

ASHLAND/NSP LAKEFRONT SITE
OCTOBER 15, 2004 PROGRESS REPORT (No. 11)
WDNR BRRTS #02-02-00013
CERCLA Docket No. V-W-04-C-764
USEPA ID# WISFN057952

This is the eleventh progress report prepared in accordance with the Administrative Order on Consent (AOC) for the Ashland/NSP Lakefront Site, effective November 14, 2003. This report covers activities completed in September 2004. It is intended to meet the requirements described in Task 8 of the Statement of Work appended to the AOC.

Field Activities Completed

Quarterly monitoring of the well network was performed during the weeks of September 20 and 27, 2004. All 70 wells in the network were measured for water levels; 67 wells were monitored for water quality. (The three short screened piezometers P-24, -25 and -26 installed during May 2004 are only monitored for water levels.) Water levels and free-product measurements collected during September are included as Tables 1 and 2 attached to this report. The water quality data from this sampling event will be utilized as part of the groundwater monitoring program for the remedial investigation. This data will be provided in the next (November) monthly report.

The City-owned artesian wells were included in this water quality monitoring program. During early September, the City temporarily closed public access to these wells in response to a recommendation from the Wisconsin DNR's Bureau of Drinking Water and Groundwater. This recommendation was based on the knowledge that the wells are in the proximity of the contaminant plume in the Copper Falls aquifer (historic monitoring has not yielded contaminant detections in samples from these wells above drinking water standards). These artesian wells will continue to be monitored as part of the quarterly monitoring, and as part of the remedial investigation for the next two quarterly events (see the next section of this report).

The coal tar removal system operated during September with one shutdown. On September 10, Coleman Engineering reported that the light non-aqueous phase liquid (LNAPL) drum was full, shutting the system down sometime between that time and the previous visit on August 31. The drum was pumped into the storage tank and the system restarted. The system operated continuously the remainder of the month. The tar volume recovered between August 31, 2004 and September 27, 2004 was 114 gallons.

On September 25, 2004, Coleman installed a permanent replaceable packer of its design in MW-7B. The sampling team later reported that this device, installed eight feet below the top of casing below the freeze line, is easily removable with the proper equipment. The remainder of the flowing wells at Kreher Park will be fitted with these packers during October.

Northern Minnesota Services mobilized to the Northern States Power Wisconsin (NSPW) property on September 17, 2004. Four drums of personal protective equipment (PPE) waste and other solid material wastes classified as D018 waste was hauled off site for proper disposal.

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A summary of the system monitoring data for the month is included on Tables 3 – 7. Lab analysis reports are included in the Appendix.

Reporting Activities Completed

USEPA convened a meeting on September 8 – 9, 2004 in Madison to discuss the agencies comments on the February 18, 2004 RI/FS Work Plan. Representatives from USEPA, WDNR, NSPW, NOAA and the Bad River and Red Cliff bands of the Chippewa Nation participated. The primary agreements made as a result of the meeting are as follows:

- Three additional quarterly monitoring events for the entire well network will be sampled, and the data evaluated for the RI report. This will result in a complete year of water quality results for the network. If additional data is required, a decision will be made after the fourth round (March 2005) is collected.
- The upland investigation proposed in the February work plan will remain essentially the same as originally proposed; however, variations will be made to the proposed air pathway sampling program, as well as the locations of surface soil background samples.
- Diffusion bag samples will be collected to better define the groundwater-surface water interface.
- Additional sediment sample stations will be added to the program.
- An expanded toxicity testing program, fish larval study and UV light study will be performed on selected species.
- A wildlife and wetland survey will be performed.

These proposed programs will be incorporated into the revised RI/FS Work Plan. USEPA specified that the submittal date for the Work Plan is October 18, 2004.

Field Activities Planned

Coleman Engineering will continue to monitor the tar removal system on a weekly basis during October.

Reporting Activities Planned

As reported above, the draft revised RI/FS Work Plan will be submitted on October 18, 2004.

Attachments:

Table 1 – Summary of Groundwater Elevations

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- Table 2 – Summary of Free-Phase Hydrocarbon Thickness
- Table 3 – Remediation System Water Quality Monitoring Results
- Table 4 – Remediation System Air Monitoring Results
- Table 5 – Summary of Coal Tar and Groundwater Volume Removed
- Table 6 – Interim Treatment System – Air Sampling and Testing Summary
- Table 7 – Interim Treatment System – Water Sampling Testing Summary

Appendix – Laboratory Reporting Forms

Table 1
Summary of Groundwater Elevations
Northern States Power, Ashland, Wisconsin

Well Location	Reference Elevation	Sep. 10, 2001		Dec. 3, 2001		Mar. 18, 2002		June 28, 2002		Sept 16, 2002		Dec 16, 2002		Mar. 24, 2003	
		Depth to Water	Groundwater Elevations	Depth to Water	Groundwater Elevations	Depth to Water	Groundwater Elevations	Depth to Water	Groundwater Elevations	Depth to Water	Groundwater Elevations	Depth to Water	Groundwater Elevations	Depth to Water	Groundwater Elevations
MW-1	634.18	15.08	619.10	14.26	619.92	--	--	14.79	619.39	17.43	616.75	15.28	618.90	15.51	618.67
MW-2	634.85	14.92	619.93	--	--	--	--	--	--	--	--	--	--	--	--
MW-2A	634.24	19.50	614.74	--	--	--	--	--	--	--	--	--	--	--	--
MW-2B	634.68	10.52	624.16	--	--	--	--	--	--	--	--	--	--	--	--
MW-2R	637.43	--	--	--	--	14.70	622.73	15.00	622.43	14.75	622.68	16.21	621.22	16.43	621.00
MW-2AR	636.28	--	--	--	--	20.13	616.15	20.25	616.03	14.87	621.41	20.24	616.04	20.28	616.00
MW-2BR	636.24	--	--	--	--	11.97	624.27	12.03	624.21	12.14	624.10	10.86	625.38	10.61	625.63
MW-3	637.83	3.14	634.69	0.00	637.83	--	--	2.72	635.11	2.16	635.67	3.69	634.14	5.09	632.74
MW-4	640.92	6.40	631.63	4.98	636.05	5.60	635.43	5.02	636.01	5.86	635.17	6.60	634.43	5.78	634.43
MW-4A	641.22	14.28	626.94	14.20	627.02	13.50	627.72	13.10	628.12	14.01	627.21	14.02	627.20	14.36	626.86
MW-4B	640.98	16.61	624.37	15.32	625.66	16.27	624.71	16.73	624.25	17.16	623.82	15.98	625.00	15.93	625.05
MW-5	633.82	18.15	615.67	17.95	615.87	19.44	614.38	17.80	616.02	18.58	615.24	--	--	19.70	614.12
MW-5A	633.72	19.38	614.34	19.26	614.46	19.60	614.12	19.05	614.67	19.17	614.55	--	--	19.09	614.63
MW-5B	633.89	19.14	614.75	19.25	614.64	19.37	614.52	19.03	614.86	19.13	614.76	--	--	18.98	614.91
MW-5C	634.33	9.90	624.43	9.47	624.86	9.33	625.00	9.51	624.82	9.94	624.39	--	--	8.97	625.36
MW-6	644.88	17.01	627.87	15.95	628.93	--	--	14.25	630.63	16.58	628.30	17.04	627.84	15.54	629.34
MW-6A	644.79	20.31	624.48	19.76	625.03	--	--	20.02	624.77	20.63	624.16	19.51	625.28	19.52	625.27
MW-7	612.60	3.92	608.68	4.00	608.60	4.17	608.43	--	--	--	--	--	--	--	--
MW-7A	613.25	flowing	--	flowing	--	flowing	--	--	--	flowing	flowing	flowing	flowing	flowing	flowing
MW-8	634.42	4.79	629.63	4.46	629.96	8.09	626.33	4.52	629.90	3.79	630.63	5.81	628.61	frozen	--
MW-8A	634.62	15.68	618.94	15.24	619.38	15.27	619.35	15.47	619.15	15.72	618.90	15.02	619.60	14.94	619.68
MW-9	637.98	5.92	632.06	--	--	--	--	4.58	633.40	4.50	633.48	6.79	631.19	--	--
MW-9A	637.86	13.66	624.20	13.25	624.61	13.21	624.65	13.92	623.94	13.58	624.28	--	--	12.94	--
MW-9B	638.02	13.80	624.22	13.28	624.74	13.30	624.72	13.86	624.16	14.42	623.60	13.09	624.93	12.96	625.06
MW-9C	637.95	13.67	624.28	13.28	624.67	13.22	624.73	14.06	623.89	14.40	623.55	13.07	624.88	12.97	624.98
MW-10	638.20	4.64	633.56	4.33	633.87	4.59	633.61	3.40	634.80	4.17	634.03	5.06	633.14	8.93	629.27
MW-10A	638.07	15.55	622.52	14.19	623.88	14.21	623.86	14.61	623.46	14.98	623.09	13.91	624.16	14.05	624.02
MW-10B	638.40	22.42	615.98	22.33	616.07	21.25	617.15	21.75	616.65	21.45	616.95	21.71	616.69	frozen	--
MW-11	636.13	8.62	627.51	6.23	629.90	--	--	6.20	629.93	7.03	629.10	9.16	626.97	--	--

Notes: Reference elevation surveyed by Dames & Moore/URS

Table 1
Summary of Groundwater Elevations
Northern States Power, Ashland, Wisconsin

Well Location	Reference Elevation	Sep. 10, 2001		Dec. 3, 2001		Mar. 18, 2002		June 28, 2002		Sept 16, 2002		Dec 16, 2002		Mar. 24, 2003		
		Depth to Water	Groundwater Elevations	Depth to Water	Groundwater Elevations	Depth to Water	Groundwater Elevations	Depth to Water	Groundwater Elevations	Depth to Water	Groundwater Elevations	Depth to Water	Groundwater Elevations	Depth to Water	Groundwater Elevations	
TW-13	635.72	9.54	626.29	4.58	631.25	4.71	631.12	3.86	631.97	4.50	631.33	--	--	6.06	629.66	
MW-13A	635.94	20.79	615.15	21.58	614.36	21.00	614.94	20.70	615.24	20.46	615.48	20.75	615.19	20.50	615.44	
MW-13B	635.90	20.83	615.07	21.21	614.69	20.75	615.15	20.62	615.28	20.13	615.77	20.25	615.65	19.98	615.92	
MW-13C	636.11	11.73	624.38	11.32	624.79	11.24	624.87	11.95	624.16	12.40	623.71	11.08	625.03	11.03	625.08	
MW-13D	637.09	11.81	625.28	11.39	625.70	11.39	625.70	12.03	625.06	12.52	624.57	11.16	625.93	11.08	626.01	
MW-14	639.15	4.33	634.82	4.92	634.23	--	--	--	--	3.00	636.15	4.35	634.80	--	--	
MW-15	641.21	4.52	636.69	4.33	636.88	3.60	637.61	3.52	637.69	3.73	637.48	5.10	636.11	4.68	636.53	
MW-16	642.20	1.74	640.46	1.05	641.15	--	--	0.40	641.80	1.66	640.54	4.20	638.00	8.03	634.17	
MW-17	633.88	2.64	631.24	--	--	3.29	630.59	2.56	631.32	2.24	631.64	4.98	628.90	--	--	
MW-17A	633.68	19.94	613.74	--	--	20.18	613.50	19.90	613.78	19.77	613.91	19.32	614.36	19.80	613.88	
MW-18A	635.57	--	--	--	--	20.50	615.07	20.22	615.35	20.24	615.33	19.93	615.64	20.16	615.41	
MW-18B	635.52	--	--	--	--	13.46	622.06	13.75	621.77	13.98	621.54	13.12	622.40	13.31	622.21	
MW-19A	636.76	--	--	--	--	21.27	615.49	20.41	616.35	20.90	615.86	20.58	616.18	20.66	616.10	
MW-19B	636.65	--	--	--	--	11.74	624.91	11.58	625.07	12.38	624.27	11.25	625.40	10.90	625.75	
MW-20A	642.65	--	--	--	--	24.30	618.35	24.25	618.40	24.81	617.84	24.37	618.28	24.85	617.80	
MW-21A	637.82	--	--	--	--	21.75	616.07	20.87	616.95	21.57	616.25	21.26	616.56	21.7	616.12	
MW-22A	638.34	--	--	--	--	--	--	--	19.11	619.23	19.44	618.90	19.16	619.18	19.56	618.78
MW-22B	638.50	--	--	--	--	--	--	14.56	623.94	14.79	623.71	13.80	624.70	13.87	624.63	
MW-1(NET)	608.40	7.30	601.10	7.47	600.93	8.00	600.40	7.17	601.23	7.09	601.31	7.67	600.73	8.27	600.13	
MW-2(NET)	608.23	7.11	601.12	7.24	600.99	7.79	600.44	6.95	601.28	--	--	--	--	7.98	600.25	
MW-2A(NET)	607.99	--	--	--	--	--	--	--	--	flowing	flowing	flowing	flowing	flowing	flowing	
MW-2B(NET)	608.50	--	--	--	--	--	--	--	--	flowing	flowing	flowing	flowing	flowing	flowing	
MW-3(NET)	612.10	7.17	604.93	11.25	600.85	11.38	600.72	10.75	601.35	10.38	601.72	11.52	600.58	12.24	599.86	
TW-11	606.80	5.75	601.05	5.75	601.05	5.74	601.06	3.58	603.22	3.75	603.05	6.00	600.80	5.99	600.81	
TW-12	608.45	--	--	--	--	--	--	7.38	601.07	--	--	--	--	8.48	599.97	

Notes: Reference elevation surveyed by Dames & Moore/URS

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Summary of Groundwater Elevations
Northern States Power, Ashland, Wisconsin**

Well Location	Reference Elevation	June 23, 2003		September 29, 2003		December 15, 2003		March 16, 2004		June 14, 2004		September 20, 2004	
		Depth to Water	Groundwater Elevations	Depth to Water	Groundwater Elevations	Depth to Water	Groundwater Elevations	Depth to Water	Groundwater Elevations	Depth to Water	Groundwater Elevations	Depth to Water	Groundwater Elevations
AW-1	--	--	--	--	--	--	--	--	--	flowing	--	flowing	--
AW-2	--	--	--	--	--	--	--	--	--	flowing	--	flowing	--
MW-1	634.18	14.51	619.67	14.80	619.38	NM	--	NM	--	15.51	618.67	14.70	619.48
MW-2R	637.43	15.59	621.84	15.58	621.85	15.52	621.91	15.32	622.11	15.57	621.86	15.78	621.65
MW-2AR	636.28	21.09	615.19	20.95	615.33	20.21	616.07	20.58	615.70	21.11	615.17	20.24	616.04
MW-2BR	636.24	11.67	624.57	11.10	625.14	10.41	625.83	10.68	625.56	10.88	625.36	11.56	624.68
MW-2C	--	--	--	--	--	2.45	--	9.81	--	10.02	--	10.51	--
MW-3	637.83	2.60	635.23	2.62	635.21	NM	--	5.36	632.47	2.77	635.06	2.94	634.89
MW-4	640.92	5.07	635.85	6.34	634.58	5.74	635.18	5.31	635.61	5.08	635.84	5.88	635.04
MW-4A	641.22	13.74	627.48	14.69	626.53	14.14	627.08	14.28	626.94	13.28	627.94	13.93	627.29
MW-4B	640.98	16.72	624.26	16.35	624.63	16.03	624.95	16.32	624.66	16.05	624.93	16.91	624.07
MW-5	633.82	19.20	614.62	18.73	615.09	NM	--	18.68	615.14	18.12	615.70	18.19	615.63
MW-5A	633.72	19.18	614.54	19.17	614.55	NM	--	19.29	614.43	19.74	613.98	19.85	613.87
MW-5B	633.89	19.15	614.74	19.09	614.80	NM	--	19.08	614.81	19.35	614.54	19.84	614.05
MW-5C	634.33	10.07	624.26	9.42	624.91	NM	--	9.17	625.16	9.32	625.01	10.02	624.31
MW-6	644.88	15.28	629.60	16.41	628.47	NM	--	13.41	631.47	14.25	630.63	16.59	628.29
MW-6A	644.79	20.10	624.69	20.02	624.77	NM	--	19.68	625.11	19.46	625.33	20.17	624.62
MW-7	612.60	--	--	--	--	--	--	--	--	--	--	--	--
MW-7R	--	--	--	--	--	--	--	--	--	8.86	--	8.29	--
MW-7A	613.25	flowing	--	flowing	--	flowing	--	flowing	--	flowing	--	flowing	--
MW-7B	--	--	--	--	--	--	--	--	--	flowing	--	flowing	--
MW-8	634.42	4.29	630.13	4.30	630.12	5.28	629.14	NM	--	3.53	630.89	3.41	631.01
MW-8A	634.62	15.67	618.95	15.19	619.43	NM	--	NM	--	14.66	619.96	14.91	619.71
MW-9	637.98	4.54	633.44	5.60	632.38	NM	--	NM	--	4.26	633.72	4.83	633.15
MW-9A	637.86	14.21	623.65	13.40	624.46	12.98	624.88	13.26	624.60	15.48	622.38	14.10	623.76
MW-9B	638.02	13.23	624.79	13.37	624.65	13.20	624.82	13.13	624.89	13.60	624.42	14.05	623.97
MW-9C	637.95	14.28	623.67	13.41	624.54	13.05	624.90	13.30	624.65	15.50	622.45	14.11	623.84
MW-10	638.20	3.98	634.22	6.29	631.91	5.84	632.36	6.62	631.58	4.46	633.74	4.78	633.42
MW-10A	638.07	14.67	623.40	14.31	623.76	14.06	624.01	14.25	623.82	14.12	623.95	14.71	623.36
MW-10B	638.40	22.52	615.88	22.85	615.55	22.27	--	22.15	616.25	24.03	614.37	25.61	612.79
MW-11	636.13	6.62	629.51	6.60	629.53	NM	--	NM	--	6.76	629.37	6.93	629.20
TW-13	635.72	4.74	630.98	5.26	630.46	5.10	630.62	NM	--	4.09	631.63	3.97	631.75
MW-13A	635.94	21.55	614.39	21.27	614.67	20.60	615.34	20.97	614.97	21.01	614.93	21.52	614.42
MW-13B	635.90	21.38	614.52	--	--	20.12	615.78	20.46	615.44	20.44	615.46	21.08	614.82
MW-13C	636.11	12.21	623.90	11.47	624.64	11.07	625.04	11.31	624.80	11.31	624.80	11.91	624.20
MW-13D	637.09	12.25	624.84	11.53	625.56	11.11	625.98	11.45	625.64	11.51	625.58	12.18	624.91

Notes: Reference elevation surveyed by Dames & Moore/URS

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Summary of Groundwater Elevations
Northern States Power, Ashland, Wisconsin**

Well Location	Reference Elevation	June 23, 2003		September 29, 2003		December 15, 2003		March 16, 2004		June 14, 2004		September 20, 2004	
		Depth to Water	Groundwater Elevations	Depth to Water	Groundwater Elevations	Depth to Water	Groundwater Elevations	Depth to Water	Groundwater Elevations	Depth to Water	Groundwater Elevations	Depth to Water	Groundwater Elevations
MW-14	639.15	3.78	635.37	4.33	634.82	NM	--	NM	--	3.63	635.52	3.67	635.48
MW-15	641.21	4.22	636.99	5.30	635.91	4.77	636.44	4.92	636.29	4.54	636.67	4.34	636.87
MW-15A	641.44	--	--	--	--	NM	--	15.13	626.31	14.59	626.85	15.05	626.39
MW-15B	641.47	--	--	--	--	16.48	624.99	16.79	624.68	16.61	624.86	17.27	624.20
MW-16	642.20	0.73	641.47	1.82	640.38	NM	--	NM	--	0.57	641.63	0.93	641.27
MW-17	633.88	2.26	631.62	2.52	631.36	2.65	631.23	2.17	631.71	2.33	631.55	3.52	630.36
MW-17A	633.68	19.82	613.86	19.61	614.07	19.48	614.20	18.27	615.41	19.34	614.34	20.31	613.37
MW-18A	635.57	20.35	615.22	20.26	615.31	20.12	615.45	20.42	615.15	20.53	615.04	20.98	614.59
MW-18B	635.52	13.74	621.78	13.37	622.15	14.66	620.86	12.17	623.35	13.35	622.17	13.83	621.69
MW-19A	636.76	21.05	615.71	20.96	615.80	NM	--	20.83	615.93	21.05	615.71	21.58	615.18
MW-19B	636.65	12.15	624.50	11.58	625.07	NM	--	11.12	625.53	11.23	625.42	12.12	624.53
MW-20A	642.65	24.85	617.80	24.85	617.80	24.82	617.83	24.89	617.76	24.73	617.92	25.14	617.51
MW-21A	637.82	21.84	615.98	21.92	615.90	21.53	616.29	21.38	616.44	21.61	616.21	21.94	615.88
MW-21B	636.83	--	--	--	--	20.78	616.05	20.94	615.89	20.86	615.97	21.36	615.47
MW-22A	638.34	19.47	618.87	19.77	618.57	19.40	618.94	19.29	619.05	19.11	619.23	19.58	618.76
MW-22B	638.50	14.58	623.92	14.15	624.35	13.88	624.62	13.97	624.53	13.98	624.52	14.65	623.85
MW-23A	--	--	--	--	--	--	--	--	--	flowing	--	flowing	--
MW-23B	--	--	--	--	--	--	--	--	--	flowing	--	flowing	--
MW-24	--	--	--	--	--	--	--	--	--	2.78	--	2.32	--
P-24	--	--	--	--	--	--	--	--	--	3.08	--	2.69	--
MW-24A	--	--	--	--	--	--	--	--	--	flowing	--	flowing	--
MW-25	--	--	--	--	--	--	--	--	--	2.27	--	1.80	--
P-25	--	--	--	--	--	--	--	--	--	2.77	--	1.87	--
MW-25A	--	--	--	--	--	--	--	--	--	flowing	--	flowing	--
MW-26	--	--	--	--	--	--	--	--	--	3.25	--	2.90	--
P-26	--	--	--	--	--	--	--	--	--	3.29	--	2.88	--
MW-26A	--	--	--	--	--	--	--	--	--	flowing	--	flowing	--
MW-1(NET)	608.40	7.41	600.99	7.73	600.67	7.80	600.60	8.12	600.28	7.11	601.29	6.68	601.72
MW-2(NET)	608.23	7.16	601.07	7.48	600.75	7.56	600.67	7.82	600.41	6.85	601.38	6.42	601.81
MW-2A(NET)	607.99	flowing	--	flowing	--	flowing	--	flowing	--	flowing	--	flowing	--
MW-2B(NET)	608.50	flowing	--	flowing	--	flowing	--	flowing	--	flowing	--	flowing	--
MW-3(NET)	612.10	11.76	600.34	11.68	600.42	11.68	600.42	12.21	599.89	11.19	600.91	10.77	601.33
TW-9	--	--	--	--	--	--	--	--	--	7.78	--	7.48	--
TW-11	606.80	6.09	600.71	5.43	601.37	5.21	601.59	5.77	601.03	5.63	601.17	4.62	602.18
TW-12	608.45	7.66	600.79	7.91	600.54	7.99	600.46	NM	--	4.65	603.80	4.22	604.23

Notes: Reference elevation surveyed by Dames & Moore/URS

Table 2
Summary of Free Phase Hydrocarbon Thickness
Northern States Power, Ashland, Wisconsin

Well Location	Depth to Bottom	October 6, 1998			November 23, 1998			June 2, 1999		
		Depth to Hydrocarbon	Feet in Well	Feet on Tape	Depth to Hydrocarbon	Feet in Well	Feet on Tape	Depth to Hydrocarbon	Feet in Well	Feet on Tape
EW-1	53.51	41.45	12.06	12.25	40.09	13.42	13.5	35.25	18.26	18.2
MW-7	17.88	(1)	(1)	10.14	(1)	(1)	10.01	(1)	(1)	9.91
MW-9	14.62	13.78	0.84	2.73	14.2	0.42	3.6	14.03	0.59	--
TW-13	14.82	(2)	(2)	(2)	(2)	(2)	(2)	18.10	0.31	2.2
MW-13A	45.33	43.22	2.11	4.73	43.36	1.97	3	43.37	1.96	--
MW-13B	69.82	43.56	26.26	26.1	43.56	26.26	27.6	52.28	17.54	--
MW-15	15.59	14.78	0.81	2.94	13.93	1.66	2.09	13.26	2.33	2.6
Well Location	Depth to Bottom	August 23, 1999			November 29, 1999			September 27, 2000		
		Depth to Hydrocarbon	Feet in Well	Feet on Tape	Depth to Hydrocarbon	Feet in Well	Feet on Tape	Depth to Hydrocarbon	Feet in Well	Feet on Tape
EW-1	53.51	34.31	19.2		(2)	(2)	16.2	(2)	(2)	(2)
MW-7	17.88	(1)	(1)	10.44	(2)	(2)	0	(2)	(2)	(2)
MW-9	14.62	13.02	1.6		(2)	(2)	<1 inch	(2)	(2)	(2)
TW-13	14.82	(2)	< 6 inches	< 6 inches	(2)	(2)	<1 inch	14.32	0.5	0.5
MW-13A	45.33	(1)	(1)	8.5	(2)	(2)	2.1	44.33	1.0	1.0
MW-13B	69.82	(1)	(1)	26	(2)	(2)	12.1	57.49	12.33	12.33
MW-15	15.59	(1)	(1)	10.6	(2)	(2)	0.67	(2)	(2)	(2)
Well Location	Depth to Bottom	December 4, 2000			March 27, 2001			June 11, 2001		
		Depth to Hydrocarbon	Feet in Well	Feet on Tape	Depth to Hydrocarbon	Feet in Well	Feet on Tape	Depth to Hydrocarbon	Feet in Well	Feet on Tape
EW-1	53.51	Not Measured	--	--	Not Measured	--	--	47.51	6.00	6.00
EW-2	50.00	Not Measured		--	Not Measured	--	--	40.5	9.50	9.50
EW-3	70.00	Not Measured	--	--	Not Measured	--	--	68.58	1.42	1.42
MW-2A	44.41	Not Measured	--	--	41.66	2.75	2.75	40.37	4.04	4.04
MW-7	17.88	Frozen	--	--	Frozen	--	--	Damaged	--	--
MW-9	14.62	14.5	0.1	0.1	(2)	(2)	(2)	(2)	(2)	(2)
MW-10B	34.91				34.66	0.25	0.25	34.33	0.58	0.58
TW-13	14.82	14.57	0.25	0.25	14.74	0.08	0.08	(2)	(2)	(2)
MW-13A	45.33	44.25	1.08	1.08	44.25	1.08	1.08	44.83	0.50	0.50
MW-13B	69.82	57.24	12.58	12.58	55.86	13.96	13.96	58.65	11.17	11.17
MW-15	15.59	15.17	0.42	0.25	12.84	2.75	2.75	15.34	0.25	0.25

(1) Free-phase hydrocarbons not detected by interface probe; free-phase hydrocarbons observed on tape.

(2) Product not encountered.

Hydrocarbon thickness in well is difference between depth to bottom and depth to hydrocarbon/water interface.

Hydrocarbon thickness on tape measure after probe removed from the well.

Table 2
Summary of Free Phase Hydrocarbon Thickness
Northern States Power, Ashland, Wisconsin

Well Location	Depth to Bottom	September 10, 2001			December 3, 2001			March 18, 2002		
		Depth to Hydrocarbon	Feet in Well	Feet on Tape	Depth to Hydrocarbon	Feet in Well	Feet on Tape	Depth to Hydrocarbon	Feet in Well	Feet on Tape
EW-1	53.51	Not Measured	--	--	Not Measured	--	--	Not Measured	--	--
EW-2	50.00	Not Measured	--	--	Not Measured	--	--	Not Measured	--	--
EW-3	70.00	Not Measured	--	--	Not Measured	--	--	Not Measured	--	--
MW-2A*	44.41	41.33	3.08	3.08	Not Measured	--	--	43.45**	1.63	1.63
MW-7	17.88	Damaged	--	--	Damaged	--	--	Damaged	--	--
MW-9	14.62	Not Measured	--	--	Not Measured	--	--	Not Measured	--	--
MW-10B	34.91	34.41	0.5	0.5	34.58	0.33	0.33	34.58	0.33	0.33
TW-13	14.82	(2)	(2)	(2)	14.74	0.08	0.08	14.74	0.08	0.08
MW-13A	45.33	43.83	0.58	0.58	43.91	0.5	0.5	44.75	0.58	0.58
MW-13B	69.82	58.99	10.83	10.83	59.65	10.17	10.17	58.32	11.50	11.50
MW-15	15.59	15.26	0.33	0.33	15.34	0.25	0.25	15.51	0.08	0.08
MW-18A*	44.86	--	--	--	--	--	--	(2)	(2)	(2)
MW-19A*	45.20	--	--	--	--	--	--	(2)	(2)	(2)
MW-21A*	46.26	--	--	--	--	--	--	46.25*	0.01*	0.01*
Well Location	Depth to Bottom	June 28, 2002			September 16, 2002			December 16, 2002		
		Depth to Hydrocarbon	Feet in Well	Feet on Tape	Depth to Hydrocarbon	Feet in Well	Feet on Tape	Depth to Hydrocarbon	Feet in Well	Feet on Tape
EW-1	53.51	Not Measured	--	--	Not Measured	--	--	Not Measured	--	--
EW-2	50.00	Not Measured	--	--	Not Measured	--	--	Not Measured	--	--
EW-3	70.00	Not Measured	--	--	Not Measured	--	--	Not Measured	--	--
EW-4	29.50	29.25	0.25	0.25	(2)	(2)	(2)	Not Measured	--	--
MW-2R*	29.40	28.23	1.17	1.17	(2)	(2)	(2)	(2)	(2)	(2)
MW-2AR**	45.08	44.31	0.77	0.77	41.08	4.00	4.00	39.88	5.20	5.20
MW-7	17.88	Abandoned	--	--	Abandoned	--	--	Abandoned	--	--
MW-9	14.62	Not Measured	--	--	(2)	(2)	(2)	Not Measured	--	--
MW-10B	34.91	34.08	0.83	0.73	33.74	1.17	1.17	33.40	1.51	1.51
TW-13	14.82	Trace	--	--	Trace	--	--	Trace	--	--
MW-13A	45.33	45.25	0.08	0.08	44.33	1.00	1.00	44.33	1.00	1.00
MW-13B	69.82	67.99	1.83	1.83	59.40	10.42	10.42	58.32	11.50	11.50
MW-15	15.59	15.46	0.13	0.13	15.55	0.04	0.04	15.46	0.13	0.13
MW-18A*	44.86	(2)	(2)	1	(2)	(2)	(2)	(2)	(2)	(2)
MW-19A*	45.20	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
MW-21A*	46.26	Trace	--	--	Trace	--	--	(2)	(2)	(2)
MW-22A*	27.55	(2)	(2)	(2)	(2)	(2)	(2)	27.42	0.13	0.13

(1) Free-phase hydrocarbons not detected by interface probe; free-phase hydrocarbons observed on tape.

(2) Product not encountered.

Hydrocarbon thickness in well is difference between depth to bottom and depth to hydrocarbon/water interface.

Hydrocarbon thickness on tape measure after probe removed from the well.

Table 2
Summary of Free Phase Hydrocarbon Thickness
Northern States Power, Ashland, Wisconsin

Well Location	Depth to Bottom	March 24, 2003			June 23, 2003			September 29, 2003		
		Depth to Hydrocarbon	Feet in Well	Feet on Tape	Depth to Hydrocarbon	Feet in Well	Feet on Tape	Depth to Hydrocarbon	Feet in Well	Feet on Tape
EW-1	53.51	Not Measured	--	--	Not Measured	--	--	Not Measured	--	--
EW-2	50.00	Not Measured	--	--	Not Measured	--	--	Not Measured	--	--
EW-3	70.00	Not Measured	--	--	Not Measured	--	--	Not Measured	--	--
EW-4	29.50	Not Measured	--	--	Not Measured	--	--	Not Measured	--	--
MW-2R	29.40	27.32	2.08	2.08	28.02	1.38	1.38	27.53	1.87	1.87
MW-2AR	45.08	40.91	4.17	4.17	38.08	7.00	7.00	41.96	3.12	3.12
MW-3 (NET)	17.60	Not Measured	--	--	Not Measured	--	--	Not Measured	--	--
MW-7	17.88	Abandoned	--	--	Abandoned	--	--	Abandoned	--	--
MW-9	14.62	Not Measured	--	--	Not Measured	--	--	Not Measured	--	--
MW-10B	34.91	Not Measured	--	--	33.24	1.67	1.67	33.83	1.08	1.08
TW-11	14.00	Not Measured	--	--	13.50	0.50	0.50	13.17	0.83	0.83
TW-13	14.82	Trace	--	--	(2)	(2)	(2)	(2)	(2)	(2)
MW-13A	45.33	44.06	1.27	1.27	44.33	Trace	Trace	45.31	0.02	0.02
MW-13B	69.82	58.00	11.82	11.82	(3)	(3)	(3)	(3)	(3)	(3)
MW-15	15.59	15.49	0.10	0.10	15.14	0.45	0.45	15.43	0.16	0.16
MW-15A		--	--	--	--	--	--	--	--	--
MW-18A	44.86	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
MW-19A	45.20	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
MW-21A	46.26	(2)	(2)	(2)	Trace	Trace	Trace	(2)	(2)	(2)
MW-22A	27.55	27.26	0.29	0.29	(2)	(2)	(2)	(2)	(2)	(2)

- (1) Free-phase hydrocarbons not detected by interface probe; free-phase hydrocarbons observed on tape.
- (2) Product not encountered.
- (3) Measuring device did not reach the well bottom. Suspected obstruction near well screen.
- (4) Trace floating LNAPL encountered in well.

Table 2
Summary of Free Phase Hydrocarbon Thickness
Northern States Power, Ashland, Wisconsin

Well Location	Depth to Bottom	December 15, 2003			March 16, 2004			June 14, 2004			September 20, 2004		
		Depth to Hydrocarbon	Feet in Well	Feet on Tape	Depth to Hydrocarbon	Feet in Well	Feet on Tape	Depth to Hydrocarbon	Feet in Well	Feet on Tape	Depth to Hydrocarbon	Feet in Well	Feet on Tape
EW-1	53.51	Not Measured	--	--	Not Measured	--	--	Not Measured	--	--	Not Measured	--	--
EW-2	50.00	Not Measured	--	--	Not Measured	--	--	Not Measured	--	--	Not Measured	--	--
EW-3	70.00	Not Measured	--	--	Not Measured	--	--	Not Measured	--	--	Not Measured	--	--
EW-4	29.50	Not Measured	--	--	Not Measured	--	--	Not Measured	--	--	Not Measured	--	--
MW-2R	29.40	27.90	1.50	1.50	28.00	1.40	1.40	28.26	1.14	1.14	28.23	1.17	1.17
MW-2AR	45.08	40.63	4.45	4.45	43.43	1.65	1.65	41.99	3.09	3.09	38.35	6.73	6.73
MW-3 (NET)	17.60	--	trace ⁴	trace ⁴	17.59	0.01	0.01	17.60	Trace	Trace	21.60	(4)	(4)
MW-4B	52.30	Not Measured	--	--	Not Measured	--	--	52.30	Trace	Trace	49.48	2.82	2.82
MW-7R	17.01	--	--	--	--	--	--	17.01	(2)	(2)	21.01	(4)	(4)
MW-9	14.62	Not Measured	--	--	Not Measured	--	--	14.62	(2)	(2)	18.62	(4)	(4)
TW-9	16.20	Not Measured	--	--	Not Measured	--	--	13.87	2.33	2.33	13.93	2.27	2.27
MW-10B	34.91	32.31	2.60	2.60	33.01	1.90	1.90	33.83	1.08	1.08	33.60	1.31	1.31
TW-11	14.00	12.92	1.08	1.08	13.20	0.80	0.80	12.92	1.08	1.08	12.97	1.03	1.03
TW-13	14.82	14.82	(2)	(2)	Not Measured	--	--	14.82	(2)	(2)	16.82	(2)	(2)
MW-13A	45.33	45.08	0.25	0.25	45.08	0.25	0.25	44.91	0.42	0.42	44.93	0.40	0.40
MW-13B	69.82	58.57	11.25	11.25	64.40	5.42	5.42	(3)	(3)	(3)	(3)	(3)	(3)
MW-15	15.59	15.57	0.02	0.02	15.58	0.01	0.01	15.04	0.55	0.55	19.59	(4)	(4)
MW-15A	30.00	26.25	3.75	3.75	Not Measured	--	--	29.70	0.30	0.30	28.27	1.73	1.73
MW-18A	44.86	44.86	(2)	(2)	(2)	(2)	(2)	44.86	(2)	(2)	46.86	(2)	(2)
MW-19A	45.20	Not Measured	--	--	(2)	(2)	(2)	45.20	(2)	(2)	47.20	(2)	(2)
MW-21A	46.26	46.24	0.02	0.02	(2)	(2)	(2)	46.26	(2)	(2)	48.26	(2)	(2)
MW-22A	27.55	27.51	0.04	0.04	27.54	0.01	0.01	27.55	(2)	(2)	29.55	(2)	(2)

- (1) Free-phase hydrocarbons not detected by interface probe; free-phase hydrocarbons observed on tape.
(2) Product not encountered.
(3) Measuring device did not reach the well bottom. Suspected obstruction near well screen.
(4) Trace floating LNAPL encountered in well.

**Table 3
Remediation System Water Quality Monitoring Results
Northern States Power, Ashland, Wisconsin**

September 2004

Analyte	Units	Influent	Precarbon	Effluent	⁽¹⁾ POTW	Method	⁽³⁾ Frequency
VOCs							
1,1,1,2-TETRACHLOROETHANE	ug/L	<210	<2.1	<0.16	--	EPA 8260	Monthly
1,1,1-TRICHLOROETHANE	ug/L	<180	<1.8	<0.14	--	EPA 8260	Monthly
1,1,2,2-TETRACHLOROETHANE	ug/L	<250	<2.5	<0.2	--	EPA 8260	Monthly
1,1,2-TRICHLOROETHANE	ug/L	<170	<1.7	<0.14	--	EPA 8260	Monthly
1,1-DICHLOROETHANE	ug/L	<160	<1.6	<0.13	--	EPA 8260	Monthly
1,1-DICHLOROETHENE	ug/L	<300	<3.0	<0.24	--	EPA 8260	Monthly
1,1-DICHLOROPROPENE	ug/L	<220	<2.2	<0.21	--	EPA 8260	Monthly
1,2,3-TRICHLOROBENZENE	ug/L	<220	<2.2	<0.17	--	EPA 8261	Monthly
1,2,3-TRICHLOROPROPANE	ug/L	<290	<2.9	<0.17	--	EPA 8260	Monthly
1,2,4-TRICHLOROBENZENE	ug/L	<130	<1.3	<0.11	--	EPA 8260	Monthly
1,2,4-TRIMETHYLBENZENE	ug/L	290	19	<0.14	--	EPA 8260	Monthly
1,2-DIBROMO-3-CHLOROPROPANE	ug/L	<310	<3.1	<0.25	--	EPA 8260	Monthly
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	ug/L	<200	<2	<0.16	--	EPA 8260	Monthly
1,2-DICHLOROBENZENE	ug/L	<160	<1.6	<0.13	--	EPA 8260	Monthly
1,2-DICHLOROETHANE	ug/L	<170	<1.7	<0.13	--	EPA 8260	Monthly
1,2-DICHLOROPROPANE	ug/L	<160	<1.6	<0.13	--	EPA 8260	Monthly
1,3,5-TRIMETHYLBENZENE (MESITYLENE)	ug/L	<150	4.5	<0.12	--	EPA 8260	Monthly
1,3-DICHLOROBENZENE	ug/L	<130	<1.3	<0.1	--	EPA 8260	Monthly
1,3-DICHLOROPROPANE	ug/L	<190	<1.9	<0.15	--	EPA 8260	Monthly
1,4-DICHLOROBENZENE	ug/L	<240	<2.4	<0.19	--	EPA 8260	Monthly
2,2-DICHLOROPROPANE	ug/L	<210	<2.1	<0.16	--	EPA 8260	Monthly
2-CHLOROTOLUENE	ug/L	<160	<1.6	<0.13	--	EPA 8260	Monthly
4-CHLOROTOLUENE	ug/L	<170	<1.7	<0.13	--	EPA 8260	Monthly
BENZENE	ug/L	5800	17	<0.12	--	EPA 8260	Monthly
BROMOBENZENE	ug/L	<160	<1.6	<0.13	--	EPA 8260	Monthly
BROMOCHLOROMETHANE	ug/L	<140	<1.4	<0.11	--	EPA 8260	Monthly
BROMODICHLOROMETHANE	ug/L	<240	<2.4	<0.19	--	EPA 8260	Monthly
BROMOFORM	ug/L	<130	<1.3	<0.1	--	EPA 8260	Monthly
BROMOMETHANE	ug/L	<400	<4	<0.32	--	EPA 8260	Monthly
CARBON TETRACHLORIDE	ug/L	<190	<1.9	<0.15	--	EPA 8260	Monthly
CHLOROBENZENE	ug/L	<240	<2.4	<0.19	--	EPA 8260	Monthly
CHLOROETHANE	ug/L	<850	<8.5	<0.68	--	EPA 8260	Monthly
CHLOROFORM	ug/L	<150	<1.5	<0.12	--	EPA 8260	Monthly
CHLOROMETHANE	ug/L	<150	<1.5	<0.12	--	EPA 8260	Monthly
CIS-1,2-DICHLOROETHYLENE	ug/L	<160	<1.6	<0.12	--	EPA 8260	Monthly
CIS-1,3-DICHLOROPROPENE	ug/L	<260	<2.6	<0.12	--	EPA 8260	Monthly
CYMENE	ug/L	<140	<1.4	<0.12	--	EPA 8260	Monthly
DIBROMOCHLOROMETHANE	ug/L	<210	<2.1	<0.16	--	EPA 8260	Monthly
DIBROMOMETHANE	ug/L	<200	<2	<0.16	--	EPA 8260	Monthly
DICHLORODIFLUOROMETHANE	ug/L	<190	<1.9	<0.15	--	EPA 8260	Monthly
ETHYLBENZENE	ug/L	<180	2.4	<0.14	--	EPA 8260	Monthly
HEXACHLOROBUTADIENE	ug/L	<290	<2.9	<0.23	--	EPA 8260	Monthly
ISOPROPYL ETHER	ug/L	<170	<1.7	<0.13	--	EPA 8260	Monthly
ISOPROPYLBENZENE (CUMENE)	ug/L	<150	<1.5	<0.12	--	EPA 8260	Monthly
M,P-XYLENE (SUM OF ISOMERS)	ug/L	840	19	<0.26	--	EPA 8260	Monthly
METHYLENE CHLORIDE	ug/L	<130	<1.3	<0.10	--	EPA 8260	Monthly
NAPHTHALENE	ug/L	10000	550	<0.16	--	EPA 8260	Monthly
N-BUTYLBENZENE	ug/L	<230	<2.3	<0.19	--	EPA 8260	Monthly
N-PROPYLBENZENE	ug/L	<210	<2.1	<0.17	--	EPA 8260	Monthly
O-XYLENE (1,2-DIMETHYLBENZENE)	ug/L	590	11	<0.13	--	EPA 8260	Monthly
SEC-BUTYLBENZENE	ug/L	<200	<2	<0.16	--	EPA 8260	Monthly
STYRENE	ug/L	1900	19	<0.14	--	EPA 8260	Monthly
T-BUTYLBENZENE	ug/L	<180	<1.8	<0.14	--	EPA 8260	Monthly
TERT-BUTYL METHYL ETHER	ug/L	<180	<1.8	<0.14	--	EPA 8260	Monthly
TETRACHLOROETHYLENE (PCE)	ug/L	<170	<1.7	<0.13	--	EPA 8260	Monthly
TOLUENE	ug/L	4100	23	<0.29>	--	EPA 8260	Monthly
TRANS-1,2-DICHLOROETHENE	ug/L	<130	<1.3	<0.2	--	EPA 8260	Monthly
TRANS-1,3-DICHLOROPROPENE	ug/L	<180	<1.8	<0.11	--	EPA 8260	Monthly
TRICHLOROETHYLENE (TCE)	ug/L	<150	<1.5	<0.15	--	EPA 8260	Monthly
TRICHLOROFLUOROMETHANE	ug/L	<180	<1.8	<0.12	--	EPA 8260	Monthly
VINYL CHLORIDE	ug/L	<200	<2	<0.15	--	EPA 8260	Monthly
Total VOCs	ug/L	23,520	645.9	0.29	⁽²⁾1000		

Collected September 27, 2004

< - Less Than Limit of Detection

<> Between Limit of Detection and Limit of Quantification

Concentrations exceeding the POTW have been shaded

⁽¹⁾ POTW standards for effluent discharge

⁽²⁾ 1000 = POTW standard for total BTEX for effluent discharge

⁽³⁾ BTEX and PVOCs collected monthly, remaining analytes collected semi-annually

**Table 3
Remediation System Water Quality Monitoring Results
Northern States Power, Ashland, Wisconsin**

September 2004

Analyte	Units	Influent	Precarbon	Effluent	⁽¹⁾ POTW	Method	Frequency
PAHs, DRO, GRO							
1-METHYLNAPHTHALENE	ug/L	⁽⁴⁾	⁽⁴⁾	0.095	--	SW8310	Quarterly
2-METHYLNAPHTHALENE	ug/L	⁽⁴⁾	⁽⁴⁾	0.21	--	SW8310	Quarterly
ACENAPHTHENE	ug/L	⁽⁴⁾	⁽⁴⁾	<0.016	--	SW8310	Quarterly
ACENAPHTHYLENE	ug/L	⁽⁴⁾	⁽⁴⁾	<0.05	--	SW8310	Quarterly
ANTHRACENE	ug/L	⁽⁴⁾	⁽⁴⁾	<0.012	--	SW8310	Quarterly
BENZO(A)ANTHRACENE	ug/L	⁽⁴⁾	⁽⁴⁾	<0.016	--	SW8310	Quarterly
BENZO(A)PYRENE	ug/L	⁽⁴⁾	⁽⁴⁾	<0.011	--	SW8310	Quarterly
BENZO(B)FLUORANTHENE	ug/L	⁽⁴⁾	⁽⁴⁾	<0.018	--	SW8310	Quarterly
BENZO(G,H,I)PERYLENE	ug/L	⁽⁴⁾	⁽⁴⁾	<0.011	--	SW8310	Quarterly
BENZO(K)FLUORANTHENE	ug/L	⁽⁴⁾	⁽⁴⁾	<0.012	--	SW8310	Quarterly
CHRYSENE	ug/L	⁽⁴⁾	⁽⁴⁾	<0.021	--	SW8310	Quarterly
DIBENZ(A,H)ANTHRACENE	ug/L	⁽⁴⁾	⁽⁴⁾	<0.016	--	SW8310	Quarterly
FLUORANTHENE	ug/L	⁽⁴⁾	⁽⁴⁾	<0.01	--	SW8310	Quarterly
FLUORENE	ug/L	⁽⁴⁾	⁽⁴⁾	<0.018>	--	SW8310	Quarterly
INDENO(1,2,3-C,D)PYRENE	ug/L	⁽⁴⁾	⁽⁴⁾	<0.037	--	SW8310	Quarterly
NAPHTHALENE	ug/L	⁽⁴⁾	⁽⁴⁾	0.32	--	SW8310	Quarterly
PHENANTHRENE	ug/L	⁽⁴⁾	⁽⁴⁾	<0.048>	--	SW8310	Quarterly
PYRENE	ug/L	⁽⁴⁾	⁽⁴⁾	<0.011	--	SW8310	Quarterly
DIESEL RANGE ORGANICS (DRO)	mg/L	⁽⁴⁾	⁽⁴⁾	<0.023	50	DRO	Semi-Annual
GASOLINE RANGE ORGANICS (GRO)	mg/L	⁽⁴⁾	⁽⁴⁾	<0.015	50	GRO	Semi-Annual
Inorganics							
CADMIUM, TOTAL (UG/L CD)	ug/L	⁽⁴⁾	⁽⁴⁾	<0.17	110	E365.2	Semi-Annual
CHROMIUM, TOTAL (UG/L CR)	ug/L	⁽⁴⁾	⁽⁴⁾	1.3	2500	SW6010	Semi-Annual
COPPER, TOTAL (UG/L CU)	ug/L	⁽⁴⁾	⁽⁴⁾	18	2000	SW6010	Semi-Annual
LEAD, TOTAL (UG/L PB)	ug/L	⁽⁴⁾	⁽⁴⁾	<0.87	100	SW6010	Semi-Annual
MERCURY, TOTAL (UG/L HG)	ug/L	⁽⁴⁾	⁽⁴⁾	<0.025	0.5	SW6010	Semi-Annual
PH, LAB (STANDARD UNITS)	pH units	⁽⁴⁾	⁽⁴⁾	7.57	5.5<pH>9.5	SW7470A	Semi-Annual
PHOSPHORUS, TOTAL (MG/L P)	mg/L	⁽⁴⁾	⁽⁴⁾	0.043	5.0	SW9040	Semi-Annual
OIL & GREASE, TOTAL REC	mg/L	⁽⁴⁾	⁽⁴⁾	<1.3	50	A5520	Quarterly

Collected September 27, 2004

< - Less Than Limit of Detection

<> Between Limit of Detection and Limit of Quantification

Concentrations exceeding the POTW have been shaded

⁽¹⁾ POTW standards for effluent discharge

⁽²⁾ 1000 = POTW standard for total BTEX for effluent discharge

⁽⁴⁾ Parameter not analyzed

Table 4
Remediation System Air Monitoring Results
Northern States Power, Ashland, Wisconsin

September 2004

Analyte	Units	Air Stripper	1st Stage Carbon	Effluent	Method	Frequency
VOCs						
Volume Collected	Liters	3.0	3.0	5.0		
Benzene	mg	<0.02	<0.02	0.020	NIOSH 1501	Monthly
Benzene	mg/m ³	<6.67	<6.67	4.0		Monthly
Ethylbenzene	mg	<0.02	<0.02	<0.02	NIOSH 1501	Monthly
Ethylbenzene	mg/m ³	<6.67	<6.67	<4.0		Monthly
Hydrocarbons (total)	mg	0.031	0.043	0.065	NIOSH 1550	Monthly
Hydrocarbons (total)	mg/m ³	10.3	14.3	13.0		Monthly
Toluene	mg	<0.02	<0.02	<0.02	NIOSH 1501	Monthly
Toluene	mg/m ³	<6.67	<6.67	<4.0		Monthly
Xylene, Total	mg	<0.03	<0.03	<0.03	NIOSH 1501	Monthly
Xylene, Total	mg/m ³	<10.0	<10.0	<6.0		Monthly

Collected September 30, 2004

< - Less Than Limit of Detection

<> Between Limit of Detection and Limit of Quantification

Table 5
Summary of Coal Tar and Groundwater Volume Removed

Date	Cumulative Volume of Coal Tar Removed (gals)	Cumulative Volume of Coal Tar Removed (lbs)	Cumulative Volume of Groundwater Removed from Wells EW-1, EW-2, EW-3 (gals)	Cumulative Volume of Groundwater Removed from well EW-4 (gals)	Cumulative Volume of Total Groundwater Removed (gals)
20-Feb-01	554.2	4,853	22,826	0	22,826
30-Mar-01	850.0	7,443	44,613	0	44,613
26-Apr-01	915.2	8,014	56,978	0	56,978
17-May-01	1,078.2	9,442	58,967	0	58,967
11-Jun-01	1,291.2	11,307	61,094	0	61,094
31-Jul-01	1,535.2	13,444	65,758	0	65,758
15-Aug-01	1,578.0	13,819	65,758	0	65,758
12-Sep-01	1,578.0	14,193	81,524	0	81,524
28-Sep-01	1,789.9	15,674	104,500	0	104,500
12-Nov-01 ¹	2,486.4	21,773	104,900	0	104,900
13-Nov-01	2,551.6	22,344	106,200	0	106,200
14-Nov-01	2,559.7	22,415	107,600	0	107,600
19-Nov-01	2,600.5	22,772	114,200	0	114,200
28-Nov-01	2,682.0	23,486	125,200	0	125,200
03-Dec-01	2,779.8	24,342	131,500	0	131,500
12-Dec-01	2,877.6	25,199	142,300	0	142,300
19-Dec-01	2,975.4	26,055	155,328	0	155,328
03-Jan-02	3,105.8	27,197	172,000	0	172,000
05-Feb-02	3,105.7	27,197	173,116	0	173,116
11-Feb-02	3,122.0	27,340	178,300	0	178,300
12-Feb-02	3,122.1	27,340	180,100	0	180,100
19-Feb-02	3,122.1	27,340	182,900	0	182,900
06-Mar-02	3,138.4	27,483	183,000	0	183,000
12-Mar-02	3,187.3	27,911	194,400	0	194,400
18-Mar-02	3,219.9	28,196	199,400	0	199,400
27-Mar-02	3,317.7	29,053	210,500	0	210,500
03-Apr-02	3,350.3	29,338	216,600	0	216,600
09-Apr-02	3,399.2	29,767	224,000	0	224,000
23-Apr-02	3,473.6	30,419	238,100	0	238,100
30-Apr-02	3,514.3	30,775	246,700	0	246,700
08-May-02	3,538.8	30,989	256,900	0	256,900
15-May-02	3,587.7	31,418	264,500	0	264,500
20-May-02	3,612.1	31,631	266,900	0	266,900
24-May-02	3,636.5	31,845	268,365	10,935	279,300
28-May-02	3,652.8	31,988	272,215	13,185	285,400
17-Jun-02	3,669.1	32,131	287,693	28,507	316,200
25-Jun-02	3,726.2	32,631	295,908	35,492	331,400
02-Jul-02	3,766.9	32,987	299,147	42,153	341,300
09-Jul-02	3,783.2	33,130	306,783	42,717	349,500
17-Jul-02	3,799.5	33,272	314,710	49,990	364,700
22-Jul-02	3,824.0	33,487	319,384	54,516	373,900
29-Jul-02	3,864.7	33,843	326,542	57,158	383,700
08-Aug-02	3,905.5	34,201	334,406	68,394	402,800
15-Aug-02	3,921.8	34,343	340,391	68,609	409,000
09-Sep-02	3,942.1	34,521	343,084	79,816	422,900
19-Sep-02	4,003.3	35,057	350,659	91,441	442,100
26-Sep-02	4,003.3	35,057	356,565	91,535	448,100
04-Oct-02	4,003.3	35,057	363,135	93,265	456,400
11-Oct-02	4,003.3	35,057	374,863	94,737	469,600
18-Oct-02	4,027.8	35,272	374,863	94,737	485,600
25-Oct-02	4,158.2	36,414	379,459	116,901	496,360
31-Oct-02	4,166.3	36,484	381,556	121,045	502,600
08-Nov-02	4,166.3	36,484	390,756	121,045	511,800
21-Nov-02	4,753.3	41,625	387,629	124,272	511,900
26-Nov-02	4,773.6	41,803	391,434	127,566	519,000
04-Dec-02	4,789.9	41,945	398,205	129,795	528,000
10-Dec-02	4,802.2	42,053	403,230	130,971	534,200
18-Dec-02	4,826.6	42,267	410,356	132,444	542,800
23-Dec-02	4,842.9	42,409	412,967	133,333	546,300
30-Dec-02	4,855.1	42,516	415,842	134,458	550,300
10-Jan-03	4,883.7	42,767	425,575	136,125	561,700
15-Jan-03	4,900.0	42,910	429,541	136,859	566,400
20-Jan-03	4,920.3	43,087	434,133	137,567	571,700
30-Jan-03	4,952.9	43,373	442,556	138,844	581,400
13-Feb-03	4,989.6	43,694	454,019	140,881	594,900
19-Feb-03	5,007.8	43,854	456,851	141,149	598,000
26-Feb-03	5,036.3	44,103	463,081	142,019	605,100
04-Mar-03	5,036.3	44,103.1	468,458	142,742	611,200
27-Mar-03	5,036.3	44,103.1	471,979	143,488	615,467
02-Apr-03	5,097.5	44,639	478,430	144,870	623,300
09-Apr-03	5,105.6	44,710	483,745	145,855	629,600
16-Apr-03	5,121.9	44,853	487,333	148,267	635,600
23-Apr-03 ²	4,910.0	42,997	492,504	152,796	645,300
29-Apr-03	4,926.3	43,140	495,729	155,771	651,500
07-May-03	4,926.3	43,140	499,877	158,223	658,100
15-May-03	4,926.3	43,140	499,877	158,223	658,100
21-May-03	4,942.6	43,283	515,230	172,470	687,700
28-May-03	4,958.9	43,425	522,943	175,357	698,300
03-Jun-03	4,967.1	43,497	524,602	176,598	701,200
10-Jun-03	4,975.2	43,568	529,728	178,472	708,200
17-Jun-03	4,983.4	43,640	534,411	179,789	714,200

Table 5
Summary of Coal Tar and Groundwater Volume Removed

Date	Cumulative Volume of Coal Tar Removed (gals)	Cumulative Volume of Coal Tar Removed (lbs)	Cumulative Volume of Groundwater Removed from Wells EW-1, EW-2, EW-3 (gals)	Cumulative Volume of Groundwater Removed from well EW-4 (gals)	Cumulative Volume of Total Groundwater Removed (gals)
26-Jun-03	4,983.4	43,640	540,050	180,950	721,000
02-Jul-03	4,983.4	43,640	543,291	181,909	725,200
09-Jul-03	4,983.4	43,640	549,991	181,909	731,900
16-Jul-03	4,991.5	43,711	553,174	185,526	738,700
22-Jul-03	4,999.7	43,783	556,643	186,957	743,600
30-Jul-03	5,007.8	43,854	560,726	188,074	748,800
06-Aug-03	5,040.4	44,139	562,275	188,825	751,100
20-Aug-03	5,081.2	44,496	567,361	191,139	758,500
28-Aug-03	5,138.2	44,995	570,561	191,139	761,700
04-Sep-03	5,316.7	46,559	572,759	191,841	764,600
11-Sep-03	5,382.7	47,137	575,659	191,841	767,500
19-Sep-03	5,423.5	47,494	579,259	191,841	771,100
25-Sep-03	5,366.4	46,994	578,399	197,101	775,500
03-Oct-03	5,382.7	47,137	584,399	197,101	781,500
09-Oct-03	5,399.0	47,279	583,771	198,229	782,000
24-Oct-03	5,452.0	47,743	589,679	200,821	790,500
29-Oct-03	5,472.4	47,922	592,579	200,821	793,400
06-Nov-03	5,521.3	48,350	596,979	200,821	797,800
13-Nov-03	5,537.6	48,493	598,764	200,836	799,600
11/19/2003	5,562.1	48,708	598,895	201,005	799,900
25-Nov-03	5,582.4	48,885	601,544	202,056	803,600
03-Dec-03	5,611.0	49,136	604,762	203,438	808,200
11-Dec-03	5,635.4	49,349	608,144	204,556	812,700
19-Dec-03	5,659.9	49,564	612,612	205,488	818,100
26-Dec-03	5,676.4	49,708	615,254	206,146	821,400
29-Dec-03	5,684.3	49,778	615,310	206,190	821,500
09-Jan-04	5,696.5	49,884	618,110	206,190	824,300
20-Jan-04	5,700.6	49,920	619,147	207,153	826,300
29-Jan-04	5,704.7	49,956	626,409	208,091	834,500
03-Feb-04	5,716.9	50,063	630,515	208,485	839,000
11-Feb-04	5,716.9	50,063	633,094	208,706	841,800
17-Feb-04	5,725.1	50,135	637,911	209,089	847,000
26-Feb-04	5,733.2	50,206	645,083	209,617	854,700
02-Mar-04	5,745.4	50,313	649,270	209,930	859,200
12-Mar-04	5,765.8	50,491	657,501	210,999	868,500
19-Mar-04	5,798.8	50,780	664,798	212,102	876,900
25-Mar-04	5,810.6	50,884	669,603	214,997	884,600
02-Apr-04	5,814.7	50,920	669,738	215,163	884,900
05-Apr-04	5,814.7	50,920	672,233	217,667	889,900
23-Apr-04	5,818.8	50,955	672,869	218,231	891,100
27-Apr-04	5,826.9	51,026	673,684	219,616	893,300
12-May-04	5,843.2	51,169	678,475	223,625	902,100
17-May-04	5,847.3	51,205	682,349	225,151	907,500
25-May-04	5,863.6	51,348	688,062	226,538	914,600
04-Jun-04	5,875.8	51,455	697,811	230,589	928,400
10-Jun-04	5,904.4	51,705	703,940	232,060	936,000
14-Jun-04	5,928.8	51,919	708,258	232,742	941,000
24-Jun-04	5,985.9	52,419	719,009	234,191	953,200
02-Jul-04	6,030.7	52,811	726,095	235,205	961,300
06-Jul-04	6,055.1	53,025	729,338	235,762	965,100
14-Jul-04	6,124.4	53,632	745,363	237,038	982,400
20-Jul-04	6,124.4	53,632	739,893	238,007	977,900
26-Jul-04	6,173.3	54,060	744,946	238,654	983,600
04-Aug-04	6,226.3	54,524	749,874	239,426	989,300
10-Aug-04	6,275.2	54,952	752,585	239,915	992,500
19-Aug-04	6,307.8	55,238	753,677	240,923	994,600
26-Aug-04	6,336.3	55,487	759,482	241,618	1,001,100
31-Aug-04	6,368.9	55,773	762,807	242,793	1,005,600
10-Sep-04	6,401.5	56,058	766,587	243,514	1,010,100
15-Sep-04	6,434.1	56,344	770,402	244,599	1,015,000
24-Sep-04	6,466.7	56,629	777,825	247,575	1,025,400
27-Sep-04	6,499.3	56,915	780,289	248,111	1,028,400
07-Oct-04	6,531.9	57,200	789,339	249,261	1,038,600

¹ Increase in coal tar removal w/ no change in groundwater removal volume due to coal tar collection tank and wash tank being pumped out and shipped to WRR in Eau Claire, WI. Total volume of 1324 gallons, w/ a current estimate of 85% coal tar in that volume.

² Correction of revised quantity of coal tar removed on 4/23/2003 of -211.9 gallons due to settling of emulsified coal tar measured on this date.

Table 6
Interim Response Treatment System
Air Sampling and Testing Summary

Sample Date	Total Elapsed Time (days) ¹	Sample Type (Influent/Effluent)	Air Flow Rate (CFM)	Effluent Temp. (F)	Total Hydrocarbons (mg/m ³) ²	Benzene (mg/m ³) ²	Total Hydrocarbon Rate (lbs/day) ³	Benzene Rate (lbs/day) ³	Cummulative Mass of Hydrocarbons Removed by Carbon (lbs.) ⁴	Cummulative Mass of Benzene Removed by Carbon (lbs.) ⁴	Cummulative Mass of Hydrocarbons Emitted (lbs.) ⁴	Cummulative Mass of Benzene Emitted (lbs.) ⁴
28-Sep-00	2	Effluent	176	70	5	3.33	0.08	0.05	-	-	0.2	0.1
19-Jan-01	21	Influent	176	-	45.5	9.1	0.71	0.14	10.36	0.00		
19-Jan-01	21	Effluent	176	45	13.7	9.1	0.21	0.14			4.2	2.8
30-Mar-01	84	Influent	176	-	71.7	26.3	1.11	0.41	50.73	18.08		
30-Mar-01	84	Effluent	176	52	30.4	7.8	0.47	0.12			33.9	10.4
11-Apr-01	96	Influent	176	-	33	7.67	0.51	0.12	56.32	19.14		
11-Apr-01	96	Effluent	176	62	3	2	0.05	0.03			34.5	10.8
17-May-01	110	Effluent	176	68	5	3.33	0.08	0.05			35.6	11.5
13-Jun-01	125	Effluent	176	80	5	3.33	0.08	0.05			36.7	12.3
31-Jul-01	135	Effluent	176	80	5	3.33	0.08	0.05			37.5	12.8
7-Dec-01	196	Influent	176	35	60	10	0.93	0.16	116.90	26.49		
7-Dec-01	196	Effluent	176	35	5	3.33	0.08	0.05			44.2	17.2
22-Feb-02	232	Influent	176	30	303	39	4.70	0.61	284.47	47.15		
22-Feb-02	232	Effluent	176	30	3	2	0.05	0.03			45.8	18.4
4-Apr-02	267	Influent	176	55	33	8	0.51	0.12	300.76	50.41		
4-Apr-02	267	Effluent	176	55	3	2	0.05	0.03			47.5	19.4
8-Aug-02	393	Influent	15	80	1270	311	1.68	0.41	473.04	91.27		
8-Aug-02	393	Effluent	15	80	236	65.8	0.31	0.09			86.8	30.4
31-Oct-02	456	Influent	125	32	2100	410	23.14	4.52	1919.39	373.59		
31-Oct-02	456	Intermediate	125	32	32.7	3.33	0.36	0.04				
31-Oct-02	456	Effluent	125	32	16.6	2	0.18	0.02			98.3	31.8
27-Nov-02	470	Influent	125	25	1780	500	19.61	5.51	2193.53	450.21		
27-Nov-02	470	Intermediate	125	25	15.3	3.33	0.17	0.04				
27-Nov-02	470	Effluent	125	25	3	2	0.03	0.02			98.8	32.1
30-Jan-03	534	Influent	125	20	17.7	3.33	0.20	0.04	2189.80	445.01		
30-Jan-03	534	Intermediate	125	20	19.7	6.67	0.22	0.07				
30-Jan-03	534	Effluent	125	20	23	10.7	0.25	0.12			115.0	39.7
19-Feb-03	554	Influent	125	19	5	3.33	0.06	0.04	2188.43	444.73		
19-Feb-03	554	Intermediate	125	19	5	3.33	0.06	0.04				
19-Feb-03	554	Effluent	125	19	11.2	4.6	0.12	0.05			117.5	40.7
2-Apr-03	580	Influent	125	29	22	3.33	0.24	0.04	2187.11	442.42		
2-Apr-03	580	Intermediate	125	29	47.3	14.7	0.52	0.16				
2-Apr-03	580	Effluent	125	29	26.6	11.4	0.29	0.13			125.1	43.9
23-Apr-03	596	Influent	125	29	66.3	18.3	0.73	0.20	2195.52	444.62		
23-Apr-03	596	Intermediate	125	29	20.7	3.33	0.23	0.04				
23-Apr-03	596	Effluent	125	29	18.6	5.8	0.20	0.06			128.4	45.0
21-May-03	619	Influent	125	29	43	10	0.47	0.11	2198.51	445.69		
21-May-03	619	Intermediate	125	29	36.7	3.33	0.40	0.04				
21-May-03	619	Effluent	125	29	31.2	5.8	0.34	0.06			136.3	46.4
25-Jun-03	654	Influent	125	29	22	3.33	0.24	0.04	2196.74	442.57		
25-Jun-03	654	Intermediate	125	29	47.3	14.7	0.52	0.16				
25-Jun-03	654	Effluent	125	29	26.6	11.4	0.29	0.13			146.5	50.8

Table 6
Interim Response Treatment System
Air Sampling and Testing Summary

Sample Date	Total Elapsed Time (days) ¹	Sample Type (Influent/Effluent)	Air Flow Rate (CFM)	Effluent Temp. (F)	Total Hydrocarbons (mg/m ³) ²	Benzene (mg/m ³) ²	Total Hydrocarbon Rate (lbs/day) ³	Benzene Rate (lbs/day) ³	Cummulative Mass of Hydrocarbons Removed by Carbon (lbs.) ⁴	Cummulative Mass of Benzene Removed by Carbon (lbs.) ⁴	Cummulative Mass of Hydrocarbons Emitted (lbs.) ⁴	Cummulative Mass of Benzene Emitted (lbs.) ⁴
30-Jul-03	684	Influent	125	29	10	3.33	0.11	0.04	2187.05	442.57		
30-Jul-03	684	Intermediate	125	29	15.7	3.33	0.17	0.04				
30-Jul-03	684	Effluent	125	29	39.3	3.33	0.43	0.04			159.5	51.9
28-Aug-03	713	Influent	125	29	5	3.33	0.06	0.04	2183.67	443.00		
28-Aug-03	713	Intermediate	125	29	15	3.33	0.17	0.04				
28-Aug-03	713	Effluent	125	29	15.6	2	0.17	0.02			164.5	52.6
29-Sep-03	745	Influent	125	29	21.3	3.33	0.23	0.04	2182.22	442.34		
29-Sep-03	745	Intermediate	125	29	15	3.33	0.17	0.04				
29-Sep-03	745	Effluent	125	29	25.4	5.2	0.28	0.06			173.5	54.4
29-Oct-03	775	Influent	125	29	5	3.33	0.06	0.04	2179.24	442.78		
29-Oct-03	775	Intermediate	125	29	14.3	3.33	0.16	0.04				
29-Oct-03	775	Effluent	125	29	14	2	0.15	0.02			178.1	55.1
19-Nov-03	796	Influent	125	29	5	3.33	0.06	0.04	2179.71	443.09		
19-Nov-03	796	Intermediate	125	29	5	3.33	0.06	0.04				
19-Nov-03	796	Effluent	125	29	3	2	0.03	0.02			178.8	55.5
29-Dec-03	836	Influent	125	29	5	3.33	0.06	0.04	2177.59	443.67		
29-Dec-03	836	Intermediate	125	29	5	3.33	0.06	0.04				
29-Dec-03	836	Effluent	125	29	9.8	2	0.11	0.02			183.1	56.4
20-Jan-04	858	Influent	125	29	12.7	3.33	0.14	0.04	2179.94	444.00		
20-Jan-04	858	Intermediate	125	29	5	3.33	0.06	0.04				
20-Jan-04	858	Effluent	125	29	3	2	0.03	0.02			183.8	56.9
26-Feb-04	895	Influent	125	29	28.3	6.67	0.31	0.07	2183.65	443.78		
26-Feb-04	895	Intermediate	125	29	23.7	8.33	0.26	0.09				
26-Feb-04	895	Effluent	125	29	19.2	7.20	0.21	0.08			191.7	59.8
19-Mar-04	917	Influent	125	29	12.67	3.33	0.14	0.04	2183.52	442.94		
19-Mar-04	917	Intermediate	125	29	20.00	9.00	0.22	0.10				
19-Mar-04	917	Effluent	125	29	13.20	6.80	0.15	0.07			194.9	61.5
27-Apr-04	956	Influent	125	29	11.30	3.33	0.12	0.04	2184.26	443.51		
27-Apr-04	956	Intermediate	125	29	11.00	3.33	0.12	0.04				
27-Apr-04	956	Effluent	125	29	9.60	2.00	0.11	0.02			199.0	62.3
26-May-04	985	Influent	125	29	5.00	3.33	0.06	0.04	2178.25	443.11		
26-May-04	985	Intermediate	125	29	19.70	3.33	0.22	0.04				
26-May-04	985	Effluent	125	29	23.80	4.60	0.26	0.05			206.6	63.8
24-Jun-04	1014	Influent	125	29	11.70	3.33	0.13	0.04	2179.11	443.53		
24-Jun-04	1014	Intermediate	125	29	13.00	3.33	0.14	0.04				
24-Jun-04	1014	Effluent	125	29	9.00	2.00	0.10	0.02			209.5	64.4
6-Jul-04	1026	Influent	125	29	108.00	3.33	1.19	0.04	2191.17	443.71		
6-Jul-04	1026	Intermediate	125	29	23.01	3.33	0.25	0.04				
6-Jul-04	1026	Effluent	125	29	16.80	2.00	0.19	0.02			211.7	64.7
19-Aug-04	1070	Influent	125	29	5.00	3.33	0.06	0.04	2192.14	444.35		
19-Aug-04	1070	Intermediate	125	29	5.00	3.33	0.06	0.04				
19-Aug-04	1070	Effluent	125	29	3.00	2.00	0.03	0.02			213.1	65.7
30-Sep-04	1112	Influent	125	29	10.30	3.33	0.11	0.04	2190.89	444.97		
30-Sep-04	1112	Intermediate	125	29	14.30	3.33	0.16	0.04				
30-Sep-04	1112	Effluent	125	29	13.00	2.00	0.14	0.02			219.2	66.6

(1) Total Elapsed Time, in days, only for days of remediation system operation, not days since start-up.

(2) When a below detection result occurs, the assumed value is half of the detection limit.

For the 1/19/01 sampling, the samples were incorrectly labeled: Drum #1 is influent to Drum #1, Drum #2 is influent to Drum #2, and Air Stripper is Air Effluent.

(3) Daily emission rate based on laboratory results.

(4) Emission rate to date calculated from average daily emission rate and total days of remediation system operation.

**Table 7
Interim Response Treatment System
Water Sampling Testing Summary**

Sample Date	Total Elapsed Time (days) ¹	Sample Type	Cummulative Volume of Treated Effluent (gal.)	VOCs (ug/L) ²	Benzene (ug/L) ²	Cummulative Mass of VOCs Removed (lbs.) ³	Cummulative Mass of Benzene Removed (lbs.) ³	Cummulative Mass of VOCs Discharged (lbs.) ⁴	Cummulative Mass of Benzene Discharged (lbs.) ⁴
5-Oct-00	9	Influent ⁵		121,985	60,000				
5-Oct-00	9	Effluent	10,592	12.9	0.94	10.8	5.3	0.00114	0.00008
19-Jan-01	21	Inlet ⁶		859.5	90.4				
19-Jan-01	21	Mid Carbon		17.3	0.62				
19-Jan-01	21	Effluent	17,346	16.6	0.7	17.7	8.7	0.00208	0.00012
30-Mar-01	84	Inlet ⁶		1,120.60	140				
30-Mar-01	84	Effluent	44,613	14.45	0.05	45.6	22.4	0.00520	0.00024
11-Apr-01	96	Influent ⁵		100,629	46,000				
11-Apr-01	96	Inlet ⁶		557.5	110				
11-Apr-01	96	Mid Carbon		50.73	5.1				
11-Apr-01	96	Effluent	54,636	13.79	0.94	54.0	26.3	0.00636	0.00031
17-May-01	110	Effluent	58,967	23.46	1.3	57.6	27.9	0.00721	0.00036
13-Jun-01	125	Effluent	61,094	7.74	0.05	59.4	28.8	0.00735	0.00036
13-Jul-01	135	Influent ⁵		97,450	51,000				
31-Jul-01	135	Effluent	65,758	12.36	0.05	63.2	30.7	0.00783	0.00036
20-Sep-01	157	Influent ⁵		113,925	58,000				
20-Sep-01	157	Inlet ⁶		3,205	1,100				
20-Sep-01	157	Effluent	91,894	19.23	0.05	88.1	43.4	0.01203	0.00038
7-Dec-01	196	Influent ⁵		101,620	52,000				
7-Dec-01	196	Inlet ⁶		4,153.5	530				
7-Dec-01	196	Effluent	136,300	9.835	0.05	125.7	62.7	0.01567	0.00039
14-Feb-02	224	Influent		83,055	35,000				
14-Feb-02	224	Precarbon		35,355.3	7,200				
14-Feb-02	224	Effluent	181,000	8.1	0.2	156.7	75.7	0.01869	0.00047
21-Mar-02	256	Influent		143,140	53,000				
21-Mar-02	256	Precarbon		15,716.5	1,600				
21-Mar-02	256	Effluent	202,700	88.22	67	182.6	85.3	0.03467	0.01264
11-Jun-02	323	Influent		63,570	23,000				
11-Jun-02	323	Precarbon		26,320.0	6,400				
11-Jun-02	323	Effluent	286,524	1,244	1,100	226.2	100.6	0.90481	0.78458
8-Aug-02	393	Influent		87,060	41,000				
8-Aug-02	393	Precarbon		26,320.0	18,695				
8-Aug-02	393	Effluent	402,800	6,554.1	4,000	304.3	136.5	7.26406	4.67835
31-Oct-02	456	Influent		27,090.0	5,600				
31-Oct-02	456	Precarbon		24,362.5	13,000				
31-Oct-02	456	Effluent	502,600	2,438.3	1,600	324.9	139.9	9.30128	6.01517
27-Nov-02	470	Influent		52,350.0	22,000				
27-Nov-02	470	Precarbon		15,633.0	7,300				
27-Nov-02	470	Effluent	519,000	6,449.5	4,600	331.1	142.2	10.18390	6.64674
18-Dec-02	491	Influent		45,325.0	19,000				
18-Dec-02	491	Precarbon		7,685.0	2,700				
18-Dec-02	491	Effluent	542,800	4,785.0	3,300	339.2	145.4	11.13420	7.30426
30-Jan-03	534	Influent		35,275.0	9,600				
30-Jan-03	534	Precarbon		4,230.0	1,700				
30-Jan-03	534	Effluent	581,400	4,584.7	2,200	349.1	147.7	12.61092	8.01520
19-Feb-03	554	Influent		71,520.0	32,000				
19-Feb-03	554	Precarbon		3,149.0	81				
19-Feb-03	554	Effluent	598,000	4,004.0	1,500	358.4	152.0	13.16556	8.22366
2-Apr-03	580	Influent		20,876.0	6,300				
2-Apr-03	580	Precarbon		1,553.0	120				
2-Apr-03	580	Effluent	623,300	114.7	22	362.8	153.3	13.18977	8.22832

**Table 7
Interim Response Treatment System
Water Sampling Testing Summary**

Sample Date	Total Elapsed Time (days) ¹	Sample Type	Cummulative Volume of Treated Effluent (gal.)	VOCs (ug/L) ²	Benzene (ug/L) ²	Cummulative Mass of VOCs Removed (lbs.) ³	Cummulative Mass of Benzene Removed (lbs.) ³	Cummulative Mass of VOCs Discharged (lbs.) ⁴	Cummulative Mass of Benzene Discharged (lbs.) ⁴
23-Apr-03	596	Influent		30,060.0	9,500				
23-Apr-03	596	Precarbon		2,095.0	29				
23-Apr-03	596	Effluent	645,300	3.0	0.15	368.3	155.0	13.19032	8.22835
21-May-03	619	Influent		25,470.0	6,100				
21-May-03	619	Precarbon		5,491.0	71				
21-May-03	619	Effluent	687,700	3.1	0.15	377.3	157.2	13.19142	8.22840
25-Jun-03	654	Influent		42,650.0	26,000				
25-Jun-03	654	Precarbon		3,310.0	150				
25-Jun-03	654	Effluent	721,000	1.9	0.12	389.2	164.4	13.19195	8.22843
30-Jul-03	684	Influent		8,440.0	1,400				
30-Jul-03	684	Precarbon		144.0	6				
30-Jul-03	684	Effluent	748,800	1.2	0.19	391.1	164.7	13.19224	8.22848
28-Aug-03	713	Influent		10,630.0	2,200				
28-Aug-03	713	Precarbon		434.3	36				
28-Aug-03	713	Effluent	761,700	0.5	0.16	392.3	165.0	13.19229	8.22849
29-Sep-03	745	Influent		18,770	3,400				
29-Sep-03	745	Precarbon		300.1	17				
29-Sep-03	745	Effluent	781,500	0.7	0.12	395.4	165.5	13.19241	8.22851
29-Oct-03	775	Influent		8,730	1,200				
29-Oct-03	775	Precarbon		169.7	3				
29-Oct-03	775	Effluent	793,400	0.3	0.18	396.3	165.7	13.19243	8.22853
19-Nov-03	796	Influent		10,940	2,000				
19-Nov-03	796	Precarbon		529	23				
19-Nov-03	796	Effluent	799,900	3.5	0.71	396.8	165.8	13.19262	8.22857
29-Dec-03	836	Influent		11,710	2,100				
29-Dec-03	836	Precarbon		7,815	2,900				
29-Dec-03	836	Effluent	821,500	0.0	0.12	399.0	166.1	13.19262	8.22859
20-Jan-04	858	Influent		9,021	2,200				
20-Jan-04	858	Precarbon		576	44				
20-Jan-04	858	Effluent	826,300	2.57	0.50	399.3	166.2	13.19273	8.22861
26-Feb-04	895	Influent		21,425	4,900				
26-Feb-04	895	Precarbon		631	38				
26-Feb-04	895	Effluent	854,700	0.49	0.05	404.4	167.4	13.19284	8.22862
15-Mar-04	917	Influent		20,660	4,500				
15-Mar-04	917	Precarbon		673	39				
15-Mar-04	917	Effluent	876,900	0	0.05	408.2	168.2	13.19284	8.22863
27-Apr-04	956	Influent		11,650	3,500				
27-Apr-04	956	Precarbon		430	74				
27-Apr-04	956	Effluent	893,300	0.28	0.09	409.8	168.7	13.19288	8.22865
26-May-04	985	Influent		22,300	4,800				
26-May-04	985	Precarbon		500	12				
26-May-04	985	Effluent	914,600	0	0.15	413.8	169.6	13.19288	8.22867
24-Jun-04	1014	Influent		24,040	4,800				
24-Jun-04	1014	Precarbon		627	47				
24-Jun-04	1014	Effluent	953,200	0	0.15	421.5	171.1	13.19288	8.22872
6-Jul-04	1026	Influent		15,530	2,600				
6-Jul-04	1026	Precarbon		153.1	9.8				
6-Jul-04	1026	Effluent	965,100	0.59	0.09	423.1	171.4	13.19294	8.22873
19-Aug-04	1070	Influent		15,060	1,900				
19-Aug-04	1070	Precarbon		82.2	5.2				
19-Aug-04	1070	Effluent	994,600	0.37	0.09	426.8	171.8	13.19303	8.22875
27-Sep-04	1109	Influent		23,520	5,800				
27-Sep-04	1109	Precarbon		645.9	17.0				
27-Sep-04	1109	Effluent	1,028,400	0.29	0.09	433.4	173.5	13.19311	8.22878

- (1) Total Elapsed Time, in days, only for days of remediation system operation, not days since start-up.
- (2) When a below detection result occurs, the assumed value is half of the detection limit.
- (3) Removal based on Influent vs. Effluent
- (4) Emission rate to date calculated from average concentrations in effluent and total days of remediation system operation.
- (5) This sample was collected at the oil-water separator discharge, prior to the air diffuser.
- (6) This sample was collected at the inlet to the liquid phase carbon.

Appendix

Laboratory Reporting Forms

ANALYTICAL REPORT

Client: URS Corporation (Milwaukee)
 Attn: Ben Nelson
 10200 West Innovation Drive #500
 Milwaukee, WI 53226 4827

NLS Project: 84704

NLS Customer: 91206

Fax: 414 831 4101 Phone: 414 831 4100

Project: Xcel Ashland 25688376 Remediation

Influent NLS ID: 351323

Ref. Line 1 COC 72174 Influent Matrix: GW
 Collected: 09/27/04 14:45 Received: 09/28/04

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
VOCs (water) by EPA 8260	see attached					10/04/04	SW846 8260	721026460

Precarbon NLS ID: 351324

Ref. Line 2 COC 72174 Precarbon Matrix: GW
 Collected: 09/27/04 14:40 Received: 09/28/04

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
VOCs (water) by EPA 8260	see attached					10/04/04	SW846 8260	721026460

Effluent NLS ID: 351325

Ref. Line 3 COC 72174 Effluent Matrix: GW
 Collected: 09/27/04 14:30 Received: 09/28/04

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Cadmium, tot. as Cd by ICP-Trace	ND	ug/L	1	0.17	0.50	10/12/04	SW846 6010	721026460
Chromium, tot. as Cr by ICP-Trace	[1.3]	ug/L	1	0.51	1.8	10/12/04	SW846 6010	721026460
Copper, tot. as Cu by ICP-Trace	18	ug/L	1	1.3	4.0	10/12/04	SW846 6010	721026460
Lead, tot. as Pb by ICP-Trace	ND	ug/L	1	0.87	3.0	10/12/04	SW846 6010	721026460
Mercury, tot. as Hg	ND	ug/L	1	0.025	0.050	10/06/04	245.7M/ 1631M	721026460
Oil and Grease, water (hexane)	ND	mg/L	1	1.3	4.4	09/30/04	EPA 1664	721026460
pH, Lab	7.57	s.u.	1			09/30/04	SW846 9040	721026460
Phosphorus, tot. as P	0.043	mg/L	1	0.0070*		09/30/04	EPA 365.2	721026460
Metals digestion - total, water ICP	yes					10/11/04	SW846 3010	721026460
VOCs (water) by EPA 8260	see attached					10/04/04	SW846 8260	721026460
PAHs (water) by EPA 8310	see attached					09/30/04	SW846 8310	721026460
Organics Extraction (Water) for PAHs	yes					09/29/04	SW846 3510	721026460
GRO (water)	ND	mg/L	1	0.015	0.045	09/29/04	WI MOD GRO	721026460
	spike-98%, duplicate-91%, surrogate-98%							
DRO (water)	ND	mg/L	1	0.023*	0.079	10/05/04	WI MOD DRO	721026460
	spike-95%, duplicate-91%, surrogate-111%							
Organics Extraction (DRO)	yes					09/29/04	WI MOD DRO	721026460

Trip Blank NLS ID: 351326

Ref. Line 4 COC 72174 Trip Blank Matrix: TB
 Collected: 09/27/04 00:00 Received: 09/28/04

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
VOCs (water) by EPA 8260	see attached					10/04/04	SW846 8260	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and/or LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution.

LOD = Limit of Detection LOQ = Limit of Quantitation ND = Not Detected 1000 ug/L = 1 mg/L
 DWB = Dry Weight Basis NA = Not Applicable %DWB = (mg/kg DWB) / 10000

Reviewed by: _____

Authorized by:
 R. T. Krueger
 President

ANALYTICAL RESULTS: VOC's by EPA 8260 - Water - (Saturn 2)

Page 1 of 8

Customer: URS Corporation (Milwaukee) NLS Project: 84704

Project Description: Xcel Ashland 25688376 Remediation

Project Title: Template: SAT2W Printed: 10/15/2004 08:31

Sample: 351323 Influent Collected: 09/27/04 Analyzed: 10/04/04 -

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ
Benzene	5800	ug/L	1250	140	480
Bromobenzene	ND	ug/L	1250	160	530
Bromochloromethane	ND	ug/L	1250	140	460
Bromodichloromethane	ND	ug/L	1250	240	870
Bromoform	ND	ug/L	1250	130	430
Bromomethane	ND	ug/L	1250	400	1300
n-Butylbenzene	ND	ug/L	1250	230	870
sec-Butylbenzene	ND	ug/L	1250	200	660
tert-Butylbenzene	ND	ug/L	1250	180	580
Carbon Tetrachloride	ND	ug/L	1250	190	640
Chlorobenzene	ND	ug/L	1250	240	860
Chloroethane	ND	ug/L	1250	850	3100
Chloroform	ND	ug/L	1250	150	510
Chloromethane	ND	ug/L	1250	150	510
2-Chlorotoluene	ND	ug/L	1250	160	520
4-Chlorotoluene	ND	ug/L	1250	170	550
Dibromochloromethane	ND	ug/L	1250	210	680
1,2-Dibromo-3-Chloropropane	ND	ug/L	1250	310	1000
1,2-Dibromoethane	ND	ug/L	1250	200	680
Dibromomethane	ND	ug/L	1250	200	720
1,2-Dichlorobenzene	ND	ug/L	1250	160	570
1,3-Dichlorobenzene	ND	ug/L	1250	130	430
1,4-Dichlorobenzene	ND	ug/L	1250	240	800
Dichlorodifluoromethane	ND	ug/L	1250	190	640
1,1-Dichloroethane	ND	ug/L	1250	160	550
1,2-Dichloroethane	ND	ug/L	1250	170	550
1,1-Dichloroethene	ND	ug/L	1250	300	1100
cis-1,2-Dichloroethene	ND	ug/L	1250	160	550
trans-1,2-Dichloroethene	ND	ug/L	1250	130	450
1,2-Dichloropropane	ND	ug/L	1250	160	520
1,3-Dichloropropane	ND	ug/L	1250	190	620
2,2-Dichloropropane	ND	ug/L	1250	210	690
1,1-Dichloropropene	ND	ug/L	1250	220	720
cis-1,3-Dichloropropene	ND	ug/L	1250	260	970
trans-1,3-Dichloropropene	ND	ug/L	1250	180	610
Ethylbenzene	ND	ug/L	1250	180	590
Hexachlorobutadiene	ND	ug/L	1250	290	1100
Isopropylbenzene	ND	ug/L	1250	150	510
p-Isopropyltoluene	ND	ug/L	1250	140	480
Methylene chloride	ND	ug/L	1250	130	430
Naphthalene	10000	ug/L	1250	210	750
n-Propylbenzene	ND	ug/L	1250	210	700
ortho-Xylene	590	ug/L	1250	170	550
Styrene	1900	ug/L	1250	180	590
1,1,1,2-Tetrachloroethane	ND	ug/L	1250	210	690
1,1,2,2-Tetrachloroethane	ND	ug/L	1250	250	840
Tetrachloroethene	ND	ug/L	1250	170	560
Toluene	4100	ug/L	1250	260	960
1,2,3-Trichlorobenzene	ND	ug/L	1250	220	790

ANALYTICAL RESULTS: VOC's by EPA 8260 - Water - (Saturn 2)

Page 2 of 8

Customer: URS Corporation (Milwaukee) NLS Project: 84704

Project Description: Xcel Ashland 25688376 Remediation

Project Title: Template: SAT2W Printed: 10/15/2004 08:31

Sample: 351323 Influent Collected: 09/27/04 Analyzed: 10/04/04 -

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ
1,2,4-Trichlorobenzene	ND	ug/L	1250	130	460
1,1,1-Trichloroethane	ND	ug/L	1250	180	600
1,1,2-Trichloroethane	ND	ug/L	1250	170	580
Trichloroethene	ND	ug/L	1250	150	490
Trichlorofluoromethane	ND	ug/L	1250	180	610
1,2,3-Trichloropropane	ND	ug/L	1250	290	950
1,2,4-Trimethylbenzene	[290]	ug/L	1250	180	600
1,3,5-Trimethylbenzene	ND	ug/L	1250	150	510
Vinyl chloride	ND	ug/L	1250	200	760
meta,para-Xylene	[840]	ug/L	1250	330	1100
MTBE	ND	ug/L	1250	180	600
Isopropyl ether	ND	ug/L	1250	170	560
Dibromofluoromethane (SURR**)	102%				
Toluene-d8 (SURR**)	111%				
1-Bromo-4-Fluorobenzene (SURR**)	105%				

ANALYTICAL RESULTS: VOC's by EPA 8260 - Water - (Saturn 2)

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Customer: URS Corporation (Milwaukee) NLS Project: 84704

Project Description: Xcel Ashland 25688376 Remediation

Project Title: Template: SAT2W Printed: 10/15/2004 08:31

Sample: 351324 Precarbon Collected: 09/27/04 Analyzed: 10/04/04 -

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ
Benzene	17	ug/L	12.5	1.4	4.8
Bromobenzene	ND	ug/L	12.5	1.6	5.3
Bromochloromethane	ND	ug/L	12.5	1.4	4.6
Bromodichloromethane	ND	ug/L	12.5	2.4	8.7
Bromoform	ND	ug/L	12.5	1.3	4.3
Bromomethane	ND	ug/L	12.5	4.0	13
n-Butylbenzene	ND	ug/L	12.5	2.3	8.7
sec-Butylbenzene	ND	ug/L	12.5	2.0	6.6
tert-Butylbenzene	ND	ug/L	12.5	1.8	5.8
Carbon Tetrachloride	ND	ug/L	12.5	1.9	6.4
Chlorobenzene	ND	ug/L	12.5	2.4	8.6
Chloroethane	ND	ug/L	12.5	8.5	31
Chloroform	ND	ug/L	12.5	1.5	5.1
Chloromethane	ND	ug/L	12.5	1.5	5.1
2-Chlorotoluene	ND	ug/L	12.5	1.6	5.2
4-Chlorotoluene	ND	ug/L	12.5	1.7	5.5
Dibromochloromethane	ND	ug/L	12.5	2.1	6.8
1,2-Dibromo-3-Chloropropane	ND	ug/L	12.5	3.1	10
1,2-Dibromoethane	ND	ug/L	12.5	2.0	6.8
Dibromomethane	ND	ug/L	12.5	2.0	7.2
1,2-Dichlorobenzene	ND	ug/L	12.5	1.6	5.7
1,3-Dichlorobenzene	ND	ug/L	12.5	1.3	4.3
1,4-Dichlorobenzene	ND	ug/L	12.5	2.4	8.0
Dichlorodifluoromethane	ND	ug/L	12.5	1.9	6.4
1,1-Dichloroethane	ND	ug/L	12.5	1.6	5.5
1,2-Dichloroethane	ND	ug/L	12.5	1.7	5.5
1,1-Dichloroethene	ND	ug/L	12.5	3.0	11
cis-1,2-Dichloroethene	ND	ug/L	12.5	1.6	5.5
trans-1,2-Dichloroethene	ND	ug/L	12.5	1.3	4.5
1,2-Dichloropropane	ND	ug/L	12.5	1.6	5.2
1,3-Dichloropropane	ND	ug/L	12.5	1.9	6.2
2,2-Dichloropropane	ND	ug/L	12.5	2.1	6.9
1,1-Dichloropropene	ND	ug/L	12.5	2.2	7.2
cis-1,3-Dichloropropene	ND	ug/L	12.5	2.6	9.7
trans-1,3-Dichloropropene	ND	ug/L	12.5	1.8	6.1
Ethylbenzene	[2.4]	ug/L	12.5	1.8	5.9
Hexachlorobutadiene	ND	ug/L	12.5	2.9	11
Isopropylbenzene	ND	ug/L	12.5	1.5	5.1
p-Isopropyltoluene	ND	ug/L	12.5	1.4	4.8
Methylene chloride	ND	ug/L	12.5	1.3	4.3
Naphthalene	550	ug/L	50	8.2	30
n-Propylbenzene	ND	ug/L	12.5	2.1	7.0
ortho-Xylene	11	ug/L	12.5	1.7	5.5
Styrene	19	ug/L	12.5	1.8	5.9
1,1,1,2-Tetrachloroethane	ND	ug/L	12.5	2.1	6.9
1,1,2,2-Tetrachloroethane	ND	ug/L	12.5	2.5	8.4
Tetrachloroethene	ND	ug/L	12.5	1.7	5.6
Toluene	23	ug/L	12.5	2.6	9.6
1,2,3-Trichlorobenzene	ND	ug/L	12.5	2.2	7.9

ANALYTICAL RESULTS: VOC's by EPA 8260 - Water - (Saturn 2)

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Customer: URS Corporation (Milwaukee) NLS Project: 84704

Project Description: Xcel Ashland 25688376 Remediation

Project Title: Template: SAT2W Printed: 10/15/2004 08:31

Sample: 351324 Precarbon

Collected: 09/27/04

Analyzed: 10/04/04 -

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ
1,2,4-Trichlorobenzene	ND	ug/L	12.5	1.3	4.6
1,1,1-Trichloroethane	ND	ug/L	12.5	1.8	6.0
1,1,2-Trichloroethane	ND	ug/L	12.5	1.7	5.8
Trichloroethene	ND	ug/L	12.5	1.5	4.9
Trichlorofluoromethane	ND	ug/L	12.5	1.8	6.1
1,2,3-Trichloropropane	ND	ug/L	12.5	2.9	9.5
1,2,4-Trimethylbenzene	19	ug/L	12.5	1.8	6.0
1,3,5-Trimethylbenzene	[4.5]	ug/L	12.5	1.5	5.1
Vinyl chloride	ND	ug/L	12.5	2.0	7.6
meta,para-Xylene	19	ug/L	12.5	3.3	11
MTBE	ND	ug/L	12.5	1.8	6.0
Isopropyl ether	ND	ug/L	12.5	1.7	5.6
Dibromofluoromethane (SURR**)	96%				
Toluene-d8 (SURR**)	101%				
1-Bromo-4-Fluorobenzene (SURR**)	98%				

ANALYTICAL RESULTS: VOC's by EPA 8260 - Water - (Saturn 2)

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Customer: URS Corporation (Milwaukee) NLS Project: 84704

Project Description: Xcel Ashland 25688376 Remediation

Project Title: Template: SAT2W Printed: 10/15/2004 08:31

Sample: 351325 Effluent Collected: 09/27/04 Analyzed: 10/04/04 -

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ
Benzene	ND	ug/L	1	0.12	0.38
Bromobenzene	ND	ug/L	1	0.13	0.42
Bromochloromethane	ND	ug/L	1	0.11	0.37
Bromodichloromethane	ND	ug/L	1	0.19	0.70
Bromoform	ND	ug/L	1	0.10	0.34
Bromomethane	ND	ug/L	1	0.32	1.0
n-Butylbenzene	ND	ug/L	1	0.19	0.70
sec-Butylbenzene	ND	ug/L	1	0.16	0.52
tert-Butylbenzene	ND	ug/L	1	0.14	0.47
Carbon Tetrachloride	ND	ug/L	1	0.15	0.51
Chlorobenzene	ND	ug/L	1	0.19	0.68
Chloroethane	ND	ug/L	1	0.68	2.5
Chloroform	ND	ug/L	1	0.12	0.41
Chloromethane	ND	ug/L	1	0.12	0.41
2-Chlorotoluene	ND	ug/L	1	0.13	0.42
4-Chlorotoluene	ND	ug/L	1	0.13	0.44
Dibromochloromethane	ND	ug/L	1	0.16	0.55
1,2-Dibromo-3-Chloropropane	ND	ug/L	1	0.25	0.83
1,2-Dibromoethane	ND	ug/L	1	0.16	0.54
Dibromomethane	ND	ug/L	1	0.16	0.57
1,2-Dichlorobenzene	ND	ug/L	1	0.13	0.46
1,3-Dichlorobenzene	ND	ug/L	1	0.10	0.34
1,4-Dichlorobenzene	ND	ug/L	1	0.19	0.64
Dichlorodifluoromethane	ND	ug/L	1	0.15	0.51
1,1-Dichloroethane	ND	ug/L	1	0.13	0.44
1,2-Dichloroethane	ND	ug/L	1	0.13	0.44
1,1-Dichloroethene	ND	ug/L	1	0.24	0.88
cis-1,2-Dichloroethene	ND	ug/L	1	0.13	0.44
trans-1,2-Dichloroethene	ND	ug/L	1	0.11	0.36
1,2-Dichloropropane	ND	ug/L	1	0.13	0.42
1,3-Dichloropropane	ND	ug/L	1	0.15	0.49
2,2-Dichloropropane	ND	ug/L	1	0.16	0.55
1,1-Dichloropropene	ND	ug/L	1	0.17	0.57
cis-1,3-Dichloropropene	ND	ug/L	1	0.21	0.78
trans-1,3-Dichloropropene	ND	ug/L	1	0.15	0.49
Ethylbenzene	ND	ug/L	1	0.14	0.47
Hexachlorobutadiene	ND	ug/L	1	0.23	0.88
Isopropylbenzene	ND	ug/L	1	0.12	0.41
p-Isopropyltoluene	ND	ug/L	1	0.12	0.39
Methylene chloride	ND	ug/L	1	0.10	0.34
Naphthalene	ND	ug/L	1	0.16	0.60
n-Propylbenzene	ND	ug/L	1	0.17	0.56
ortho-Xylene	ND	ug/L	1	0.13	0.44
Styrene	ND	ug/L	1	0.14	0.47
1,1,1,2-Tetrachloroethane	ND	ug/L	1	0.16	0.55
1,1,2,2-Tetrachloroethane	ND	ug/L	1	0.20	0.67
Tetrachloroethene	ND	ug/L	1	0.13	0.45
Toluene	[0.29]	ug/L	1	0.20	0.77
1,2,3-Trichlorobenzene	ND	ug/L	1	0.17	0.64

ANALYTICAL RESULTS: VOC's by EPA 8260 - Water - (Saturn 2)

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Customer: URS Corporation (Milwaukee) NLS Project: 84704

Project Description: Xcel Ashland 25688376 Remediation

Project Title: Template: SAT2W Printed: 10/15/2004 08:31

Sample: 351325 Effluent Collected: 09/27/04 Analyzed: 10/04/04 -

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ
1,2,4-Trichlorobenzene	ND	ug/L	1	0.11	0.37
1,1,1-Trichloroethane	ND	ug/L	1	0.14	0.48
1,1,2-Trichloroethane	ND	ug/L	1	0.14	0.46
Trichloroethene	ND	ug/L	1	0.12	0.39
Trichlorofluoromethane	ND	ug/L	1	0.15	0.49
1,2,3-Trichloropropane	ND	ug/L	1	0.23	0.76
1,2,4-Trimethylbenzene	ND	ug/L	1	0.14	0.48
1,3,5-Trimethylbenzene	ND	ug/L	1	0.12	0.41
Vinyl chloride	ND	ug/L	1	0.16	0.61
meta,para-Xylene	ND	ug/L	1	0.26	0.88
MTBE	ND	ug/L	1	0.14	0.48
Isopropyl ether	ND	ug/L	1	0.13	0.45
Dibromofluoromethane (SURR**)	90%				
Toluene-d8 (SURR**)	93%				
1-Bromo-4-Fluorobenzene (SURR**)	87%				

ANALYTICAL RESULTS: VOC's by EPA 8260 - Water - (Saturn 2)

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Customer: URS Corporation (Milwaukee) NLS Project: 84704

Project Description: Xcel Ashland 25688376 Remediation

Project Title: Template: SAT2W Printed: 10/15/2004 08:31

Sample: 351326 Trip Blank

Collected: 09/27/04

Analyzed: 10/04/04 -

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ
Benzene	ND	ug/L	1	0.12	0.38
Bromobenzene	ND	ug/L	1	0.13	0.42
Bromochloromethane	ND	ug/L	1	0.11	0.37
Bromodichloromethane	ND	ug/L	1	0.19	0.70
Bromoform	ND	ug/L	1	0.10	0.34
Bromomethane	ND	ug/L	1	0.32	1.0
n-Butylbenzene	ND	ug/L	1	0.19	0.70
sec-Butylbenzene	ND	ug/L	1	0.16	0.52
tert-Butylbenzene	ND	ug/L	1	0.14	0.47
Carbon Tetrachloride	ND	ug/L	1	0.15	0.51
Chlorobenzene	ND	ug/L	1	0.19	0.68
Chloroethane	ND	ug/L	1	0.68	2.5
Chloroform	ND	ug/L	1	0.12	0.41
Chloromethane	ND	ug/L	1	0.12	0.41
2-Chlorotoluene	ND	ug/L	1	0.13	0.42
4-Chlorotoluene	ND	ug/L	1	0.13	0.44
Dibromochloromethane	ND	ug/L	1	0.16	0.55
1,2-Dibromo-3-Chloropropane	ND	ug/L	1	0.25	0.83
1,2-Dibromoethane	ND	ug/L	1	0.16	0.54
Dibromomethane	ND	ug/L	1	0.16	0.57
1,2-Dichlorobenzene	ND	ug/L	1	0.13	0.46
1,3-Dichlorobenzene	ND	ug/L	1	0.10	0.34
1,4-Dichlorobenzene	ND	ug/L	1	0.19	0.64
Dichlorodifluoromethane	ND	ug/L	1	0.15	0.51
1,1-Dichloroethane	ND	ug/L	1	0.13	0.44
1,2-Dichloroethane	ND	ug/L	1	0.13	0.44
1,1-Dichloroethene	ND	ug/L	1	0.24	0.88
cis-1,2-Dichloroethene	ND	ug/L	1	0.13	0.44
trans-1,2-Dichloroethene	ND	ug/L	1	0.11	0.36
1,2-Dichloropropane	ND	ug/L	1	0.13	0.42
1,3-Dichloropropane	ND	ug/L	1	0.15	0.49
2,2-Dichloropropane	ND	ug/L	1	0.16	0.55
1,1-Dichloropropene	ND	ug/L	1	0.17	0.57
cis-1,3-Dichloropropene	ND	ug/L	1	0.21	0.78
trans-1,3-Dichloropropene	ND	ug/L	1	0.15	0.49
Ethylbenzene	ND	ug/L	1	0.14	0.47
Hexachlorobutadiene	ND	ug/L	1	0.23	0.88
Isopropylbenzene	ND	ug/L	1	0.12	0.41
p-Isopropyltoluene	ND	ug/L	1	0.12	0.39
Methylene chloride	ND	ug/L	1	0.10	0.34
Naphthalene	ND	ug/L	1	0.16	0.60
n-Propylbenzene	ND	ug/L	1	0.17	0.56
ortho-Xylene	ND	ug/L	1	0.13	0.44
Styrene	ND	ug/L	1	0.14	0.47
1,1,1,2-Tetrachloroethane	ND	ug/L	1	0.16	0.55
1,1,2,2-Tetrachloroethane	ND	ug/L	1	0.20	0.67
Tetrachloroethene	ND	ug/L	1	0.13	0.45
Toluene	[0.26]	ug/L	1	0.20	0.77
1,2,3-Trichlorobenzene	ND	ug/L	1	0.17	0.64

ANALYTICAL RESULTS: VOC's by EPA 8260 - Water - (Saturn 2)

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Customer: URS Corporation (Milwaukee) NLS Project: 84704

Project Description: Xcel Ashland 25688376 Remediation

Project Title: Template: SAT2W Printed: 10/15/2004 08:31

Sample: 351326 Trip Blank

Collected: 09/27/04

Analyzed: 10/04/04 -

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ
1,2,4-Trichlorobenzene	ND	ug/L	1	0.11	0.37
1,1,1-Trichloroethane	ND	ug/L	1	0.14	0.48
1,1,2-Trichloroethane	ND	ug/L	1	0.14	0.46
Trichloroethene	ND	ug/L	1	0.12	0.39
Trichlorofluoromethane	ND	ug/L	1	0.15	0.49
1,2,3-Trichloropropane	ND	ug/L	1	0.23	0.76
1,2,4-Trimethylbenzene	ND	ug/L	1	0.14	0.48
1,3,5-Trimethylbenzene	ND	ug/L	1	0.12	0.41
Vinyl chloride	ND	ug/L	1	0.16	0.61
meta,para-Xylene	ND	ug/L	1	0.26	0.88
MTBE	ND	ug/L	1	0.14	0.48
Isopropyl ether	ND	ug/L	1	0.13	0.45
Dibromofluoromethane (SURR**)	92%				
Toluene-d8 (SURR**)	96%				
1-Bromo-4-Fluorobenzene (SURR**)	91%				

** Surrogates are used to evaluate a method's Quality Control.

ANALYTICAL RESULTS: Polynuclear Aromatic Hydrocarbons by EPA 8310 (w)

Page 1 of 1

Customer: URS Corporation (Milwaukee) NLS Project: 84704

Project Description: Xcel Ashland 25688376 Remediation

Project Title: Template: 04PAHW Printed: 10/15/2004 08:31

Sample: 351325 Effluent

Collected: 09/27/04

Analyzed: 09/30/04 -

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ
Acenaphthene	ND	ug/L	1	0.016	0.054
Acenaphthylene	ND	ug/L	1	0.050	0.17
Anthracene	ND	ug/L	1	0.012	0.039
Benzo (a) anthracene	ND	ug/L	1	0.016	0.053
Benzo (a) pyrene	ND	ug/L	1	0.011	0.035
Benzo (b) fluoranthene	ND	ug/L	1	0.018	0.061
Benzo (g,h,i) perylene	ND	ug/L	1	0.011	0.038
Benzo (k) fluoranthene	ND	ug/L	1	0.012	0.041
Chrysene	ND	ug/L	1	0.021	0.069
Dibenzo (a,h) anthracene	ND	ug/L	1	0.016	0.054
Fluoranthene	ND	ug/L	1	0.010	0.035
Fluorene	[0.018]	ug/L	1	0.015	0.051
Indeno (1,2,3-cd) pyrene	ND	ug/L	1	0.037	0.12
Methyl-1-Naphthalene	0.095	ug/L	1	0.012	0.041
Methyl-2-Naphthalene	0.21	ug/L	1	0.018	0.061
Naphthalene	0.32	ug/L	1	0.014	0.047
Phenanthrene	[0.048]	ug/L	1	0.017	0.056
Pyrene	ND	ug/L	1	0.011	0.035
P-Terphenyl (SURR**)	99%				

** Surrogates are used to evaluate a method's Quality Control.

ANALYTICAL REPORT

Bert Cole
URS CORPORATION
54 Park Place
Suite 950
Appleton, WI 54914

10/14/2004

TestAmerica Job: 04.13902

Project Number:
Project: IH-Xcel Energy-Ashland

Enclosed is the Analytical Reports for the following samples submitted to the Cedar Falls Division of TestAmerica Analytical Testing Corporation for analysis.

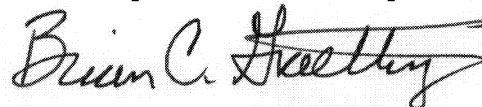
Sample Number	Sample Description	Date Taken	Date Received
828446	Air Stripper	09/30/2004	10/04/2004
828447	1st Stage Carbon	09/30/2004	10/04/2004
828448	Air Effluent	09/30/2004	10/04/2004

TestAmerica Analytical Testing Corporation AIHA Lab Accreditation Number 285

Laboratory Director - Michael K. McGee, CIH

TestAmerica Analytical Testing Corporation certifies that the analytical results contained herein apply only to the specific samples analyzed.

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Brian C. Graettinger
Project Manager

ANALYTICAL REPORT

Bert Cole
 URS CORPORATION
 54 Park Place
 Suite 950
 Appleton, WI 54914

10/14/2004

Date Received: 10/04/2004

URS/XCEL ENERGY
 CC: DAVE TRAINOR NEWFIELDS CC: BEN NELSON URS-MILWAUKEE
 Job Number: 04.13902

	Result	Units	Result Flag	Date Taken	Date Analyzed	Analyst	Analysis Method	Quantitation Limit
828446 Air Stripper								
Air Volume	3	Liters		09/30/2004	10/14/2004	bcg		
Benzene (UST)	<0.020	mg		09/30/2004	10/14/2004	amn	NIOSH 1501	0.020
Benzene	<6.67	mg/m3		09/30/2004	10/14/2004	bcg	N1501	
Ethyl Benzene (UST)	<0.020	mg		09/30/2004	10/14/2004	amn	NIOSH 1501	0.020
Ethylbenzene	<6.67	mg/m3		09/30/2004	10/14/2004	bcg	N1501	
Hydrocarbons, Total (UST)	0.031	mg		09/30/2004	10/14/2004	amn	NIOSH 1550	0.030
Hydrocarbons, Total	10.3	mg/m3		09/30/2004	10/14/2004	bcg	N1550	
Toluene (UST)	<0.020	mg		09/30/2004	10/14/2004	amn	NIOSH 1501	0.020
Toluene	<6.67	mg/m3		09/30/2004	10/14/2004	bcg	N1501	
Xylenes, Total (UST)	<0.030	mg		09/30/2004	10/14/2004	amn	NIOSH 1501	0.030
Xylenes, Total	<10.0	mg/m3		09/30/2004	10/14/2004	bcg	N1501	
828447 1st Stage Carbon								
Air Volume	3	Liters		09/30/2004	10/14/2004	bcg		
Benzene (UST)	<0.020	mg		09/30/2004	10/14/2004	amn	NIOSH 1501	0.020
Benzene	<6.67	mg/m3		09/30/2004	10/14/2004	bcg	N1501	
Ethyl Benzene (UST)	<0.020	mg		09/30/2004	10/14/2004	amn	NIOSH 1501	0.020
Ethylbenzene	<6.67	mg/m3		09/30/2004	10/14/2004	bcg	N1501	
Hydrocarbons, Total (UST)	0.043	mg		09/30/2004	10/14/2004	amn	NIOSH 1550	0.030
Hydrocarbons, Total	14.3	mg/m3		09/30/2004	10/14/2004	bcg	N1550	
Toluene (UST)	<0.020	mg		09/30/2004	10/14/2004	amn	NIOSH 1501	0.020

TOTAL HYDROCARBONS QUANTIFIED AS: Gasoline

Results are not blank corrected.

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Results relate only to the items tested.

ANALYTICAL REPORT

Bert Cole
URS CORPORATION
54 Park Place
Suite 950
Appleton, WI 54914

10/14/2004

Date Received: 10/04/2004

URS/XCEL ENERGY
CC: DAVE TRAINOR NEWFIELDS CC: BEN NELSON URS-MILWAUKEE
Job Number: 04.13902

	Result	Units	Result Flag	Date Taken	Date Analyzed	Analyst	Analysis Method	Quantitation Limit
828447 1st Stage Carbon								
Toluene	<6.67	mg/m3		09/30/2004	10/14/2004	bcg	N1501	
Xylenes, Total (UST)	<0.030	mg		09/30/2004	10/14/2004	amn	NIOSH 1501	0.030
Xylenes, Total	<10.0	mg/m3		09/30/2004	10/14/2004	bcg	N1501	
828448 Air Effluent								
Air Volume	5	Liters		09/30/2004	10/14/2004	bcg		
Benzene (UST)	0.020	mg		09/30/2004	10/14/2004	amn	NIOSH 1501	0.020
Benzene	4.00	mg/m3		09/30/2004	10/14/2004	bcg	N1501	
Ethyl Benzene (UST)	<0.020	mg		09/30/2004	10/14/2004	amn	NIOSH 1501	0.020
Ethylbenzene	<4.00	mg/m3		09/30/2004	10/14/2004	bcg	N1501	
Hydrocarbons, Total (UST)	0.065	mg		09/30/2004	10/14/2004	amn	NIOSH 1550	0.030
Hydrocarbons, Total	13.0	mg/m3		09/30/2004	10/14/2004	bcg	N1550	
Toluene (UST)	<0.020	mg		09/30/2004	10/14/2004	amn	NIOSH 1501	0.020
Toluene	<4.00	mg/m3		09/30/2004	10/14/2004	bcg	N1501	
Xylenes, Total (UST)	<0.030	mg		09/30/2004	10/14/2004	amn	NIOSH 1501	0.030
Xylenes, Total	<6.00	mg/m3		09/30/2004	10/14/2004	bcg	N1501	

TOTAL HYDROCARBONS QUANTIFIED AS: Gasoline

Results are not blank corrected.

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