



*Infrastructure, environment, facilities*

Ms. Susan Kaelber-Matlock  
Environmental Response Division  
Michigan Department of Environmental Quality  
Saginaw Bay District  
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Subject:

Annual Progress Report – October 2008 through September 2009  
Motors Liquidation Company Saginaw Malleable Iron Plant Property and  
REALM, Inc. Green Point Landfill and Drum Remediation Area  
Saginaw, Michigan

Date:  
October 15, 2009

Dear Ms. Kaelber-Matlock:

Contact:  
Lisa Coffey

This progress report presents a summary of the work activities conducted during the period of October 2008 through September 2009 for the above-referenced Site, and a summary of the work activities anticipated for the next 12 month period. This report was prepared in accordance with the requirements specified in the Consent Judgment executed between the Michigan Department of Environmental Quality (MDEQ), the Michigan Attorney General's Office, General Motors Corporation (GM), and Waste Management Inc. (WMI), which was entered by the State of Michigan Circuit Court on March 16, 1998. An October 15 submittal date for the annual reports was established by the MDEQ in a letter dated October 22, 1999 (Brouillet, A., October 1999).

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Our ref:  
B0027608 #2.04

As of October 12, 2009, Mr. Doug Wagner is the site Project Manager on behalf of Motors Liquidation Company (MLC), the post bankruptcy GM legacy company. Mr. Wagner's contact information is as follows:

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7704 Milan Road  
Sandusky, Ohio 44870  
office phone: 419.609.1339  
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Imagine the result

## Significant RI/FS/RAP Activities and Correspondence

The following is a summary of significant Remedial Investigation/Feasibility Study/Remedial Action Plan (RI/FS/RAP) activities and correspondence for the period from October 1, 2008 through September 30, 2009.

### **Deliverables Submitted**

The key deliverables submitted to the MDEQ are as follows:

- The annual progress report for October 2007 through September 2008 was submitted to the MDEQ on October 14, 2008.
- Monthly reports were transmitted to the MDEQ through June 2009. Note that in the monthly report dated July 15, 2009, MDEQ was notified that GM had entered into bankruptcy and that the legacy company, MLC, would retain responsibility for the Saginaw Malleable Iron (SMI) and Green Point Landfill Properties.
- The Mixing Zone Request for the Site that had been submitted as an Appendix of the RAP was resubmitted on October 6, 2008, using the new MDEQ form provided by Ms. Susan Kaelber-Matlock on September 29, 2008.
- Revised sections of the RAP, prepared in response to preliminary comments provided by the MDEQ, were submitted to the MDEQ on December 31, 2008.
- *Affidavits of Unremediated Releases* were submitted to the MDEQ by ARCADIS on behalf of GM, under cover of a letter dated May 28, 2009. The Affidavits document impacts from: (1) the property located west of the former Drum Remediation Area, (2) the former City of Saginaw Queen Street (Center Street) waste disposal area, (3) the Dow Chemical manufacturing facility in Midland, Michigan, and (4) the former Delphi Steering Systems Plant 2 located west of the site.
- Supplemental survey information, to be inserted into the draft RAP, was submitted to the MDEQ by ARCADIS, on behalf of GM, under cover of a letter dated May 29, 2009.

### **Meetings**

- None

**Key Correspondence and Communications**

- On November 21, 2008, Ms. Susan Kaelber-Matlock (MDEQ) sent an electronic mail to Ms. Cheryl Hiatt (GM), with preliminary comments on the Site Remedial Action Plan.
- The RAP, dated July 30, 2008 and revised on December 31, 2008, was conditionally approved by the MDEQ in a letter dated February 27, 2009, from Mr. Andrew Hogarth (MDEQ) to Ms. Cheryl Hiatt (GM). In summary, the conditional approval is based on submittal of the following items: (1) Affidavits for Unremediated Release(s) for the former Queen Street Dump, dioxin compounds present in the Tittabawassee and Saginaw River flood plains due to Dow Chemical Company activities, impacts from the former Delphi Steering Systems Plant 2, and impacts from the property located west of the former Drum Remediation Area; and (2) provision of survey maps for the SMI property, Green Point Landfill property, REALM Eastern Property Extension, Former Consumers Property, and Former UST 7 Area. The letter also proposes a schedule for the implementation of a Financial Assurance Mechanism, recording of the restrictive covenants, and installation of the permanent markers.
- In a letter dated March 27, 2009, GM and WMI acknowledged receipt of the MDEQ's conditional RAP approval letter, dated February 27, 2009, and requested an extension of two months to file the restrictive covenants and to submit the financial assurance mechanism (FAM).
- In a letter dated March 31, 2009, the MDEQ approved the extension request made by GM and WMI. The revised schedule dates are: submittal of the FAM for MDEQ review and approval by August 7, 2009; filling of restrictive covenants by August 28, 2009; and abandonment of monitoring wells not used in the RAP groundwater monitoring programs during the summer of 2010.
- In an electronic mail dated July 16, 2009, Ms. Sue Kaelber-Matlock (MDEQ), indicated that the remaining RAP work activities would "likely be postponed for some time to allow new property managers to get up to speed."
- In an electronic mail transmittal to Ms. Sue Kaelber-Matlock (MDEQ) dated July 31, 2009, Ms. Lisa Coffey (ARCADIS), on behalf of MLC and WMI, asked for confirmation that monthly reports are no longer required for the project. In a return email dated August 5, 2009, Ms. Matlock confirmed MDEQ's agreement.
- In a letter dated August 21, 2009, on behalf of MLC, ARCADIS formalized the previous schedule extension request, and asked for a formal acknowledgement to ensure Consent Judgment compliance.

- Ms. Sue Kaelber-Matlock (MDEQ) prepared a letter dated August 31, 2009, to MLC that specified a due date of October 31, 2009, for submittal of a new schedule for completion of the remaining RAP activities.

## Supplemental Site Activities

### **SMI Plant Area**

- 21 monitoring wells located near the SMI Plant that are not included in the long term monitoring program were abandoned during the week of November 17<sup>th</sup>, 2008.

### **Former Underground Storage Tank (UST) #7 Area**

- The semi-annual groundwater monitoring event for the former underground storage tank (UST) #7 area was completed on November 7, 2008. The samples were collected and analyzed for benzene, toluene, ethylbenzene, xylene, sulfate, and dissolved lead. Table 1 presents an updated summary of the analytical data collected in the UST #7 area.

### **Saginaw River Berm Area**

- A groundwater sample from monitoring well MW-186WT, located in the Saginaw River berm area, was collected for PCB analysis on October 10, 2008. PCBs were not detected in the primary or duplicate samples.

### **Quench Pit LNAPL Recovery Program**

- The automated skimmer pump in the Quench Pit Area (monitoring well QPTW-3) operated until October 26, 2007, when it was turned off due to plant demolition activities. Since the system was turned off, 1.5 gallons of light non-aqueous phase liquid (LNAPL) were manually bailed through the end of September 2009. Access to the Quench Pit Area to manually bail LNAPL has been limited due to demolition activities. Since the system was installed on February 8, 2002, a total of approximately 2,420 gallons of LNAPL were recovered (through October 26, 2007).

### **LNAPL Recovery System**

- The LNAPL recovery system located south of the plant building was turned off due to plant demolition activities on October 26, 2007. LNAPL has been manually bailed from the monitoring wells and recovery wells on a monthly basis;

however, only minimal LNAPL volumes are observed in the wells. Table 2 presents a summary of the LNAPL and groundwater elevation measurements:

The cumulative historical recovery from this area of the site is approximately 12,520 gallons of LNAPL, and over 3,000,000 gallons of groundwater.

## **Green Point Landfill**

- A Green Point Landfill Cap inspection was completed on November 7, 2008. Several holes in the fence were noted during the inspection and repairs were made.

## **Anticipated Site Activities**

Given the change in property ownership, and the anticipated demolition of the plant building, there is some uncertainty associated with the scope of the activities to be completed during the next calendar year. Despite this uncertainty, the following activities are planned for completion during the period from October 2009 through September 2010:

- Completion of the annual groundwater monitoring program in the vicinity of the Green Point Landfill and along the Saginaw River berm, as described in the RAP.
- Completion of an inspection of the Green Point Landfill.
- Abandonment of additional monitoring wells in the vicinity of the vacant plant building that are not needed to implement future monitoring programs.
- Continued monitoring and removal of LNAPL in the area south of the plant building. The existing automated recovery system, which has been turned off during plant demolition activities, will be evaluated to determine if system operation following restoration of power to the system is warranted given the small volume of LNAPL remaining in this area. Following this evaluation, discussions regarding the collected information will be held with the MDEQ.
- Following building demolition, implementation of LNAPL recovery in the area of the former quench pits within the plant footprint.
- Submittal of a schedule extension request for completion of the remaining activities required to meet the conditions of MDEQ approval of the RAP,

# ARCADIS

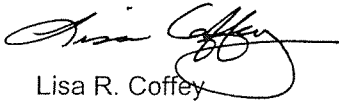
Ms. Susan Kaelber-  
Matlock  
October 15, 2009

including submittal of a Financial Assurance Mechanism, filing of site deed restrictions, and placement of permanent markers. In addition, a work plan for additional site activities may be prepared and submitted to the MDEQ for approval, to reflect revised site goals.

Please contact me if you have any questions regarding the enclosed.

Sincerely,

ARCADIS



Lisa R. Coffey  
Principal Geologist

LRC/plf

Attachments:

- Table 1 – Current and Historic Groundwater Quality Data, Former UST 7 Area
- Table 2 – Groundwater and LNAPL Measurement Summary, June 2005 through the Present

References

Copies:

- John Fordell Leone, Esq., Department of Attorney General
- Mr. Douglas Wagner, MLC
- Mr. Kent Bainbridge/Mr. Jim Forney, Waste Management, Inc.
- Ms. Jo Ann Robertson, ARCADIS

Table 1. Current and Historic Groundwater Quality Data, Former UST 7 Area, GM Saginaw Malleable Iron Plant, Saginaw, Michigan

		Benzene	Ethylbenzene	Toluene	Total Xylenes	Lead	Sulfate (mg/L)	
Industrial & Commercial II, III & IV Drinking Water Criteria*		5 (A,I)	74 (E,I)	790 (E,I)	280 (E,I)	4 (L)	250 (E)	
Groundwater Contact Criteria*		11000 (I)	170,000 (I,S)	530,000 (I,S)	190,000 (I,S)	ID	ID	
Residential Groundwater Volatilization to Air Inhalation Criteria*		5600 (I)	110,000 (I)	530,000 (I,S)	190,000 (I,S)	NLV	NLV	
Industrial Groundwater Volatilization to Air Inhalation Criteria*		35000 (I)	170,000 (I,S)	530,000 (I,S)	190,000 (I,S)	NLV	NLV	
Monitoring Well	Date							
BBL-MW1	6/96	16	130	25 U	210	3 U	5 U	
	7/98	13	13	1 U	10	100 U	5 U	
	10/98	10	30	2	45	3 U	2	
	1/99	26	32	3	54	1 U	2	
	4/99	20	30	20 U	50	1 U	3	
	7/99	27	17	5	20	3 U	2	
	10/99	6	3	1 U	2	3 U	1 U	
	1/00	4 (5)	5 (5)	1 U (1 U)	5 (5)	3 U (3 U)	1 U (1 U)	
	5/00	8.1	10	0.77 J	15	10	25.1	
	8/00	3 (1 U)	2 (1 U)	1 U (1 U)	2 (1 U)	3 U (3 U)	6 (6)	
	10/00	17	22	2	36	3 U	1 U	
	3/01	14 (15)	12 (13)	1 (1)	15 (17)	3 U (3 U)	1 U (1 U)	
	5/01	14	9	1 U	9	1 U	5 U	
	8/01	18 (18)	13 (13)	1 U	15 (15)	3 (3)	2 (2)	
	2/02	53	25	3	28	3 U	21	
	8/02	6 (7)	2 (2)	1 U (1 U)	2 (2)	1 U (1 U)	5 (4)	
	3/03	23	4	2	3	1 U	16	
	8/03	23 (21)	4 (4)	2 (2)	4 (4)	0.001 U (0.001 U)	5 U (5 U)	
	2/04	29 (29)	13 (13)	1.5 J (1.5 J)	7.4 (7.3)	0.83 B (0.81 B)	8 (8)	
	8/04	33 (32)	19 (20)	1.6 (1.7)	6.8 (7.5)	0.93 B (1.4 B,G)	5 U (5 U)	
	2/05	36	27	2.5 U	11	1.1	5 U	
	8/05	37	25	3.3 U	6.7 U	1.3	5 U	
	2/06	36	29	2.5 U	10	1.2	5 U	
	8/06	44.0	52	4 U	17	1.1	5 U	
	2/07	34.0	33	2.5	8.6	1 U	5 U	
	3/08	22.0	32	1.6	3.3	5 U	12	
	11/08	31 (30)	35 (36)	2.3 (2.3)	8.5 (8.4)	1 B J (1 B J)	2 B (5 U)	
	BBL-MW4	6/96	12	1 U	1 U	3 U	3 U	5 U
		7/98	5 U	1 U	1 U	3 U	100 U	NA
		10/98	1 U	1 U	1 U	1 U	3 U	NA
		1/99	2	1 U	1 U	1 U	2	NA
4/99		1	1 U	1 U	2 U	1 U	NA	
7/99		1 U	1 U	3	2 U	3 U	NA	
10/99		1 U	1 U	1 U	2 U	3 U	NA	
1/00		1 U	1 U	1 U	2 U	3 U	NA	
5/00		1.6	1 U	0.12 J	1 U	5.1	9.6 B G	
8/00		1 U	1 U	1 U	1 U	3 U	NA	
10/00		1	1 U	1 U	1 U	3 U	NA	
3/01		2	1 U	1 U	1 U	3 U	NA	
5/01		1 U (1 U)	1 U (1 U)	1 U (1 U)	1 U (1 U)	1 U (1 U)	NA	
8/01		1 U	1 U	1 U	1 U	1 U	NA	
2/02		1 U	1 U	1 U	1 U	1 U	NA	
8/02		1 U	1 U	1 U	1 U	3 U	NA	
3/03		1 U	1 U	1 U	1 U	1 U	NA	
8/03		1 U	1 U	1 U	1 U	1 U	NA	
2/04		0.33 J	1 U	1 U	2 U	1 U	4 B	
8/04		0.25 J	1 U	1 U	1 U	1 U	3 B	
2/05	1 U	1 U	1 U	3 U	1 U	5 U		
8/05	1 U	1 U	1 U	2 U	1 U	5 U		
2/06	1 U	1 U	1 U	3 U	1 U	5 U		
8/06	1 U	1 U	1 U	3 U	1 U	5 U		
2/07	NA	NA	NA	NA	1 U	NA		
MW-135 WT	7/98	5 U	1 U	1 U	3 U	100 U	NA	
	10/98	1	1 U	1 U	2 U	3 U	NA	
	1/99	1 U	1 U	1 U	1 U	1 U	NA	
	4/99	1 U	1 U	1 U	1 U	1 U	NA	
	7/99	2	1 U	3	2 U	3 U	NA	
	10/99	2	1 U	1 U	2 U	3 U	NA	
	1/00	1 U	1 U	1 U	2 U	3 U	NA	
	5/00	0.3 J	1 U	0.12 J	1 U	3 U	146	
	8/00	1 U	1 U	1 U	1 U	3 U	NA	
	10/00	1 U	1 U	1 U	1 U	3 U	NA	
	3/01	1 U	1 U	1 U	1 U	3 U	NA	
	5/01	1 U	1 U	1 U	1 U	1 U	NA	
	8/01	1 U (1 U)	1 U (1 U)	1 U (1 U)	1 U (1 U)	1 U (1 U)	NA (NA)	
	2/02	1 U	1 U	1 U	1 U	3 U	NA	
	8/02	1 U	1 U	1 U	1 U	1 U	NA	
	3/03	1 U	1 U	1 U	1 U	1 U	NA	
	8/03	1 U	1 U	2 B	1 U	0.001 U	NA	
	2/04	1 U	1 U	1 U	1 U	1 U	5 U	
	8/04	1 U	1 U	1 U	2 U	1 U	5 U	
	2/05	1 U	1 U	1 U	3 U	1 U	5 U	
8/05	1 U	1 U	1 U	2 U	1 U	5 U		
2/06	1 U (1 U)	1 U (1 U)	1 U (1 U)	3 U (3 U)	1 U (1 U)	5 U (5 U)		
8/06	1 U (1 U)	1 U (1 U)	1 U (1 U)	3 U (3 U)	1 U (1 U)	5 U (5 U)		
2/07	NA	NA	NA	NA	1 U	NA		

See notes, Page 4.

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		Benzene	Ethylbenzene	Toluene	Total Xylenes	Lead	Sulfate (mg/L)	
Industrial & Commercial II, III & IV Drinking Water Criteria*		5 (A,I)	74 (E,I)	790 (E,I)	280 (E,I)	4 (L)	250 (E)	
Groundwater Contact Criteria*		11000 (I)	170,000 (I,S)	530,000 (I,S)	190,000 (I,S)	ID	ID	
Residential Groundwater Volatilization to Air Inhalation Criteria*		5600 (I)	110,000 (I)	530,000 (I,S)	190,000 (I,S)	NLV	NLV	
Industrial Groundwater Volatilization to Air Inhalation Criteria*		35000 (I)	170,000 (I,S)	530,000 (I,S)	190,000 (I,S)	NLV	NLV	
Monitoring Well	Date							
MW-139 WT	6/96	5 U	1 U	1 U	3 U	3 U	132	
	7/98	5 U	1 U	1 U	3 U	100 U	160	
	10/98	1 U	1 U	1 U	2 U	3 U	168	
	1/99	1 U	1 U	1 U	1 U	1 U	153	
	4/99	1 U	1 U	1 U	2 U	1 U	158	
	7/99	1 U	1 U	1 U	2 U	3 U	156	
	10/99	1 U (1)	1 U (1 U)	1 U (1 U)	2 U (2 U)	3 U (3 U)	152 (155)	
	1/00	1 U	1	1 U	7	3 U	162	
	5/00	1 U	1 U	0.29 J	1 U	3 U	168	
	8/00	1 U	1 U	1 U	1 U	3 U	170	
	10/00	1 (1)	1 U (1 U)	1 U (1 U)	1 (1)	3 U (3 U)	159 (156)	
	3/01	1 U	1 U	1 U	1 U	3 U	168	
	5/01	1 U (1 U)	1 U (1 U)	1 U (1 U)	1 U (1 U)	1 U (1 U)	166 (167)	
	8/01	1 U	1 U	1 U	1 U	1 U	170	
	2/02	1 U (1 U)	1 U (1 U)	1 U (1 U)	1 U (1 U)	3 U (3 U)	163 (163)	
	8/02	1 U	1 U	1 U	1 U	1 U	166	
	3/03	1 U (1 U)	1 U (1 U)	1 U (1 U)	1 U (1 U)	1 U (1 U)	164 (165)	
	8/03	1 U	1 U	2 B	1 B	0.001 U	170	
	2/04	1 U	1 U	1 U	1 U	1 U	160	
	8/04	1 U	1 U	0.19 J	2 U	1	150	
	2/05	1 U	1 U	1 U	3 U	1 U	150	
	8/05	1 U	1 U	1 U	2 U	1 U	160	
	2/06	1 U	1 U	1 U	3 U	1 U	91	
	8/06	1 U	1 U	1 U	3 U	1 U	140	
	2/07	NA	NA	NA	NA	NA	NA	
	UST 7-2	6/94	2,100	100 U	3,100	9,800	1	NA
		6/96	950	1,700	120 U	3,600	114	5 U
7/98		6	17	1 U	6	100 U	NA	
10/98		1 U	2	1 U	2 U	3 U	NA	
1/99		5	23	1 U	7	1 U	NA	
4/99		10 U	40	10 U	20	1 U	NA	
7/99		10 U	20	20	10	3 U	NA	
10/99		10 (10 U)	20 (20)	10 U (10 U)	10 (10)	3 U (3 U)	NA (NA)	
1/00		2	1 U	1 U	1	3 U	NA	
5/00		1,500	1,200	25 J	1,200	35	2 U G	
8/00		4	1	1 U	1 U	3 U	NA	
10/00		50	3	1	3	3 U	NA	
3/01		96 (112)	9 (9)	1 (5 U)	7 (8)	3 U (3 U)	NA (NA)	
5/01		7	1 U	1 U	1 U	1 U	NA	
8/01		170	50 U	50 U	50 U	1 U	NA	
2/02		47	1	1 U	3	3 U	NA	
8/02		1 U (1 U)	1 U (1 U)	1 U (1 U)	1 U (1 U)	1 U (1 U)	NA	
3/03		67	1 U	1	2	1 U	NA	
8/03		123 (126)	1 U (1)	2 (2)	2 (3)	0.001 U (0.001 U)	NA (NA)	
2/04		850	120	12 J	97	12.5	5 U	
8/04		2,100	980	39 J	400	4.6	5 U	
2/05		1600	420	59	170	5.8	5 U	
8/05		2400	610	62 U	210	6.6	5 U	
2/06		1900	450	56 U	170 U	5.6	5 U	
8/06		2300	610	100 U	300 U	4.6	5 U	
2/07		1900	310	50 U	150 U	4.5	5 U	
3/08		2100	240	27 J	36 J	3.7	3 B	
UST 7-3R	7/98	14	1 U	1 U	3 U	100 U	NA	
	10/98	12	1 U	1 U	2 U	3 U	NA	
	1/99	5	1 U	1 U	1 U	1 U	NA	
	4/99	18	1 U	1 U	2 U	1 U	NA	
	7/99	24	1 U	2	2 U	3 U	NA	
	10/99	50	1 U	1 U	2 U	3 U	NA	
	1/00	30 (32)	1 U	1 U	2 U	4 (3 U)	NA	
	5/00	13	1 U	0.12 J	1 U	3 U	27.6	
	8/00	28	1 U	1 U	1 U	3 U	NA	
	10/00	26	1 U	1 U	1 U	3 U	NA	
	3/01	15	1 U	1 U	1 U	3 U	NA	
	5/01	12	1 U	1 U	1 U	1 U	NA	
	8/01	35	1 U	1 U	1 U	1 U	NA	
	2/02	30	1 U	1 U	1 U	3 U	NA	
	8/02	6	1 U	1 U	1 U	1 U	NA	
	3/03	30	1 U	1 U	1 U	1 U	NA	
	8/03	9	1 U	1 U	1 U	0.001 U	NA	
	2/04	9	1 U	1 U	1 U	1 U	5 U	
	8/04	16	1 U	1 U	2 U	1 U	3 B	
	2/05	11 (11)	1 U (1 U)	1 U (1 U)	3 U (3 U)	1 U (1 U)	5 U (5 U)	
	8/05	12	1 U	1 U	2 U	1 U	5 U	
	2/06	3.3	1 U	1 U	3 U	1 U	6	
	8/06	8.9	1 U	1 U	3 U	1 U	5 U	
	2/07	1.4	1 U	1 U	3 U	1 U	15	
	3/08	0.86 J	1 U	1 U	2 U	1 U	10	
	11/08	1 U	1 U	1 U	2 U	1 U	10	

See Notes, Page 4.

Table 1. Current and Historic Groundwater Quality Data, Former UST 7 Area, GM Saginaw Malleable Iron Plant, Saginaw, Michigan

		Benzene	Ethylbenzene	Toluene	Total Xylenes	Lead	Sulfate (mg/L)	
Industrial & Commercial II, III & IV Drinking Water Criteria*		5 (A, I)	74 (E, I)	790 (E, I)	280 (E, I)	4 (L)	250 (E)	
Groundwater Contact Criteria*		11000 (I)	170,000 (I, S)	530,000 (I, S)	190,000 (I, S)	ID	ID	
Residential Groundwater Volatilization to Air Inhalation Criteria*		5600 (I)	110,000 (I)	530,000 (I, S)	190,000 (I, S)	NLV	NLV	
Industrial Groundwater Volatilization to Air Inhalation Criteria*		35000 (I)	170,000 (I, S)	530,000 (I, S)	190,000 (I, S)	NLV	NLV	
Monitoring Well	Date							
UST 7-4	6/94	110	2.0 U	.8	1.0 U	1.0 U	NA	
	6/96	44	1.7 U	1.7 U	5.1 U	3 U	6	
	7/98	14	1 U	1 U	3 U	100 U	NA	
	10/98	10	1 U	1 U	2 U	3 U	NA	
	1/99	17	1 U	1 U	2 U	1 U	NA	
	4/99	7	1 U	1 U	2 U	1 U	NA	
	7/99	4	1 U	4	2 U	1 U	NA	
	10/99	4	1 U	1 U	2 U	3 U	NA	
	1/00	3	1 U	1	1	3 U	NA	
	5/00	6	0.18 J	0.22 J	0.67 J	17	NA	
	8/00	3 (3)	1 U (1 U)	1 U (1 U)	1 U (1 U)	9.4	30.5	
	10/00	23	1 U	1 U	1 U	3 U (3 U)	NA	
	3/01	2	1 U	1 U	1	3 U	NA	
	5/01	2	1 U	1 U	1 U	1 U	NA	
	8/01	2	1 U	1 U	1 U	1 U	NA	
	2/02	16 (16)	2 (3)	1 U (1 U)	1 (1)	3 U (3 U)	NA	
	8/02	1	1 U	1 U	1 U	1 U	NA	
	3/03	1 U (1 U)	1 U (1 U)	1 U (1 U)	1 U (1 U)	1 U (1 U)	NA	
	8/03	2	1 U	1 U	1 U	0.001 U	NA	
	2/04	4	1 U	0.25 J	0.84 J	1 U	23	
	8/04	0.71 J	1 U	1 U	1 U	1 U	5 U	
	2/05	1 U	1 U	1 U	3 U	1 U	5 U	
	8/05	1 U	1 U	1 U	2 U	1 U	5 U	
	2/06	1 U	1 U	1 U	3 U	1 U	6	
	8/06	1 U	1 U	1 U	3 U	1 U	5 U	
	2/07	1.1	1 U	1 U	3 U	1 U	5 U	
	3/08	1 U	1 U	1 U	2 U	1.2	11	
	11/08	1.4	1 U	1 U	2 U	1 U	11	
	UST 7-5	6/94	3,700	13,000	3,600	19,000	1	NA
		6/96	1,600	1,800	1,400	6,900	46	8
7/98		1,900	200 U	930	7,900	100 U	NA	
10/98		1,390	1,330	990	5,120	3 U	NA	
1/99		190	680	450	4,440	10	NA	
4/99		400	890	400	6,540	5	NA	
7/99		300	240	240	3,470	4	NA	
10/99		20	110	20	860	5	NA	
1/00		23	71	9	354	3 U	NA	
5/00		42 (56)	71 (83)	13 (13)	330 (360)	20.3 (12.9)	52.6 (54.2)	
8/00		160	100	40	530	3 U	NA	
10/00		56 (59)	27 (29)	30 (50 U)	860 (870)	3 U (3 U)	NA	
3/01		200	100	100 U	1,300	6	NA	
5/01		10 U	10	10 U	170	1	NA	
8/01		160	130	50 U	690	2	NA	
2/02		1	1	1 U	7	14	NA	
8/02		7	7	3	85	3	NA	
3/03		330	380	80	1,400	2	NA	
8/03		470	340	100	1,690	0.001	NA	
2/04		42	62	27	350	2.1	210	
8/04		120	96	29	460	1.8	5 U	
2/05		140	78	34	450	1.8	99	
8/05		340	230	86	1060	1 U	5 U	
2/06		390	450	42	1500	1 U	39	
8/06		430	440	63	2000	1 U	5 U	
2/07		340	330	20 U	960	1 U	8	
3/08	42 (45)	18 (20)	7.7 (8.1)	100 (110)	5 U (5 U)	120 (120)		
11/08	150	110	36	630	1 U	5 U		

Table 1. Current and Historic Groundwater Quality Data, Former UST 7 Area, GM Saginaw Malleable Iron Plant, Saginaw, Michigan

**Notes:**

All units are micrograms per liter (ug/L) except sulfate concentrations which are reported in units of milligrams per liter (mg/L).

ID = Insufficient Data.

Bolded and underlined values indicate exceedance of referenced criteria.

NA = Not Analyzed.

B = The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

G = Elevated reporting limit. The reporting limit is elevated due to matrix interference.

J = The compound was positively identified; however, the associated numerical value is an estimated concentration only.

U = Not detected above method detection limit.

\* Michigan Department of Environmental Quality - Generic Industrial Cleanup Criteria and Screening Levels, December 2002.

{A} Criterion is the State of Michigan Drinking Water Standard established pursuant to Section 5 of the Safe Drinking Water Act, Act. No. 399 of the Public Acts

{E} Criterion is the aesthetic drinking water value, as required by Sec. 20120(1)(5).

{I} Hazardous substance may exhibit the characteristic of ignitability as defined in 40 CFR 261.21.

{L} Reserved.

{S} Criterion defaults to the chemical-specific water solubility limit.

NLV = Chemical is not likely to volatilize under most conditions.

The number in parentheses is the sample duplicate.

Table 2. Groundwater and LNAPL Measurement Summary, June 2005 Through the Present, GM Saginaw Malleable Iron Plant, Saginaw, Michigan

Date	MW-147WT reference elevation = 592.07				MW-157WT reference elevation = 591.72				MW-158WT reference elevation = 591.78			
	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Depth to Water (feet)	Groundwater Elevation (corrected)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Depth to Water (feet)	Groundwater Elevation (corrected)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Depth to Water (feet)	Groundwater Elevation (corrected)
June 28, 2005	5.83	1.73	7.56	586.10	6.23	0.21	6.44	585.47	NP	0.00	7.72	584.06
July 29, 2005	5.59	1.58	7.17	586.35	6.21	0.70	6.91	585.45	NP	0.00	7.69	584.09
August 18, 2005	6.19	1.75	7.94	585.74	6.96	0.23	7.19	584.74	NP	0.00	7.98	583.80
September 28, 2005	6.49	1.59	8.08	585.45	7.37	0.04	7.41	584.35	8.33	0.01	8.34	583.45
October 18, 2005	6.85	1.93	8.78	585.07	7.68	0.38	8.06	584.01	NP	0.00	8.56	583.22
November 30, 2005	6.33	1.76	8.09	585.60	7.09	0.03	7.12	584.63	NP	0.00	8.31	583.47
December 26, 2005	6.15	1.96	8.11	585.76	6.89	0.19	7.08	584.81	NP	0.00	8.14	583.64
January 31, 2006	5.21	1.91	7.12	586.71	5.74	0.51	6.25	585.94	NP	0.00	7.53	584.25
February 24, 2006	6.38	1.86	8.24	585.54	6.87	0.27	7.14	584.83	NP	0.00	7.98	583.80
March 22, 2006	5.70	1.63	7.33	586.24	5.68	0.13	5.81	586.03	NP	0.00	7.71	584.07
April 27, 2006	6.23	1.69	7.92	585.70	7.17	0.03	7.20	584.55	8.14	0.01	8.15	583.64
May 25, 2006	NA	NA	NA	NA	6.37	0.14	6.51	585.34	NP	0.00	7.95	583.83
June 27, 2006	6.32	1.70	8.02	585.61	7.20	0.04	7.24	584.52	NP	0.00	8.17	583.61
July 11, 2006	5.99	1.67	7.66	585.95	6.96	0.11	7.07	584.75	NP	0.00	8.03	583.75
August 23, 2006	6.24	1.65	7.89	585.70	7.20	0.01	7.21	584.52	NP	0.00	8.08	583.70
September 26, 2006	5.67	1.64	7.31	586.27	6.69	0.11	6.80	585.02	NP	0.00	7.90	583.88
October 30, 2006	5.36	1.65	7.01	586.58	5.71	0.22	5.93	585.99	7.49	0.02	7.51	584.29
November 27, 2006	6.00	1.66	7.66	585.94	6.89	0.12	7.01	584.82	7.92	0.01	7.93	583.86
December 27, 2006	6.12	1.65	7.77	585.82	7.00	0.02	7.02	584.72	NP	0.00	7.94	583.84
January 25, 2007	NA	NA	NA	NA	7.42	0.04	7.46	584.30	NA	NA	NA	NA
March 6, 2007	7.08	1.60	8.68	584.86	NP	0.00	7.72	584.00	NA	NA	NA	NA
March 23, 2007	6.18	1.64	7.82	585.76	7.23	0.02	7.25	584.49	NP	0.00	8.09	583.69
April 30, 2007	6.13	1.47	7.60	585.82	7.10	0.05	7.15	584.62	8.05	0.01	8.06	583.73
May 17, 2007	6.19	1.57	7.76	585.75	7.16	0.04	7.20	584.56	NA	NA	NA	NA
June 12, 2007	6.30	1.58	7.88	585.64	7.20	0.02	7.22	584.52	NP	0.00	8.11	583.67
July 18, 2007	6.42	1.62	8.04	585.52	7.19	0.02	7.21	584.53	NP	0.00	8.16	583.62
August 28, 2007	5.93	1.51	7.44	586.02	6.71	0.02	6.73	585.01	NP	0.00	7.97	583.81
September 19, 2007	5.59	1.53	7.12	586.36	6.03	0.12	6.15	585.68	NP	0.00	7.51	584.27
October 25, 2007	6.53	1.72	8.25	585.40	7.46	0.08	7.54	584.25	NP	0.00	8.31	583.47
November 27, 2007	6.47	1.58	8.05	585.47	7.06	0.06	7.12	584.66	NP	0.00	7.64	584.14
January 7, 2008	5.46	1.18	6.64	586.52	6.01	0.26	6.27	585.69	NP	0.00	6.49	585.29
February 22, 2008	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
March 17, 2008	4.09	1.23	5.32	587.88	NA	NA	NA	NA	NP	0.00	5.42	586.36
April 7, 2008	4.68	0.97	5.65	587.31	4.96	0.31	5.27	586.74	NP	0.00	5.66	586.12
May 5, 2008	5.91	0.74	6.65	586.10	5.72	0.29	6.01	585.98	NP	0.00	6.68	585.10
June 2, 2008	5.98	0.66	6.64	586.04	6.26	0.25	6.51	585.44	NP	0.00	6.81	584.97
July 7, 2008	4.96	0.64	5.60	587.06	5.21	0.18	5.39	586.50	NP	0.00	6.00	585.78
August 13, 2008	5.19	0.63	5.82	586.83	5.32	0.18	5.50	586.39	NP	0.00	6.21	585.57
September 8, 2008	5.45	0.51	5.96	586.58	5.61	0.18	5.79	586.10	NP	0.00	6.35	585.43
October 9, 2008	5.16	0.42	5.58	586.88	5.36	0.16	5.52	586.35	NP	0.00	6.03	585.75
November 20, 2008	5.85	0.30	6.15	586.20	5.66	0.28	5.94	586.04	NP	0.00	6.64	585.14
December 15, 2008	5.55	0.29	5.84	586.50	5.92	0.13	6.05	585.79	NP	0.00	6.37	585.41
January 6, 2009	4.60	0.28	4.88	587.45	NA	NA	NA	NA	NA	NA	NA	NA
February 10, 2009	5.09	0.19	5.28	586.96	5.31	0.15	5.46	586.40	NP	0.00	5.92	585.86
March 5, 2009	4.91	0.29	5.20	587.14	5.05	0.13	5.18	586.66	NP	0.00	5.82	585.96
April 13, 2009	4.66	0.30	4.96	587.39	4.84	0.14	4.98	586.87	NP	0.00	5.42	586.36
May 6, 2009	3.74	0.29	4.03	588.31	4.15	0.17	4.32	587.56	NP	0.00	4.80	586.98
June 12, 2009	4.89	0.31	5.20	587.16	5.02	0.13	5.15	586.69	NP	0.00	5.66	586.12
July 2, 2009	4.26	0.31	4.57	587.79	4.58	0.14	4.72	587.13	NP	0.00	5.26	586.52
August 11, 2009	4.69	0.34	5.03	587.35	4.81	0.37	5.18	586.88	NP	0.00	5.83	585.95
October 9, 2009	5.66	0.25	5.91	586.39	5.81	0.14	5.95	585.90	NP	0.00	6.53	585.25
September 3, 2009	5.37	0.36	5.73	586.67	5.46	0.14	5.60	586.25	NP	0.00	6.20	585.58

See Notes on Page 6.

Table 2. Groundwater and LNAPL Measurement Summary, June 2005 Through the Present, GM Saginaw Malleable Iron Plant, Saginaw, Michigan

Date	MW-160WT reference elevation = 591.53				MW-169WT reference elevation = 591.82				MW-172WT reference elevation = 591.51			
	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Depth to Water (feet)	Groundwater Elevation (corrected)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Depth to Water (feet)	Groundwater Elevation (corrected)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Depth to Water (feet)	Groundwater Elevation (corrected)
June 28, 2005	8.14	0.09	8.23	583.38	NP	0.00	7.92	583.90	8.06	0.04	8.10	583.45
July 29, 2005	8.13	0.04	8.17	583.40	NP	0.00	7.92	583.90	8.06	0.02	8.08	583.45
August 18, 2005	8.30	0.04	8.34	583.23	NA	NA	NA	NA	8.24	0.17	8.41	583.26
September 28, 2005	8.46	0.02	8.48	583.07	NA	NA	NA	NA	8.36	0.21	8.57	583.13
October 18, 2005	8.66	0.06	8.72	582.87	NA	NA	NA	NA	8.51	0.42	8.93	582.97
November 30, 2005	8.52	0.01	8.53	583.01	NA	NA	NA	NA	8.41	0.32	8.73	583.07
December 26, 2005	8.44	0.01	8.45	583.09	NA	NA	NA	NA	8.32	0.35	8.67	583.16
January 31, 2006	NP	0.00	8.21	583.32	NA	NA	NA	NA	8.08	0.27	8.35	583.41
February 24, 2006	NP	0.00	8.38	583.15	NA	NA	NA	NA	8.32	0.33	8.65	583.16
March 22, 2006	8.24	0.01	8.25	583.29	NA	NA	NA	NA	8.17	0.08	8.25	583.33
April 27, 2006	NP	0.00	8.43	583.10	NA	NA	NA	NA	8.33	0.11	8.44	583.17
May 25, 2006	NA	NA	NA	NA	NA	NA	NA	NA	8.20	0.18	8.38	583.30
June 27, 2006	NP	0.00	8.44	583.09	NA	NA	NA	NA	8.39	0.31	8.70	583.10
July 11, 2006	NP	0.00	8.40	583.13	NA	NA	NA	NA	8.27	0.36	8.63	583.21
August 23, 2006	NP	0.00	8.41	583.12	NA	NA	NA	NA	8.36	0.19	8.55	583.13
September 26, 2006	NP	0.00	8.32	583.21	NA	NA	NA	NA	8.21	0.23	8.44	583.28
October 30, 2006	NP	0.00	8.13	583.40	NA	NA	NA	NA	8.07	0.15	8.22	583.43
November 27, 2006	NP	0.00	8.40	583.13	NA	NA	NA	NA	8.29	0.16	8.45	583.21
December 27, 2006	NP	0.00	8.34	583.19	NA	NA	NA	NA	NA	NA	NA	NA
January 25, 2007	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
March 6, 2007	NP	0.00	8.59	582.94	NA	NA	NA	NA	8.44	0.29	8.73	583.05
March 23, 2007	NP	0.00	8.53	583.00	NA	NA	NA	NA	8.41	0.33	8.74	583.07
April 30, 2007	NP	0.00	8.46	583.07	NA	NA	NA	NA	8.34	0.36	8.70	583.14
May 17, 2007	NP	0.00	8.44	583.09	NA	NA	NA	NA	8.32	0.19	8.51	583.17
June 12, 2007	NP	0.00	8.50	583.03	NA	NA	NA	NA	8.33	0.38	8.71	583.15
July 18, 2007	NP	0.00	8.54	582.99	NP	0.00	8.31	583.51	NA	NA	NA	NA
August 28, 2007	NP	0.00	8.46	583.07	NA	NA	NA	NA	NA	NA	NA	NA
September 19, 2007	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
October 25, 2007	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
November 27, 2007	NP	0.00	7.61	583.92	NA	NA	NA	NA	NP	0.00	8.42	583.09
January 7, 2008	NP	0.00	6.31	585.22	NA	NA	NA	NA	7.50	0.02	7.52	584.01
February 22, 2008	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
March 17, 2008	5.82	0.03	5.85	585.71	NA	NA	NA	NA	NP	0.00	5.73	585.78
April 7, 2008	5.96	0.06	6.02	585.57	NA	NA	NA	NA	NP	0.00	5.88	585.63
May 5, 2008	6.89	0.03	7.13	584.43	NA	NA	NA	NA	NP	0.00	6.85	584.66
June 2, 2008	6.80	0.23	7.03	584.71	NP	0.00	7.10	584.72	NP	0.00	6.75	584.76
July 7, 2008	6.08	0.21	6.29	585.43	NP	0.00	6.56	585.26	NP	0.00	5.99	585.52
August 13, 2008	6.31	0.21	6.52	585.20	NP	0.00	6.78	585.04	NA	NA	NA	NA
September 8, 2008	6.54	0.12	6.66	584.98	NP	0.00	7.03	584.79	NA	NA	NA	NA
October 9, 2008	6.11	0.09	6.20	585.41	NP	0.00	6.72	585.10	6.00	0.02	6.02	585.51
November 20, 2008	6.66	0.23	6.89	584.85	NP	0.00	7.13	584.69	6.57	0.15	6.72	584.93
December 15, 2008	NP	0.00	6.30	585.23	NP	0.00	7.09	584.73	NA	NA	NA	NA
January 6, 2009	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
February 10, 2009	6.08	0.07	6.15	585.44	NP	0.00	6.64	585.18	NA	NA	NA	NA
March 5, 2009	5.94	0.07	6.01	585.58	NA	NA	NA	NA	NP	0.00	6.08	585.43
April 13, 2009	5.77	0.09	5.86	585.75	NP	0.00	6.24	585.58	6.68	0.03	6.71	584.83
May 6, 2009	5.27	0.14	5.41	586.25	NP	0.00	5.73	586.09	5.19	0.03	5.22	586.32
June 12, 2009	5.90	0.27	6.17	585.61	NP	0.00	6.34	585.48	5.84	0.02	5.86	585.67
July 2, 2009	5.63	0.29	5.92	585.88	NP	0.00	6.13	585.69	5.58	0.02	5.60	585.93
August 11, 2009	5.97	0.34	6.31	585.53	NP	0.00	6.50	585.32	5.91	0.01	5.92	585.60
October 9, 2009	6.51	0.28	6.79	585.00	NP	0.00	7.06	584.76	NA	NA	NA	NA
September 3, 2009	6.25	0.36	6.61	585.25	NP	0.00	6.81	585.01	6.21	0.02	6.23	585.30

See Notes on Page 6.

Table 2. Groundwater and LNAPL Measurement Summary, June 2005 Through the Present, GM Saginaw Malleable Iron Plant, Saginaw, Michigan

Date	MW-175WT reference elevation not available				MW-178WT reference elevation = 590.35				MW-179WT reference elevation not available			
	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Depth to Water (feet)	Groundwater Elevation (corrected)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Depth to Water (feet)	Groundwater Elevation (corrected)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Depth to Water (feet)	Groundwater Elevation (corrected)
June 28, 2005	6.67	0.01	6.68	NA	7.39	0.56	7.95	582.92	NP	0.00	6.82	NA
July 29, 2005	NP	0.00	6.73	NA	7.44	0.82	8.26	582.84	NP	0.00	6.73	NA
August 18, 2005	NP	0.00	6.83	NA	7.51	1.26	8.77	582.74	NP	0.00	6.78	NA
September 28, 2005	NP	0.00	7.04	NA	7.49	0.32	7.81	582.83	NP	0.00	6.95	NA
October 18, 2005	NP	0.00	7.26	NA	7.57	0.32	7.89	582.75	NP	0.00	7.14	NA
November 30, 2005	NP	0.00	7.16	NA	7.54	0.51	8.05	582.77	7.03	0.01	7.04	NA
December 26, 2005	NP	0.00	7.19	NA	7.54	1.24	8.78	582.71	NP	0.00	7.14	NA
January 31, 2006	NP	0.00	6.79	NA	7.45	0.16	7.61	582.89	NP	0.00	7.63	NA
February 24, 2006	NP	0.00	6.99	NA	7.56	0.60	8.16	582.74	NP	0.00	7.82	NA
March 22, 2006	NP	0.00	6.75	NA	7.42	0.14	7.56	582.92	NP	0.00	6.68	NA
April 27, 2006	NP	0.00	6.84	NA	7.43	0.26	7.69	582.90	6.79	0.01	6.80	NA
May 25, 2006	NP	0.00	6.82	NA	7.39	0.36	7.75	582.93	NP	0.00	6.74	NA
June 27, 2006	NP	0.00	6.79	NA	7.43	0.37	7.80	582.89	NP	0.00	6.84	NA
July 11, 2006	NP	0.00	6.79	NA	7.46	0.34	7.80	582.86	NP	0.00	6.83	NA
August 23, 2006	NP	0.00	6.81	NA	7.39	0.47	7.86	582.92	NP	0.00	6.61	NA
September 26, 2006	NP	0.00	6.70	NA	7.41	0.29	7.70	582.92	NA	NA	NA	NA
October 30, 2006	NP	0.00	6.56	NA	7.35	0.38	7.73	582.97	NA	NA	NA	NA
November 27, 2006	NP	0.00	6.79	NA	7.37	0.34	7.71	582.95	NA	NA	NA	NA
December 27, 2006	NP	0.00	6.83	NA	7.36	0.33	7.69	582.96	NA	NA	NA	NA
January 25, 2007	NA	NA	NA	NA	7.41	0.38	7.79	582.91	NA	NA	NA	NA
March 6, 2007	NA	NA	NA	NA	7.51	0.51	8.02	582.80	NP	0.00	7.13	NA
March 23, 2007	NP	0.00	7.13	NA	7.51	0.46	7.97	582.80	NP	0.00	6.90	NA
April 30, 2007	NP	0.00	6.89	NA	7.48	0.25	7.73	582.85	NP	0.00	6.56	NA
May 17, 2007	NP	0.00	6.86	NA	7.13	0.33	7.46	583.19	NA	NA	NA	NA
June 12, 2007	NP	0.00	6.91	NA	7.47	0.28	7.75	582.86	NP	0.00	6.57	NA
July 18, 2007	NP	0.00	7.02	NA	7.46	0.32	7.78	582.86	NP	0.00	6.75	NA
August 28, 2007	NP	0.00	6.96	NA	7.46	0.29	7.75	582.87	NP	0.00	6.82	NA
September 19, 2007	NP	0.00	6.66	NA	6.87	0.11	6.98	583.47	NP	0.00	6.65	NA
October 25, 2007	NP	0.00	7.08	NA	7.59	0.25	7.84	582.74	NP	0.00	6.98	NA
November 27, 2007	NA	NA	NA	NA	6.52	0.14	6.66	583.82	NA	NA	NA	NA
January 7, 2008	NP	0.00	6.53	NA	5.44	0.05	5.49	584.91	NA	NA	NA	NA
February 22, 2008	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
March 17, 2008	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
April 7, 2008	NP	0.00	5.84	NA	5.30	0.02	5.32	585.05	NP	0.00	6.46	NA
May 5, 2008	NP	0.00	6.31	NA	6.25	0.02	6.27	584.10	NA	NA	NA	NA
June 2, 2008	NP	0.00	6.39	NA	5.93	0.01	5.94	584.42	NP	0.00	6.55	NA
July 7, 2008	NP	0.00	5.96	NA	5.32	0.02	5.34	585.03	NA	NA	NA	NA
August 13, 2008	NP	0.00	6.14	NA	NP	0.00	5.81	584.54	NA	NA	NA	NA
September 8, 2008	NP	0.00	6.36	NA	5.86	0.01	5.87	584.49	NA	NA	NA	NA
October 9, 2008	NP	0.00	6.13	NA	NP	0.00	5.68	584.67	NA	NA	NA	NA
November 20, 2008	NP	0.00	6.58	NA	NP	0.00	6.18	584.17	NA	NA	NA	NA
December 15, 2008	NP	0.00	6.44	NA	NP	0.00	5.56	584.79	NA	NA	NA	NA
January 6, 2009	NA	NA	NA	NA	NP	0.00	5.42	584.93	NA	NA	NA	NA
February 10, 2009	NP	0.00	6.15	NA	NP	0.00	5.57	584.78	NA	NA	NA	NA
March 5, 2009	NA	NA	NA	NA	NP	0.00	5.55	584.80	NP	0.00	6.41	NA
April 13, 2009	NP	0.00	5.84	NA	NP	0.00	5.20	585.15	NP	0.00	6.04	NA
May 6, 2009	NP	0.00	5.42	NA	NP	0.00	4.84	585.51	NA	NA	NA	NA
June 12, 2009	NP	0.00	5.93	NA	NP	0.00	5.49	584.86	NA	NA	NA	NA
July 2, 2009	NP	0.00	5.78	NA	NP	0.00	5.59	584.76	NA	NA	NA	NA
August 11, 2009	NP	0.00	6.03	NA	NP	0.00	5.49	584.86	NA	NA	NA	NA
October 9, 2009	NP	0.00	6.53	NA	NP	0.00	5.90	584.45	NP	NA	6.31	NA
September 3, 2009	NP	0.00	6.35	NA	NP	0.00	5.93	584.42	NP	NA	6.09	NA

See Notes on Page 6.

Table 2. Groundwater and LNAPL Measurement Summary, June 2005 Through the Present, GM Saginaw Malleable Iron Plant, Saginaw, Michigan

Date	MW-180WT reference elevation = 590.67				RW-1 reference elevation = 592.18				RW-2 reference elevation = 592.07			
	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Depth to Water (feet)	Groundwater Elevation (corrected)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Depth to Water (feet)	Groundwater Elevation (corrected)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Depth to Water (feet)	Groundwater Elevation (corrected)
June 28, 2005	6.84	0.01	6.85	583.83	8.13	0.21	8.34	584.03	NP	0.00	8.71	583.36
July 29, 2005	NP	0.00	6.73	583.94	8.05	0.17	8.22	584.12	NP	0.00	8.69	583.38
August 18, 2005	NP	0.00	6.78	583.89	8.18	0.79	8.97	583.94	NP	0.00	8.67	583.40
September 28, 2005	6.99	0.01	7.00	583.68	8.81	0.59	9.40	583.32	NP	0.00	9.01	583.06
October 18, 2005	7.20	0.01	7.21	583.47	8.83	0.91	9.74	583.28	NP	0.00	8.99	583.08
November 30, 2005	NP	0.00	7.11	583.56	8.54	0.68	9.22	583.59	NP	0.00	8.93	583.14
December 26, 2005	NP	0.00	7.20	583.47	NA	NA	NA	NA	NP	0.00	8.99	583.08
January 31, 2006	NP	0.00	6.81	583.86	NA	NA	NA	NA	NP	0.00	8.72	583.35
February 24, 2006	NP	0.00	6.81	583.86	8.49	0.33	8.82	583.66	NP	0.00	8.87	583.20
March 22, 2006	NP	0.00	6.69	583.98	8.35	0.52	8.87	583.79	NA	NA	NA	NA
April 27, 2006	NP	0.00	6.82	583.85	8.72	0.67	9.39	583.41	NA	NA	NA	NA
May 25, 2006	NP	0.00	6.76	583.91	8.45	0.56	9.01	583.69	NA	NA	NA	NA
June 27, 2006	NP	0.00	6.85	583.82	8.71	0.71	9.42	583.41	NA	NA	NA	NA
July 11, 2006	NP	0.00	6.90	583.77	8.49	0.86	9.35	583.62	NA	NA	NA	NA
August 23, 2006	NP	0.00	6.65	584.02	8.51	0.97	9.48	583.59	NA	NA	NA	NA
September 26, 2006	NP	0.00	6.76	583.91	8.31	0.48	8.79	583.83	NP	0.00	8.90	583.17
October 30, 2006	NP	0.00	6.49	584.18	NA	NA	NA	NA	NP	0.00	8.75	583.32
November 27, 2006	NP	0.00	6.59	584.08	8.43	0.61	9.04	583.70	NP	0.00	8.94	583.13
December 27, 2006	NP	0.00	6.64	584.03	NA	NA	NA	NA	NP	0.00	8.76	583.31
January 25, 2007	NP	0.00	6.76	583.91	NA	NA	NA	NA	NP	0.00	NA	NA
March 6, 2007	NP	0.00	7.16	583.51	8.53	0.27	8.80	583.63	NP	0.00	9.14	582.93
March 23, 2007	NP	0.00	6.93	583.74	8.31	0.27	8.58	583.85	NP	0.00	8.64	583.43
April 30, 2007	NP	0.00	6.58	584.09	8.52	0.09	8.61	583.65	NP	0.00	8.98	583.09
May 17, 2007	NP	0.00	6.52	584.15	8.38	0.14	8.52	583.79	NP	0.00	8.99	583.08
June 12, 2007	NP	0.00	6.58	584.09	8.39	0.07	8.46	583.78	NP	0.00	9.03	583.04
July 18, 2007	NP	0.00	6.78	583.89	8.46	0.63	9.09	583.67	NP	0.00	9.07	583.00
August 28, 2007	NP	0.00	6.85	583.82	8.23	0.11	8.34	583.94	NP	0.00	9.00	583.07
September 19, 2007	NP	0.00	6.69	583.98	7.93	0.11	8.04	584.24	NP	0.00	8.44	583.63
October 25, 2007	NP	0.00	7.02	583.65	8.80	0.45	9.25	583.34	NP	0.00	8.93	583.14
November 27, 2007	NP	0.00	7.07	583.60	8.03	0.15	8.18	584.14	NP	0.00	8.04	584.03
January 7, 2008	NP	0.00	7.01	583.66	6.76	0.04	6.80	585.42	NA	NA	NA	NA
February 22, 2008	NA	NA	NA	NA	6.06	0.03	6.09	586.12	NP	0.00	6.56	585.51
March 17, 2008	NA	NA	NA	NA	5.95	0.02	5.97	586.23	NP	0.00	6.36	585.71
April 7, 2008	NP	0.00	6.45	584.22	6.24	0.06	6.30	585.94	NP	0.00	6.51	585.56
May 5, 2008	NP	0.00	6.52	584.15	7.17	0.02	7.19	585.01	NP	0.00	6.18	585.89
June 2, 2008	NP	0.00	6.56	584.11	7.16	0.03	7.19	585.02	NP	0.00	7.33	584.74
July 7, 2007	NP	0.00	6.14	584.53	6.24	0.01	6.25	585.94	NA	NA	NA	NA
August 13, 2008	NP	0.00	6.25	584.42	NP	0.00	6.49	585.69	NA	NA	NA	NA
September 8, 2008	NP	0.00	6.45	584.22	NP	0.00	6.60	585.58	NA	NA	NA	NA
October 9, 2008	NP	0.00	6.31	584.36	NP	0.00	6.34	585.84	NP	0.00	6.69	585.38
November 20, 2008	NP	0.00	6.56	584.11	NP	0.00	6.99	585.19	NP	0.00	7.19	584.88
December 15, 2008	NP	0.00	6.64	584.03	NA	NA	NA	NA	NA	NA	NA	NA
January 6, 2009	NP	0.00	6.25	584.42	NA	NA	NA	NA	NA	NA	NA	NA
February 10, 2009	NP	0.00	6.58	584.09	NP	0.00	6.06	586.12	NP	0.00	6.53	585.54
March 5, 2009	NP	0.00	6.40	584.27	NP	0.00	6.21	585.97	NP	0.00	6.63	585.44
April 13, 2009	NP	0.00	6.01	584.66	NP	0.00	5.77	586.41	NP	0.00	6.32	585.75
May 6, 2009	NP	0.00	5.66	585.01	NP	0.00	4.96	587.22	NP	0.00	5.81	586.26
June 12, 2009	NP	0.00	6.10	584.57	NP	0.00	5.91	586.27	NP	0.00	3.85	588.22
July 2, 2009	NP	0.00	5.97	584.70	NP	0.00	5.47	586.71	NP	0.00	4.32	587.75
August 11, 2009	NP	0.00	5.91	584.76	NP	0.00	6.01	586.17	NP	0.00	4.07	588.00
October 9, 2009	NP	0.00	6.33	584.34	NP	0.00	6.78	585.40	NP	0.00	4.39	587.68
September 3, 2009	NP	0.00	6.11	584.56	NP	0.00	6.47	585.71	NP	0.00	6.75	585.32

See Notes on Page 6.

Table 2. Groundwater and LNAPL Measurement Summary, June 2005 Through the Present, GM Saginaw Malleable Iron Plant, Saginaw, Michigan

Date	RW-3 reference elevation = 592.32				TP-2			
	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Depth to Water (feet)	Groundwater Elevation (corrected)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Depth to Water (feet)	Groundwater Elevation (corrected)
June 28, 2005	NP	0.00	7.04	585.28	8.01	0.48	8.49	NA
July 29, 2005	NP	0.00	6.77	585.55	7.97	0.25	8.22	NA
August 18, 2005	NP	0.00	7.72	584.60	8.28	0.75	9.03	NA
September 28, 2005	NP	0.00	8.41	583.91	8.69	0.82	9.51	NA
October 18, 2005	NP	0.00	8.41	583.91	--	--	--	NA
November 30, 2005	NP	0.00	8.02	584.30	--	--	--	NA
December 26, 2005	NP	0.00	7.98	584.34	8.43	0.87	9.30	NA
January 31, 2006	NP	0.00	5.50	586.82	7.82	0.72	8.54	NA
February 24, 2006	NP	0.00	6.78	585.54	8.36	1.04	9.40	NA
March 22, 2006	NP	0.00	6.29	586.03	8.22	0.81	9.03	NA
April 27, 2006	NP	0.00	7.66	584.66	8.57	0.99	9.56	NA
May 25, 2006	NP	0.00	7.25	585.07	8.31	0.96	9.27	NA
June 27, 2006	NP	0.00	7.91	584.41	NA	NA	NA	NA
July 11, 2006	NP	0.00	7.34	584.98	8.03	1.70	9.73	NA
August 23, 2006	NP	0.00	7.89	584.43	NA	NA	NA	NA
September 26, 2006	NP	0.00	7.08	585.24	NA	NA	NA	NA
October 30, 2006	NP	0.00	7.05	585.27	NA	NA	NA	NA
November 27, 2006	NP	0.00	7.50	584.82	NA	NA	NA	NA
December 27, 2006	NP	0.00	7.33	584.99	NA	NA	NA	NA
January 25, 2007	NP	0.00	7.90	584.42	NA	NA	NA	NA
March 6, 2007	NP	0.00	8.18	584.14	8.54	0.92	9.46	NA
March 23, 2007	NA	NA	NA	NA	8.28	0.89	9.17	NA
April 30, 2007	NP	0.00	8.03	584.29	8.37	0.79	9.16	NA
May 17, 2007	NP	0.00	7.98	584.34	8.34	0.77	9.11	NA
June 12, 2007	NP	0.00	8.21	584.11	8.29	0.76	9.05	NA
July 18, 2007	NP	0.00	8.27	584.05	8.44	0.01	8.45	NA
August 28, 2007	NP	0.00	7.57	584.75	8.12	0.45	8.57	NA
September 19, 2007	NP	0.00	7.03	585.29	7.82	0.11	7.93	NA
October 25, 2007	NP	0.00	8.32	584.00	8.69	0.39	9.08	NA
November 27, 2007	NP	0.00	8.22	584.10	7.95	0.22	8.17	NA
January 7, 2008	NP	0.00	7.30	585.02	6.66	0.04	6.70	NA
February 22, 2008	NP	0.00	5.19	587.13	NA	NA	NA	NA
March 17, 2008	NP	0.00	4.45	587.87	5.79	0.02	5.81	NA
April 7, 2008	NP	0.00	5.03	587.29	6.15	0.02	6.17	NA
May 5, 2008	NP	0.00	6.79	585.53	7.18	0.01	7.19	NA
June 2, 2008	NP	0.00	7.51	584.81	7.09	0.02	7.11	NA
July 7, 2007	NP	0.00	6.78	585.54	6.13	0.03	6.16	NA
August 13, 2008	NP	0.00	6.95	585.37	6.38	0.04	6.42	NA
September 8, 2008	NP	0.00	7.31	585.01	6.60	0.02	6.62	NA
October 9, 2008	NP	0.00	6.83	585.49	NP	0.00	6.25	NA
November 20, 2008	NP	0.00	7.56	584.76	6.89	0.02	6.91	NA
December 15, 2008	NP	0.00	7.39	584.93	6.37	0.01	6.38	NA
January 6, 2009	NA	NA	NA	NA	NP	0.00	5.68	NA
February 10, 2009	NP	0.00	5.83	586.49	NP	0.00	5.99	NA
March 5, 2009	NP	0.00	5.74	586.58	NP	0.00	6.10	NA
April 13, 2009	NP	0.00	5.66	586.66	NP	0.00	5.68	NA
May 6, 2009	NP	0.00	4.44	587.88	NP	0.00	4.87	NA
June 12, 2009	NP	0.00	6.48	585.84	NP	0.00	5.83	NA
July 2, 2009	NP	0.00	5.71	586.81	NP	0.00	5.38	NA
August 11, 2009	NP	0.00	6.51	585.81	NP	0.00	5.93	NA
October 9, 2009	NP	0.00	7.67	584.65	NP	0.00	6.72	NA
September 3, 2009	NP	0.00	7.09	585.23	NP	0.00	6.38	NA

See Notes on Page 6.

Table 1. Groundwater and LNAPL Measurement Summary, January 2005 Through the Present, GM Saginaw Malleable Iron Plant, Saginaw, Michigan

Notes:

The reference elevation for each of the recovery wells (RW-1, RW-2, RW-3, and RW-4) is the ground surface elevation; approximately equal to the elevation of the edge of the vault.

NA = not available; monitoring well inaccessible (e.g., covered by pallet, gravel, roll-off, vehicle, or snowpile).

-- = Not measured.

NP = LNAPL was not present in well.

An LNAPL density of 0.92 was used to correct the water level elevations for the presence of LNAPL.

LNAPL is periodically removed by bailing from monitoring well MW-178WT.