



Infrastructure, environment, facilities

Mr. Allan Brouillet
Environmental Response Division
Michigan Department of Environmental Quality
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Subject:

Monthly Report #167 – October 2008
GM SMI Plant Property, REALM Inc. Green Point Landfill and
Drum Remediation Area RI/FS/RAP, and Green Point Landfill Closure

Dear Mr. Brouillet:

On behalf of the General Motors Corporation (GM) and Waste Management, Inc. (WMI), the October 2008 monthly report for the GM SMI Plant Property and the Remediation and Liability Management Company Inc. (REALM) Green Point Landfill Property is attached. Please contact me if you have any questions regarding the enclosed information.

Sincerely,

ARCADIS

Lisa R. Coffey, P.G.
Principal Geologist

LRC/plf
Attachments

Copies:

Ms. Susan Kaelber-Matlock, MDEQ, ERD
John Fordell Leone, Esq., Department of Attorney General
Ms. Cheryl Hiatt/Mr. Edward Peterson, GM WFG
Anthony Thrubis, Esq., GM Legal
Mr. Kent Bainbridge, Waste Management, Inc.
Mr. Jim Forney, Waste Management, Inc.
Ms. Jo Ann Robertson, ARCADIS
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Date:

November 11, 2008

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B0027608 #2.08

Imagine the result

Significant RI/FS/RAP and Interim Measure Activities and Events

- The light non-aqueous phase liquid (LNAPL) recovery system located south of the main plant building is not currently operating due to plant decommissioning activities. The recovery wells and the monitoring wells were gauged on October 9, 2008. Small accumulations of LNAPL were recorded (Table 1). The wells in this area will continue to be monitored and bailed, when possible, until power can be restored to the recovery system (once the building is down).
- The Quench Pit Area was not accessible during the month of October 2008. As allowed by plant decommissioning activities, the wells in this area will be manually bailed until power is restored to the automated recovery system.
- A groundwater sample from monitoring well MW-186WT, located in the Saginaw River berm area, was collected for PCB analysis on October 10, 2008. The preliminary (un-validated) data show that PCBs were not detected in the sample. It is anticipated that the validated data will be available for inclusion in the next monthly report.

Significant Green Point Landfill Closure Activities and Events

- None during October.

Key Correspondence and Communications

- The September 2008 monthly report, dated October 14, 2008, was submitted to the MDEQ.
- The annual progress report for October 2007 through September 2008 was submitted to the MDEQ on October 14, 2008.
- The Mixing Zone Request for the Site that had been submitted as an Appendix of the Remedial Action Plan (RAP) was resubmitted on October 6, 2008, using the new MDEQ form provided by Ms. Susan Kaelber-Matlock on September 29, 2008.
- On October 29, 2008, an additional copy of the RAP was transmitted to the MDEQ for placement in the public library.

Anticipated Activities for November 2008

- Continuation of LNAPL recovery activities using manual means, until a power supply to the automated recovery systems can be established given planned decommissioning and demolition activities.
- Submittal of a monthly report.

**General Motors Corporation Saginaw Malleable Iron Plant Property and
REALM Inc. Green Point Landfill and Drum Remediation Area
October 2008**

- Submittal of a letter report presenting the results of the first 2008 semiannual round of groundwater sampling at the former underground storage tank (UST) 7 area.
- Completion of an inspection of the Green Point Landfill.
- Completion of the semi-annual groundwater monitoring event for the UST-7 area.
- Initiation of well abandonment activities, previously approved by the MDEQ, in the vicinity of the plant building.

Table 1. Groundwater and LNAPL Measurement Summary, March 2004 Through the Present, GM Saginaw Malleable Iron Plant, Saginaw, Michigan

Date	MW-132WT reference elevation = 594.24				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)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Depth to Water (feet)	Groundwater Elevation (corrected)
March 8, 2004	--	--	--	--	NA	NA	NA	NA	--	--	--	--	8.41	0.01	8.42	NA
April 29, 2004	--	--	--	--	6.36	1.64	8.00	585.58	--	--	--	--	NA	NA	NA	NA
June 1, 2004	--	--	--	--	5.20	1.25	6.45	586.77	--	--	--	--	NA	NA	NA	NA
June 30, 2004	--	--	--	--	6.05	1.26	7.31	585.92	--	--	--	--	NA	NA	NA	NA
July 28, 2004	--	--	--	--	NA	NA	NA	NA	--	--	--	--	7.90	0.01	7.91	583.88
August 17, 2004	--	--	--	--	6.76	1.34	8.10	585.20	--	--	--	--	8.21	0.01	8.22	583.57
September 27, 2004	--	--	--	--	6.91	1.61	8.52	585.03	--	--	--	--	NP	0.00	8.39	583.39
October 29, 2004	--	--	--	--	7.04	1.78	8.82	584.89	--	--	--	--	8.41	0.01	8.42	583.37
November 30, 2004	--	--	--	--	6.35	1.72	8.07	585.58	--	--	--	--	8.56	0.01	8.57	583.22
December 27, 2004	--	--	--	--	NA	NA	NA	NA	--	--	--	--	8.35	0.01	8.36	583.43
January 26, 2005	--	--	--	--	6.28	2.03	8.31	585.63	--	--	--	--	NA	NA	NA	NA
February 7, 2005	--	--	--	--	6.57	1.96	8.53	585.34	--	--	--	--	NP	0.00	7.98	583.80
March 17, 2005	NP	0.00	10.97	583.27	6.55	2.04	8.59	585.36	7.27	0.66	7.93	584.40	NP	0.00	8.24	583.54
April 13, 2005	NP	0.00	10.94	583.30	6.44	1.74	8.18	585.49	7.18	0.18	7.36	584.63	NP	0.00	8.23	583.55
May 31, 2005	NP	0.00	10.91	583.33	6.53	1.76	8.29	585.40	7.23	0.25	7.48	584.47	NP	0.00	8.14	583.64
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	NP	0.00	10.69	583.65	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	NP	0.00	10.82	583.42	6.19	1.76	7.94	585.74	6.96	0.23	7.19	584.74	NP	0.00	7.98	583.80
September 28, 2005	NP	0.00	11.03	583.21	6.49	1.69	8.08	585.45	7.37	0.04	7.41	584.35	NP	0.00	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	NP	0.00	11.03	583.21	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	NP	0.00	10.96	583.28	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	NP	0.00	10.55	583.69	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	NP	0.00	10.80	583.44	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	NP	0.00	10.37	583.87	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	NP	0.00	10.91	583.33	6.23	1.69	7.92	585.70	7.17	0.03	7.20	584.55	NP	0.00	8.15	583.64
May 25, 2006	NA	NA	NA	NA	NA	NA	NA	NA	6.37	0.14	6.51	586.34	NP	0.00	7.95	583.83
June 27, 2006	NP	0.00	10.94	583.30	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	NP	0.00	10.82	583.42	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	NP	0.00	10.92	583.32	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	NP	0.00	10.75	583.49	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	NP	0.00	10.53	583.71	5.36	1.85	7.01	586.58	5.71	0.22	5.93	585.99	NP	0.00	7.49	584.29
November 27, 2006	NP	0.00	10.80	583.44	6.00	1.66	7.66	585.94	6.89	0.12	7.01	584.82	NP	0.01	7.93	583.86
December 27, 2006	NP	0.00	10.76	583.48	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	NP	0.00	10.98	583.26	NA	NA	NA	NA	7.42	0.04	7.46	584.30	NP	0.00	8.17	583.61
March 6, 2007	NP	0.00	11.06	583.18	7.08	1.50	8.68	584.86	NP	0.00	7.72	584.00	NP	0.00	8.09	583.69
March 23, 2007	NP	0.00	10.97	583.27	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	NP	0.00	10.68	583.36	6.13	1.47	7.60	585.82	7.10	0.05	7.15	584.62	NP	0.01	8.06	583.73
May 17, 2007	NP	0.00	10.90	583.34	6.19	1.57	7.76	585.75	7.16	0.04	7.20	584.56	NP	0.00	8.11	583.67
June 12, 2007	NP	0.00	10.95	583.29	6.30	1.58	7.88	585.64	7.20	0.02	7.22	584.52	NP	0.00	8.16	583.62
July 18, 2007	NP	0.00	11.01	583.23	6.42	1.62	8.04	585.52	7.19	0.02	7.21	584.53	NP	0.00	7.97	583.81
August 28, 2007	NP	0.00	10.88	583.36	5.93	1.51	7.44	586.02	6.71	0.02	6.73	585.01	NP	0.00	7.51	584.27
September 19, 2007	NP	0.00	10.37	583.87	5.59	1.53	7.12	586.36	6.03	0.12	6.15	585.68	NP	0.00	8.31	583.47
October 25, 2007	NP	0.00	11.02	583.22	6.53	1.72	8.25	585.40	7.46	0.08	7.54	584.26	NP	0.00	7.64	584.14
November 27, 2007	NP	0.00	10.27	583.97	6.47	1.58	8.05	585.47	7.06	0.06	7.12	584.66	NP	0.00	6.49	585.29
January 7, 2008	NP	0.00	9.03	585.21	5.46	1.18	6.64	586.52	6.01	0.26	6.27	585.69	NP	0.00	NA	NA
February 22, 2008	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NP	0.00	5.42	586.36
March 17, 2008	NP	0.00	8.31	585.93	4.09	1.23	5.32	587.88	NA	NA	NA	NA	NP	0.00	5.66	586.12
April 7, 2008	NP	0.00	8.51	585.73	4.68	0.97	5.65	587.31	4.96	0.31	5.27	586.74	NP	0.00	6.68	585.10
May 5, 2008	NP	0.00	9.46	584.78	5.91	0.74	6.65	586.10	5.72	0.29	6.01	585.98	NP	0.00	6.81	584.97
June 2, 2008	NP	0.00	10.80	583.44	5.98	0.66	6.64	586.04	6.26	0.26	6.51	585.44	NP	0.00	6.00	585.78
July 7, 2007	NP	0.00	8.68	585.56	4.96	0.64	5.60	587.06	5.21	0.18	5.39	586.50	NP	0.00	6.21	585.57
August 13, 2008	NP	0.00	8.93	585.31	5.19	0.63	5.82	586.83	5.32	0.18	5.50	586.39	NP	0.00	6.35	585.43
September 8, 2008	NP	0.00	9.15	585.09	5.45	0.51	5.96	586.58	5.61	0.18	5.79	586.10	NP	0.00	6.03	585.76
October 9, 2008	NP	0.00	8.74	585.50	5.16	0.42	5.58	586.88	5.36	0.16	5.52	586.35	NP	0.00		

See Notes on Page 6.

11/11/2008

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Table 1. Groundwater and LNAPL Measurement Summary, March 2004 Through the Present, GM Saginaw Malleable Iron Plant, Saginaw, Michigan

Date	MW-160WT reference elevation = 591.53				MW-161WT reference elevation = 591.80				MW-168WT reference elevation = 592.11				MW-169WT reference elevation = 591.82			
	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)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Depth to Water (feet)	Groundwater Elevation (corrected)
March 8, 2004	8.33	0.31	8.64	583.18	--	--	--	--	8.32	0.23	8.55	583.77	NA	NA	NA	NA
April 29, 2004	8.41	0.19	8.60	583.10	--	--	--	--	NA	NA	NA	NA	NA	NA	NA	NA
June 1, 2004	7.83	0.11	7.94	583.69	--	--	--	--	NA	NA	NA	NA	7.62	0.01	7.63	584.20
June 30, 2004	8.25	0.09	8.34	583.27	--	--	--	--	NA	NA	NA	NA	7.94	0.01	7.95	583.88
July 28, 2004	8.43	0.11	8.54	583.09	--	--	--	--	NA	NA	NA	NA	NP	0.00	8.17	583.65
August 17, 2004	8.46	0.11	8.57	583.06	--	--	--	--	NA	NA	NA	NA	NP	0.00	8.23	583.59
September 27, 2004	8.54	0.17	8.71	582.98	--	--	--	--	NA	NA	NA	NA	8.35	0.01	8.36	583.47
October 29, 2004	8.58	0.09	8.67	582.94	--	--	--	--	NA	NA	NA	NA	8.44	0.01	8.45	583.38
November 30, 2004	8.47	0.07	8.54	583.05	--	--	--	--	NA	NA	NA	NA	NP	0.00	8.23	583.59
December 27, 2004	NA	NA	NA	NA	--	--	--	--	NA	NA	NA	NA	NP	0.00	8.30	583.52
January 26, 2005	8.21	0.35	8.56	583.29	--	--	--	--	NA	NA	NA	NA	NA	NA	NA	NA
February 7, 2005	8.10	0.11	8.21	583.42	--	--	--	--	NA	NA	NA	NA	NP	0.00	8.17	583.65
March 17, 2005	8.43	0.13	8.56	583.09	NP	0.00	7.60	584.20	NA	NA	NA	NA	NA	NA	NA	NA
April 13, 2005	8.39	0.13	8.52	583.13	NP	0.00	7.82	583.98	NA	NA	NA	NA	NA	NA	NA	NA
May 31, 2005	8.39	0.15	8.54	583.13	NP	0.00	7.57	584.23	NA	NA	NA	NA	NP	0.00	8.20	583.62
June 28, 2005	8.14	0.09	8.23	583.38	NP	0.00	7.34	584.46	NA	NA	NA	NA	NP	0.00	7.92	583.90
July 29, 2005	8.13	0.04	8.17	583.40	7.39	0.01	7.40	584.41	NA	NA	NA	NA	NP	0.00	7.92	583.90
August 18, 2005	8.30	0.04	8.34	583.23	NP	0.00	7.51	584.29	NA	NA	NA	NA	NA	NA	NA	NA
September 28, 2005	8.46	0.02	8.48	583.07	NP	0.00	7.75	584.05	NA	NA	NA	NA	NA	NA	NA	NA
October 18, 2005	8.66	0.06	8.72	582.87	NP	0.00	8.00	583.80	NA	NA	NA	NA	NA	NA	NA	NA
November 30, 2005	8.52	0.01	8.53	583.01	NP	0.00	7.78	584.02	NA	NA	NA	NA	NA	NA	NA	NA
December 26, 2005	8.44	0.01	8.45	583.09	NP	0.00	7.76	584.04	NA	NA	NA	NA	NA	NA	NA	NA
January 31, 2006	NP	0.00	8.21	583.32	NP	0.00	7.37	584.43	NA	NA	NA	NA	NA	NA	NA	NA
February 24, 2006	NP	0.00	8.38	583.15	NP	0.00	7.49	584.31	NA	NA	NA	NA	NA	NA	NA	NA
March 22, 2006	8.24	0.01	8.25	583.29	NP	0.00	7.23	584.57	NA	NA	NA	NA	NA	NA	NA	NA
April 27, 2006	NP	0.00	8.43	583.10	NP	0.00	7.35	584.45	NA	NA	NA	NA	NA	NA	NA	NA
May 25, 2006	NA	NA	NA	NA	NP	0.00	7.21	584.59	NA	NA	NA	NA	NA	NA	NA	NA
June 27, 2006	NP	0.00	8.44	583.09	NP	0.00	7.39	584.41	NA	NA	NA	NA	NA	NA	NA	NA
July 11, 2006	NP	0.00	8.40	583.13	NP	0.00	7.46	584.34	NA	NA	NA	NA	NA	NA	NA	NA
August 23, 2006	NP	0.00	8.41	583.12	NP	0.00	7.41	584.39	NA	NA	NA	NA	NA	NA	NA	NA
September 26, 2006	NP	0.00	8.32	583.21	NP	0.00	7.38	584.42	NA	NA	NA	NA	NA	NA	NA	NA
October 30, 2006	NP	0.00	8.13	583.40	NP	0.00	7.17	584.63	NA	NA	NA	NA	NA	NA	NA	NA
November 27, 2006	NP	0.00	8.40	583.13	NP	0.00	7.36	584.44	NA	NA	NA	NA	NA	NA	NA	NA
December 27, 2006	NP	0.00	8.34	583.19	NP	0.00	7.32	584.48	NA	NA	NA	NA	NA	NA	NA	NA
January 25, 2007	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
March 6, 2007	NP	0.00	8.59	582.94	NP	0.00	7.78	584.02	NA	NA	NA	NA	NA	NA	NA	NA
March 23, 2007	NP	0.00	8.53	583.00	NP	0.00	7.58	584.22	NA	NA	NA	NA	NA	NA	NA	NA
April 30, 2007	NP	0.00	8.46	583.07	NP	0.00	7.40	584.40	NA	NA	NA	NA	NA	NA	NA	NA
May 17, 2007	NP	0.00	8.44	583.09	NP	0.00	7.39	584.41	NA	NA	NA	NA	NA	NA	NA	NA
June 12, 2007	NP	0.00	8.50	583.03	NP	0.00	7.45	584.35	NA	NA	NA	NA	NA	NA	NA	NA
July 18, 2007	NP	0.00	8.54	582.99	NP	0.00	7.59	584.21	NA	NA	NA	NA	NP	0.00	8.31	583.51
August 28, 2007	NP	0.00	8.46	583.07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
September 19, 2007	NA	NA	NA	NA	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	NA	NA	NA	NA
November 27, 2007	NP	0.00	7.61	583.92	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
January 7, 2008	NP	0.00	6.31	585.22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
February 22, 2008	NA	NA	NA	NA	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	NA	NA	NA	NA	NA	NA	NA	NA
April 7, 2008	5.96	0.06	6.02	585.57	NP	0.00	6.49	585.31	NA	NA	NA	NA	NA	NA	NA	NA
May 5, 2008	6.89	0.03	7.13	584.43	NP	0.00	7.04	584.76	NA	NA	NA	NA	NA	NA	NA	NA
June 2, 2008	6.80	0.23	7.03	584.71	NP	0.00	7.12	584.68	NA	NA	NA	NA	NP	0.00	7.10	584.72
July 7, 2007	6.08	0.21	6.29	585.43	NP	0.00	6.79	585.01	NA	NA	NA	NA	NP	0.00	6.56	585.26
August 13, 2008	6.31	0.21	6.52	585.20	NP	0.00	7.02	584.78	NA	NA	NA	NA	NP	0.00	6.78	585.04
September 8, 2008	6.54	0.12	6.66	584.98	NP	0.00	7.20	584.60	NA	NA	NA	NA	NP	0.00	7.03	584.79
October 9, 2008	6.11	0.09	6.20	585.41	NP	0.00	6.95	584.85	NA	NA	NA	NA	NP	0.00	6.72	585.10

See Notes on Page 6.

Table 1. Groundwater and LNAPL Measurement Summary, March 2004 Through the Present, GM Saginaw Malleable Iron Plant, Saginaw, Michigan

Date	MW-172WT reference elevation = 591.51				MW-175WT reference elevation not available				MW-178WT reference elevation = 590.35			
	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)
March 8, 2004	8.18	0.44	8.62	583.29	NA	NA	NA	NA	NA	NA	NA	NA
April 29, 2004	7.98	0.56	8.54	583.49	NA	NA	NA	NA	NA	NA	NA	NA
June 1, 2004	NA	NA	NA	NA	NA	NA	NA	NA	NP	0.00	7.21	583.14
June 30, 2004	8.55	0.06	8.61	582.96	6.71	0.01	6.72	NA	7.37	1.24	8.61	582.88
July 28, 2004	8.32	0.36	8.68	583.16	6.88	0.01	6.89	NA	NA	NA	NA	NA
August 17, 2004	8.33	0.49	8.82	583.14	7.01	0.01	7.02	NA	7.45	1.25	8.70	582.80
September 27, 2004	8.42	0.48	8.90	583.05	7.18	0.01	7.19	NA	7.45	1.33	8.79	582.78
October 29, 2004	NA	NA	NA	NA	7.24	0.01	7.25	NA	7.51	1.02	8.53	582.76
November 30, 2004	8.39	0.72	9.11	583.06	NP	0.00	7.11	NA	NA	NA	NA	NA
December 27, 2004	NA	NA	NA	NA	NP	0.00	7.11	NA	7.53	0.59	8.12	582.77
January 26, 2005	NA	NA	NA	NA	NP	0.00	7.01	NA	7.55	0.65	8.20	582.75
February 7, 2005	8.00	0.19	8.19	583.49	7.11	0.01	7.12	NA	7.17	0.39	7.56	583.15
March 17, 2005	8.34	0.28	8.62	583.15	NP	0.00	7.22	NA	7.63	0.65	8.28	582.67
April 13, 2005	8.33	0.35	8.68	583.15	NP	0.00	7.12	NA	7.46	0.69	8.15	582.83
May 31, 2005	8.29	0.38	8.67	583.19	NP	0.00	6.98	NA	7.56	0.83	8.39	582.72
June 28, 2005	8.06	0.04	8.10	583.45	6.67	0.01	6.68	NA	7.39	0.56	7.95	582.92
July 29, 2005	8.06	0.02	8.08	583.45	NP	0.00	6.73	NA	7.44	0.82	8.26	582.84
August 18, 2005	8.24	0.17	8.41	583.26	NP	0.00	6.83	NA	7.51	1.26	8.77	582.74
September 28, 2005	8.36	0.21	8.57	583.13	NP	0.00	7.04	NA	7.49	0.32	7.81	582.83
October 18, 2005	8.51	0.42	8.93	582.97	NP	0.00	7.26	NA	7.57	0.32	7.89	582.75
November 30, 2005	8.41	0.32	8.73	583.07	NP	0.00	7.16	NA	7.54	0.51	8.05	582.77
December 26, 2005	8.32	0.35	8.67	583.16	NP	0.00	7.19	NA	7.54	1.24	8.78	582.71
January 31, 2006	8.08	0.27	8.35	583.41	NP	0.00	6.79	NA	7.45	0.16	7.61	582.89
February 24, 2006	8.32	0.33	8.65	583.16	NP	0.00	6.99	NA	7.56	0.60	8.16	582.74
March 22, 2006	8.17	0.08	8.25	583.33	NP	0.00	6.75	NA	7.42	0.14	7.56	582.92
April 27, 2006	8.33	0.11	8.44	583.17	NP	0.00	6.84	NA	7.43	0.26	7.69	582.90
May 25, 2006	8.20	0.18	8.38	583.30	NP	0.00	6.62	NA	7.39	0.36	7.75	582.93
June 27, 2006	8.39	0.31	8.70	583.10	NP	0.00	6.79	NA	7.43	0.37	7.80	582.89
July 11, 2006	8.27	0.36	8.63	583.21	NP	0.00	6.79	NA	7.46	0.34	7.80	582.86
August 23, 2006	8.36	0.19	8.55	583.13	NP	0.00	6.81	NA	7.39	0.47	7.86	582.92
September 26, 2006	8.21	0.23	8.44	583.28	NP	0.00	6.70	NA	7.41	0.29	7.70	582.92
October 30, 2006	8.07	0.15	8.22	583.43	NP	0.00	6.56	NA	7.35	0.38	7.73	582.97
November 27, 2006	8.29	0.16	8.45	583.21	NP	0.00	6.79	NA	7.37	0.34	7.71	582.95
December 27, 2006	NA	NA	NA	NA	NP	0.00	6.83	NA	7.36	0.33	7.69	582.96
January 25, 2007	NA	NA	NA	NA	NA	NA	NA	NA	7.41	0.38	7.79	582.91
March 6, 2007	8.44	0.29	8.73	583.05	NA	NA	NA	NA	7.51	0.51	8.02	582.80
March 23, 2007	8.41	0.33	8.74	583.07	NP	0.00	7.13	NA	7.51	0.46	7.97	582.80
April 30, 2007	8.34	0.36	8.70	583.14	NP	0.00	6.89	NA	7.48	0.25	7.73	582.85
May 17, 2007	8.32	0.19	8.51	583.17	NP	0.00	6.86	NA	7.13	0.33	7.46	583.19
June 12, 2007	8.33	0.38	8.71	583.15	NP	0.00	6.91	NA	7.47	0.28	7.75	582.86
July 18, 2007	NA	NA	NA	NA	NP	0.00	7.02	NA	7.46	0.32	7.78	582.86
August 28, 2007	NA	NA	NA	NA	NP	0.00	6.96	NA	7.46	0.29	7.75	582.87
September 19, 2007	NA	NA	NA	NA	NP	0.00	6.66	NA	6.87	0.11	6.98	583.47
October 25, 2007	NP	0.00	8.42	583.09	NP	0.00	7.08	NA	7.59	0.25	7.84	582.74
November 27, 2007	7.50	0.02	7.52	584.01	NA	NA	NA	NA	6.52	0.14	6.66	583.82
January 7, 2008	NP	0.00	6.16	585.35	NP	0.00	6.53	NA	5.44	0.05	5.49	584.91
February 22, 2008	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
March 17, 2008	NP	0.00	5.73	585.78	NA	NA	NA	NA	NA	NA	NA	NA
April 7, 2008	NP	0.00	5.88	585.63	NP	0.00	5.84	NA	5.30	0.02	5.32	585.05
May 5, 2008	NP	0.00	6.85	584.66	NP	0.00	6.31	NA	6.25	0.02	6.27	584.10
June 2, 2008	NP	0.00	6.75	584.76	NP	0.00	6.39	NA	5.93	0.01	5.94	584.42
July 7, 2007	NP	0.00	5.99	585.52	NP	0.00	5.96	NA	5.32	0.02	5.34	585.03
August 13, 2008	NA	NA	NA	NA	NP	0.00	6.14	NA	NP	0.00	5.81	584.54
September 8, 2008	NA	NA	NA	NA	NP	0.00	6.36	NA	5.86	0.01	5.87	584.49
October 9, 2008	6.00	0.02	6.02	585.51	NP	0.00	6.13	NA	NP	0.00	5.68	584.67

See Notes on Page 6.

Table 1. Groundwater and LNAPL Measurement Summary, March 2004 Through the Present, GM Saginaw Malleable Iron Plant, Saginaw, Michigan

Date	MW-179WT reference elevation not available				MW-180WT reference elevation = 590.67				RW-1 reference elevation = 592.18			
	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)
March 8, 2004	--	--	--	--	--	--	--	--	8.10	0.18	8.28	584.07
April 29, 2004	--	--	--	--	--	--	--	--	8.63	0.17	8.80	583.54
June 1, 2004	--	--	--	--	--	--	--	--	7.71	0.27	7.98	584.45
June 30, 2004	--	--	--	--	--	--	--	--	8.30	0.13	8.43	583.87
July 28, 2004	--	--	--	--	--	--	--	--	8.76	0.39	9.15	583.39
August 17, 2004	--	--	--	--	--	--	--	--	8.89	0.46	9.35	583.25
September 27, 2004	--	--	--	--	--	--	--	--	8.87	0.38	9.25	583.28
October 29, 2004	--	--	--	--	--	--	--	--	NA	NA	NA	NA
November 30, 2004	--	--	--	--	--	--	--	--	8.79	0.95	9.74	583.31
December 27, 2004	--	--	--	--	--	--	--	--	8.76	0.55	9.31	583.38
January 26, 2005	--	--	--	--	--	--	--	--	8.43	1.29	9.72	583.65
February 7, 2005	--	--	--	--	--	--	--	--	8.59	0.70	9.29	583.53
March 17, 2005	NP	0.00	7.13	NA	7.15	0.02	7.17	583.52	NA	NA	NA	NA
April 13, 2005	NP	0.00	6.91	NA	NP	0.00	6.87	583.80	8.60	0.28	8.88	583.56
May 31, 2005	NP	0.00	6.96	NA	NP	0.00	7.01	583.66	8.58	0.21	8.79	583.58
June 28, 2005	NP	0.00	6.82	NA	6.84	0.01	6.85	583.83	8.13	0.21	8.34	584.03
July 29, 2005	NP	0.00	6.73	NA	NP	0.00	6.73	583.94	8.05	0.17	8.22	584.12
August 18, 2005	NP	0.00	6.78	NA	NP	0.00	6.78	583.89	8.18	0.79	8.97	583.94
September 28, 2005	NP	0.00	6.95	NA	6.99	0.01	7.00	583.68	8.81	0.59	9.40	583.32
October 18, 2005	NP	0.00	7.14	NA	7.20	0.01	7.21	583.47	8.83	0.91	9.74	583.28
November 30, 2005	7.03	0.01	7.04	NA	NP	0.00	7.11	583.56	8.54	0.68	9.22	583.59
December 26, 2005	NP	0.00	7.14	NA	NP	0.00	7.20	583.47	NA	NA	NA	NA
January 31, 2006	NP	0.00	7.63	NA	NP	0.00	6.81	583.86	NA	NA	NA	NA
February 24, 2006	NP	0.00	7.82	NA	NP	0.00	6.81	583.86	8.49	0.33	8.82	583.66
March 22, 2006	NP	0.00	6.68	NA	NP	0.00	6.69	583.98	8.35	0.52	8.87	583.79
April 27, 2006	6.79	0.01	6.80	NA	NP	0.00	6.82	583.85	8.72	0.67	9.39	583.41
May 25, 2006	NP	0.00	6.74	NA	NP	0.00	6.76	583.91	8.45	0.56	9.01	583.69
June 27, 2006	NP	0.00	6.84	NA	NP	0.00	6.85	583.82	8.71	0.71	9.42	583.41
July 11, 2006	NP	0.00	6.83	NA	NP	0.00	6.90	583.77	8.49	0.86	9.35	583.62
August 23, 2006	NP	0.00	6.61	NA	NP	0.00	6.65	584.02	8.51	0.97	9.48	583.59
September 26, 2006	NA	NA	NA	NA	NP	0.00	6.76	583.91	8.31	0.48	8.79	583.83
October 30, 2006	NA	NA	NA	NA	NP	0.00	6.49	584.18	NA	NA	NA	NA
November 27, 2006	NA	NA	NA	NA	NP	0.00	6.59	584.08	8.43	0.61	9.04	583.70
December 27, 2006	NA	NA	NA	NA	NP	0.00	6.64	584.03	NA	NA	NA	NA
January 25, 2007	NA	NA	NA	NA	NP	0.00	6.76	583.91	NA	NA	NA	NA
March 6, 2007	NP	0.00	7.13	NA	NP	0.00	7.16	583.51	8.53	0.27	8.80	583.63
March 23, 2007	NP	0.00	6.90	NA	NP	0.00	6.93	583.74	8.31	0.27	8.58	583.85
April 30, 2007	NP	0.00	6.58	NA	NP	0.00	6.58	584.09	8.52	0.09	8.61	583.65
May 17, 2007	NA	NA	NA	NA	NP	0.00	6.52	584.15	8.38	0.14	8.52	583.79
June 12, 2007	NP	0.00	6.57	NA	NP	0.00	6.58	584.09	8.39	0.07	8.46	583.78
July 18, 2007	NP	0.00	6.75	NA	NP	0.00	6.78	583.89	8.46	0.63	9.09	583.67
August 28, 2007	NP	0.00	6.82	NA	NP	0.00	6.85	583.82	8.23	0.11	8.34	583.94
September 19, 2007	NP	0.00	6.65	NA	NP	0.00	6.69	583.98	7.93	0.11	8.04	584.24
October 25, 2007	NP	0.00	6.98	NA	NP	0.00	7.02	583.65	8.80	0.45	9.25	583.34
November 27, 2007	NA	NA	NA	NA	NP	0.00	7.07	583.60	8.03	0.15	8.18	584.14
January 7, 2008	NA	NA	NA	NA	NP	0.00	7.01	583.66	6.76	0.04	6.80	585.42
February 22, 2008	NA	NA	NA	NA	NP	0.00	6.45	584.22	6.24	0.06	6.30	585.94
March 17, 2008	NA	NA	NA	NA	NP	0.00	6.45	584.22	NP	0.00	6.60	585.58
April 7, 2008	NP	0.00	6.46	NA	NP	0.00	6.45	584.22	NP	0.00	6.34	585.84
May 5, 2008	NA	NA	NA	NA	NP	0.00	6.52	584.15	7.17	0.02	7.19	585.01
June 2, 2008	NP	0.00	6.55	NA	NP	0.00	6.56	584.11	7.16	0.03	7.19	585.02
July 7, 2007	NA	NA	NA	NA	NP	0.00	6.14	584.53	6.24	0.01	6.25	585.94
August 13, 2008	NA	NA	NA	NA	NP	0.00	6.25	584.42	NP	0.00	6.49	585.69
September 8, 2008	NA	NA	NA	NA	NP	0.00	6.45	584.22	NP	0.00	6.60	585.58
October 9, 2008	NA	NA	NA	NA	NP	0.00	6.31	584.36	NP	0.00	6.34	585.84

See Notes on Page 6.

Table 1. Groundwater and LNAPL Measurement Summary, March 2004 Through the Present, GM Saginaw Malleable Iron Plant, Saginaw, Michigan

Date	RW-2 reference elevation = 592.07				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)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Depth to Water (feet)	Groundwater Elevation (corrected)
March 8, 2004	NA	NA	NA	NA	8.27	0.01	8.28	584.05	NA	NA	NA	NA
April 29, 2004	NA	NA	NA	NA	7.78	0.01	7.79	584.54	8.65	0.75	9.40	NA
June 1, 2004	NA	NA	NA	NA	NP	0.00	5.61	586.71	7.64	0.23	7.87	NA
June 30, 2004	8.66	0.01	8.67	583.41	NP	0.00	7.44	584.88	NA	NA	NA	NA
July 28, 2004	8.83	0.01	8.84	583.24	NP	0.00	8.14	584.18	NA	NA	NA	NA
August 17, 2004	8.94	0.01	8.95	583.13	NP	0.00	8.51	583.81	NA	NA	NA	NA
September 27, 2004	9.09	0.01	9.10	582.98	NP	0.00	8.50	583.82	8.75	0.71	9.46	NA
October 29, 2004	8.71	0.02	8.73	583.36	NP	0.00	7.72	584.60	NA	NA	NA	NA
November 30, 2004	9.02	0.01	9.03	583.05	NP	0.00	8.07	584.25	8.67	1.00	9.67	NA
December 27, 2004	NP	0.00	9.03	583.04	NP	0.00	7.84	584.48	NA	NA	NA	NA
January 26, 2005	NP	0.00	8.69	583.38	NP	0.00	6.92	585.40	8.33	1.09	9.42	NA
February 7, 2005	NP	0.00	8.73	583.34	NP	0.00	7.57	584.75	8.44	1.05	9.49	NA
March 17, 2005	NP	0.00	8.92	583.15	NP	0.00	7.82	584.50	8.61	1.30	9.91	NA
April 13, 2005	NP	0.00	8.94	583.13	NP	0.00	7.83	584.49	8.49	1.13	9.62	NA
May 31, 2005	NP	0.00	8.93	583.14	NP	0.00	7.86	584.44	8.54	0.33	8.87	NA
June 28, 2005	NP	0.00	8.71	583.36	NP	0.00	7.04	585.28	8.01	0.48	8.49	NA
July 29, 2005	NP	0.00	8.69	583.38	NP	0.00	6.77	585.55	7.97	0.25	8.22	NA
August 18, 2005	NP	0.00	8.67	583.40	NP	0.00	7.72	584.60	8.28	0.75	9.03	NA
September 28, 2005	NP	0.00	9.01	583.06	NP	0.00	8.41	583.91	8.69	0.82	9.51	NA
October 18, 2005	NP	0.00	8.99	583.08	NP	0.00	8.41	583.91	--	--	--	NA
November 30, 2005	NP	0.00	8.93	583.14	NP	0.00	8.02	584.30	--	--	--	NA
December 26, 2005	NP	0.00	8.99	583.08	NP	0.00	7.98	584.34	8.43	0.87	9.30	NA
January 31, 2006	NP	0.00	8.72	583.35	NP	0.00	5.50	586.82	7.82	0.72	8.54	NA
February 24, 2006	NP	0.00	8.87	583.20	NP	0.00	6.78	585.54	8.36	1.04	9.40	NA
March 22, 2006	NA	NA	NA	NA	NP	0.00	6.29	586.03	8.22	0.81	9.03	NA
April 27, 2006	NA	NA	NA	NA	NP	0.00	7.66	584.66	8.57	0.99	9.56	NA
May 25, 2006	NA	NA	NA	NA	NP	0.00	7.25	585.07	8.31	0.96	9.27	NA
June 27, 2006	NA	NA	NA	NA	NP	0.00	7.91	584.41	NA	NA	NA	NA
July 11, 2006	NA	NA	NA	NA	NP	0.00	7.34	584.98	8.03	1.70	9.73	NA
August 23, 2006	NA	NA	NA	NA	NP	0.00	7.89	584.43	NA	NA	NA	NA
September 26, 2006	NP	0.00	8.90	583.17	NP	0.00	7.08	585.24	NA	NA	NA	NA
October 30, 2006	NP	0.00	8.75	583.32	NP	0.00	7.05	585.27	NA	NA	NA	NA
November 27, 2006	NP	0.00	8.94	583.13	NP	0.00	7.50	584.82	NA	NA	NA	NA
December 27, 2006	NP	0.00	8.76	583.31	NP	0.00	7.33	584.99	NA	NA	NA	NA
January 25, 2007	NA	NA	NA	NA	NP	0.00	7.90	584.42	NA	NA	NA	NA
March 6, 2007	NP	0.00	9.14	582.93	NP	0.00	8.18	584.14	8.54	0.92	9.46	NA
March 23, 2007	NP	0.00	8.64	583.43	NA	NA	NA	NA	8.28	0.89	9.17	NA
April 30, 2007	NP	0.00	8.98	583.09	NP	0.00	8.03	584.29	8.37	0.79	9.16	NA
May 17, 2007	NP	0.00	8.99	583.08	NP	0.00	7.98	584.34	8.34	0.77	9.11	NA
June 12, 2007	NP	0.00	9.03	583.04	NP	0.00	8.21	584.11	8.29	0.76	9.05	NA
July 18, 2007	NP	0.00	9.07	583.00	NP	0.00	8.27	584.05	8.44	0.01	8.45	NA
August 28, 2007	NP	0.00	9.00	583.07	NP	0.00	7.57	584.75	8.12	0.45	8.57	NA
September 19, 2007	NP	0.00	8.44	583.63	NP	0.00	7.03	585.29	7.82	0.11	7.93	NA
October 25, 2007	NP	0.00	8.93	583.14	NP	0.00	8.32	584.00	8.69	0.39	9.08	NA
November 27, 2007	NP	0.00	8.04	584.03	NP	0.00	8.22	584.10	7.95	0.22	8.17	NA
January 7, 2008	NA	NA	NA	NA	NP	0.00	7.30	585.02	6.66	0.04	6.70	NA
February 22, 2008	NP	0.00	6.56	585.51	NP	0.00	5.19	587.13	NA	NA	NA	NA
March 17, 2008	NP	0.00	6.36	585.71	NP	0.00	4.45	587.87	5.79	0.02	5.81	NA
April 7, 2008	NP	0.00	6.51	585.56	NP	0.00	5.03	587.29	6.15	0.02	6.17	NA
May 5, 2008	NP	0.00	6.18	585.89	NP	0.00	6.79	585.53	7.18	0.01	7.19	NA
June 2, 2008	NP	0.00	7.33	584.74	NP	0.00	7.51	584.81	7.09	0.02	7.11	NA
July 7, 2007	NA	NA	NA	NA	NP	0.00	6.78	585.54	6.13	0.03	6.16	NA
August 13, 2008	NA	NA	NA	NA	NP	0.00	6.95	585.37	6.38	0.04	6.42	NA
September 8, 2008	NA	NA	NA	NA	NP	0.00	7.31	585.01	6.60	0.02	6.62	NA
October 9, 2008	NP	0.00	6.69	585.38	NP	0.00	6.83	585.49	NP	0.00	6.25	NA

See Notes on Page 6.

Table 1. Groundwater and LNAPL Measurement Summary, March 2004 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.

See Notes on Page 6.