(400)	---	---	---
bis(2-Ethylhexyl)phthalate	---	---	0.32	NLV	0.34	---	---	---	---	---	---	---	ND(400)	---	---	---
Butyl benzylphthalate	---	---	2.7	NLV	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
Caprolactam	---	---	390000	NLV	1000000	---	---	---	---	---	---	---	ND(400)	---	---	---
Carbazole	---	---	7.4	NLV	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
Chrysene	---	---	0.005	ID	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
Dibenz(a,h)anthracene	---	---	0.002	NLV	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
Dibenzofuran	---	---	ID	ID	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
Diethyl phthalate	---	---	1100	NLV	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
Dimethyl phthalate	---	---	4200	NLV	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
Di-n-butylphthalate	---	---	11	NLV	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
Di-n-octyl phthalate	---	---	0.4	NLV	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
Fluoranthene	---	---	0.21	ID	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
Fluorene	---	---	2	ID	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
Hexachlorobenzene	0.13	---	0.0046	3	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
Hexachlorobutadiene	0.5	---	0.4	3.2	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
Hexachlorocyclopentadiene	---	---	1.6	0.42	ID	---	---	---	---	---	---	---	ND(1900)	---	---	---
Hexachloroethane	3.0	---	1.9	ID	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
Indeno(1,2,3-cd)pyrene	---	---	0.002	NLV	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
Isophorone	---	---	990	NLV	12000	---	---	---	---	---	---	---	ND(400)	---	---	---
Naphthalene	---	---	31	31	---	---	---	---	---	---	---	---	ND(400)	---	---	---
Nitrobenzene	2.0	---	11	550	ID	---	---	---	---	---	---	---	ND(400)	---	---	---

TABLE 3
LNAPL ANALYTICAL RESULTS
GENERAL MOTORS CORPORATION
GMPT - WILLOW RUN
YPSILANTI, MICHIGAN

	Michigan Act 451, Part 201 Generic Residential & Industrial Criteria ⁽¹⁾						CRA-001M	CRA-002RB	CRA-003RB	CRA-004M	CRA-005RA	CRA-006RB	CRA-012RB	CRA-13R	CRA-015R	CRA-016R	CRA-025R
	Maximum Concentration for Toxicity Characteristic ⁽²⁾	TSCA ⁽³⁾	Groundwater Contact Criteria	Industrial & Commercial II, III, & IV Groundwater to Volatilization to Indoor Air Inhalation Criteria	Flammability and Explosivity Screening Levels	Acute Inhalation Screening Levels											
	(mg/L)	(mg/kg)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	O-17358-033004-MM-546	O-17358-033004-MM-541	O-17358-033004-MM-544	O-17358-033004-MM-547	O-17358-033004-MM-548	O-17358-033004-MM-549	O-17358-033104-MM-559	O-17358-012004-MM-520	O-17358-033104-MM-555	O-17358-033104-MM-556	O-17358-033004-MM-550
	a	b	c	d	e	f	3/30/2004	3/30/2004	3/30/2004	3/30/2004	3/30/2004	3/30/2004	3/31/2004	1/20/2004	3/31/2004	3/31/2004	3/30/2004
N-Nitrosodi-n-propylamine	---	---	0.36	NLV	ID	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
N-Nitrosodiphenylamine	---	---	35	NLV	ID	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
Pentachlorophenol	100.0	---	0.2	NLV	ID	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
Phenanthrene	---	---	1	1	ID	ID	---	---	---	---	---	---	---	490 ⁽⁴⁾	---	---	---
Phenol	---	---	29000	NLV	ID	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
Pyrene	---	---	0.14	0.14	ID	ID	---	---	---	---	---	---	---	ND(400)	---	---	---
<u>Inorganics (mg/Kg)</u>																	
Aluminum	---	---	64000	NLV	ID	ID	---	---	---	---	---	---	---	ND(20.0)	---	---	---
Antimony	---	---	68	NLV	ID	ID	---	---	---	---	---	---	---	ND(6.0)	---	---	---
Arsenic	5.0	---	4.3	NLV	ID	ID	---	---	---	---	---	---	---	ND(1.0)	---	---	---
Barium	100.0	---	14000	NLV	ID	ID	---	---	---	---	---	---	---	ND(20.0)	---	---	---
Beryllium	---	---	290	NLV	ID	ID	---	---	---	---	---	---	---	ND(0.50)	---	---	---
Cadmium	1.0	---	190	NLV	ID	ID	---	---	---	---	---	---	---	ND(0.50)	---	---	---
Calcium	---	---	---	---	---	---	---	---	---	---	---	---	---	ND(500)	---	---	---
Chromium Total	5.0	---	460	NLV	ID	ID	---	---	---	---	---	---	---	ND(1.0)	---	---	---
Cobalt	---	---	2400	NLV	ID	ID	---	---	---	---	---	---	---	ND(5.0)	---	---	---
Copper	---	---	7400	NLV	ID	ID	---	---	---	---	---	---	---	ND(2.5)	---	---	---
Cyanide (total)	---	---	57	NLV	ID	ID	---	---	---	---	---	---	---	ND(0.50)	---	---	---
Iron	---	---	58000	NLV	ID	ID	---	---	---	---	---	---	---	13.2	---	---	---
Lead	5.0	---	ID	NLV	ID	ID	---	---	---	---	---	---	---	7.6	---	---	---
Magnesium	---	---	1000000	NLV	ID	ID	---	---	---	---	---	---	---	ND(500)	---	---	---
Manganese	---	---	9100	NLV	ID	ID	---	---	---	---	---	---	---	ND(1.5)	---	---	---
Mercury	0.2	---	0.056	0.056	ID	ID	---	---	---	---	---	---	---	ND(0.10)	---	---	---
Nickel	---	---	74000	NLV	ID	ID	---	---	---	---	---	---	---	ND(4.0)	---	---	---
Potassium	---	---	---	---	---	---	---	---	---	---	---	---	---	ND(500)	---	---	---
Selenium	1.0	---	970	NLV	ID	ID	---	---	---	---	---	---	---	ND(0.50)	---	---	---
Silver	5.0	---	1500	NLV	ID	ID	---	---	---	---	---	---	---	ND(1.0)	---	---	---
Sodium	---	---	1000000	NLV	ID	ID	---	---	---	---	---	---	---	ND(500)	---	---	---
Thallium	---	---	13	NLV	ID	ID	---	---	---	---	---	---	---	ND(1.0)	---	---	---
Vanadium	---	---	970	NLV	ID	ID	---	---	---	---	---	---	---	ND(5.0)	---	---	---
Zinc	---	---	110000	NLV	ID	ID	---	---	---	---	---	---	---	ND(2.0)	---	---	---
<u>PCB (mg/Kg)</u>																	
Aroclor-1016 (PCB-1016)	---	---	0.0033	0.045	ID	ID	ND(0.19)	ND(0.19)	ND(0.19)	ND(0.19)	ND(0.19)	ND(0.19)	ND(0.19)	ND(1)	ND(0.38)	ND(0.19)	ND(0.19)
Aroclor-1221 (PCB-1221)	---	---	0.0033	0.045	ID	ID	ND(0.22)	ND(0.22)	ND(0.22)	ND(0.22)	ND(0.22)	ND(0.22)	ND(0.22)	ND(1)	ND(0.44)	ND(0.22)	ND(0.22)
Aroclor-1232 (PCB-1232)	---	---	0.0033	0.045	ID	ID	ND(0.17)	ND(0.17)	ND(0.17)	ND(0.17)	ND(0.17)	ND(0.17)	ND(0.17)	ND(1)	ND(0.34)	ND(0.17)	ND(0.17)
Aroclor-1242 (PCB-1242)	---	---	0.0033	0.045	ID	ID	ND(0.29)	ND(0.29)	ND(0.29)	ND(0.29)	ND(0.29)	ND(0.29)	ND(0.29)	ND(1)	ND(0.58)	ND(0.29)	ND(0.29)
Aroclor-1248 (PCB-1248)	---	---	0.0033	0.045	ID	ID	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(1)	ND(0.4)	ND(0.2)	ND(0.2)
Aroclor-1254 (PCB-1254)	---	---	0.0033	0.045	ID	ID	ND(0.12)	ND(0.12)	ND(0.12)	ND(0.12)	ND(0.12)	ND(0.12)	ND(0.12)	ND(1)	22 ⁽⁴⁾	ND(0.12)	ND(0.12)
Aroclor-1260 (PCB-1260)	---	---	0.0033	0.045	ID	ID	ND(0.13)	ND(0.13)	ND(0.13)	ND(0.13)	ND(0.13)	ND(0.13)	1 ⁽⁴⁾	ND(1)	ND(0.26)	ND(0.13)	ND(0.13)
Aroclor-1262 (PCB-1262)	---	---	0.0033	0.045	ID	ID	ND(0.033)	ND(0.033)	ND(0.033)	ND(0.033)	ND(0.033)	ND(0.033)	ND(0.033)	ND(1)	ND(0.066)	ND(0.033)	ND(0.033)
Aroclor-1268 (PCB-1268)	---	---	0.0033	0.045	ID	ID	ND(0.033)	ND(0.033)	ND(0.033)	ND(0.033)	ND(0.033)	ND(0.033)	ND(0.033)	ND(1)	ND(0.066)	ND(0.033)	ND(0.033)
<u>Total PCB (mg/Kg)</u>	---	50	0.0033	0.045	ID	ID	---	---	---	---	---	---	1 ⁽⁴⁾	ND(1)	22 ⁽⁴⁾	---	---

Notes:

(1) Cleanup Criteria established in Part 7 of the Administrative Rules, effective December 21, 2002, pursuant to Part 201 Environmental Remediation, 1994 PA 451, as amended

-- No Criteria available for this constituent or not analyzed.

NLV **Constituent is not likely to volatilize**

ID Inadequate data exists to develop criterion for constituent

ND () Not detected above the value in parenthesis.

J The associated value is qualified as an estimated quantity.

U The analyte was analyzed for, but was qualified not detected above the value identified.

UJ The analyte was reported or qualified as not detected however, the sample report limit is qualified as an estimated value and may be inaccurate or imprecise.

(2) Max concentration for toxicity characteristic based on TCLP analysis. However, TCLP analysis was not performed on these samples.

(3) TSCA - toxic substances control act.

(4) CRA-123R is a groundwater sample.

TCLP Toxicity Characteristic Leaching Procedure.

Exceeds Part 201 Criteria.

Exceeds Part 201 Criteria and either TSCA or RCRA (TCLP) Criteria.

TABLE 3
LNAPL ANALYTICAL RESULTS
GENERAL MOTORS CORPORATION
GMPT - WILLOW RUN
YPSILANTI, MICHIGAN

	CRA-41R	CRA-75M	CRA-75M	CRA-079M	CRA-080M	CRA-86M-B	CRA-086M	CRA-092M	CRA-096M	CRA-096M	CRA-096M	CRA-102M	CRA-111R	CRA-111R	CRA-111R	CRA-123R
	O-17358-012004-MM-516	O-17358-012004-MM-522	O-17358-012104-MM-522	O-17358-033104-MM-554	O-17358-012004-MM-523	O-17358-012004-MM-518	O-17358-033104-MM-553	O-17358-033104-MM-552	O-17358-012004-MM-516	O-17358-012004-MM-517	O-17358-012204-MM-517	O-17358-012004-MM-519	O-17358-012004-MM-514	O-17358-012004-MM-515	O-17358-033004-MM-551	GW-17358-071703-JD-001 ⁴
	1/20/2004	1/20/2004	1/21/2004	3/31/2004	1/20/2004	1/20/2004	3/31/2004	3/31/2004	1/20/2004	1/20/2004	1/22/2004	1/20/2004	1/20/2004	1/20/2004 Duplicate	3/30/2004	7/17/2003 (mg/L)
VOC (mg/kg)																
1,1,1-Trichloroethane	ND(3)	ND(1.4)	---	---	ND(1.4)	ND(1.4)	---	---	---	ND(1.4)	---	ND(1.4)	ND(1.4)	ND(1.4)	---	ND(0.001)
1,1,2,2-Tetrachloroethane	ND(3)	ND(1.4)	---	---	ND(1.4)	ND(1.4)	---	---	---	ND(1.4)	---	ND(1.4)	ND(1.4)	ND(1.4)	---	ND(0.001)
1,1,2-Trichloroethane	ND(3)	ND(1.4)	---	---	ND(1.4)	ND(1.4)	---	---	---	ND(1.4)	---	ND(1.4)	ND(1.4)	ND(1.4)	---	ND(0.001)
1,1-Dichloroethane	ND(3)	ND(1.4)	---	---	ND(1.4)	ND(1.4)	---	---	---	ND(1.4)	---	ND(1.4)	ND(1.4)	ND(1.4)	---	ND(0.001)
1,1-Dichloroethene	ND(3)	ND(1.4)	---	---	ND(1.4)	ND(1.4)	---	---	---	ND(1.4)	---	ND(1.4)	ND(1.4)	ND(1.4)	---	ND(0.001)
1,2,4-Trichlorobenzene	ND(5.7)	ND(2.7)	---	---	ND(2.7)	4.6	---	---	---	ND(2.7)	---	ND(2.7)	ND(2.7)	ND(2.7)	---	ND(0.001)
1,2-Dibromo-3-chloropropane (DBCP)	ND(5.7)	ND(2.7)	---	---	ND(2.7)	ND(2.7)	---	---	---	ND(2.7)	---	ND(2.7)	ND(2.7)	ND(2.7)	---	ND(0.001)
1,2-Dibromoethane (Ethylene Dibromide)	ND(3)	ND(1.4)	---	---	ND(1.4)	ND(1.4)	---	---	---	ND(1.4)	---	ND(1.4)	ND(1.4)	ND(1.4)	---	ND(0.001)
1,2-Dichlorobenzene	ND(5.7)	ND(2.7)	---	---	ND(2.7)U	ND(2.7)U	---	---	---	ND(2.7)U	---	ND(2.7)	ND(2.7)	ND(2.7)	---	ND(0.001)
1,2-Dichloroethane	ND(3)	ND(1.4)	---	---	ND(1.4)	ND(1.4)	---	---	---	ND(1.4)	---	ND(1.4)	ND(1.4)	ND(1.4)	---	ND(0.001)
1,2-Dichloropropane	ND(3)	ND(1.4)	---	---	ND(1.4)	ND(1.4)	---	---	---	ND(1.4)	---	ND(1.4)	ND(1.4)	ND(1.4)	---	ND(0.001)
1,3-Dichlorobenzene	ND(5.7)	ND(2.7)	---	---	ND(2.7)	0.53 J	---	---	---	ND(2.7)	---	ND(2.7)	ND(2.7)	ND(2.7)	---	ND(0.001)
1,4-Dichlorobenzene	ND(5.7)	ND(2.7)	---	---	ND(2.7)	ND(2.7)	---	---	---	ND(2.7)	---	ND(2.7)	ND(2.7)	ND(2.7)	---	ND(0.001)
2-Butanone (Methyl Ethyl Ketone)	ND(12)	ND(5.7)	---	---	ND(5.7)	ND(5.7)	---	---	---	ND(5.6)	---	ND(5.6)	ND(5.6)	ND(5.6)	---	ND(0.005)
2-Hexanone	ND(12)	ND(5.7)	---	---	ND(5.7)	ND(5.7)	---	---	---	ND(5.6)	---	ND(5.6)U	ND(5.6)	ND(5.6)	---	ND(0.005)
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ND(12)	ND(5.7)	---	---	ND(5.7)U	ND(5.7)	---	---	---	ND(5.6)U	---	ND(5.6)U	ND(5.6)U	ND(5.6)	---	ND(0.005)
Acetone	ND(12)U	ND(5.7)U	---	---	ND(5.7)U	ND(5.7)U	---	---	---	ND(5.6)U	---	ND(5.6)U	ND(5.6)U	ND(5.6)U	---	ND(0.025)
Benzene	ND(3)	ND(1.4)	---	---	ND(1.4)	0.094 J	---	---	---	ND(1.4)	---	ND(1.4)	ND(1.4)	ND(1.4)	---	ND(0.001)
Bromodichloromethane	ND(3)	ND(1.4)	---	---	ND(1.4)	ND(1.4)	---	---	---	ND(1.4)	---	ND(1.4)	ND(1.4)	ND(1.4)	---	ND(0.001)
Bromoform	ND(3)	ND(1.4)	---	---	ND(1.4)	ND(1.4)	---	---	---	ND(1.4)	---	ND(1.4)	ND(1.4)	ND(1.4)	---	ND(0.001)
Bromomethane (Methyl Bromide)	ND(5.7)	ND(2.7)	---	---	ND(2.7)	ND(2.7)	---	---	---	ND(2.7)	---	ND(2.7)	ND(2.7)	ND(2.7)	---	ND(0.001)
Carbon disulfide	ND(3)	ND(1.4)	---	---	ND(1.4)	ND(1.4)	---	---	---	ND(1.4)	---	ND(1.4)	ND(1.4)	ND(1.4)	---	ND(0.001)
Carbon tetrachloride	ND(3)	ND(1.4)	---	---	ND(1.4)	ND(1.4)	---	---	---	ND(1.4)	---	ND(1.4)	ND(1.4)	ND(1.4)	---	ND(0.001)
Chlorobenzene	ND(3)	ND(1.4)	---	---	ND(1.4)	ND(1.4)	---	---	---	1.1 J	---	ND(1.4)	ND(1.4)	ND(1.4)	---	ND(0.001)
Chloroethane	ND(5.7)	ND(2.7)	---	---	ND(2.7)	ND(2.7)	---	---	---	ND(2.7)	---	ND(2.7)	ND(2.7)	ND(2.7)	---	ND(0.001)
Chloroform (Trichloromethane)	ND(3)	ND(1.4)	---	---	ND(1.4)	ND(1.4)	---	---	---	ND(1.4)	---	ND(1.4)	ND(1.4)	ND(1.4)	---	ND(0.001)
Chloromethane (Methyl Chloride)	ND(5.7)	ND(2.7)	---	---	ND(2.7)	ND(2.7)	---	---	---	ND(2.7)	---	ND(2.7)	ND(2.7)	ND(2.7)	---	ND(0.001)
cis-1,2-Dichloroethene	ND(1.5)	ND(0.71)	---	---	ND(0.7)	ND(0.71)	---	---	---	0.24 J	---	ND(0.7)	ND(0.7)	ND(0.69)	---	ND(0.001)
Cyclohexane	ND(12)	ND(5.7)	---	---	ND(5.7)	0.078 J	---	---	---	ND(5.6)	---	ND(5.6)	ND(5.6)	ND(5.6)	---	---
Dibromochloromethane	ND(3)	ND(1.4)	---	---	ND(1.4)	ND(1.4)	---	---	---	ND(1.4)	---	ND(1.4)	ND(1.4)	ND(1.4)	---	ND(0.001)
Dichlorodifluoromethane (CFC-12)	ND(5.7)	ND(2.7)	---	---	ND(2.7)	ND(2.7)	---	---	---	ND(2.7)	---	ND(2.7)	ND(2.7)	ND(2.7)	---	ND(0.001)
Ethylbenzene	3	ND(1.4)	---	---	0.27 J	0.41 J	---	---	---	ND(1.4)	---	ND(1.4)	0.21 J	0.22 J	---	ND(0.001)
Isopropylbenzene	3.6 J	ND(2.7)	---	---	ND(2.7)	0.35 J	---	---	---	ND(2.7)	---	ND(2.7)	ND(2.7)	ND(2.7)	---	ND(0.001)
Methyl acetate	ND(5.7)U	ND(2.7)U	---	---	ND(2.7)U	ND(2.7)U	---	---	---	ND(2.7)U	---	ND(2.7)	ND(2.7)	ND(2.7)U	---	---
Methyl cyclohexane	2.4 J	ND(1.4)	---	---	ND(1.4)	0.28 J	---	---	---	ND(1.4)	---	ND(1.4)	ND(1.4)	ND(1.4)	---	---
Methyl Tert Butyl Ether	ND(12)	ND(5.7)	---	---	ND(5.7)	ND(5.7)	---	---	---	ND(5.6)	---	ND(5.6)	ND(5.6)	ND(5.6)	---	0.004
Methylene chloride	ND(3)	ND(1.4)	---	---	ND(1.4)	ND(1.4)	---	---	---	ND(1.4)	---	ND(1.4)	ND(1.4)	0.25 J	---	0.016
Styrene	ND(3)	ND(1.4)	---	---	ND(1.4)	ND(1.4)	---	---	---	ND(1.4)	---	ND(1.4)	ND(1.4)	ND(1.4)	---	ND(0.001)
Tetrachloroethene	ND(3)	ND(1.4)	---	---	0.16 J	ND(1.4)	---	---	---	ND(1.4)	---	ND(1.4)	ND(1.4)	ND(1.4)	---	ND(0.001)
Toluene	ND(3)	ND(1.4)	---	---	0.19 J	0.5 J	---	---	---	ND(1.4)	---	ND(1.4)	0.095 J	0.082 J	---	ND(0.001)
trans-1,2-Dichloroethene	ND(1.5)	ND(0.71)	---	---	ND(0.7)	ND(0.71)	---	---	---	ND(0.7)	---	ND(0.7)	ND(0.7)	ND(0.69)	---	ND(0.001)
Trichloroethene	ND(3)	ND(1.4)	---	---	0.11 J	ND(1.4)	---	---	---	0.34 J	---	ND(1.4)	ND(1.4)	ND(1.4)	---	ND(0.001)
Trichlorofluoromethane (CFC-11)	ND(5.7)	ND(2.7)	---	---	ND(2.7)	ND(2.7)	---	---	---	ND(2.7)	---	ND(2.7)	ND(2.7)	ND(2.7)	---	ND(0.001)
Trifluorotrichloroethane (Freon 113)	ND(12)	ND(5.7)	---	---	ND(5.7)	ND(5.7)	---	---	---	ND(5.6)	---	ND(5.6)	ND(5.6)	ND(5.6)	---	---
Vinyl chloride	ND(5.7)	0.16 J	---	---	ND(2.7)	ND(2.7)	---	---	---	ND(2.7)	---	ND(2.7)	ND(2.7)	ND(2.7)	---	ND(0.001)
Xylene (total)	2.9 J	ND(1.4)	---	---	1.3 J	1.8	---	---	---	ND(1.4)	---	ND(1.4)	0.23 J	0.26 J	---	ND(0.001)
cis-1,3-Dichloropropene	ND(3)	ND(1.4)	---	---	ND(1.4)	ND(1.4)	---	---	---	ND(1.4)	---	ND(1.4)	ND(1.4)	ND(1.4)	---	ND(0.001)
trans-1,3-Dichloropropene	ND(3)	ND(1.4)	---	---	ND(1.4)	ND(1.4)	---	---	---	ND(1.4)	---	ND(1.4)	ND(1.4)	ND(1.4)	---	ND(0.001)
1,3-Dichloropropene - Total	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

TABLE 3
LNAPL ANALYTICAL RESULTS
GENERAL MOTORS CORPORATION
GMPT - WILLOW RUN
YPSILANTI, MICHIGAN

	CRA-41R	CRA-75M	CRA-75M	CRA-079M	CRA-080M	CRA-86M-B	CRA-086M	CRA-092M	CRA-096M	CRA-096M	CRA-096M	CRA-102M	CRA-111R	CRA-111R	CRA-111R	CRA-123R
	O-17358-012004-MM-516	O-17358-012004-MM-522	O-17358-012104-MM-522	O-17358-033104-MM-554	O-17358-012004-MM-523	O-17358-012004-MM-518	O-17358-033104-MM-553	O-17358-033104-MM-552	O-17358-012004-MM-516	O-17358-012004-MM-517	O-17358-012204-MM-517	O-17358-012004-MM-519	O-17358-012004-MM-514	O-17358-012004-MM-515	O-17358-033004-MM-551	GW-17358-071703-JD-001 ⁴
	1/20/2004	1/20/2004	1/21/2004	3/31/2004	1/20/2004	1/20/2004	3/31/2004	3/31/2004	1/20/2004	1/20/2004	1/22/2004	1/20/2004	1/20/2004	1/20/2004 Duplicate	3/30/2004	7/17/2003 (mg/L)
SVOC (mg/Kg)																
2,4,5-Trichlorophenol	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.04)
2,4,6-Trichlorophenol	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
2,4-Dichlorophenol	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
2,4-Dimethylphenol	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.08)
2,4-Dinitrophenol	ND(4800)	---	ND(4800)	---	ND(1900)	ND(1900)	---	---	---	---	ND(1900)	ND(960)	ND(1900)	ND(1900)	---	ND(0.02)
2,4-Dinitrotoluene	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
2,6-Dinitrotoluene	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
2-Chloronaphthalene	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
2-Chlorophenol	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
2-Methylnaphthalene	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
2-Methylphenol	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
2-Nitroaniline	ND(4800)	---	ND(4800)	---	ND(1900)	ND(1900)	---	---	---	---	ND(1900)	ND(960)	ND(1900)	ND(1900)	---	ND(0.1)
2-Nitrophenol	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.08)
3,3'-Dichlorobenzidine	ND(4800)	---	ND(4800)	---	ND(1900)	ND(1900)	---	---	---	---	ND(1900)	ND(960)	ND(1900)	ND(1900)	---	ND(0.02)
3-Nitroaniline	ND(4800)	---	ND(4800)	---	ND(1900)	ND(1900)	---	---	---	---	ND(1900)	ND(960)	ND(1900)	ND(1900)	---	ND(0.1)
4,6-Dinitro-2-methylphenol	ND(4800)	---	ND(4800)	---	ND(1900)	ND(1900)	---	---	---	---	ND(1900)	ND(960)	ND(1900)	ND(1900)	---	ND(0.08)
4-Bromophenyl phenyl ether	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
4-Chloro-3-methylphenol	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
4-Chloroaniline	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
4-Chlorophenyl phenyl ether	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
4-Methylphenol	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
4-Nitroaniline	ND(4800)	---	ND(4800)	---	ND(1900)	ND(1900)	---	---	---	---	ND(1900)	ND(960)	ND(1900)	ND(1900)	---	ND(0.1)
4-Nitrophenol	ND(4800)	---	ND(4800)	---	ND(1900)	ND(1900)	---	---	---	---	ND(1900)	ND(960)	ND(1900)	ND(1900)	---	ND(0.02)
Acenaphthene	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
Acenaphthylene	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
Acetophenone	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	---
Anthracene	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
Atrazine	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	---
Benzaldehyde	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	---
Benzo(a)anthracene	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
Benzo(a)pyrene	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
Benzo(b)fluoranthene	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
Benzo(g,h,i)perylene	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
Benzo(k)fluoranthene	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
Biphenyl	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	---
bis(2-Chloroethoxy)methane	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
bis(2-Chloroethyl)ether	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
bis(2-Ethylhexyl)phthalate	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	0.034
Butyl benzylphthalate	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
Caprolactam	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	---
Carbazole	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
Chrysene	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
Dibenz(a,h)anthracene	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
Dibenzofuran	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
Diethyl phthalate	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
Dimethyl phthalate	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
Di-n-butylphthalate	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
Di-n-octyl phthalate	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
Fluoranthene	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
Fluorene	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
Hexachlorobenzene	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
Hexachlorobutadiene	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
Hexachlorocyclopentadiene	ND(4800)	---	ND(4800)	---	ND(1900)	ND(1900)	---	---	---	---	ND(1900)	ND(960)	ND(1900)	ND(1900)	---	ND(0.04)
Hexachloroethane	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
Indeno(1,2,3-cd)pyrene	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
Isophorone	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
Naphthalene	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
Nitrobenzene	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)

TABLE 3
LNAPL ANALYTICAL RESULTS
GENERAL MOTORS CORPORATION
GMPT - WILLOW RUN
YPSILANTI, MICHIGAN

	CRA-41R	CRA-75M	CRA-75M	CRA-079M	CRA-080M	CRA-86M-B	CRA-086M	CRA-092M	CRA-096M	CRA-096M	CRA-102M	CRA-111R	CRA-111R	CRA-111R	CRA-123R	
	O-17358-012004-MM-516	O-17358-012004-MM-522	O-17358-012104-MM-522	O-17358-033104-MM-554	O-17358-012004-MM-523	O-17358-012004-MM-518	O-17358-033104-MM-553	O-17358-033104-MM-552	O-17358-012004-MM-516	O-17358-012004-MM-517	O-17358-012204-MM-517	O-17358-012004-MM-519	O-17358-012004-MM-514	O-17358-012004-MM-515	O-17358-033004-MM-551	GW-17358-071703-JD-001
	1/20/2004	1/20/2004	1/21/2004	3/31/2004	1/20/2004	1/20/2004	3/31/2004	3/31/2004	1/20/2004	1/20/2004	1/22/2004	1/20/2004	1/20/2004	1/20/2004	1/20/2004	7/17/2003
													Duplicate			(mg/L)
N-Nitrosodi-n-propylamine	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
N-Nitrosodiphenylamine	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
Pentachlorophenol	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.08)
Phenanthrene	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
Phenol	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
Pyrene	ND(1000)	---	ND(1000)	---	ND(400)	ND(400)	---	---	---	---	ND(400)	ND(200)	ND(400)	ND(400)	---	ND(0.02)
Inorganics (mg/Kg)																
Aluminum	32.0	---	305	---	ND(20.0)	ND(20.0)	---	---	---	---	29.7	ND(20.0)	ND(20.0)	ND(20.0)	---	---
Antimony	ND(6.0)	---	ND(6.0)	---	ND(6.0)	ND(6.0)	---	---	---	---	ND(6.0)	ND(6.0)	ND(6.0)	ND(6.0)	---	---
Arsenic	4.6	---	1.4	---	6.8	9.8	---	---	---	---	1.4	1.4	ND(1.0)	ND(1.0)	---	---
Barium	ND(20.0)	---	ND(20.0)	---	ND(20.0)	ND(20.0)	---	---	---	---	ND(20.0)	ND(20.0)	ND(20.0)	ND(20.0)	---	---
Beryllium	ND(0.50)	---	ND(0.50)	---	ND(0.50)	ND(0.50)	---	---	---	---	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	---	---
Cadmium	ND(0.50)	---	0.59	---	ND(0.50)	ND(0.50)	---	---	---	---	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	---	---
Calcium	ND(500)	---	1120	---	ND(500)	ND(500)	---	---	---	---	ND(500)	ND(500)	ND(500)	ND(500)	---	---
Chromium Total	ND(1.0)	---	4.8	---	2.5	1.4	---	---	---	---	1.6	ND(1.0)	ND(1.0)	ND(1.0)	---	---
Cobalt	ND(5.0)	---	ND(5.0)	---	ND(5.0)	ND(5.0)	---	---	---	---	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	---	---
Copper	4.7	---	60.5	---	ND(2.5)	ND(2.5)	---	---	---	---	5.0	ND(2.5)	ND(2.5)	ND(2.5)	---	---
Cyanide (total)	ND(0.50)	---	ND(0.50)	---	ND(0.50)	ND(0.50)	---	---	---	---	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	---	---
Iron	133	---	3040	---	12.1	ND(10.0)	---	---	---	---	102	ND(10.0)	19.4	32.3	---	---
Lead	0.66	---	28.2	---	0.87	0.32	---	---	---	---	10.2	19.6	ND(0.30)	ND(0.30)	---	---
Magnesium	ND(500)	---	ND(500)	---	ND(500)	ND(500)	---	---	---	---	ND(500)	ND(500)	ND(500)	ND(500)	---	---
Manganese	ND(1.5)	---	13.6	---	ND(1.5)	ND(1.5)	---	---	---	---	ND(1.5)	ND(1.5)	ND(1.5)	ND(1.5)	---	---
Mercury	ND(0.10)	---	ND(0.10)	---	ND(0.10)	ND(0.10)	---	---	---	---	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	---	---
Nickel	ND(4.0)	---	4.3	---	ND(4.0)	ND(4.0)	---	---	---	---	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	---	---
Potassium	ND(500)	---	ND(500)	---	ND(500)	ND(500)	---	---	---	---	ND(500)	ND(500)	ND(500)	ND(500)	---	---
Selenium	ND(0.50)	---	ND(0.50)	---	ND(0.50)	ND(0.50)	---	---	---	---	ND(0.50)	ND(0.50)	0.52	ND(0.50)	---	---
Silver	ND(1.0)	---	ND(1.0)	---	ND(1.0)	ND(1.0)	---	---	---	---	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	---	---
Sodium	ND(500)	---	514	---	ND(500)	ND(500)	---	---	---	---	ND(500)	ND(500)	ND(500)	ND(500)	---	---
Thallium	ND(1.0)	---	ND(1.0)	---	ND(1.0)	ND(1.0)	---	---	---	---	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	---	---
Vanadium	ND(5.0)	---	ND(5.0)	---	ND(5.0)	ND(5.0)	---	---	---	---	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	---	---
Zinc	6.6	---	29.9	---	ND(2.0)	ND(2.0)	---	---	---	---	3.1	ND(2.0)	ND(2.0)	ND(2.0)	---	---
PCB (mg/Kg)																
Aroclor-1016 (PCB-1016)	ND(1)	ND(1)	--	ND(0.38)	ND(5)	ND(10)UJ	ND(1.9)	ND(1.9)	---	ND(1)	---	ND(1)	ND(2)	ND(2)	ND(0.38)	ND(0.0008)
Aroclor-1221 (PCB-1221)	ND(1)	ND(1)	--	ND(0.44)	ND(5)	ND(10)UJ	ND(2.2)	ND(2.2)	---	ND(1)	---	ND(1)	ND(2)	ND(2)	ND(0.44)	ND(0.0008)
Aroclor-1232 (PCB-1232)	ND(1)	ND(1)	--	ND(0.34)	ND(5)	ND(10)UJ	ND(1.7)	ND(1.7)	---	ND(1)	---	ND(1)	ND(2)	ND(2)	ND(0.34)	ND(0.0008)
Aroclor-1242 (PCB-1242)	ND(1)	ND(1)	--	ND(0.58)	ND(5)	ND(10)UJ	36 ^{ad}	ND(2.9)	---	ND(1)	---	ND(1)	ND(2)	ND(2)	ND(0.58)	ND(0.0008)
Aroclor-1248 (PCB-1248)	ND(1)	ND(1)	--	ND(0.4)	ND(5)	54 J ^{ad}	ND(2)	ND(2)	---	ND(1)	---	ND(1)	ND(2)	ND(2)	ND(0.4)	ND(0.0008)
Aroclor-1254 (PCB-1254)	ND(1)	ND(1)	--	ND(0.24)	29 ^{ad}	ND(10)UJ	ND(1.2)	12 ^{ad}	---	4.7 ^{ad}	---	ND(1)	17 J ^{ad}	18 J ^{ad}	15 ^{ad}	ND(0.0008)
Aroclor-1260 (PCB-1260)	ND(1)	6 J ^{ad}	--	18 ^{ad}	ND(5)	35 J ^{ad}	37 ^{ad}	ND(1.3)	---	ND(1)	---	ND(1)	ND(2)	ND(2)	ND(0.26)	ND(0.0008)
Aroclor-1262 (PCB-1262)	ND(1)	ND(1)	--	ND(0.066)	ND(5)	ND(10)UJ	ND(0.33)	ND(0.33)	---	ND(1)	---	ND(1)	ND(2)	ND(2)	ND(0.066)	---
Aroclor-1268 (PCB-1268)	ND(1)	ND(1)	--	ND(0.066)	ND(5)	ND(10)UJ	ND(0.33)	ND(0.33)	---	ND(1)	---	ND(1)	ND(2)	ND(2)	ND(0.066)	---
Total PCB (mg/Kg)	ND(1)	6 J ^{ad}	--	18 ^{ad}	29 ^{ad}	89 J ^{ad}	73 ^{ad}	12 ^{ad}	---	4.7 ^{ad}	---	ND(1)	17 J ^{ad}	18 J ^{ad}	15 ^{ad}	ND(0.0008)

Notes:

- (1) Cleanup Criteria established in Part 7 of the Administrative Rules, effective December 21, 2002, pursuant to Part 201 Environmental Remediation, 1994 PA 451, as amended
-- No Criteria available for this constituent or not analyzed.

NLV *Constituent is not likely to volatilize*

ID Inadequate data exists to develop criterion for constituent

ND () Not detected above the value in parenthesis.

J The associated value is qualified as an estimated quantity.

U The analyte was analyzed for, but was qualified not detected above the value identified.

UJ The analyte was reported or qualified as not detected however, the sample report limit is qualified as an estimated value and may be inaccurate or imprecise.

(2) Max concentration for toxicity characteristic based on TCLP analysis. However, TCLP analysis was not performed on these samples.

(3) TSCA - toxic substances control act.

(4) CRA-123R is a groundwater sample.

TCLP Toxicity Characteristic Leaching Procedure.

Exceeds Part 201 Criteria.

Exceeds Part 201 Criteria and either TSCA or RCRA (TCLP) Criteria.

TABLE 3
LNAPL ANALYTICAL RESULTS
GENERAL MOTORS CORPORATION
GMPT - WILLOW RUN
YPSILANTI, MICHIGAN

	CRA-123R	CRA-138M	CRA-202M	CRA-202M	CRA-202M	CRA-210M-B	CRA-215M-B	CRA-229M	CRA-235RB	CRA-241M	CRA-244R	CRA-300M	CRA-301M	CRA-408M-S	CRA-408M-S
	GW-17358-081903-JD-002 ⁴	O-17358-033104-MM-560	O-17358-012004-MM-512	O-17358-033004-MM-542	O-17358-033004-MM-543	O-17358-012004-MM-513	O-17358-033004-MM-540	O-17358-012004-MM-525	O-17358-033004-MM-545	O-17358-012004-MM-521	O-17358-012004-MM-526	O-17358-033104-MM-558	O-17358-033104-MM-557	O-17358-012104-MM-524	O-17358-012304-MM-524
	8/19/2003	3/31/2004	1/20/2004	3/30/2004	3/30/2004	1/20/2004	3/30/2004	1/20/2004	3/30/2004	1/20/2004	1/20/2004	3/31/2004	3/31/2004	1/21/2004	1/23/2004
	(mg/L)														
VOC (mg/kg)															
1,1,1-Trichloroethane	ND(0.002)	---	ND(1.4)	---	---	ND(1.3)	---	ND(2.9)	---	ND(1.4)	ND(7.5)	---	---	ND(35)	---
1,1,2,2-Tetrachloroethane	ND(0.002)	---	ND(1.4)	---	---	ND(1.3)	---	ND(2.9)	---	ND(1.4)	ND(7.5)	---	---	ND(35)	---
1,1,2-Trichloroethane	ND(0.002)	---	ND(1.4)	---	---	ND(1.3)	---	ND(2.9)	---	ND(1.4)	ND(7.5)	---	---	ND(35)	---
1,1-Dichloroethane	ND(0.002)	---	ND(1.4)	---	---	ND(1.3)	---	ND(2.9)	---	ND(1.4)	ND(7.5)	---	---	ND(35)	---
1,1-Dichloroethene	ND(0.002)	---	ND(1.4)	---	---	ND(1.3)	---	ND(2.9)	---	ND(1.4)	ND(7.5)	---	---	ND(35)	---
1,2,4-Trichlorobenzene	ND(0.002)	---	ND(2.7)	---	---	ND(2.6)	---	ND(5.6)	---	ND(2.7)	ND(14)	---	---	ND(67)	---
1,2-Dibromo-3-chloropropane (DBCP)	ND(0.002)	---	ND(2.7)	---	---	ND(2.6)	---	ND(5.6)	---	ND(2.7)	ND(14)	---	---	ND(67)	---
1,2-Dibromoethane (Ethylene Dibromide)	ND(0.002)	---	ND(1.4)	---	---	ND(1.3)	---	ND(2.9)	---	ND(1.4)	ND(7.5)	---	---	ND(35)	---
1,2-Dichlorobenzene	ND(0.002)	---	ND(2.7)U	---	---	ND(2.6)	---	ND(5.6)	---	ND(2.7)	ND(14)	---	---	ND(67)	---
1,2-Dichloroethane	ND(0.002)	---	ND(1.4)	---	---	ND(1.3)	---	ND(2.9)	---	ND(1.4)	ND(7.5)	---	---	23 J ⁴	---
1,2-Dichloropropane	ND(0.002)	---	ND(1.4)	---	---	ND(1.3)	---	ND(2.9)	---	ND(1.4)	ND(7.5)	---	---	5.7 J	---
1,3-Dichlorobenzene	ND(0.002)	---	ND(2.7)	---	---	ND(2.6)	---	ND(5.6)	---	ND(2.7)	ND(14)	---	---	ND(67)	---
1,4-Dichlorobenzene	ND(0.002)	---	ND(2.7)	---	---	ND(2.6)	---	ND(5.6)	---	ND(2.7)	ND(14)	---	---	ND(67)	---
2-Butanone (Methyl Ethyl Ketone)	ND(0.01)	---	ND(5.6)	---	---	ND(5.4)	---	ND(12)	---	ND(5.7)	ND(30)	---	---	ND(140)	---
2-Hexanone	ND(0.01)	---	ND(5.6)	---	---	ND(5.4)	---	ND(12)	---	ND(5.7)	ND(30)	---	---	ND(140)	---
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ND(0.01)	---	ND(5.6)	---	---	ND(5.4)U	---	ND(12)U	---	ND(5.7)	ND(30)U	---	---	ND(140)	---
Acetone	ND(0.05)	---	ND(5.6)U	---	---	ND(5.4)U	---	ND(12)U	---	ND(5.7)U	ND(30)U	---	---	ND(140)	---
Benzene	ND(0.002)	---	ND(1.4)	---	---	ND(1.3)	---	0.17 J	---	ND(1.4)	ND(7.5)	---	---	810 ⁹⁸⁸	---
Bromodichloromethane	ND(0.002)	---	ND(1.4)	---	---	ND(1.3)	---	ND(2.9)	---	ND(1.4)	ND(7.5)	---	---	ND(35)	---
Bromoform	ND(0.002)	---	ND(1.4)	---	---	ND(1.3)	---	ND(2.9)	---	ND(1.4)	ND(7.5)	---	---	ND(35)	---
Bromomethane (Methyl Bromide)	ND(0.002)	---	ND(2.7)	---	---	ND(2.6)	---	ND(5.6)	---	ND(2.7)	ND(14)	---	---	ND(67)	---
Carbon disulfide	ND(0.002)	---	ND(1.4)	---	---	ND(1.3)	---	ND(2.9)	---	ND(1.4)	ND(7.5)	---	---	ND(35)	---
Carbon tetrachloride	ND(0.002)	---	ND(1.4)	---	---	ND(1.3)	---	ND(2.9)	---	ND(1.4)	ND(7.5)	---	---	ND(35)	---
Chlorobenzene	ND(0.002)	---	2.2	---	---	ND(1.3)	---	ND(2.9)	---	ND(1.4)	2.6 J	---	---	ND(35)	---
Chloroethane	ND(0.002)	---	ND(2.7)	---	---	ND(2.6)	---	ND(5.6)	---	ND(2.7)	ND(14)	---	---	ND(67)	---
Chloroform (Trichloromethane)	ND(0.002)	---	ND(1.4)	---	---	ND(1.3)	---	ND(2.9)	---	ND(1.4)	ND(7.5)	---	---	ND(35)	---
Chloromethane (Methyl Chloride)	ND(0.002)	---	ND(2.7)	---	---	ND(2.6)	---	ND(5.6)	---	ND(2.7)	ND(14)	---	---	ND(67)	---
cis-1,2-Dichloroethene	ND(0.002)	---	ND(0.7)	---	---	ND(0.67)	---	0.22 J	---	ND(1.4)	ND(3.7)	---	---	ND(17)	---
Cyclohexane	---	---	ND(5.6)	---	---	ND(5.4)	---	0.36 J	---	ND(5.7)	ND(30)	---	---	990	---
Dibromochloromethane	ND(0.002)	---	ND(1.4)	---	---	ND(1.3)	---	ND(2.9)	---	ND(1.4)	ND(7.5)	---	---	ND(35)	---
Dichlorodifluoromethane (CFC-12)	ND(0.002)	---	ND(2.7)	---	---	ND(2.6)	---	ND(5.6)	---	ND(2.7)	ND(14)	---	---	ND(67)	---
Ethylbenzene	ND(0.002)	---	0.23 J	---	---	ND(1.3)	---	2 J	---	0.78 J	3.6 J	---	---	980 ⁹⁸⁸	---
Isopropylbenzene	0.002	---	ND(2.7)	---	---	ND(2.6)	---	1.3 J	---	0.61 J	4 J	---	---	97 ⁹⁸⁸	---
Methyl acetate	---	---	ND(2.7)U	---	---	ND(2.6)U	---	ND(5.6)	---	ND(2.7)U	ND(14)	---	---	ND(67)	---
Methyl cyclohexane	---	---	0.14 J	---	---	ND(1.3)	---	1.8 J	---	0.3 J	2.1 J	---	---	670	---
Methyl Tert Butyl Ether	0.005	---	ND(5.6)	---	---	ND(5.4)	---	ND(12)	---	ND(5.7)	ND(30)	---	---	ND(140)	---
Methylene chloride	ND(0.01)	---	ND(1.4)	---	---	ND(1.3)	---	0.79 J	---	0.46 J	2.1 J	---	---	ND(35)	---
Styrene	ND(0.002)	---	ND(1.4)	---	---	ND(1.3)	---	ND(2.9)	---	ND(1.4)	ND(7.5)	---	---	ND(35)	---
Tetrachloroethene	ND(0.002)	---	ND(1.4)	---	---	ND(1.3)	---	ND(2.9)	---	ND(1.4)	ND(7.5)	---	---	ND(35)	---
Toluene	0.004	---	0.12 J	---	---	ND(1.3)	---	0.65 J	---	1.8	1.9 J	---	---	41	---
trans-1,2-Dichloroethene	ND(0.002)	---	ND(0.7)	---	---	ND(0.67)	---	ND(1.4)	---	ND(0.7)	ND(3.7)	---	---	ND(17)	---
Trichloroethene	ND(0.002)	---	ND(1.4)	---	---	ND(1.3)	---	ND(2.9)	---	0.34 J	ND(7.5)	---	---	ND(35)	---
Trichlorofluoromethane (CFC-11)	ND(0.002)	---	ND(2.7)	---	---	ND(2.6)	---	ND(5.6)	---	ND(2.7)	ND(14)	---	---	ND(67)	---
Trifluorotrichloroethane (Freon 113)	---	---	ND(5.6)	---	---	ND(5.4)	---	ND(12)	---	ND(5.7)	ND(30)	---	---	ND(140)	---
Vinyl chloride	ND(0.002)	---	ND(2.7)	---	---	ND(2.6)	---	ND(5.6)	---	ND(2.7)	ND(14)	---	---	ND(67)	---
Xylene (total)	ND(0.002)	---	1.1 J	---	---	0.89 J	---	14	---	3.8	21	---	---	2000 ⁹⁸⁸	---
cis-1,3-Dichloropropene	ND(0.002)	---	ND(1.4)	---	---	ND(1.3)	---	ND(2.9)	---	ND(1.4)	ND(7.5)	---	---	ND(35)	---
trans-1,3-Dichloropropene	ND(0.002)	---	ND(1.4)	---	---	ND(1.3)	---	ND(2.9)	---	ND(1.4)	ND(7.5)	---	---	ND(35)	---
1,3-Dichloropropene - Total	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

TABLE 3
LNAPL ANALYTICAL RESULTS
GENERAL MOTORS CORPORATION
GMPT - WILLOW RUN
YPSILANTI, MICHIGAN

	CRA-123R	CRA-138M	CRA-202M	CRA-202M	CRA-202M	CRA-210M-B	CRA-215M-B	CRA-229M	CRA-235RB	CRA-241M	CRA-244R	CRA-300M	CRA-301M	CRA-408M-S	CRA-408M-S
	GW-17358-081903-JD-002 ⁴	O-17358-033104-MM-560	O-17358-012004-MM-512	O-17358-033004-MM-542	O-17358-033004-MM-543	O-17358-012004-MM-513	O-17358-033004-MM-540	O-17358-012004-MM-525	O-17358-033004-MM-545	O-17358-012004-MM-521	O-17358-012004-MM-526	O-17358-033104-MM-558	O-17358-033104-MM-557	O-17358-012104-MM-524	O-17358-012304-MM-524
	8/19/2003	3/31/2004	1/20/2004	3/30/2004	3/30/2004	1/20/2004	3/30/2004	1/20/2004	3/30/2004	1/20/2004	1/20/2004	3/31/2004	3/31/2004	1/21/2004	1/23/2004
	(mg/L)														
SVOC (mg/Kg)															
2,4,5-Trichlorophenol	ND(1)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
2,4,6-Trichlorophenol	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
2,4-Dichlorophenol	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
2,4-Dimethylphenol	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
2,4-Dinitrophenol	ND(0.25)	---	ND(1900)	---	---	ND(1900)	---	ND(4800)	---	ND(1900)	ND(4800)	---	---	--	ND(1900)
2,4-Dinitrotoluene	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
2,6-Dinitrotoluene	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
2-Chloronaphthalene	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
2-Chlorophenol	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
2-Methylnaphthalene	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
2-Methylphenol	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
2-Nitroaniline	ND(1.25)	---	ND(1900)	---	---	ND(1900)	---	ND(4800)	---	ND(1900)	ND(4800)	---	---	--	ND(1900)
2-Nitrophenol	ND(1)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
3,3'-Dichlorobenzidine	ND(0.25)	---	ND(1900)	---	---	ND(1900)	---	ND(1900)	---	ND(1900)	ND(4800)	---	---	--	ND(1900)
3-Nitroaniline	ND(1.25)	---	ND(1900)	---	---	ND(1900)	---	ND(4800)	---	ND(1900)	ND(4800)	---	---	--	ND(1900)
4,6-Dinitro-2-methylphenol	ND(1)	---	ND(1900)	---	---	ND(1900)	---	ND(4800)	---	ND(1900)	ND(4800)	---	---	--	ND(1900)
4-Bromophenyl phenyl ether	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
4-Chloro-3-methylphenol	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
4-Chloroaniline	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
4-Chlorophenyl phenyl ether	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
4-Methylphenol	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
4-Nitroaniline	ND(1.25)	---	ND(1900)	---	---	ND(1900)	---	ND(4800)	---	ND(1900)	ND(4800)	---	---	--	ND(1900)
4-Nitrophenol	ND(0.25)	---	ND(1900)	---	---	ND(1900)	---	ND(4800)	---	ND(1900)	ND(4800)	---	---	--	ND(1900)
Acenaphthene	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Acenaphthylene	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Acetophenone	---	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Anthracene	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Atrazine	---	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Benzaldehyde	---	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Benzo(a)anthracene	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Benzo(a)pyrene	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Benzo(b)fluoranthene	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Benzo(g,h,i)perylene	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Benzo(k)fluoranthene	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Biphenyl	---	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
bis(2-Chloroethoxy)methane	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
bis(2-Chloroethyl)ether	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
bis(2-Ethylhexyl)phthalate	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Butyl benzylphthalate	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Caprolactam	---	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Carbazole	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Chrysene	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Dibenz(a,h)anthracene	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Dibenzofuran	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Diethyl phthalate	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Dimethyl phthalate	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Di-n-butylphthalate	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Di-n-octyl phthalate	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Fluoranthene	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Fluorene	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Hexachlorobenzene	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Hexachlorobutadiene	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Hexachlorocyclopentadiene	ND(0.5)	---	ND(1900)	---	---	ND(1900)	---	ND(4800)	---	ND(1900)	ND(4800)	---	---	--	ND(1900)
Hexachloroethane	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Indeno(1,2,3-cd)pyrene	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Isophorone	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Naphthalene	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Nitrobenzene	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)

TABLE 3
LNAPL ANALYTICAL RESULTS
GENERAL MOTORS CORPORATION
GMPT - WILLOW RUN
YPSILANTI, MICHIGAN

	CRA-123R	CRA-138M	CRA-202M	CRA-202M	CRA-202M	CRA-210M-B	CRA-215M-B	CRA-229M	CRA-235RB	CRA-241M	CRA-244R	CRA-300M	CRA-301M	CRA-408M-S	CRA-408M-S
	GW-17358-081903-JD-002 ⁴	O-17358-033104-MM-560	O-17358-012004-MM-512	O-17358-033004-MM-542	O-17358-033004-MM-543	O-17358-012004-MM-513	O-17358-033004-MM-540	O-17358-012004-MM-525	O-17358-033004-MM-545	O-17358-012004-MM-521	O-17358-012004-MM-526	O-17358-033104-MM-558	O-17358-033104-MM-557	O-17358-012104-MM-524	O-17358-012304-MM-524
	8/19/2003	3/31/2004	1/20/2004	3/30/2004	3/30/2004	1/20/2004	3/30/2004	1/20/2004	3/30/2004	1/20/2004	1/20/2004	3/31/2004	3/31/2004	1/21/2004	1/23/2004
	(mg/L)														
N-Nitrosodi-n-propylamine	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
N-Nitrosodiphenylamine	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Pentachlorophenol	ND(1)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Phenanthrene	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Phenol	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Pyrene	ND(0.25)	---	ND(400)	---	---	ND(400)	---	ND(1000)	---	ND(400)	ND(1000)	---	---	--	ND(400)
Inorganics (mg/Kg)															
Aluminum	---	---	ND(20.0)	---	---	30.0	---	ND(20.0)	---	ND(20.0)	ND(20.0)	---	---	--	ND(20.0)
Antimony	---	---	ND(6.0)	---	---	ND(6.0)	---	ND(6.0)	---	ND(6.0)	ND(6.0)	---	---	--	ND(6.0)
Arsenic	---	---	1.7	---	---	1.9	---	---	---	2.2	---	---	---	--	2.3
Barium	---	---	146 ^a	---	---	ND(20.0)	---	ND(20.0)	---	ND(20.0)	27.3	---	---	--	ND(20.0)
Beryllium	---	---	ND(0.50)	---	---	ND(0.50)	---	ND(0.50)	---	ND(0.50)	ND(0.50)	---	---	--	ND(0.50)
Cadmium	---	---	ND(0.50)	---	---	ND(0.50)	---	ND(0.50)	---	ND(0.50)	ND(0.50)	---	---	--	ND(0.50)
Calcium	---	---	ND(500)	---	---	ND(500)	---	ND(500)	---	ND(500)	ND(500)	---	---	--	ND(500)
Chromium Total	---	---	1.5	---	---	ND(1.0)	---	ND(1.0)	---	ND(1.0)	ND(1.0)	---	---	--	ND(1.0)
Cobalt	---	---	ND(5.0)	---	---	ND(5.0)	---	ND(5.0)	---	ND(5.0)	ND(5.0)	---	---	--	ND(5.0)
Copper	---	---	ND(2.5)	---	---	6.2	---	ND(2.5)	---	ND(2.5)	ND(2.5)	---	---	--	ND(2.5)
Cyanide (total)	---	---	ND(0.50)	---	---	ND(0.50)	---	ND(0.50)	---	ND(0.50)	ND(0.50)	---	---	--	ND(0.50)
Iron	---	---	216	---	---	162	---	15.4	---	---	11.5	---	---	--	373
Lead	---	---	26.7 ^a	---	---	1.6	---	3.1	---	---	31.8 ^a	7.0 ^a	---	---	9.7 ^a
Magnesium	---	---	ND(500)	---	---	ND(500)	---	ND(500)	---	ND(500)	ND(500)	---	---	--	ND(500)
Manganese	---	---	4.2	---	---	6.2	---	ND(1.5)	---	ND(1.5)	ND(1.5)	---	---	--	4.2
Mercury	---	---	ND(0.10)	---	---	ND(0.10)	---	ND(0.10)	---	ND(0.10)	ND(0.10)	---	---	--	ND(0.10)
Nickel	---	---	ND(4.0)	---	---	ND(4.0)	---	ND(4.0)	---	ND(4.0)	ND(4.0)	---	---	--	ND(4.0)
Potassium	---	---	ND(500)	---	---	ND(500)	---	ND(500)	---	ND(500)	ND(500)	---	---	--	ND(500)
Selenium	---	---	ND(0.50)	---	---	ND(0.50)	---	ND(0.50)	---	ND(0.50)	ND(0.50)	---	---	--	ND(0.50)
Silver	---	---	ND(1.0)	---	---	ND(1.0)	---	ND(1.0)	---	ND(1.0)	ND(1.0)	---	---	--	ND(1.0)
Sodium	---	---	ND(500)	---	---	ND(500)	---	ND(500)	---	ND(500)	ND(500)	---	---	--	ND(500)
Thallium	---	---	ND(1.0)	---	---	ND(1.0)	---	ND(1.0)	---	ND(1.0)	ND(1.0)	---	---	--	ND(1.0)
Vanadium	---	---	ND(5.0)	---	---	ND(5.0)	---	ND(5.0)	---	ND(5.0)	ND(5.0)	---	---	--	ND(5.0)
Zinc	---	---	17.9	---	---	17.6	---	ND(2.0)	---	ND(2.0)	14.3	---	---	--	ND(2.0)
PCB (mg/Kg)															
Aroclor-1016 (PCB-1016)	ND(0.0002)	ND(1.9)	ND(2)	ND(0.19)	ND(0.19)	ND(1)	ND(0.19)	ND(10)	ND(0.19)	ND(10)	ND(1)	ND(1.9)	ND(0.19)	ND(10)	---
Aroclor-1221 (PCB-1221)	ND(0.0002)	ND(2.2)	ND(2)	ND(0.22)	ND(0.22)	ND(1)	ND(0.22)	ND(10)	ND(0.22)	ND(10)	ND(1)	ND(2.2)	ND(0.22)	ND(10)	---
Aroclor-1232 (PCB-1232)	ND(0.0002)	ND(1.7)	ND(2)	ND(0.17)	ND(0.17)	ND(1)	ND(0.17)	ND(10)	ND(0.17)	ND(10)	ND(1)	ND(1.7)	ND(0.17)	ND(10)	---
Aroclor-1242 (PCB-1242)	ND(0.0002)	ND(2.9)	ND(2)	ND(0.29)	ND(0.29)	ND(1)	ND(0.29)	ND(10)	ND(0.29)	ND(10)	ND(1)	ND(2.9)	ND(0.29)	ND(10)	---
Aroclor-1248 (PCB-1248)	ND(0.0002)	ND(2)	ND(2)	ND(0.2)	ND(0.2)	ND(1)	ND(0.2)	ND(10)	ND(0.2)	ND(10)	ND(1)	ND(2)	ND(0.2)	ND(10)	---
Aroclor-1254 (PCB-1254)	ND(0.0002)	ND(1.2)	2.4 ^{ab}	ND(0.12)	ND(0.12)	ND(1)	ND(0.12)	ND(10)	ND(0.12)	ND(10)	ND(1)	ND(1.2)	ND(0.12)	ND(10)	---
Aroclor-1260 (PCB-1260)	ND(0.0002)	ND(1.3)	ND(2)	ND(0.13)	ND(0.13)	ND(1)	ND(0.13)	ND(10)	ND(0.13)	ND(10)	ND(1)	ND(1.3)	12 ^{ab}	ND(10)	---
Aroclor-1262 (PCB-1262)	---	ND(0.33)	ND(2)	ND(0.033)	ND(0.033)	ND(1)	ND(0.033)	ND(10)	ND(0.033)	ND(10)	ND(1)	ND(0.33)	ND(0.033)	ND(10)	---
Aroclor-1268 (PCB-1268)	---	ND(0.33)	ND(2)	ND(0.033)	ND(0.033)	ND(1)	ND(0.033)	ND(10)	ND(0.033)	ND(10)	ND(1)	ND(0.33)	ND(0.033)	ND(10)	---
Total PCB (mg/Kg)	ND(0.0002)	---	2.4 ^{ab}	---	---	ND(1)	---	ND(10)	---	ND(10)	ND(1)	---	12 ^{ab}	ND(10)	---

Notes:

(1) Cleanup Criteria established in Part 7 of the Administrative Rules, effective December 21, 2002, pursuant to Part 201 Environmental Remediation, 1994 PA 451, as amended

-- No Criteria available for this constituent or not analyzed.

NLV *Constituent is not likely to volatilize*

ID Inadequate data exists to develop criterion for constituent

ND () Not detected above the value in parenthesis.

J The associated value is qualified as an estimated quantity.

U The analyte was analyzed for, but was qualified not detected above the value identified.

UJ The analyte was reported or qualified as not detected however, the sample report limit is qualified as an estimated value and may be inaccurate or imprecise.

(2) Max concentration for toxicity characteristic based on TCLP analysis. However, TCLP analysis was not performed on these samples.

(3) TSCA - toxic substances control act.

(4) CRA-123R is a groundwater sample.

TCLP Toxicity Characteristic Leaching Procedure.

Exceeds Part 201 Criteria.

Exceeds Part 201 Criteria and either TSCA or RCRA (TCLP) Criteria.

TABLE 4
LNAPL CHARACTERISTICS
GENERAL MOTORS CORPORATION
GMPT - WILLOW RUN
YPSILANTI, MICHIGAN

Sample Location:		CRA-13R	CRA-41R	CRA-044M	CRA-75M	CRA-75M	CRA-080M	CRA-080M	CRA-86M	CRA-096M
Sample Identification		O-17358-012004-MM-520	O-17358-012004-MM-516	O-017358-101002-JD-001	O-17358-012004-MM-522	O-17358-012104-MM-522	O-017358-101002-JD-003	O-17358-012004-MM-523	O-17358-012004-MM-518	O-17358-012004-MM-516
Sample Date		<u>Units</u> 1/20/2004	1/20/2004	10/10/2002	1/20/2004	1/21/2004	10/10/2002	1/20/2004	1/20/2004	1/20/2004
<u>Parameters</u>										
Chlorine	mg/L	--	--	2220	--	--	1905	--	--	--
Heating value	BTU/gal	--	--	143331	--	--	140528	--	--	--
Heating value	BTU/lb	--	--	19578	--	--	18957	--	--	--
Ignitability	deg f	> 180	> 180	200	--	> 180	200	> 180	> 180	--
Phosphorus	ug/g	--	--	50	--	--	56	--	--	--
Specific gravity	API	--	--	29.5	--	--	27.5	--	--	--
Specific gravity	lbs/gal	--	--	7.321	--	--	7.413	--	--	--
Specific gravity	none	0.84	0.79	0.8791	--	0.96	0.8901	0.89	0.84	--
Sulfur	%	--	--	0.24	--	--	0.24	--	--	--
Viscosity	cp	53.3	--	--	22.0	--	--	50.0	41.3	12.5
Viscosity at 100C	cST	--	--	7.372	--	--	--	--	--	--
Viscosity at 40C	cST	--	--	69.61	--	--	--	--	--	--
Carbon Range		C11 to C34	--	C-15 to C-28	C11 to C22	--	C-11 to C-20 (Fuel Oil), C-11 to C-28 (Total Sample)	C10 to C34	C9 to C36	C9 to C22
Estimated Oil Type		Petroleum Distillate/ Mineral Oil	--	Hydraulic Fluid/Lube Oil	Petroleum Distillate	--	Fuel Oil, Hydraulic Fluid/Lube Oil	Petroleum Distillate/ Mineral Oil	Petroleum Distillate/ Mineral Oil	Petroleum Distillate
LNAPL Thickness	ft	--	--	1.78	--	--	--	--	--	--
Date LNAPL Measured		--	--	10/7/2002	--	--	--	--	--	--
(Average)	g/mol	--	--	--	--	--	--	--	--	--

TABLE 4
LNAPL CHARACTERISTICS
GENERAL MOTORS CORPORATION
GMPT - WILLOW RUN
YPSILANTI, MICHIGAN

Sample Location:		CRA-096M	CRA-102M	CRA-111R	CRA-111R	CRA-123R	CRA-123R	CRA-202M	CRA-202M	
Sample Identification		O-17358-012204-MM-517	O-17358-012004-MM-519	O-17358-012004-MM-514	O-17358-012004-MM-515	GW-17358-071703-JD-001	GW-17358-081903-JD-002	O-017358-101002-JD-004	O-17358-012004-MM-512	
Sample Date		<u>Units</u>	1/22/2004	1/20/2004	1/20/2004	1/20/2004	7/17/2003	8/19/2003	10/10/2002	1/20/2004
<u>Parameters</u>										
Chlorine	mg/L	--	--	--	--	--	--	780	--	
Heating value	BTU/gal	--	--	--	--	--	--	142483	--	
Heating value	BTU/lb	--	--	--	--	--	--	19396	--	
Ignitability	deg f	> 180	> 180	> 180	> 180	--	--	200	> 180	
Phosphorus	ug/g	--	--	--	--	--	--	334	--	
Specific gravity	API	--	--	--	--	--	--	28.9	--	
Specific gravity	lbs/gal	--	--	--	--	--	--	7.346	--	
Specific gravity	none	0.96	0.87	0.86	0.85	--	--	0.8821	0.86	
Sulfur	%	--	--	--	--	--	--	0.23	--	
Viscosity	cp	104	428	37.5	38.5	--	--	--	74.3	
Viscosity at 100C	cST	--	--	--	--	--	--	6.778	--	
Viscosity at 40C	cST	--	--	--	--	--	--	38.01	--	
Carbon Range		C10 to C36	C12 to C36	C11 to C34	C11 to C34	c-11 to c-22	c-11 to c-22	C-11 to C-20 (Fuel Oil), C-11 to C-28 (Total Sample)		C9 to C36
Estimated Oil Type		Diesel #4, Diesel Fuel #6, Bunker C	Petroleum Distillate, Mineral Oil/Lube Oil	Mineral Oil	Mineral Oil	Fuel Oil, Diesel Fuel, Kerosene, Lubricating/Hydraulic Oil	Fuel Oil, Diesel Fuel, Kerosene, Lubricating/Hydraulic Oil	Fuel Oil, Hydraulic Fluid/Lube Oil	Petroleum Distillate/Mineral Oil	
LNAPL Thickness	ft	--	--	--	--	--	--	1.33	--	
Date LNAPL Measured		--	--	--	--	--	--	10/17/2002	--	
(Average)	g/mol	422	--	--	--	--	--	--	--	

TABLE 4
LNAPL CHARACTERISTICS
GENERAL MOTORS CORPORATION
GMPT - WILLOW RUN
YPSILANTI, MICHIGAN

Sample Location:		CRA-210M-B		CRA-229M		CRA-229M		CRA-241M		CRA-241M		CRA-244R		CRA-244R		CRA-408M-S	
Sample Identification		O-17358-012004-MM-513		O-017358-101002-JD-005		O-17358-012004-MM-525		O-017358-101002-JD-002		O-17358-012004-MM-521		O-017358-101002-JD-006		O-17358-012004-MM-526		O-17358-012304-MM-524	
Sample Date		<u>Units</u> 1/20/2004		10/10/2002		1/20/2004		10/10/2002		1/20/2004		10/10/2002		1/20/2004		1/23/2004	
<u>Parameters</u>																	
Chlorine	mg/L	--		1020		--		1319		--		864		--		--	
Heating value	BTU/gal	--		139239		--		151095		--		137587		--		--	
Heating value	BTU/lb	--		19336		--		19544		--		19644		--		--	
Ignitability	deg f	> 180		200		> 180		200		> 180		200		> 180		84	
Phosphorus	ug/g	--		36		--		35		--		864		--		--	
Specific gravity	API	--		32.1		--		20.9		--		36.7		--		--	
Specific gravity	lbs/gal	--		7.201		--		7.731		--		7.004		--		--	
Specific gravity	none	0.84		0.8647		0.84		0.9283		0.81		0.841		0.78		0.94	
Sulfur	%	--		0.26		--		0.3		--		0.22		--		--	
Viscosity	cp	79.0		--		19.8		--		41.3		--		14.3		92.8	
Viscosity at 100C	cST	--		2.368		--		--		--		1.831		--		--	
Viscosity at 40C	cST	--		8.62		--		--		--		5.434		--		--	
Carbon Range		C11 to C36		C-11 to C-22		C11 to C22		C-1 to C-20, C-11 to C-28 (Total Sample)		C10 to C34		C-11 to C-22		C9 to C24		C7 to nC13 and C10 to C36	
Estimated Oil Type		Mineral Oil		Diesel Range		Petroleum Distillate		Fuel Oil, Hydraulic Fluid/Lube Oil		Petroleum Distillate/ Mineral Oil		Diesel Range		Petroleum Distillate		Gasoline, Or Diesel #4, Diesel Fuel #6, Bunker C	
LNAPL Thickness	ft	--		1.73		--		0.86		--		2.8		--		--	
Date LNAPL Measured		--		10/9/2002		--		10/15/2002		--		10/18/2002		--		--	
(Average)	g/mol	--		--		--		--		--		--		--		128	

TABLE 5
LNAPL THICKNESS SUMMARY FOR FIGURE 5
GENERAL MOTORS CORPORATION
GMPT - WILLOW RUN
YPSILANTI, MICHIGAN

	CRA-016R		CRA-017R		CRA-078M		CRA-204M-B		CRA-245R		CRA-235RB	
	2/26/2002	0.24	2/26/2002	1.16	2/26/2002	0.34	2/27/2002	0.98	4/30/2002	0.47	2/27/2002	0.01
	6/5/2002	0.17	4/4/2002	0.55	5/31/2002	0.16	6/4/2002	1.48	6/5/2002	0.97	4/3/2002	0.55
	6/25/2002	0.61	4/30/2002	0.72	10/16/2002	0.13	10/17/2002	1.64	6/25/2002	0.9	4/30/2002	0.6
	7/24/2002	1.13	6/5/2002	0.01	12/18/2002	0.55	12/19/2002	1.59	7/24/2002	1.23	6/6/2002	0.79
	12/18/2002	0.96	6/25/2002	0.94	4/3/2003	0.9	4/2/2003	1.04	1/1/2003	0.01	6/26/2002	0.7
	1/1/2003	1.19	7/24/2002	1.16	4/3/2003	0.9	7/17/2003	1.61	4/1/2003	0.49	7/23/2002	0.68
	3/7/2003	0.98	10/16/2002	2.29			7/17/2003	1.61	4/29/2003	0.01	10/9/2002	0.72
	4/1/2003	0.97	12/18/2002	0.12			7/17/2003	1.61	6/6/2003	0.43	12/17/2002	0.81
	4/29/2003	1.13	7/18/2003	1.73					8/8/2003	0.42	1/1/2003	0.83
	6/6/2003	1.03	7/18/2003	1.73					9/5/2003	0.92	3/7/2003	0.84
	7/18/2003	0.83	7/18/2003	1.73					9/5/2003	0.92	4/1/2003	0.76
	8/8/2003	1.04	7/18/2003	1.73					9/5/2003	0.92	4/30/2003	1.49
	9/5/2003	1.03	7/18/2003	1.73					9/5/2003	0.92	6/6/2003	0.79
	9/5/2003	1.03	7/18/2003	1.73					9/5/2003	0.92	7/17/2003	0.89
	9/5/2003	1.03	7/18/2003	1.73					9/5/2003	0.92	8/8/2003	0.8
	9/5/2003	1.03	7/18/2003	1.73					9/5/2003	0.92	9/5/2003	0.84
									9/5/2003	0.92	9/5/2003	0.84
Min	6/5/2002	0.17	2/26/2002	1.16	10/16/2002	0.13	2/27/2002	0.98	1/1/2003	0.01	4/3/2002	0.55
Max	9/5/2003	1.03	7/18/2003	1.73	4/3/2003	0.9	10/17/2002	1.64	9/5/2003	0.92	4/30/2003	1.49
increase		0.86		0.57		0.77		0.66		0.91		0.94

TABLE 6
LNAPL THICKNESS SUMMARY FOR FIGURE 6
GENERAL MOTORS CORPORATION
GMPT - WILLOW RUN
YPSILANTI, MICHIGAN

	CRA-004M		CRA-004RA		CRA-001RB		CRA-005RA		CRA-015R		CRA-013RB	
	12/4/2001	1.21	2/27/2002	1.41	4/3/2002	1.67	12/4/2001	1.52	4/4/2002	0.01	6/5/2002	1.25
	12/11/2001	1.26	4/3/2002	2.17	4/30/2002	1.87	4/3/2002	1.06	4/30/2002	0.01	6/25/2002	1.2
	6/26/2002	2.67	5/1/2002	2.02	6/6/2002	2.02	5/1/2002	2.32	7/24/2002	0.01	7/24/2002	0.25
	7/25/2002	2.59	6/6/2002	2.54	6/26/2002	1.45	6/6/2002	2.77	4/29/2003	0.02	1/1/2003	2.5
	10/17/2002	2.85	1/1/2003	2.82	7/25/2002	2.2	6/26/2002	1.98	9/5/2003	1.19	1/1/2003	2.5
	12/19/2002	2.66	3/7/2003	2.58	4/1/2003	3.63	7/25/2002	1.7	9/5/2003	1.19	1/1/2003	2.5
	4/3/2003	2.43	4/1/2003	2.31	4/30/2003	3.63	10/17/2002	0.42	9/5/2003	1.19	1/1/2003	2.5
	7/17/2003	2.53	4/30/2003	2.27	6/6/2003	3.65	1/1/2003	0.36	9/5/2003	1.19	1/1/2003	2.5
	7/17/2003	2.53	6/6/2003	0.47	7/17/2003	3.55	3/7/2003	0.37	9/5/2003	1.19	1/1/2003	2.5
	7/17/2003	2.53	7/17/2003	3.27	8/8/2003	3.62	4/1/2003	0.48	9/5/2003	1.19	1/1/2003	2.5
	7/17/2003	2.53	8/8/2003	3.26	8/8/2003	3.62	4/30/2003	0.48	9/5/2003	1.19	1/1/2003	2.5
	7/17/2003	2.53	9/5/2003	4.42	8/8/2003	3.62	6/6/2003	0.37	9/5/2003	1.19	1/1/2003	2.5
	7/17/2003	2.53	9/5/2003	4.42	8/8/2003	3.62	7/17/2003	0.41	9/5/2003	1.19	1/1/2003	2.5
	7/17/2003	2.53	9/5/2003	4.42	8/8/2003	3.62	8/8/2003	0.4	9/5/2003	1.19	1/1/2003	2.5
	7/17/2003	2.53	9/5/2003	4.42	8/8/2003	3.62	9/5/2003	2.61	9/5/2003	1.19	1/1/2003	2.5
	7/17/2003	2.53	9/5/2003	4.42	8/8/2003	3.62	9/5/2003	2.61	9/5/2003	1.19	1/1/2003	2.5
	CRA-004M		CRA-004RA		CRA-001RB		CRA-005RA		CRA-015R		CRA-013RB	
Min	12/4/2001	1.21	6/6/2003	0.47	6/26/2002	1.45	1/1/2003	0.36	4/4/2002	0.01	7/24/2002	0.25
Max	10/17/2002	2.85	9/5/2003	4.42	6/6/2003	3.65	6/6/2002	2.77	9/5/2003	1.19	1/1/2003	2.5
increase		1.64		3.95		2.2		2.41		1.18		2.25

TABLE 6
LNAPL THICKNESS SUMMARY FOR FIGURE 6
GENERAL MOTORS CORPORATION
GMPT - WILLOW RUN
YPSILANTI, MICHIGAN

CRA-097M		CRA-112R		CRA-212M-A		CRA-222M		CRA-201M-A		CRA-252R	
5/31/2002	0.45	11/30/2001	4.72	6/3/2002	3.19	12/3/2001	3.22	12/4/2001	1.48	6/5/2002	0.03
7/18/2003	6.2	6/7/2002	0.08	10/18/2002	5.34	12/4/2001	0.86	12/11/2001	0.06	6/25/2002	2.28
7/18/2003	6.2	6/26/2002	0.18	4/2/2003	5.1	2/25/2002	3.81	2/27/2002	1.6	7/24/2002	2.81
7/18/2003	6.2	7/25/2002	0.17	7/17/2003	5.14	5/29/2002	4	2/27/2002	1.6	1/1/2003	0.01
7/18/2003	6.2	10/17/2002	0.7	7/17/2003	5.14	10/9/2002	2.55	2/27/2002	1.6	9/5/2003	4.91
7/18/2003	6.2	12/19/2002	0.23	7/17/2003	5.14	4/2/2003	2.92	2/27/2002	1.6	9/5/2003	4.91
7/18/2003	6.2	1/1/2003	0.14	7/17/2003	5.14	7/17/2003	3.32	2/27/2002	1.6	9/5/2003	4.91
7/18/2003	6.2	3/7/2003	0.13	7/17/2003	5.14	7/17/2003	3.32	2/27/2002	1.6	9/5/2003	4.91
7/18/2003	6.2	4/1/2003	0.13							9/5/2003	4.91
7/18/2003	6.2	6/6/2003	0.17							9/5/2003	4.91
7/18/2003	6.2	7/17/2003	0.13							9/5/2003	4.91
7/18/2003	6.2	8/8/2003	0.2							9/5/2003	4.91
7/18/2003	6.2	9/5/2003	1.12							9/5/2003	4.91
		9/5/2003	1.12							9/5/2003	4.91
		9/5/2003	1.12							9/5/2003	4.91
		9/5/2003	1.12							9/5/2003	4.91
CRA-097M		CRA-112R		CRA-212M-A		CRA-222M		CRA-201M-A		CRA-252R	
5/31/2002	0.45	6/7/2002	0.08	6/3/2002	3.19	12/4/2001	0.86	12/11/2001	0.06	1/1/2003	0.01
7/18/2003	6.2	9/5/2003	1.12	10/18/2002	5.34	5/29/2002	4	2/27/2002	1.6	9/5/2003	4.91
	5.75		1.04		2.15		3.14		1.54		4.9

TABLE 7
SUMMARY OF PCB RESULTS
GENERAL MOTORS CORPORATION
GMPT- WILLOW RUN
YPSILANTI, MICHIGAN

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Michigan Act 451, Part 201 Generic Residential & Industrial Criteria ⁽¹⁾						CRA-001M	CRA-002RB	CRA-003RB	CRA-004M	CRA-005RA
Maximum Concentration for Toxicity Characteristic ⁽²⁾	TSCA ⁽³⁾	Groundwat er Contact Criteria	Industrial & Commercial II, III, & IV Groundwater to Volatilization to Indoor Air Inhalation Criteria	Flammability and Explosivity Screening Levels	Acute Inhalation Screening Levels	O-17358-033004-MM-546	O-17358-033004-MM-541	O-17358-033004-MM-544	O-17358-033004-MM-547	O-17358-033004-MM-548
(mg/L)	(mg/kg)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	3/30/2004	3/30/2004	3/30/2004	3/30/2004	3/30/2004
a	b	c	d	e	f					
<u>PCB (mg/Kg)</u>										
Aroclor-1016 (PCB-1016)	---	---	0.0033	0.045	ID	ID	ND(0.19)	ND(0.19)	ND(0.19)	ND(0.19)
Aroclor-1221 (PCB-1221)	---	---	0.0033	0.045	ID	ID	ND(0.22)	ND(0.22)	ND(0.22)	ND(0.22)
Aroclor-1232 (PCB-1232)	---	---	0.0033	0.045	ID	ID	ND(0.17)	ND(0.17)	ND(0.17)	ND(0.17)
Aroclor-1242 (PCB-1242)	---	---	0.0033	0.045	ID	ID	ND(0.29)	ND(0.29)	ND(0.29)	ND(0.29)
Aroclor-1248 (PCB-1248)	---	---	0.0033	0.045	ID	ID	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)
Aroclor-1254 (PCB-1254)	---	---	0.0033	0.045	ID	ID	ND(0.12)	ND(0.12)	ND(0.12)	ND(0.12)
Aroclor-1260 (PCB-1260)	---	---	0.0033	0.045	ID	ID	ND(0.13)	ND(0.13)	ND(0.13)	ND(0.13)
Aroclor-1262 (PCB-1262)	---	---	0.0033	0.045	ID	ID	ND(0.033)	ND(0.033)	ND(0.033)	ND(0.033)
Aroclor-1268 (PCB-1268)	---	---	0.0033	0.045	ID	ID	ND(0.033)	ND(0.033)	ND(0.033)	ND(0.033)
<u>Total PCB (mg/Kg)</u>	---	50	0.0033	0.045	ID	ID	---	---	---	---

TABLE 7
SUMMARY OF PCB RESULTS
GENERAL MOTORS CORPORATION
GMPT- WILLOW RUN
YPSILANTI, MICHIGAN

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CRA-006RB	CRA-012RB	CRA-13R	CRA-015R	CRA-016R	CRA-025R	CRA-41R	CRA-75M	CRA-75M	CRA-079M	CRA-080M	CRA-86M	CRA-086M
O-17358-033004-MM-549 3/30/2004	O-17358-033104-MM-559 3/31/2004	O-17358-012004-MM-520 1/20/2004	O-17358-033104-MM-555 3/31/2004	O-17358-033104-MM-556 3/31/2004	O-17358-033004-MM-550 3/30/2004	O-17358-012004-MM-516 1/20/2004	O-17358-012004-MM-522 1/20/2004	O-17358-012104-MM-522 1/21/2004	O-17358-033104-MM-554 3/31/2004	O-17358-012004-MM-523 1/20/2004	O-17358-012004-MM-518 1/20/2004	O-17358-033104-MM-553 3/31/2004
ND(0.19)	ND(0.19)	ND(1)	ND(0.38)	ND(0.19)	ND(0.19)	ND(1)	ND(1)	--	ND(0.38)	ND(5)	ND(10)UJ	ND(1.9)
ND(0.22)	ND(0.22)	ND(1)	ND(0.44)	ND(0.22)	ND(0.22)	ND(1)	ND(1)	--	ND(0.44)	ND(5)	ND(10)UJ	ND(2.2)
ND(0.17)	ND(0.17)	ND(1)	ND(0.34)	ND(0.17)	ND(0.17)	ND(1)	ND(1)	--	ND(0.34)	ND(5)	ND(10)UJ	ND(1.7)
ND(0.29)	ND(0.29)	ND(1)	ND(0.58)	ND(0.29)	ND(0.29)	ND(1)	ND(1)	--	ND(0.58)	ND(5)	ND(10)UJ	36 ^{ca}
ND(0.2)	ND(0.2)	ND(1)	ND(0.4)	ND(0.2)	ND(0.2)	ND(1)	ND(1)	--	ND(0.4)	ND(5)	54 J ^{ca}	ND(2)
ND(0.12)	ND(0.12)	ND(1)	22 ^{ca}	ND(0.12)	ND(0.12)	ND(1)	ND(1)	--	ND(0.24)	29 ^{ca}	ND(10)UJ	ND(1.2)
ND(0.13)	1 ^{ca}	ND(1)	ND(0.26)	ND(0.13)	ND(0.13)	ND(1)	6 J ^{ca}	--	18 ^{ca}	ND(5)	35 J ^{ca}	37 ^{ca}
ND(0.033)	ND(0.033)	ND(1)	ND(0.066)	ND(0.033)	ND(0.033)	ND(1)	ND(1)	--	ND(0.066)	ND(5)	ND(10)UJ	ND(0.33)
ND(0.033)	ND(0.033)	ND(1)	ND(0.066)	ND(0.033)	ND(0.033)	ND(1)	ND(1)	--	ND(0.066)	ND(5)	ND(10)UJ	ND(0.33)
---	1 ^{ca}	ND(1)	22 ^{ca}	---	---	ND(1)	6 J ^{ca}	--	18 ^{ca}	29 ^{ca}	89 J ^{ca}	73 ^{ca}

TABLE 7
SUMMARY OF PCB RESULTS
GENERAL MOTORS CORPORATION
GMPT- WILLOW RUN
YPSILANTI, MICHIGAN

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CRA-092M	CRA-096M	CRA-096M	CRA-096M	CRA-102M	CRA-111R	CRA-111R	CRA-111R	CRA-123R	CRA-123R	CRA-138M	CRA-202M	CRA-202M	CRA-202M	CRA-210M-B
	O-17358-012004-MM-516	O-17358-012004-MM-517	O-17358-012204-MM-517	O-17358-012004-MM-519	O-17358-012004-MM-514	O-17358-012004-MM-515	O-17358-033004-MM-551	GW-17358-071703-JD-001 ⁴	GW-17358-081903-JD-002 ⁴	O-17358-033104-MM-560	O-17358-012004-MM-512	O-17358-033004-MM-542	O-17358-033004-MM-543	O-17358-012004-MM-513
3/31/2004	1/20/2004	1/20/2004	1/22/2004	1/20/2004	1/20/2004	1/20/2004	3/30/2004	7/17/2003	8/19/2003	3/31/2004	1/20/2004	3/30/2004	3/30/2004	1/20/2004
						Duplicate		(mg/L)	(mg/L)					
ND(1.9)	---	ND(1)	---	ND(1)	ND(2)	ND(2)	ND(0.38)	ND(0.0008)	ND(0.0002)	ND(1.9)	ND(2)	ND(0.19)	ND(0.19)	ND(1)
ND(2.2)	---	ND(1)	---	ND(1)	ND(2)	ND(2)	ND(0.44)	ND(0.0008)	ND(0.0002)	ND(2.2)	ND(2)	ND(0.22)	ND(0.22)	ND(1)
ND(1.7)	---	ND(1)	---	ND(1)	ND(2)	ND(2)	ND(0.34)	ND(0.0008)	ND(0.0002)	ND(1.7)	ND(2)	ND(0.17)	ND(0.17)	ND(1)
ND(2.9)	---	ND(1)	---	ND(1)	ND(2)	ND(2)	ND(0.58)	ND(0.0008)	ND(0.0002)	ND(2.9)	ND(2)	ND(0.29)	ND(0.29)	ND(1)
ND(2)	---	ND(1)	---	ND(1)	ND(2)	ND(2)	ND(0.4)	ND(0.0008)	ND(0.0002)	ND(2)	ND(2)	ND(0.2)	ND(0.2)	ND(1)
12 ^{ca}	---	4.7 ^{ca}	---	ND(1)	17 J ^{ca}	18 J ^{ca}	15 ^{ca}	ND(0.0008)	ND(0.0002)	ND(1.2)	2.4 ^{ca}	ND(0.12)	ND(0.12)	ND(1)
ND(1.3)	---	ND(1)	---	ND(1)	ND(2)	ND(2)	ND(0.26)	ND(0.0008)	ND(0.0002)	ND(1.3)	ND(2)	ND(0.13)	ND(0.13)	ND(1)
ND(0.33)	---	ND(1)	---	ND(1)	ND(2)	ND(2)	ND(0.066)	---	---	ND(0.33)	ND(2)	ND(0.033)	ND(0.033)	ND(1)
ND(0.33)	---	ND(1)	---	ND(1)	ND(2)	ND(2)	ND(0.066)	---	---	ND(0.33)	ND(2)	ND(0.033)	ND(0.033)	ND(1)
12 ^{ca}	---	4.7 ^{ca}	---	ND(1)	17 J ^{ca}	18 J ^{ca}	15 ^{ca}	ND(0.0008)	ND(0.0002)	---	2.4 ^{ca}	---	---	ND(1)

TABLE 7
SUMMARY OF PCB RESULTS
GENERAL MOTORS CORPORATION
GMPT- WILLOW RUN
YPSILANTI, MICHIGAN

DRAFT
PRIVILEGED AND CONFIDENTIAL
PREPARED AT THE REQUEST OF COUNSEL

CRA-215M-B	CRA-229M	CRA-235RB	CRA-241M	CRA-244R	CRA-300M	CRA-301M	CRA-408M-S	CRA-408M-S
	O-17358-012004-MM-525		O-17358-012004-MM-521	O-17358-012004-MM-526			O-17358-012104-MM-524	O-17358-012304-MM-524
O-17358-033004-MM-540 3/30/2004	1/20/2004	O-17358-033004-MM-545 3/30/2004	1/20/2004	1/20/2004	O-17358-033104-MM-558 3/31/2004	O-17358-033104-MM-557 3/31/2004	1/21/2004	1/23/2004
ND(0.19)	ND(10)	ND(0.19)	ND(10)	ND(1)	ND(1.9)	ND(0.19)	ND(10)	---
ND(0.22)	ND(10)	ND(0.22)	ND(10)	ND(1)	ND(2.2)	ND(0.22)	ND(10)	---
ND(0.17)	ND(10)	ND(0.17)	ND(10)	ND(1)	ND(1.7)	ND(0.17)	ND(10)	---
ND(0.29)	ND(10)	ND(0.29)	ND(10)	ND(1)	ND(2.9)	ND(0.29)	ND(10)	---
ND(0.2)	ND(10)	ND(0.2)	ND(10)	ND(1)	ND(2)	ND(0.2)	ND(10)	---
ND(0.12)	ND(10)	ND(0.12)	ND(10)	ND(1)	ND(1.2)	ND(0.12)	ND(10)	---
ND(0.13)	ND(10)	ND(0.13)	ND(10)	ND(1)	ND(1.3)	12 ^{ua}	ND(10)	---
ND(0.033)	ND(10)	ND(0.033)	ND(10)	ND(1)	ND(0.33)	ND(0.033)	ND(10)	---
ND(0.033)	ND(10)	ND(0.033)	ND(10)	ND(1)	ND(0.33)	ND(0.033)	ND(10)	---
---	ND(10)	---	ND(10)	ND(1)	---	12 ^{ua}	ND(10)	---