12/23/99

MONTGOMERY WATSON

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WAUSAU DNR

December 21, 1999

Ms. Lisa Gutknecht
Wisconsin Department of Natural Resources
5301 Rib Mountain Drive
Wausau, Wisconsin 54401

Re: November Progress Report
WAULECO, Inc.
Wausau, Wisconsin
Administrative Order No. NCD-91-04

BRRTS# 02-37-000006

Dear Ms. Gutknecht:

On behalf of WAULECO, Montgomery Watson is submitting two copies (enclosed) of the November Progress Report for the WAULECO, Inc. site in Wausau, Wisconsin. The report is submitted in fulfillment of Paragraph 41 of Administrative Order No. NCD-91-04.

If you have any questions or comments regarding this information, please call.

Sincerely,

MONTGOMERY WATSON

Patrick H. Lytle
Associate Engineer

Douglas J. Bach, P.E.
Project Manager

Enclosures: Monthly Report

cc: Wastewater Engineer - WDNR (Wausau, WI) (1)
J. Gehin - Wausau Utilities Director (1)
P. Peshek (3)
R. Brandt (1)
T. Dushek – MW Wauleco (1)

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One Science Court
P.O. Box 5385
Madison, Wisconsin
53705-0385

Tel: 608 231 4747
Fax: 608 231 4777

Serving the World's Environmental Needs

WAULECO INCORPORATED
WAUSAU, WISCONSIN
MONTHLY REPORT
NOVEMBER 1999

SUMMARY OF NOVEMBER 1999 ACTIVITIES

Groundwater Extraction and Treatment System Operation

During the month of November, activities associated with the controls upgrade of the treatment system were completed. These activities completed the overall upgrade of the extraction and treatment system.

Treatment system performance data for this reporting period are summarized in Table 1. PCP screening (on-site gas chromatograph) results for the system effluent samples, which represent the water discharged to the municipal sewer, averaged 2 ug/L for the month of November, with a maximum single day concentration of 6 ug/L. The laboratory result for PCP in the system effluent was 4.5 ug/L on November 16, 1999. The on-site result for the same day was 3 ug/L. Both these results indicate PCP concentrations were well below the permit levels of 150 ug/L (monthly average) and 300 ug/L (daily maximum).

Laboratory results for mercury analyses of the FBR influent, FBR effluent, and system effluent samples collected on November 16 are included in Table 1. The mercury concentration in the system effluent samples (discharged to the sanitary sewer) was <0.2 ug/L.

PCP influent concentrations ranged from 26,514 ug/L to 4,790 ug/L during November (Table 1). PCP influent and effluent concentrations in the FBR are presented graphically both as individual data points and as a 30-day moving average in Figure 1. As shown in Figure 1, influent PCP concentrations generally declined during November. The average PCP removal efficiency for the FBR during November was 88% compared to an average of 86% during the previous year. Removal efficiencies continue to increase while biological growth is established on the FBR carbon media.

Daily groundwater flow through the treatment system (Table 2) ranged from 26 to 56 gallons per minute (gpm) during November. The majority of this fluctuation is due to varying log times for the flow totalizer, not from changes to the treatment system flowrate, which averaged 43 gpm. Total treatment system efficiency (including carbon polishing units) continues to be greater than 99%.

Product Recovery

Product recovery data for the reporting period are presented in Table 3. Historic product recovery (since July 1990) compared to average water level deviation is presented in Figure 2. Water levels in the vicinity of the site decreased during November. Product recovery totaled 369 gallons in November. The product pumps in a number of extraction wells were not operated in November, in order to reestablish product thickness in the wells. Table 4 shows

that product thickness in wells throughout the site increased, as decreased water levels allowed more residual product to coalesce into the free phase. As the additional product pumps are brought online, product recovery should increase accordingly. Preliminary results from December indicate this is occurring.

A comparison of the product recovery of each phase of well installations is presented in Figure 3. This figure illustrates the historical productivity of each phase of well installations. Cumulative product recovery of all wells is plotted on the secondary vertical axis.

Groundwater Monitoring

Groundwater elevation and product thickness data for September, October, and November are summarized in Table 4.

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TABLE 1

Above Ground Treatment System Data
Wauleco, Inc.
Wausau, Wisconsin

Parameter	UNIT	DATE	FBR Influent	FBR Effluent	FFR Effluent	Bag Filter Effluent	Filters1+2 Effluent	System Effluent	System Eff Dup
Biological Oxygen Demand	mg/L	11/16/99	18.0	8.00				<	
Chemical Oxygen Demand	mg/L	11/16/99	50.0	51.0				26.0	
Chloride	mg/L	11/16/99	181	181				183	
Dissolved Oxygen	mg/L	11/02/99	8.2	6.3	7.2				
	mg/L	11/09/99	8.1	6.2	7.2				
	mg/L	11/15/99	6.9	5.2	5.9				
	mg/L	11/23/99	5.5	3.7	4.2				
	mg/L	11/29/99	6.2	3	4.3				
Nitrogen, Ammonia	mg/L	11/02/99	2	1	<				
	mg/L	11/09/99	2	<	<				
	mg/L	11/15/99	1	0.3	0.2				
	mg/L	11/23/99	1	0.4	0.6				
	mg/L	11/29/99	1	0.4	0.4				
Nitrogen, Nitrate	mg/L	11/02/99	<	<	<				
	mg/L	11/09/99	<	<	<				
	mg/L	11/15/99	<	<	<				
	mg/L	11/23/99	<	<	<				
	mg/L	11/29/99	<	<	<				
Nitrogen, Nitrate + Nitrite	mg/L	11/16/99	0.49	0.56				0.32	
Nitrogen, Total Kjeldahl	mg/L	11/16/99	1.10	0.72				0.47	
Pentachlorophenol-Screen	µg/L	11/01/99						2	
	µg/L	11/02/99	4790	475	1030			1	
	µg/L	11/03/99						1	
	µg/L	11/04/99						<	
	µg/L	11/05/99						1	
	µg/L	11/06/99						3	
	µg/L	11/07/99						3	
	µg/L	11/08/99						3	
	µg/L	11/09/99						3	
	µg/L	11/10/99						2	
	µg/L	11/11/99						2	
	µg/L	11/12/99						2	
	µg/L	11/13/99						3	
	µg/L	11/14/99						3	
	µg/L	11/15/99	26514	1315	2615			3	
	µg/L	11/16/99						3	
	µg/L	11/17/99						3	
	µg/L	11/18/99						2	

TABLE 1

Above Ground Treatment System Data
Wauleco, Inc.
Wausau, Wisconsin

Parameter	UNIT	DATE	FBR Influent	FBR Effluent	FFR Effluent	Bag Filter Effluent	Filters1+2 Effluent	System Effluent	System Eff Dup
Pentachlorophenol-Screen	µg/L	11/19/99						2	
	µg/L	11/20/99						2	
	µg/L	11/21/99						2	
	µg/L	11/22/99						2	
	µg/L	11/23/99	8235	1709	1225			6	
	µg/L	11/24/99						1	
	µg/L	11/25/99						2	
	µg/L	11/26/99						2	
	µg/L	11/27/99						4	
	µg/L	11/28/99						4	
	µg/L	11/29/99						4	
	µg/L	11/30/99						2	
pH	S.U.	11/02/99	6.6	6.6	6.6				
	S.U.	11/09/99	6.8	6.8	7				
	S.U.	11/15/99	6.4	6.4	6.4				
	S.U.	11/23/99	6.9	6.8	6.9				
	S.U.	11/29/99	6.8	6.7	6.7				
Phosphorus, Ortho	mg/L	11/16/99	0.760	0.460				0.260	
Phosphorus, Phosphate	mg/L	11/02/99	1	1	1				
	mg/L	11/09/99	1	1	1				
	mg/L	11/15/99	2	1.5	1.5				
	mg/L	11/23/99	2.5	2.5	2.5				
	mg/L	11/29/99	2.5	2.5	2.5				
Solids, Total Suspended	mg/L	11/16/99	6.00	15.0		8.00	<	<	
Mercury	ug/L	11/16/99	0.7	0.5				<	
Phenols									
2,3,4,6-Tetrachlorophenol	ug/L	11/16/99	<	<	<	<	13.0	<	<
2,4,5-Trichlorophenol	ug/L	11/16/99	<	<	<	<	<	<	<
2,4,6-Trichlorophenol	ug/L	11/16/99	<	<	<	<	<	<	<
2,4-Dichlorophenol	ug/L	11/16/99	<	<	<	<	<	<	<
2,4-Dimethylphenol	ug/L	11/16/99	<	<	<	<	<	<	<
2,4-Dinitrophenol	ug/L	11/16/99	<	<	<	<	<	<	<
2,6-Dichlorophenol	ug/L	11/16/99	<	<	<	<	<	<	<
2-Chlorophenol	ug/L	11/16/99	<	<	<	<	<	<	<
2-Methylphenol	ug/L	11/16/99	<	<	<	<	<	<	<
2-Nitrophenol	ug/L	11/16/99	<	<	<	<	<	<	<
3&4-Methylphenol	ug/L	11/16/99	<	<	<	<	<	<	<
4,6-Dinitro-2-Methylphenol	ug/L	11/16/99	<	<	<	<	<	<	<
4-Chloro-3-Methylphenol	ug/L	11/16/99	<	<	<	<	<	<	<
4-Nitrophenol	ug/L	11/16/99	<	<	<	<	<	<	<

TABLE 1

Above Ground Treatment System Data
Wauleco, Inc.
Wausau, Wisconsin

Parameter	UNIT	DATE	FBR Influent	FBR Effluent	FFR Effluent	Bag Filter Effluent	Filters1+2 Effluent	System Effluent	System Eff Dup
Phenols									
Pentachlorophenol	ug/L	11/16/99	9200	900	720	170	110	5.20	4.50
Phenol	ug/L	11/16/99	<	<	<	<	<	<	<

TABLE 2

Treatment System Flows
Wauleco, Inc.
Wausau, Wisconsin

Date	Influent Groundwater Flow Rate [1] (gpm)	POTW Discharge Flow Rate [1] (gpm)	POTW Totalized Discharge (gal)
11/1/99	39.00	34.58	18,498,354
11/2/99	41.83	36.99	18,551,614
11/3/99	41.46	36.81	18,604,622
11/4/99	41.58	37.01	18,657,911
11/5/99	40.68	35.33	18,708,780
11/6/99	40.67	36.42	18,761,220
11/7/99	40.69	35.62	18,812,519
11/8/99	56.07	49.24	18,883,423
11/9/99	25.96	22.80	18,916,252
11/10/99	38.43	32.65	18,963,263
11/11/99	41.21	35.50	19,014,387
11/12/99	36.27	30.78	19,058,703
11/13/99	52.50	45.47	19,124,173
11/14/99	45.47	36.28	19,176,421
11/15/99	43.93	36.99	19,229,683
11/16/99	45.44	37.39	19,283,518
11/17/99	44.97	36.60	19,336,227
11/18/99	46.03	39.26	19,392,758
11/19/99	48.62	41.43	19,452,412
11/20/99	49.34	44.84	19,516,983
11/21/99	55.61	50.21	19,589,282
11/22/99	51.65	46.85	19,656,750
11/23/99	32.22	28.93	19,698,413
11/24/99	40.64	35.77	19,749,922
11/25/99	46.11	43.47	19,812,519
11/26/99	43.49	40.44	19,870,748
11/27/99	40.78	36.25	19,922,941
11/28/99	42.89	35.47	19,974,018
11/29/99	42.55	33.35	20,022,041
11/30/99	44.44	37.45	20,075,967
Average	43.35	37.67	
Total [2]:			1,627,415

Footnotes:

(1) Influent and POTW flow rates are daily averages. These may not be equal due to balancing in the treatment system and calibration of individual flowmeters.

(2) Total is the cumulative POTW discharge during the reporting period.

TABLE 3

Product Removal
(gallons per day)
Wauleco, Inc.
Wausau, Wisconsin

Date	PW04	PW05	PW07	PW09	PW10	PW11	PW12	PW13	PW15	PW16	PW17	PW18	PW19	PW20	PW21	PW22	PW23	PW24	PW25	PW26	PW27	Date Total
11/01/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.8	0.0	0.0	0.0	0.0	0.0	11.3	8.6	6.9	0.0	40.6
11/02/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.8	0.0	0.0	0.0	0.0	0.0	10.3	8.6	6.9	0.0	39.6
11/03/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	5.2	0.0	1.7	0.0	8.6
11/04/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.6	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	12.0
11/05/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	3.4	0.0	0.0	5.2	6.9	0.0	0.0	20.7
11/06/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2
11/07/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	6.9
11/08/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	1.7	0.0	0.0	0.0	0.0	1.7	1.7	10.3
11/09/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	6.9
11/10/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	6.9
11/11/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	1.7	0.0	0.0	0.0	0.0	1.7	1.7	10.3
11/12/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2
11/13/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	1.7	8.6
11/14/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2
11/15/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	6.9
11/16/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	6.9
11/17/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	6.9
11/18/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	6.9
11/19/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	1.7	1.7	1.7	0.0	10.3
11/20/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	8.6
11/21/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	0.0	8.6
11/22/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	1.7	0.0	1.7	0.0	8.6
11/23/99	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	1.7	3.4	1.7	15.4
11/24/99	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	13.8
11/25/99	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	1.7	3.4	1.7	18.9
11/26/99	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	0.0	13.7
11/27/99	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	1.7	3.4	1.7	18.9
11/28/99	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	0.0	13.8
11/29/99	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	12.0
11/30/99	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	0.0	12.0
Well Total	0.0	0.0	0.0	0.0	0.0	34.4	0.0	0.0	0.0	0.0	0.0	178.2	0.0	0.0	13.6	0.0	0.0	38.8	37.7	49.5	17.0	369.2

TABLE 4

Groundwater Elevation Data
Wauleco, Inc.
Wausau, Wisconsin

Well	September 23 1999		October 21 1999		November 15 1999	
	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)
PW01	0.05	1162.06	0.08	1162.12	0.09	1160.66
PW02	-----	1162.08	-----	1162.14	-----	1161.73
PW03	-----	1162.33	-----	1162.20	-----	1161.93
PW3S	-----	-----	0.04	1160.15	-----	-----
PW04	0.79	1155.54	-----	1156.72	0.52	1154.95
PW05	0.29	1153.05	-----	1147.24	-----	1147.26
PW06	-----	-----	0.43	1161.26	-----	-----
PW07	-----	1156.97	-----	1156.88	0.06	1156.86
PW08	-----	-----	0.37	1160.29	-----	-----
PW9I	-----	1163.58	-----	-----	-----	-----
PW9O	-----	1161.82	-----	1161.24	-----	1163.91
PW10	-----	1153.32	-----	1159.64	-----	1158.37
PW11	0.04	1159.81	-----	1160.67	0.01	1158.50
PW12	0.35	1161.97	-----	1162.18	-----	1161.88
PW13	0.31	1158.51	-----	1161.06	0.39	1157.57
PW14	-----	-----	0.21	1160.46	-----	-----
PW15	-----	1159.99	0.09	1160.49	0.12	1160.17
PW16	0.26	1158.70	-----	1159.61	0.06	1158.80
PW17	-----	1157.57	-----	1159.44	0.24	1157.65
PW18	0.51	1159.03	0.22	1160.18	0.08	1159.37
PW19	0.43	1159.78	-----	1160.47	0.08	1159.89
PW20	0.58	1159.22	0.55	1160.03	0.59	1159.12
PW21	0.71	1158.99	-----	1160.51	0.05	1159.66
PW22	0.76	1157.22	1.26	1156.52	-----	1156.89
PW23	0.44	1158.39	0.26	1159.12	0.36	1158.65
PW24	0.18	1158.98	0.36	1159.54	0.46	1158.82
PW25	0.16	1158.48	0.06	1159.53	0.68	1158.31
PW26	0.19	1158.14	1.05	1158.20	0.41	1158.27
PW27	0.26	1158.43	0.31	1158.08	0.37	1158.21
PW28	-----	-----	-----	-----	-----	-----
PW29	-----	-----	-----	-----	0.02	-----
P01	0.46	1159.82	0.41	1160.59	0.42	1159.80
OW01	-----	-----	-----	1162.52	-----	-----
W01A	-----	-----	-----	1162.85	-----	-----
W01B	-----	-----	-----	1162.73	-----	-----
W02	-----	1161.75	0.16	1161.88	-----	-----
W03A	2.54	1157.44	0.39	1160.20	0.43	1159.97
W03B	-----	1160.95	-----	1161.10	-----	1160.91
W04A	0.44	1160.89	0.23	1161.39	0.27	1160.93
W04B	-----	-----	0.11	1161.54	-----	-----
W05	1.09	1159.21	0.53	1160.70	0.62	1159.54
W06R	-----	1162.41	-----	1162.42	0.36	1161.95
W07	-----	-----	0.34	1162.02	-----	-----
W08	-----	-----	-----	1172.29	-----	-----
W09	-----	-----	-----	1161.72	-----	-----
W10A	-----	-----	-----	1160.69	-----	-----
W10B	-----	-----	-----	1160.72	-----	-----
W11	-----	-----	-----	1160.62	-----	-----

TABLE 4

Groundwater Elevation Data
Wauleco, Inc.
Wausau, Wisconsin

Well	September 23 1999		October 21 1999		November 15 1999	
	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)
W12	-----	-----	-----	1160.34	-----	-----
W13	-----	-----	-----	1160.92	-----	-----
W14	-----	-----	-----	1159.46	-----	-----
W16	-----	-----	-----	1161.22	-----	-----
W17	-----	-----	0.26	1160.29	-----	-----
W18	-----	-----	-----	1160.74	-----	-----
W19	-----	-----	-----	1162.07	-----	-----
W21	-----	-----	-----	1160.61	-----	-----
W22	-----	1160.27	0.13	1160.72	0.14	1160.66
W23	-----	-----	-----	1160.57	-----	-----
W24A	-----	-----	-----	1160.54	-----	-----
W25	-----	-----	-----	1162.71	-----	-----
W26	-----	-----	-----	1160.66	-----	-----
W27	-----	-----	-----	1160.97	-----	-----
W28	-----	-----	-----	1160.77	-----	-----
W29	-----	-----	-----	1160.64	-----	-----
W30	1.04	1159.27	0.40	1160.48	0.72	1159.42
W31	-----	-----	-----	1160.70	-----	-----
W32	-----	-----	-----	1160.70	-----	-----
W33	-----	-----	0.10	1161.25	-----	-----
W34	0.11	1157.51	0.13	1157.92	0.21	1157.31
W35	0.87	1159.49	0.74	1160.52	0.37	1159.90
W36	-----	1160.97	-----	1161.80	-----	1161.01
W39	-----	-----	-----	1161.32	-----	-----
W40	-----	-----	0.74	1160.32	-----	-----
W41	-----	-----	-----	1162.27	-----	-----
W42	-----	-----	-----	1161.91	-----	-----
W44	1.44	1158.98	0.05	1161.07	0.41	1160.05
W45	3.66	1156.80	0.06	1161.11	0.06	1160.33
W46	0.97	1159.21	0.81	1160.39	0.93	1159.19
W47	0.51	1155.94	-----	1157.35	0.05	1156.51
W48	0.21	1155.95	-----	1156.81	0.03	1156.55
W49	0.81	1155.90	0.09	1157.19	0.73	1156.29
W66	-----	1162.63	-----	1162.52	-----	1162.22
W67	-----	1162.53	-----	1162.44	-----	1162.19
W68A	-----	-----	0.34	1162.18	-----	-----
W68B	-----	-----	-----	1162.44	-----	-----
W69	0.18	1160.88	0.52	1161.00	0.85	1160.10
W70B	-----	-----	-----	1162.29	-----	-----
River	-----	No Gage	-----	No Gage	-----	No Gage

Notes:
ft msl = feet mean sea level

FIGURE 1
FBR Influent and Effluent
PCP Concentrations

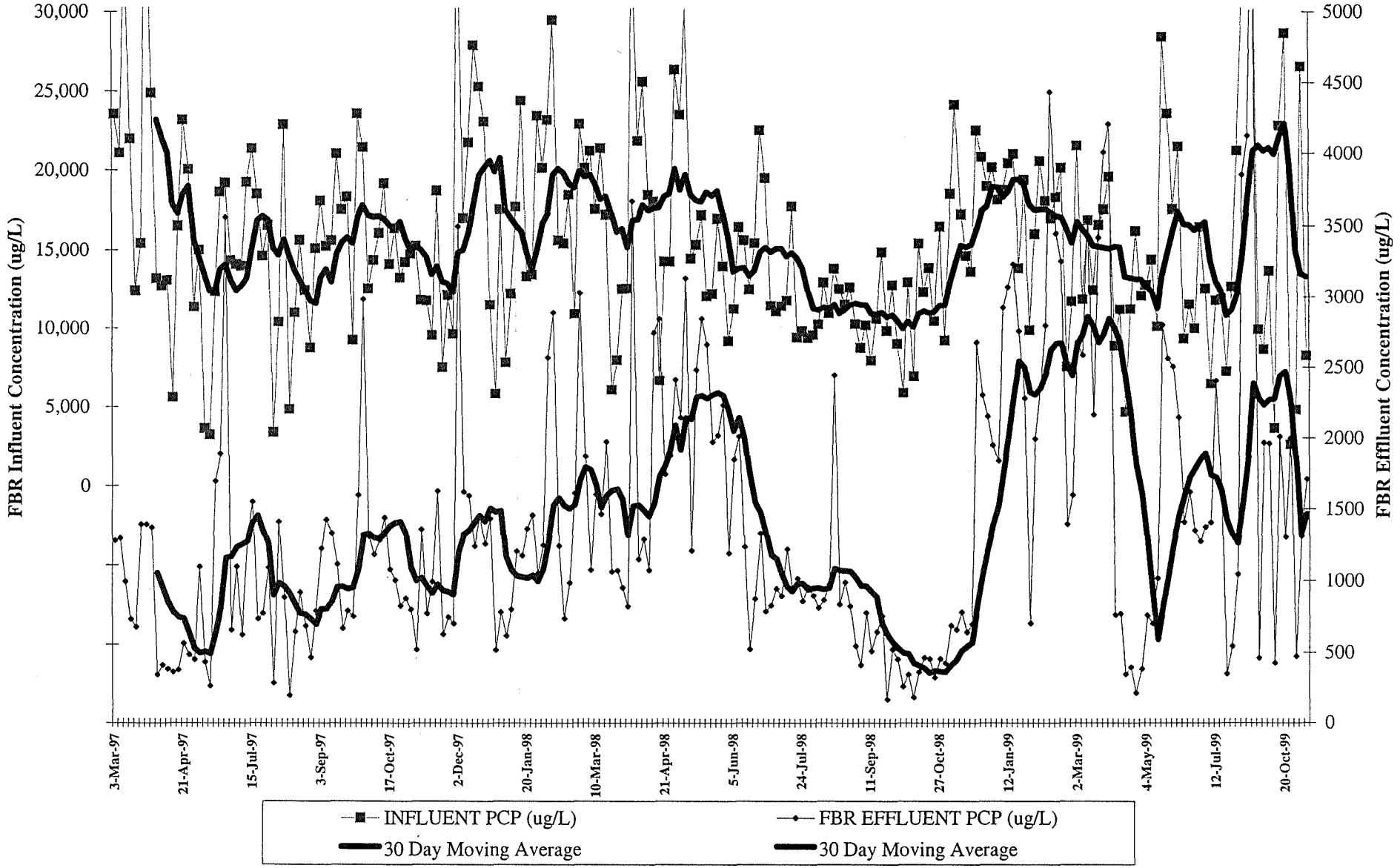
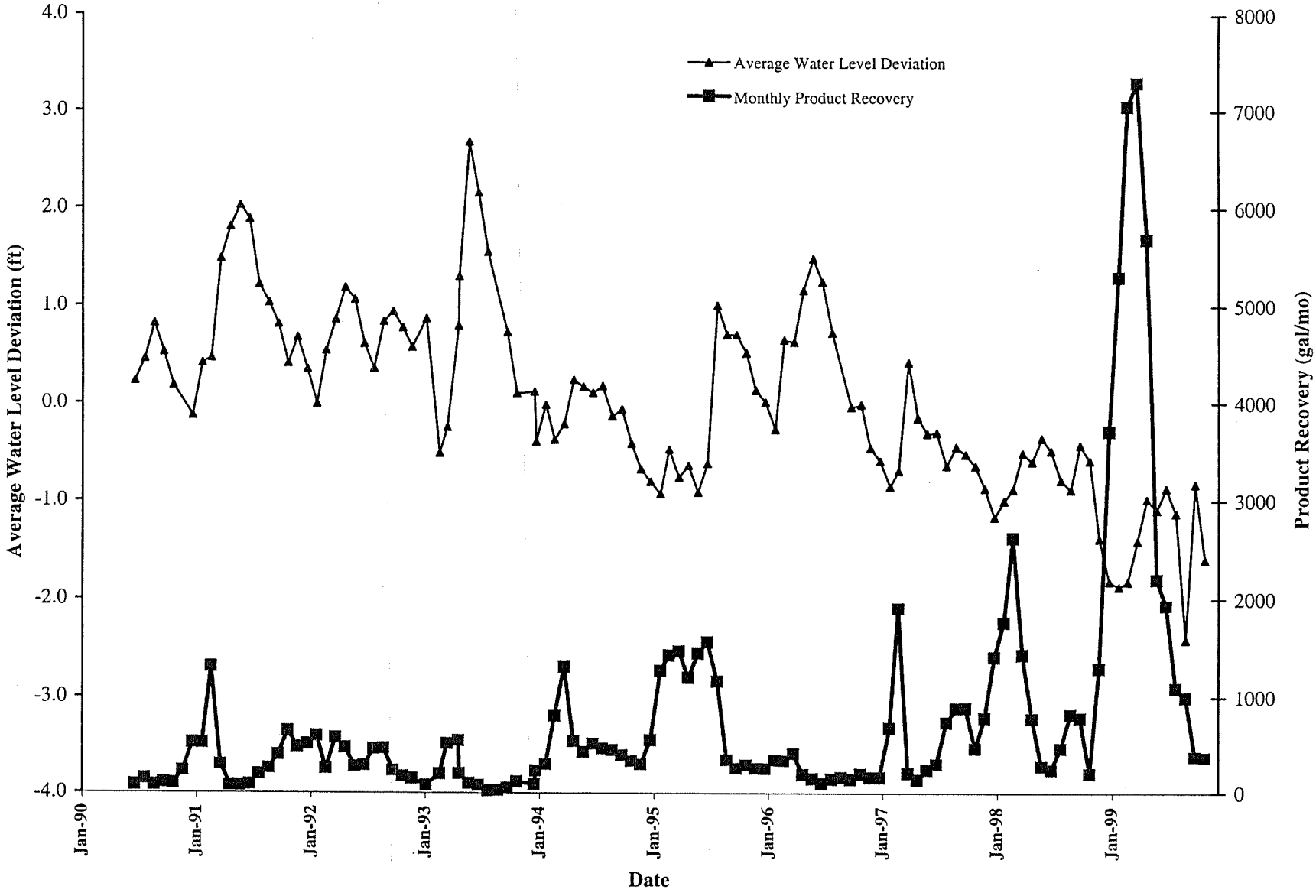


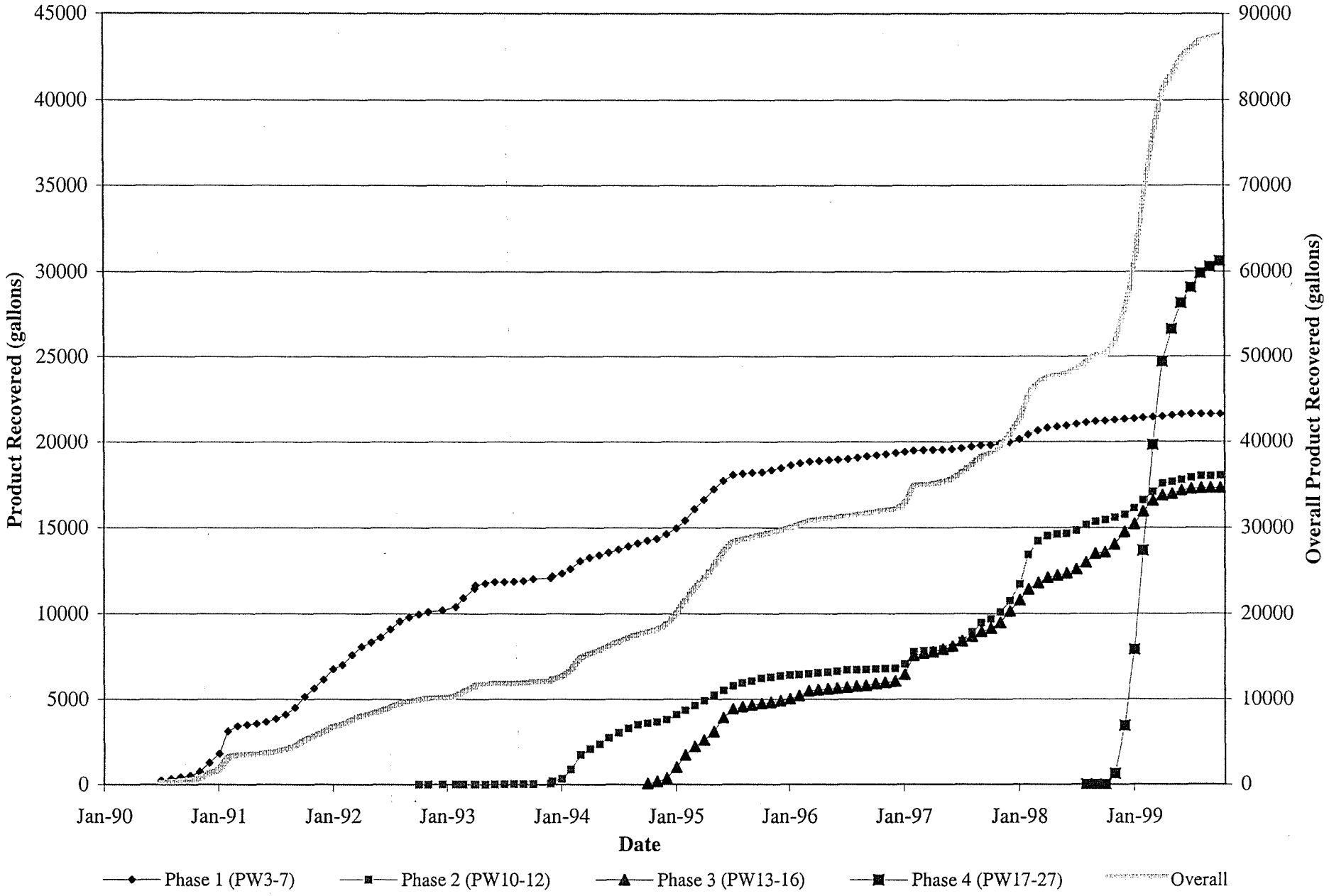
FIGURE 2
Average Water Level Deviation Versus Product Recovery Rates



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12/16/99

FIGURE 3
Cumulative Product Recovery by Phase and Overall



11/30/99

WAULECO INCORPORATED
WAUSAU, WISCONSIN
MONTHLY REPORT
NOVEMBER 1999

SUMMARY OF NOVEMBER 1999 ACTIVITIES

Groundwater Extraction and Treatment System Operation

During the month of November, activities associated with the controls upgrade of the treatment system were completed. These activities completed the overall upgrade of the extraction and treatment system.

Treatment system performance data for this reporting period are summarized in Table 1. PCP screening (on-site gas chromatograph) results for the system effluent samples, which represent the water discharged to the municipal sewer, averaged 2 ug/L for the month of November, with a maximum single day concentration of 6 ug/L. The laboratory result for PCP in the system effluent was 4.5 ug/L on November 16, 1999. The on-site result for the same day was 3 ug/L. Both these results indicate PCP concentrations were well below the permit levels of 150 ug/L (monthly average) and 300 ug/L (daily maximum).

Laboratory results for mercury analyses of the FBR influent, FBR effluent, and system effluent samples collected on November 16 are included in Table 1. The mercury concentration in the system effluent samples (discharged to the sanitary sewer) was <0.2 ug/L.

PCP influent concentrations ranged from 26,514 ug/L to 4,790 ug/L during November (Table 1). PCP influent and effluent concentrations in the FBR are presented graphically both as individual data points and as a 30-day moving average in Figure 1. As shown in Figure 1, influent PCP concentrations generally declined during November. The average PCP removal efficiency for the FBR during November was 88% compared to an average of 86% during the previous year. Removal efficiencies continue to increase while biological growth is established on the FBR carbon media.

Daily groundwater flow through the treatment system (Table 2) ranged from 26 to 56 gallons per minute (gpm) during November. The majority of this fluctuation is due to varying log times for the flow totalizer, not from changes to the treatment system flowrate, which averaged 43 gpm. Total treatment system efficiency (including carbon polishing units) continues to be greater than 99%.

Product Recovery

Product recovery data for the reporting period are presented in Table 3. Historic product recovery (since July 1990) compared to average water level deviation is presented in Figure 2. Water levels in the vicinity of the site decreased during November. Product recovery totaled 369 gallons in November. The product pumps in a number of extraction wells were not operated in November, in order to reestablish product thickness in the wells. Table 4 shows

that product thickness in wells throughout the site increased, as decreased water levels allowed more residual product to coalesce into the free phase. As the additional product pumps are brought online, product recovery should increase accordingly. Preliminary results from December indicate this is occurring.

A comparison of the product recovery of each phase of well installations is presented in Figure 3. This figure illustrates the historical productivity of each phase of well installations. Cumulative product recovery of all wells is plotted on the secondary vertical axis.

Groundwater Monitoring

Groundwater elevation and product thickness data for September, October, and November are summarized in Table 4.

PHL/phl/vlr/DJB
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1242057.04810101-MD

TABLE 1

Above Ground Treatment System Data
Wauleco, Inc.
Wausau, Wisconsin

Parameter	UNIT	DATE	FBR Influent	FBR Effluent	FFR Effluent	Bag Filter Effluent	Filters1+2 Effluent	System Effluent	System Eff Dup
Biological Oxygen Demand	mg/L	11/16/99	18.0	8.00				<	
Chemical Oxygen Demand	mg/L	11/16/99	50.0	51.0				26.0	
Chloride	mg/L	11/16/99	181	181				183	
Dissolved Oxygen	mg/L	11/02/99	8.2	6.3	7.2				
	mg/L	11/09/99	8.1	6.2	7.2				
	mg/L	11/15/99	6.9	5.2	5.9				
	mg/L	11/23/99	5.5	3.7	4.2				
	mg/L	11/29/99	6.2	3	4.3				
Nitrogen, Ammonia	mg/L	11/02/99	2	1	<				
	mg/L	11/09/99	2	<	<				
	mg/L	11/15/99	1	0.3	0.2				
	mg/L	11/23/99	1	0.4	0.6				
	mg/L	11/29/99	1	0.4	0.4				
Nitrogen, Nitrate	mg/L	11/02/99	<	<	<				
	mg/L	11/09/99	<	<	<				
	mg/L	11/15/99	<	<	<				
	mg/L	11/23/99	<	<	<				
	mg/L	11/29/99	<	<	<				
Nitrogen, Nitrate + Nitrite	mg/L	11/16/99	0.49	0.56				0.32	
Nitrogen, Total Kjeldahl	mg/L	11/16/99	1.10	0.72				0.47	
Pentachlorophenol-Screen	µg/L	11/01/99						2	
	µg/L	11/02/99	4790	475	1030			1	
	µg/L	11/03/99						1	
	µg/L	11/04/99						<	
	µg/L	11/05/99						1	
	µg/L	11/06/99						3	
	µg/L	11/07/99						3	
	µg/L	11/08/99						3	
	µg/L	11/09/99						3	
	µg/L	11/10/99						2	
	µg/L	11/11/99						2	
	µg/L	11/12/99						2	
	µg/L	11/13/99						3	
	µg/L	11/14/99						3	
	µg/L	11/15/99	26514	1315	2615			3	
	µg/L	11/16/99						3	
	µg/L	11/17/99						3	
	µg/L	11/18/99						2	

TABLE 1

Above Ground Treatment System Data
Wauleco, Inc.
Wausau, Wisconsin

Parameter	UNIT	DATE	FBR Influent	FBR Effluent	FFR Effluent	Bag Filter Effluent	Filters1+2 Effluent	System Effluent	System Eff Dup
Pentachlorophenol-Screen	µg/L	11/19/99						2	
	µg/L	11/20/99						2	
	µg/L	11/21/99						2	
	µg/L	11/22/99						2	
	µg/L	11/23/99	8235	1709	1225			6	
	µg/L	11/24/99						1	
	µg/L	11/25/99						2	
	µg/L	11/26/99						2	
	µg/L	11/27/99						4	
	µg/L	11/28/99						4	
	µg/L	11/29/99						4	
	µg/L	11/30/99						2	
pH	S.U.	11/02/99	6.6	6.6	6.6				
	S.U.	11/09/99	6.8	6.8	7				
	S.U.	11/15/99	6.4	6.4	6.4				
	S.U.	11/23/99	6.9	6.8	6.9				
	S.U.	11/29/99	6.8	6.7	6.7				
Phosphorus, Ortho	mg/L	11/16/99	0.760	0.460				0.260	
Phosphorus, Phosphate	mg/L	11/02/99	1	1	1				
	mg/L	11/09/99	1	1	1				
	mg/L	11/15/99	2	1.5	1.5				
	mg/L	11/23/99	2.5	2.5	2.5				
	mg/L	11/29/99	2.5	2.5	2.5				
Solids, Total Suspended	mg/L	11/16/99	6.00	15.0		8.00	<	<	
Mercury	ug/L	11/16/99	0.7	0.5				<	
Phenols									
2,3,4,6-Tetrachlorophenol	ug/L	11/16/99	<	<	<	<	13.0	<	<
2,4,5-Trichlorophenol	ug/L	11/16/99	<	<	<	<	<	<	<
2,4,6-Trichlorophenol	ug/L	11/16/99	<	<	<	<	<	<	<
2,4-Dichlorophenol	ug/L	11/16/99	<	<	<	<	<	<	<
2,4-Dimethylphenol	ug/L	11/16/99	<	<	<	<	<	<	<
2,4-Dinitrophenol	ug/L	11/16/99	<	<	<	<	<	<	<
2,6-Dichlorophenol	ug/L	11/16/99	<	<	<	<	<	<	<
2-Chlorophenol	ug/L	11/16/99	<	<	<	<	<	<	<
2-Methylphenol	ug/L	11/16/99	<	<	<	<	<	<	<
2-Nitrophenol	ug/L	11/16/99	<	<	<	<	<	<	<
3&4-Methylphenol	ug/L	11/16/99	<	<	<	<	<	<	<
4,6-Dinitro-2-Methylphenol	ug/L	11/16/99	<	<	<	<	<	<	<
4-Chloro-3-Methylphenol	ug/L	11/16/99	<	<	<	<	<	<	<
4-Nitrophenol	ug/L	11/16/99	<	<	<	<	<	<	<

TABLE 1

Above Ground Treatment System Data
Wauleco, Inc.
Wausau, Wisconsin

Parameter	UNIT	DATE	FBR Influent	FBR Effluent	FFR Effluent	Bag Filter Effluent	Filters1+2 Effluent	System Effluent	System Eff Dup
Phenols									
Pentachlorophenol	ug/L	11/16/99	9200	900	720	170	110	5.20	4.50
Phenol	ug/L	11/16/99	<	<	<	<	<	<	<

TABLE 2

Treatment System Flows
Wauleco, Inc.
Wausau, Wisconsin

Date	Influent Groundwater Flow Rate [1] (gpm)	POTW Discharge Flow Rate [1] (gpm)	POTW Totalized Discharge (gal)
11/1/99	39.00	34.58	18,498,354
11/2/99	41.83	36.99	18,551,614
11/3/99	41.46	36.81	18,604,622
11/4/99	41.58	37.01	18,657,911
11/5/99	40.68	35.33	18,708,780
11/6/99	40.67	36.42	18,761,220
11/7/99	40.69	35.62	18,812,519
11/8/99	56.07	49.24	18,883,423
11/9/99	25.96	22.80	18,916,252
11/10/99	38.43	32.65	18,963,263
11/11/99	41.21	35.50	19,014,387
11/12/99	36.27	30.78	19,058,703
11/13/99	52.50	45.47	19,124,173
11/14/99	45.47	36.28	19,176,421
11/15/99	43.93	36.99	19,229,683
11/16/99	45.44	37.39	19,283,518
11/17/99	44.97	36.60	19,336,227
11/18/99	46.03	39.26	19,392,758
11/19/99	48.62	41.43	19,452,412
11/20/99	49.34	44.84	19,516,983
11/21/99	55.61	50.21	19,589,282
11/22/99	51.65	46.85	19,656,750
11/23/99	32.22	28.93	19,698,413
11/24/99	40.64	35.77	19,749,922
11/25/99	46.11	43.47	19,812,519
11/26/99	43.49	40.44	19,870,748
11/27/99	40.78	36.25	19,922,941
11/28/99	42.89	35.47	19,974,018
11/29/99	42.55	33.35	20,022,041
11/30/99	44.44	37.45	20,075,967
Average	43.35	37.67	
Total [2]:			1,627,415

Footnotes:

(1) Influent and POTW flow rates are daily averages. These may not be equal due to balancing in the treatment system and calibration of individual flowmeters.

(2) Total is the cumulative POTW discharge during the reporting period.

TABLE 3

Product Removal
(gallons per day)
Wauleco, Inc.
Wausau, Wisconsin

Date	PW04	PW05	PW07	PW09	PW10	PW11	PW12	PW13	PW15	PW16	PW17	PW18	PW19	PW20	PW21	PW22	PW23	PW24	PW25	PW26	PW27	Date Total
11/01/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.8	0.0	0.0	0.0	0.0	0.0	11.3	8.6	6.9	0.0	40.6
11/02/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.8	0.0	0.0	0.0	0.0	0.0	10.3	8.6	6.9	0.0	39.6
11/03/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	5.2	0.0	1.7	0.0	8.6
11/04/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.6	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	12.0
11/05/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	3.4	0.0	0.0	5.2	6.9	0.0	0.0	20.7
11/06/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2
11/07/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	6.9
11/08/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	1.7	0.0	0.0	0.0	0.0	1.7	1.7	10.3
11/09/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	6.9
11/10/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	6.9
11/11/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	1.7	0.0	0.0	0.0	0.0	1.7	1.7	10.3
11/12/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2
11/13/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	1.7	8.6
11/14/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2
11/15/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	6.9
11/16/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	6.9
11/17/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	6.9
11/18/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	6.9
11/19/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	1.7	1.7	1.7	0.0	10.3
11/20/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	8.6
11/21/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	0.0	8.6
11/22/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	1.7	0.0	1.7	0.0	8.6
11/23/99	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	1.7	3.4	1.7	15.4
11/24/99	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	13.8
11/25/99	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	1.7	3.4	1.7	18.9
11/26/99	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	0.0	13.7
11/27/99	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	1.7	3.4	1.7	18.9
11/28/99	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	0.0	13.8
11/29/99	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	12.0
11/30/99	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	0.0	12.0
Well Total	0.0	0.0	0.0	0.0	0.0	34.4	0.0	0.0	0.0	0.0	0.0	178.2	0.0	0.0	13.6	0.0	0.0	38.8	37.7	49.5	17.0	369.2

TABLE 4

Groundwater Elevation Data
Wauleco, Inc.
Wausau, Wisconsin

Well	September 23 1999		October 21 1999		November 15 1999	
	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)
PW01	0.05	1162.06	0.08	1162.12	0.09	1160.66
PW02	-----	1162.08	-----	1162.14	-----	1161.73
PW03	-----	1162.33	-----	1162.20	-----	1161.93
PW3S	-----	-----	0.04	1160.15	-----	-----
PW04	0.79	1155.54	-----	1156.72	0.52	1154.95
PW05	0.29	1153.05	-----	1147.24	-----	1147.26
PW06	-----	-----	0.43	1161.26	-----	-----
PW07	-----	1156.97	-----	1156.88	0.06	1156.86
PW08	-----	-----	0.37	1160.29	-----	-----
PW9I	-----	1163.58	-----	-----	-----	-----
PW9O	-----	1161.82	-----	1161.24	-----	1163.91
PW10	-----	1153.32	-----	1159.64	-----	1158.37
PW11	0.04	1159.81	-----	1160.67	0.01	1158.50
PW12	0.35	1161.97	-----	1162.18	-----	1161.88
PW13	0.31	1158.51	-----	1161.06	0.39	1157.57
PW14	-----	-----	0.21	1160.46	-----	-----
PW15	-----	1159.99	0.09	1160.49	0.12	1160.17
PW16	0.26	1158.70	-----	1159.61	0.06	1158.80
PW17	-----	1157.57	-----	1159.44	0.24	1157.65
PW18	0.51	1159.03	0.22	1160.18	0.08	1159.37
PW19	0.43	1159.78	-----	1160.47	0.08	1159.89
PW20	0.58	1159.22	0.55	1160.03	0.59	1159.12
PW21	0.71	1158.99	-----	1160.51	0.05	1159.66
PW22	0.76	1157.22	1.26	1156.52	-----	1156.89
PW23	0.44	1158.39	0.26	1159.12	0.36	1158.65
PW24	0.18	1158.98	0.36	1159.54	0.46	1158.82
PW25	0.16	1158.48	0.06	1159.53	0.68	1158.31
PW26	0.19	1158.14	1.05	1158.20	0.41	1158.27
PW27	0.26	1158.43	0.31	1158.08	0.37	1158.21
PW28	-----	-----	-----	-----	-----	-----
PW29	-----	-----	-----	-----	0.02	-----
P01	0.46	1159.82	0.41	1160.59	0.42	1159.80
OW01	-----	-----	-----	1162.52	-----	-----
W01A	-----	-----	-----	1162.85	-----	-----
W01B	-----	-----	-----	1162.73	-----	-----
W02	-----	1161.75	0.16	1161.88	-----	-----
W03A	2.54	1157.44	0.39	1160.20	0.43	1159.97
W03B	-----	1160.95	-----	1161.10	-----	1160.91
W04A	0.44	1160.89	0.23	1161.39	0.27	1160.93
W04B	-----	-----	0.11	1161.54	-----	-----
W05	1.09	1159.21	0.53	1160.70	0.62	1159.54
W06R	-----	1162.41	-----	1162.42	0.36	1161.95
W07	-----	-----	0.34	1162.02	-----	-----
W08	-----	-----	-----	1172.29	-----	-----
W09	-----	-----	-----	1161.72	-----	-----
W10A	-----	-----	-----	1160.69	-----	-----
W10B	-----	-----	-----	1160.72	-----	-----
W11	-----	-----	-----	1160.62	-----	-----

TABLE 4

Groundwater Elevation Data
Wauleco, Inc.
Wausau, Wisconsin

Well	September 23 1999		October 21 1999		November 15 1999	
	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)
W12	-----	-----	-----	1160.34	-----	-----
W13	-----	-----	-----	1160.92	-----	-----
W14	-----	-----	-----	1159.46	-----	-----
W16	-----	-----	-----	1161.22	-----	-----
W17	-----	-----	0.26	1160.29	-----	-----
W18	-----	-----	-----	1160.74	-----	-----
W19	-----	-----	-----	1162.07	-----	-----
W21	-----	-----	-----	1160.61	-----	-----
W22	-----	1160.27	0.13	1160.72	0.14	1160.66
W23	-----	-----	-----	1160.57	-----	-----
W24A	-----	-----	-----	1160.54	-----	-----
W25	-----	-----	-----	1162.71	-----	-----
W26	-----	-----	-----	1160.66	-----	-----
W27	-----	-----	-----	1160.97	-----	-----
W28	-----	-----	-----	1160.77	-----	-----
W29	-----	-----	-----	1160.64	-----	-----
W30	1.04	1159.27	0.40	1160.48	0.72	1159.42
W31	-----	-----	-----	1160.70	-----	-----
W32	-----	-----	-----	1160.70	-----	-----
W33	-----	-----	0.10	1161.25	-----	-----
W34	0.11	1157.51	0.13	1157.92	0.21	1157.31
W35	0.87	1159.49	0.74	1160.52	0.37	1159.90
W36	-----	1160.97	-----	1161.80	-----	1161.01
W39	-----	-----	-----	1161.32	-----	-----
W40	-----	-----	0.74	1160.32	-----	-----
W41	-----	-----	-----	1162.27	-----	-----
W42	-----	-----	-----	1161.91	-----	-----
W44	1.44	1158.98	0.05	1161.07	0.41	1160.05
W45	3.66	1156.80	0.06	1161.11	0.06	1160.33
W46	0.97	1159.21	0.81	1160.39	0.93	1159.19
W47	0.51	1155.94	-----	1157.35	0.05	1156.51
W48	0.21	1155.95	-----	1156.81	0.03	1156.55
W49	0.81	1155.90	0.09	1157.19	0.73	1156.29
W66	-----	1162.63	-----	1162.52	-----	1162.22
W67	-----	1162.53	-----	1162.44	-----	1162.19
W68A	-----	-----	0.34	1162.18	-----	-----
W68B	-----	-----	-----	1162.44	-----	-----
W69	0.18	1160.88	0.52	1161.00	0.85	1160.10
W70B	-----	-----	-----	1162.29	-----	-----
River	-----	No Gage	-----	No Gage	-----	No Gage

Notes:
ft msl = feet mean sea level

FIGURE 1
FBR Influent and Effluent
PCP Concentrations

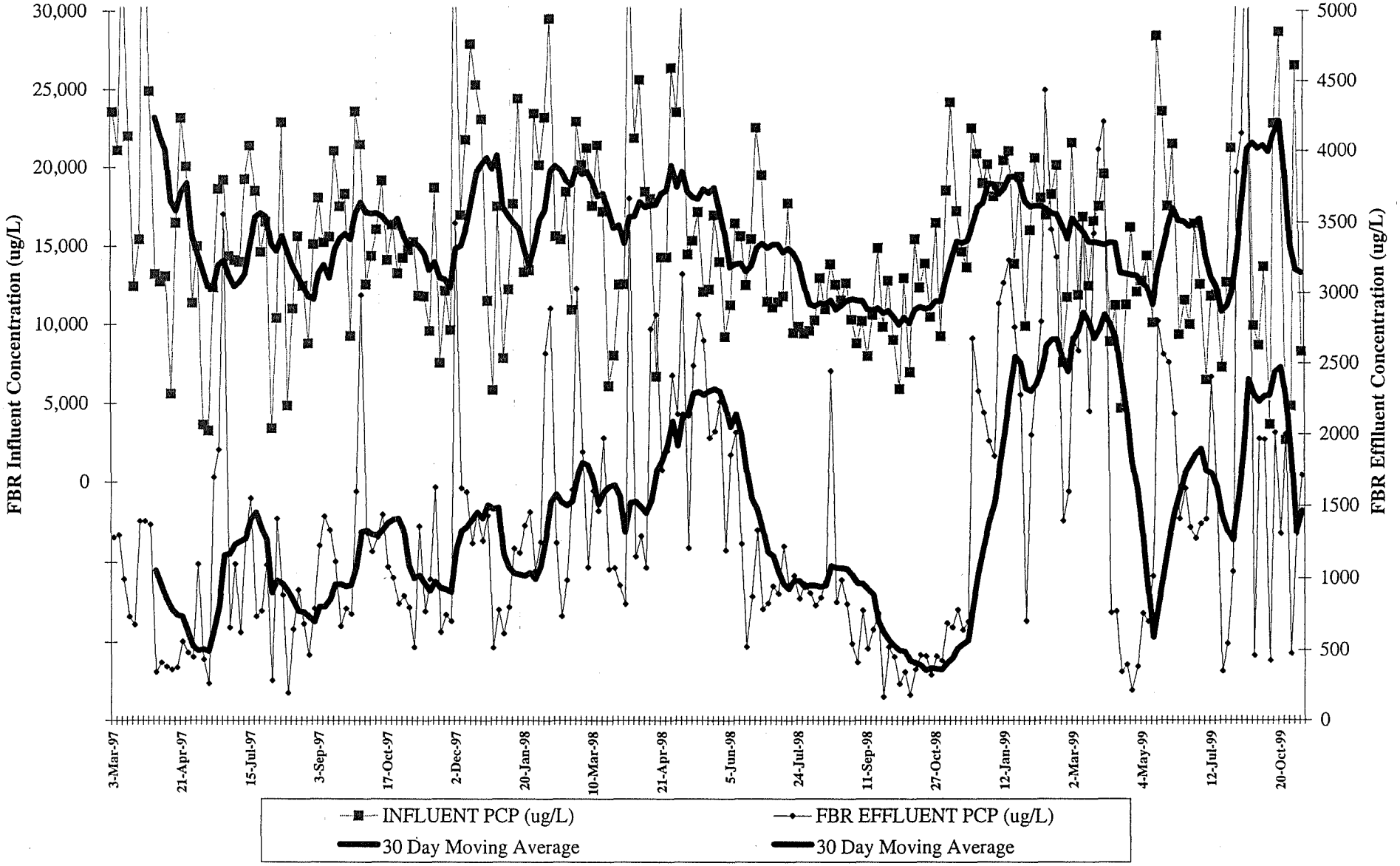
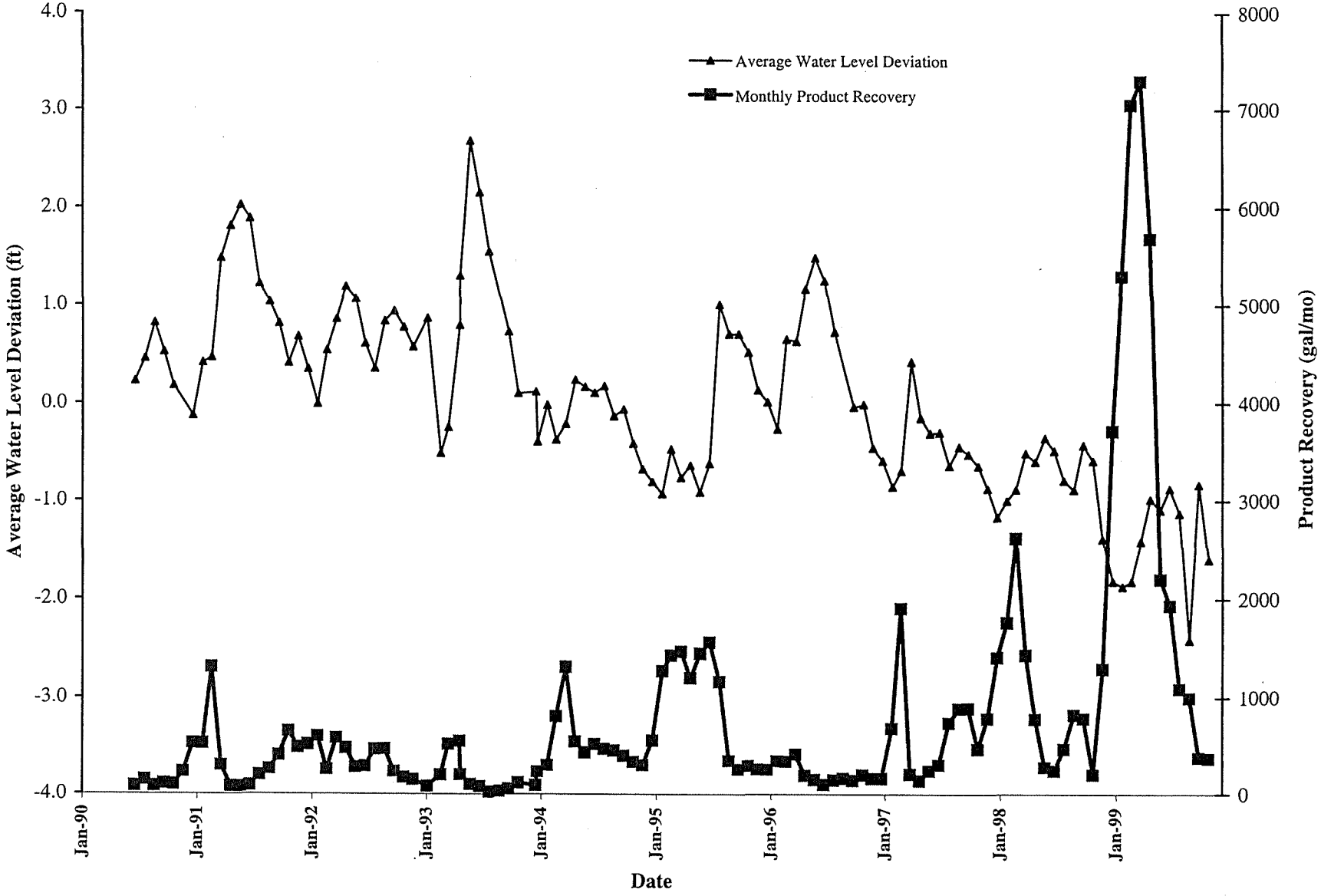


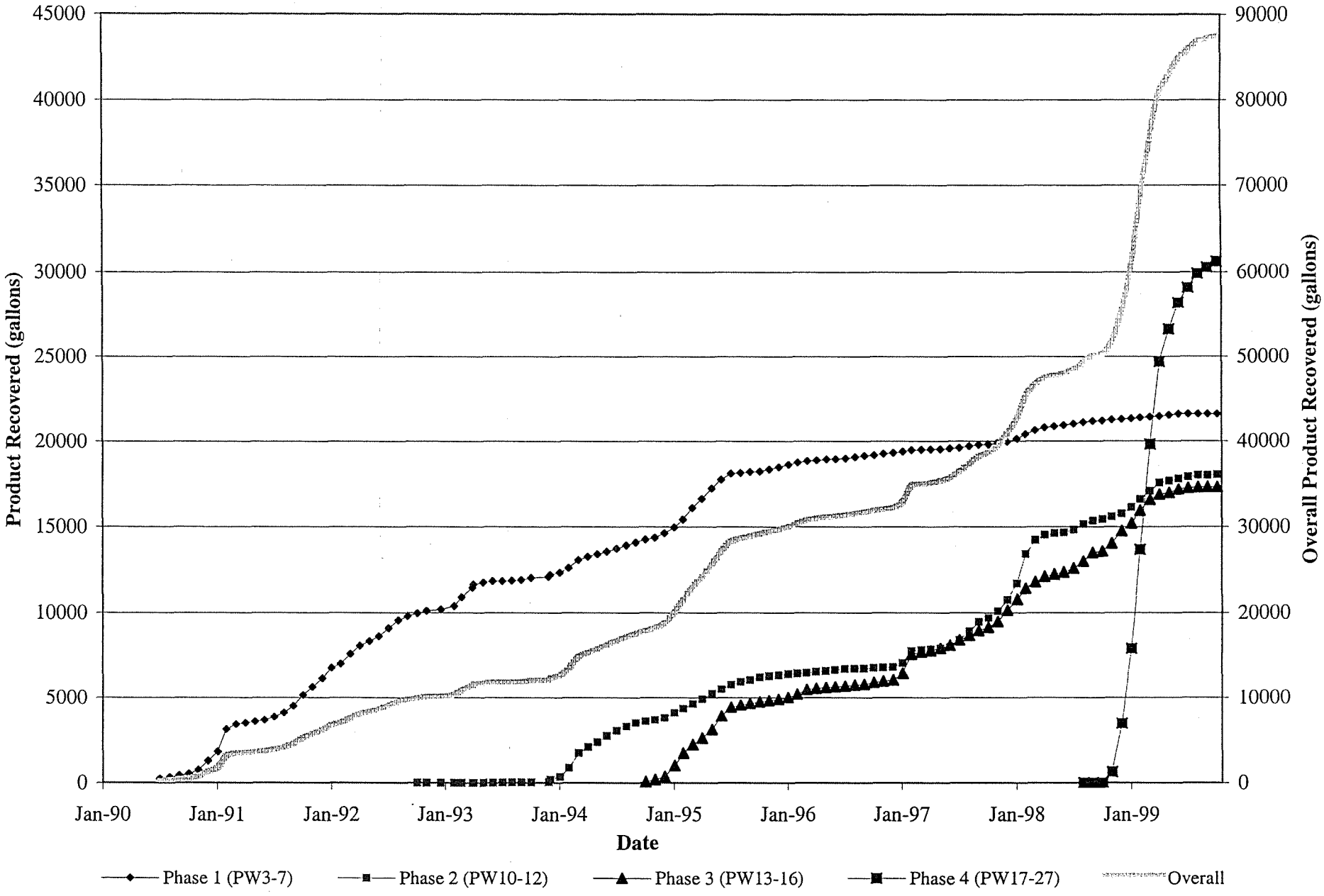
FIGURE 2
Average Water Level Deviation Versus Product Recovery Rates



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12/16/99

FIGURE 3
Cumulative Product Recovery by Phase and Overall



11/29/99

MONTGOMERY WATSON

RECEIVED
DEC - 1 1999
WAUSAU DNR

November 29, 1999

Ms. Lisa Gutknecht
Wisconsin Department of Natural Resources
5301 Rib Mountain Drive
Wausau, Wisconsin 54401

Re: October Progress Report
WAULECO, Inc.
Wausau, Wisconsin
Administrative Order No. NCD-91-04

BRRTS# 02-37-000006

Dear Ms. Gutknecht:

On behalf of WAULECO, Montgomery Watson is submitting two copies (enclosed) of the October Progress Report for the WAULECO, Inc. site in Wausau, Wisconsin. The report is submitted in fulfillment of Paragraph 41 of Administrative Order No. NCD-91-04.

If you have any questions or comments regarding this information, please call.

Sincerely,

MONTGOMERY WATSON

Patrick H. Lytle
Associate Engineer

Douglas J. Bach, P.E.
Project Manager

Enclosures: Monthly Report

cc: Wastewater Engineer - WDNR (Wausau, WI) (1)
J. Gehin - Wausau Utilities Director (1)
P. Peshek (3)
R. Brandt (1)
T. Dushek – MW Wauleco (1)

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One Science Court
P.O. Box 5385
Madison, Wisconsin
53705-0385

Tel: 608 231 4747
Fax: 608 231 4777

Serving the World's Environmental Needs

WAULECO INCORPORATED
WAUSAU, WISCONSIN
MONTHLY REPORT
OCTOBER 1999

SUMMARY OF OCTOBER 1999 ACTIVITIES

Groundwater Extraction and Treatment System Operation

During the month of October, a number of system maintenance and upgrade activities were performed. The timing of the activities was coordinated to coincide with a season of typically low product recovery. Additional maintenance activities were performed during this time to minimize any future shutdowns. A summary of the work performed is listed below:

- The system was shutdown late on October 10 to prepare for maintenance activities the next day.

- Removal and replacement of the carbon in the main fluidized bed reactor (FBR) occurred on October 11 through 13. On-site and laboratory results indicated this reactor was no longer achieving optimal removal of PCP compounds, with removal efficiencies dropping 15 to 20 percent during the past several months.

- Wells PW4, 5, 10, 11, 12, 13, 16, 17, 19, and 27 were redeveloped during the shutdown to improve their specific capacity, thus enhancing their radius of influence.

- Wells PW28 and PW29 were plumbed into the system during this time as well.

- The system was brought back online on October 14 by restarting three or four extraction wells per day. This gradual restart was necessary to properly condition the new carbon in the FBR.

- Additional valves were installed in the meter building on October 20. These valves will be used to better control water levels in five extraction wells, enhancing product removal. System downtime for this installation was approximately 8 hours.

Treatment system performance data for this reporting period are summarized in Table 1. PCP screening (on-site gas chromatograph) results for the system effluent samples, which represent the water discharged to the municipal sewer, averaged 2 ug/L for the month of October, with a maximum single day concentration of 6 ug/L. These low PCP effluent levels are the result of higher removal efficiencies in the polishing filters. The carbon in these filters was replaced in July. The laboratory result for PCP in the system effluent was 4 ug/L on October 17, 1999. The on-site result for the same day was <1 ug/L. Both these results indicate PCP

concentrations were well below the permit levels of 150 ug/L (monthly average) and 300 ug/L (daily maximum).

Laboratory results for mercury analyses of the FBR influent, FBR effluent, and system effluent samples collected on October 27 are included in Table 1. The mercury concentration in the system effluent samples (discharged to the sanitary sewer) was <0.2 ug/L.

PCP influent concentrations ranged from 28,644 ug/L to 2,600 ug/L during October (Table 1). PCP influent and effluent concentrations in the FBR are presented graphically both as individual data points and as a 30-day moving average in Figure 1. As shown in Figure 1, influent PCP concentrations increased, then declined during October. FBR effluent concentrations were relatively stable. The average PCP removal efficiency for the FBR during October was 70% compared to an average of 87% during the previous year. Removal efficiencies for the latter portion of October were reduced while biological growth was established on the FBR carbon media.

Daily groundwater flow through the treatment system (Table 2) ranged from 0 to 46 gallons per minute (gpm) during October. Low system flows correspond directly to dates of system maintenance. Total treatment system efficiency (including carbon polishing units) continues to be greater than 99%.

Product Recovery

Product recovery data for the reporting period are presented in Table 3. Historic product recovery (since July 1990) compared to average water level deviation is presented in Figure 2. Water levels in the vicinity of the site increased during October, following the temporary system shutdown. Product recovery decreased to 379 gallons in October. The majority of this decrease is due to the temporary system shutdown and maintenance.

A comparison of the product recovery of each phase of well installations is presented in Figure 3. This figure illustrates the historical productivity of each phase of well installations. Cumulative product recovery of all wells is plotted on the secondary vertical axis.

Groundwater Monitoring

Groundwater elevation and product thickness data for August, September, and October are summarized in Table 4.

Upcoming Activities

The system upgrade will be completed in November with the installation of an enhanced controls system. This system will further minimize future shutdowns, optimize system operation, and reduce the amount of human oversight required at the site.

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TABLE 1

Above Ground Treatment System Data
Wauleco, Inc.
Wausau, Wisconsin

Parameter	UNIT	DATE	FBR Influent	FBR Effluent	FFR Effluent	Bag Filter Effluent	Filters1+2 Effluent	System Effluent	System Eff Dup
Biological Oxygen Demand	mg/L	10/27/99	18.0	7				4	
Chemical Oxygen Demand	mg/L	10/27/99	62.0	64.0				196	
Chloride	mg/L	10/27/99	188	189				190	
Dissolved Oxygen	mg/L	10/04/99	6.5	1.6	4.4				
	mg/L	10/20/99	5.4	4.3	4.2				
	mg/L	10/25/99	8.3	6	7				
Nitrogen, Ammonia	mg/L	10/04/99	2	1	1				
	mg/L	10/20/99	1.5	1	1				
	mg/L	10/25/99	1.5	1	1				
Nitrogen, Nitrate	mg/L	10/04/99	<	<	<				
	mg/L	10/20/99	<	<	<				
	mg/L	10/25/99	<	<	<				
Nitrogen, Nitrate + Nitrite	mg/L	10/27/99	0.720	0.520				<	
Nitrogen, Total Kjeldahl	mg/L	10/27/99	1.67	0.65				0.51	
Pentachlorophenol-Screen	µg/L	10/01/99						1	
	µg/L	10/02/99						1	
	µg/L	10/03/99						1	
	µg/L	10/04/99	22781	2013	3404			1	
	µg/L	10/05/99						1	
	µg/L	10/06/99						1	
	µg/L	10/07/99						1	
	µg/L	10/08/99						1	
	µg/L	10/09/99						1	
	µg/L	10/10/99						1	
	µg/L	10/15/99						2	
	µg/L	10/16/99						1	
	µg/L	10/17/99						1	
	µg/L	10/18/99						1	
	µg/L	10/19/99						<	
	µg/L	10/20/99	28644	1309	1564			2	
	µg/L	10/21/99						1	
	µg/L	10/22/99						4	
	µg/L	10/23/99						6	
	µg/L	10/24/99						6	
	µg/L	10/25/99	2600	2000	2226			6	
	µg/L	10/26/99						<	
	µg/L	10/27/99						<	
	µg/L	10/28/99						<	

TABLE 1

Above Ground Treatment System Data
Wauleco, Inc.
Wausau, Wisconsin

Parameter	UNIT	DATE	FBR Influent	FBR Effluent	FFR Effluent	Bag Filter Effluent	Filters1+2 Effluent	System Effluent	System Eff Dup
Pentachlorophenol-Screen	µg/L	10/29/99						<	
	µg/L	10/30/99						2	
	µg/L	10/31/99						2	
pH	S.U.	10/04/99	6.6	6.5	6.5				
	S.U.	10/20/99	6.8	6.7	6.8				
	S.U.	10/25/99	7.1	6.6	6.7				
Phosphorus, Ortho	mg/L	10/27/99	0.400	0.230				0.230	
Phosphorus, Phosphate	mg/L	10/04/99	1.5	1.5	1.5				
	mg/L	10/20/99	2	2	2				
	mg/L	10/25/99	1.5	1.5	1.5				
Solids, Total Suspended	mg/L	10/27/99	20.0	20.0		32.0	<	<	
Mercury	µg/L	10/27/99	0.79	0.89				<	
Phenols									
2,3,4,6-Tetrachlorophenol	µg/L	10/27/99	<	<	<	<	<	<	<
2,4,5-Trichlorophenol	µg/L	10/27/99	<	<	<	<	<	<	<
2,4,6-Trichlorophenol	µg/L	10/27/99	<	<	<	<	<	<	<
2,4-Dichlorophenol	µg/L	10/27/99	<	<	<	<	<	<	<
2,4-Dimethylphenol	µg/L	10/27/99	<	<	<	<	<	<	<
2,4-Dinitrophenol	µg/L	10/27/99	<	<	<	<	<	<	<
2,6-Dichlorophenol	µg/L	10/27/99	<	<	<	<	<	<	<
2-Chlorophenol	µg/L	10/27/99	<	<	<	<	<	<	<
2-Methylphenol	µg/L	10/27/99	<	<	<	<	<	<	<
2-Nitrophenol	µg/L	10/27/99	<	<	<	<	<	<	<
3&4-Methylphenol	µg/L	10/27/99	<	<	<	<	<	<	<
4,6-Dinitro-2-Methylphenol	µg/L	10/27/99	<	<	<	<	<	4.00	3.70
4-Chloro-3-Methylphenol	µg/L	10/27/99	<	<	<	<	<	<	<
4-Nitrophenol	µg/L	10/27/99	<	<	<	<	<	<	<
Pentachlorophenol	µg/L	10/27/99	12000	710	740	750	6.30	<	<
Phenol	µg/L	10/27/99	<	<	<	<	<	<	<

TABLE 2

Treatment System Flows
Wauleco, Inc.
Wausau, Wisconsin

Date	Influent Groundwater Flow Rate [1] (gpm)	POTW Discharge Flow Rate [1] (gpm)	POTW Totalized Discharge (gal)
10/01/99	43.14	36.76	17,295,573
10/02/99	43.05	37.00	17,348,859
10/03/99	43.32	37.32	17,402,600
10/04/99	43.28	36.73	17,455,489
10/05/99	43.10	36.53	17,508,099
10/06/99	45.82	38.07	17,562,924
10/07/99	44.83	39.04	17,619,145
10/08/99	44.64	38.84	17,675,074
10/09/99	45.29	39.12	17,731,405
10/10/99	44.57	38.68	17,787,101
10/11/1999 [3]	9.46	9.65	17,801,003
10/12/99	0.09	0.19	17,801,280
10/13/99	0.08	0.99	17,802,708
10/14/99	3.59	-	17,802,708
10/15/99	6.13	4.07	17,808,573
10/16/99	13.57	12.55	17,826,642
10/17/99	28.10	24.29	17,861,624
10/18/99	11.02	6.94	17,871,624
10/19/99	29.23	22.40	17,903,874
10/20/99	13.47	12.17	17,921,392
10/21/99	37.03	32.27	17,967,859
10/22/99	38.62	33.93	18,016,720
10/23/99	30.40	26.68	18,055,145
10/24/99	37.93	33.07	18,102,768
10/25/99	37.23	32.71	18,149,867
10/26/99	36.92	31.98	18,195,924
10/27/99	39.93	34.69	18,245,879
10/28/99	40.10	34.60	18,295,704
10/29/99	39.89	34.31	18,345,106
10/30/99	40.67	35.54	18,396,288
10/31/99	41.43	36.29	18,448,552
Average	31.48	27.91	
Total [2]:			1,205,919

Footnotes:

(1) Influent and POTW flow rates are daily averages. These may not be equal due to balancing in the treatment system and calibration of individual flowmeters.

(2) Total is the cumulative POTW discharge during the reporting period.

(3) System flows reduced mid-month due to temporary shutdown and maintenance of reactor.

TABLE 3

Product Removal
(gallons per day)
Wauleco, Inc.
Wausau, Wisconsin

Date	PW04	PW05	PW07	PW09	PW10	PW11	PW12	PW13	PW15	PW16	PW17	PW18	PW19	PW20	PW21	PW22	PW23	PW24	PW25	PW26	PW27	Date Total
10/01/99	0	0	0	0	0	0	0	0	0	0	0	8.6	0	0	1.7	0	0	5.2	20	5.2	1.7	42.4
10/02/99	0	0	0	0	0	0	0	0	0	0	0	8.6	0	0	1.7	0	0	5.2	17.2	5.2	1.7	39.6
10/03/99	0	0	0	0	0	0	0	1.7	0	0	1.7	8.6	1.7	0	0	0	0	3.4	17.2	5.2	1.7	41.2
10/04/99	0	0	0	0	0	0	0	0	0	0	0	8.6	3.4	0	1.7	0	0	0	17.2	5.2	0	36.1
10/05/99	0	0	0	0	0	0	0	1.7	0	0	0	6.9	3.4	0	3.4	0	0	1.7	6.9	5.2	1.7	30.9
10/06/99	0	0	0	0	0	0	0	0	0	0	0	10.3	0	0	1.7	0	0	3.4	6.9	3.4	0	25.7
10/07/99	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	3.4	6.9	1.7	0	24
10/08/99	0	0	0	0	0	0	0	1.7	0	0	0	10.3	0	0	0	0	0	5.2	6.9	3.4	0	27.5
10/09/99	0	0	0	0	0	0	0	1.7	0	0	3.4	3.4	0	0	0	0	0	6.9	3.4	3.4	0	22.2
10/10/99	0	0	0	0	0	0	0	0	0	0	3.4	1.7	0	0	0	0	0	3.4	3.4	3.4	0	15.3
10/11/99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/12/99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/13/99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/14/99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/15/99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/16/99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/17/99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/18/99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/19/99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/20/99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/21/99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/22/99	0	0	0	0	0	0	0	0	0	0	0	6.9	0	0	0	0	0	0	0	0	0	6.9
10/23/99	0	0	0	0	0	0	0	0	0	0	0	6.9	0	0	0	0	0	0	0	0	1.7	8.6
10/24/99	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	12
10/25/99	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	1.7	13.7
10/26/99	0	0	0	0	0	0	0	0	0	0	0	10.3	0	0	0	0	0	0	0	0	0	10.3
10/27/99	0	0	0	0	0	0	0	0	0	0	0	3.4	0	0	0	0	0	0	0	0	1.7	5.1
10/28/99	0	0	0	0	0	0	0	0	0	0	0	3.4	0	0	0	0	0	0	0	0	0	3.4
10/29/99	0	0	0	0	0	0	0	0	0	0	0	3.4	0	0	0	0	0	0	0	0	1.7	5.1
10/30/99	0	0	0	0	0	0	0	0	0	0	0	3.4	0	0	0	0	0	0	0	0	0	3.4
10/31/99	0	0	0	0	0	0	0	0	0	0	1.7	3.4	0	0	0	0	0	0	0	0	0	5.1
Well Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	0.0	0.0	10.2	144.1	8.5	0.0	10.2	0.0	0.0	37.8	106.0	41.3	13.6	378.5

TABLE 4

Groundwater Elevation Data
Wauleco, Inc.
Wausau, Wisconsin

Well	August 16 1999		September 23 1999		October 21 1999	
	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)
PW01	-----	1162.47	0.05	1162.06	0.08	1162.12
PW02	-----	1162.40	-----	1162.08	-----	1162.14
PW03	-----	1162.66	-----	1162.33	-----	1162.20
PW3S	-----	-----	-----	-----	0.04	1160.15
PW04	0.70	1156.28	0.79	1155.54	-----	1156.72
PW05	0.55	1152.20	0.29	1153.05	-----	1147.24
PW06	-----	-----	-----	-----	0.43	1161.26
PW07	-----	1158.18	-----	1156.97	-----	1156.88
PW08	-----	-----	-----	-----	0.37	1160.29
PW9I	-----	-----	-----	1163.58	-----	-----
PW9O	-----	1162.85	-----	1161.82	-----	1161.24
PW10	0.03	1154.71	-----	1153.32	-----	1159.64
PW11	1.86	1157.17	0.04	1159.81	-----	1160.67
PW12	0.36	1162.75	0.35	1161.97	-----	1162.18
PW13	0.35	1157.83	0.31	1158.51	-----	1161.06
PW14	-----	-----	-----	-----	0.21	1160.46
PW15	0.06	1153.73	-----	1159.99	0.09	1160.49
PW16	0.12	1159.41	0.26	1158.70	-----	1159.61
PW17	0.26	1157.46	-----	1157.57	-----	1159.44
PW18	1.22	1158.86	0.51	1159.03	0.22	1160.18
PW19	0.89	1159.79	0.43	1159.78	-----	1160.47
PW20	0.63	1159.48	0.58	1159.22	0.55	1160.03
PW21	0.14	1159.93	0.71	1158.99	-----	1160.51
PW22	0.49	1157.18	0.76	1157.22	1.26	1156.52
PW23	0.21	1158.74	0.44	1158.39	0.26	1159.12
PW24	-----	1159.27	0.18	1158.98	0.36	1159.54
PW25	0.23	1158.39	0.16	1158.48	0.06	1159.53
PW26	-----	1158.34	0.19	1158.14	1.05	1158.20
PW27	0.07	1159.11	0.26	1158.43	0.31	1158.08
PW28	-----	-----	-----	-----	-----	-----
PW29	-----	-----	-----	-----	-----	-----
P01	0.46	1160.24	0.46	1159.82	0.41	1160.59
OW01	-----	-----	-----	-----	-----	1162.52
W01A	-----	-----	-----	-----	-----	1162.85
W01B	-----	-----	-----	-----	-----	1162.73
W02	-----	1162.24	-----	1161.75	0.16	1161.88
W03A	0.45	1160.21	2.54	1157.44	0.39	1160.20
W03B	-----	1161.27	-----	1160.95	-----	1161.10
W04A	0.19	1161.58	0.44	1160.89	0.23	1161.39
W04B	-----	-----	-----	-----	0.11	1161.54
W05	1.10	1159.60	1.09	1159.21	0.53	1160.70
W06R	0.32	1162.82	-----	1162.41	-----	1162.42
W07	-----	-----	-----	-----	0.34	1162.02
W08	-----	-----	-----	-----	-----	1172.29
W09	-----	-----	-----	-----	-----	1161.72
W10A	-----	-----	-----	-----	-----	1160.69
W10B	-----	-----	-----	-----	-----	1160.72
W11	-----	-----	-----	-----	-----	1160.62

TABLE 4

Groundwater Elevation Data
Wauleco, Inc.
Wausau, Wisconsin

Well	August 16 1999		September 23 1999		October 21 1999	
	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)
W12	-----	-----	-----	-----	-----	1160.34
W13	-----	-----	-----	-----	-----	1160.92
W14	-----	-----	-----	-----	-----	1159.46
W16	-----	-----	-----	-----	-----	1161.22
W17	-----	-----	-----	-----	0.26	1160.29
W18	-----	-----	-----	-----	-----	1160.74
W19	-----	-----	-----	-----	-----	1162.07
W21	-----	-----	-----	-----	-----	1160.61
W22	0.33	1160.45	-----	1160.27	0.13	1160.72
W23	-----	-----	-----	-----	-----	1160.57
W24A	-----	-----	-----	-----	-----	1160.54
W25	-----	-----	-----	-----	-----	1162.71
W26	-----	-----	-----	-----	-----	1160.66
W27	-----	-----	-----	-----	-----	1160.97
W28	-----	-----	-----	-----	-----	1160.77
W29	-----	-----	-----	-----	-----	1160.64
W30	0.68	1159.96	1.04	1159.27	0.40	1160.48
W31	-----	-----	-----	-----	-----	1160.70
W32	-----	-----	-----	-----	-----	1160.70
W33	-----	-----	-----	-----	0.10	1161.25
W34	0.21	1157.87	0.11	1157.51	0.13	1157.92
W35	0.37	1160.29	0.87	1159.49	0.74	1160.52
W36	-----	1161.42	-----	1160.97	-----	1161.80
W39	-----	-----	-----	-----	-----	1161.32
W40	-----	-----	-----	-----	0.74	1160.32
W41	-----	-----	-----	-----	-----	1162.27
W42	-----	-----	-----	-----	-----	1161.91
W44	0.48	1160.47	1.44	1158.98	0.05	1161.07
W45	0.30	1160.91	3.66	1156.80	0.06	1161.11
W46	1.04	1159.50	0.97	1159.21	0.81	1160.39
W47	0.51	1156.27	0.51	1155.94	-----	1157.35
W48	0.02	1156.73	0.21	1155.95	-----	1156.81
W49	0.29	1156.98	0.81	1155.90	0.09	1157.19
W66	-----	1163.03	-----	1162.63	-----	1162.52
W67	-----	1163.01	-----	1162.53	-----	1162.44
W68A	-----	-----	-----	-----	0.34	1162.18
W68B	-----	-----	-----	-----	-----	1162.44
W69	1.04	1160.52	0.18	1160.88	0.52	1161.00
W70B	-----	-----	-----	-----	-----	1162.29
River	-----	No Gage	-----	No Gage	-----	No Gage

Notes:
ft msl = feet mean sea level

FIGURE 1
FBR Influent and Effluent
PCP Concentrations

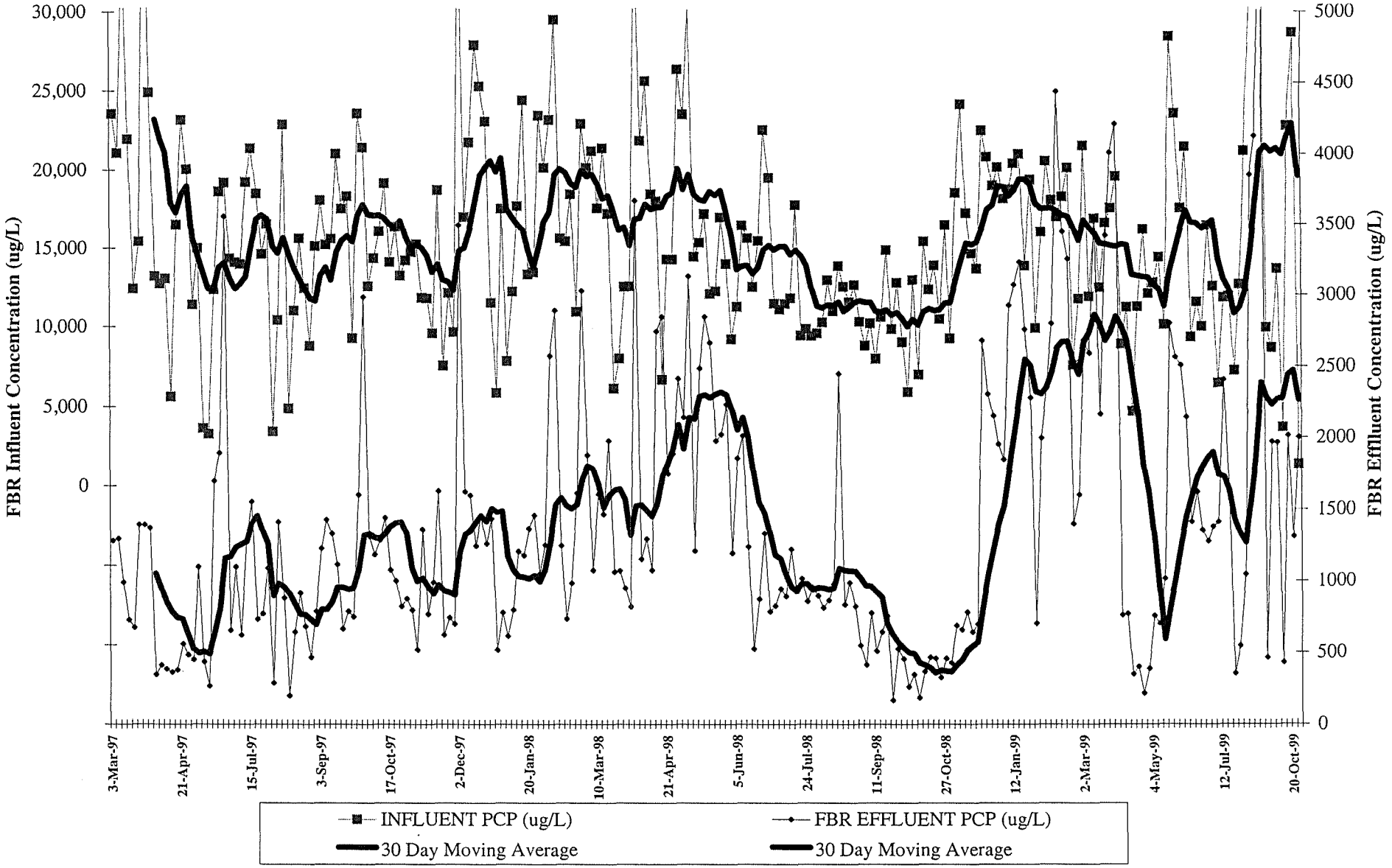
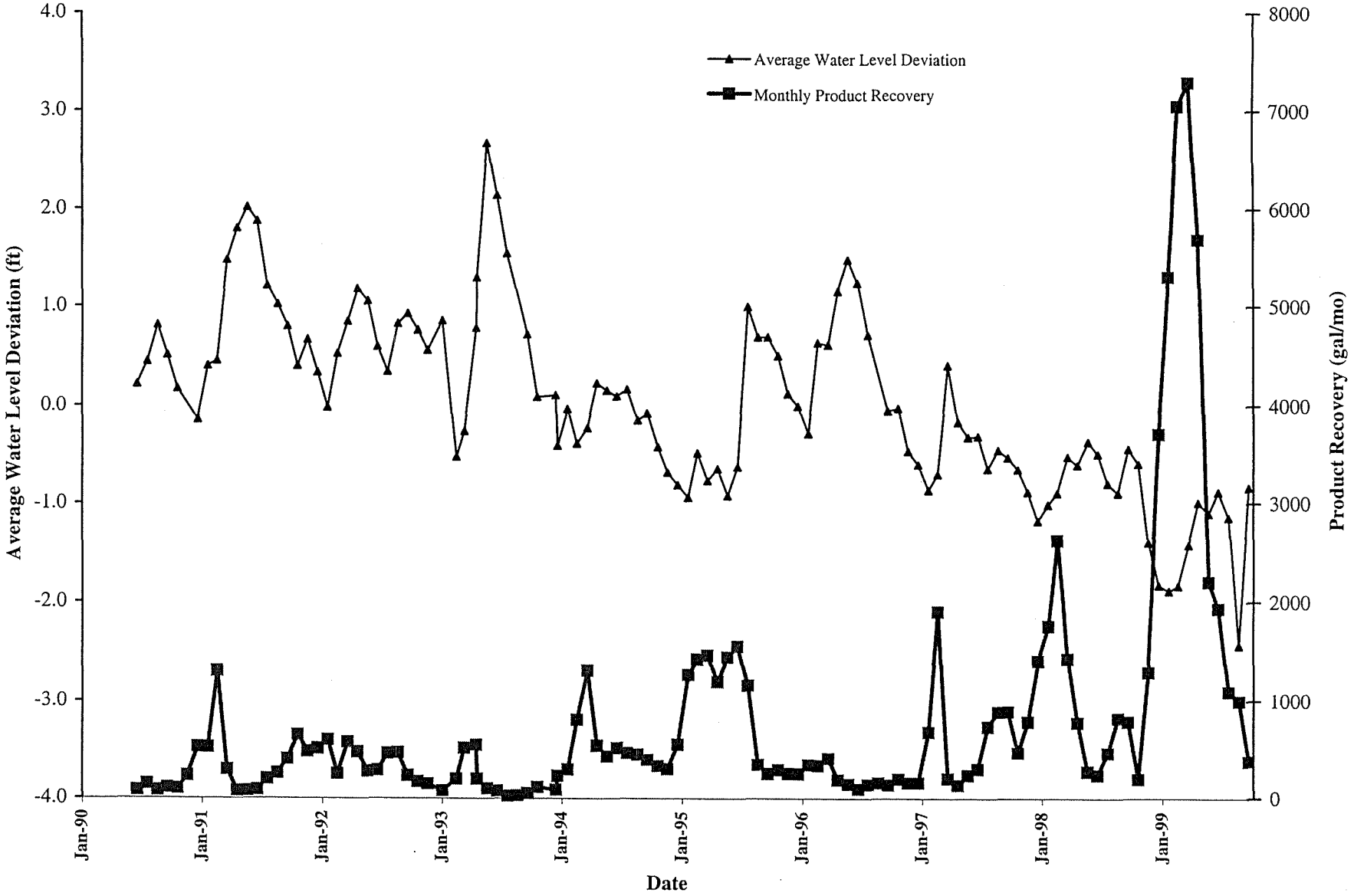


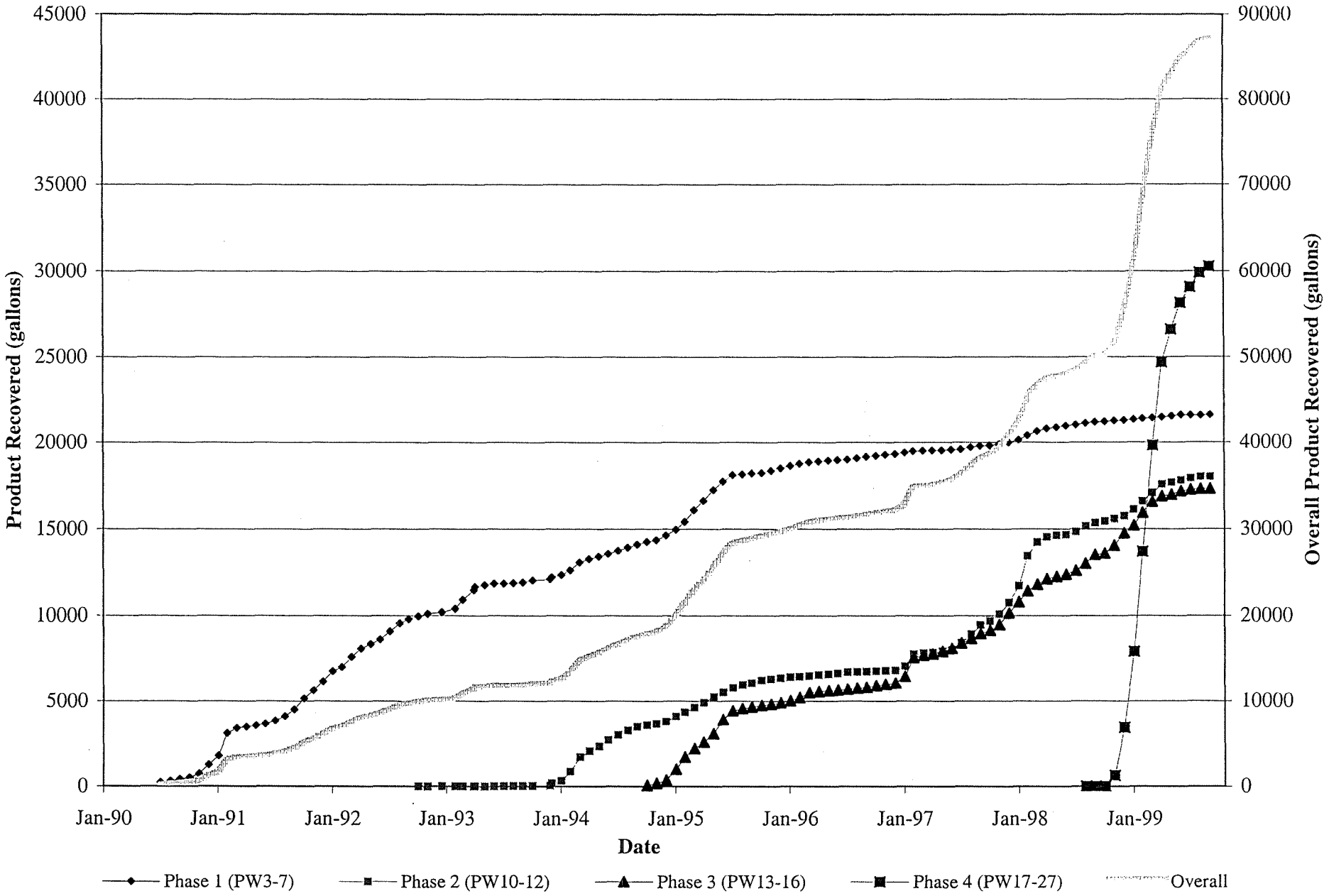
FIGURE 2
Average Water Level Deviation Versus Product Recovery Rates



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11/16/99

FIGURE 3
Cumulative Product Recovery by Phase and Overall



11/1/99

MONTGOMERY WATSON

November 1, 1999

RECEIVED
NOV - 2 1999
WAUSAU DNR

Ms. Lisa Gutknecht
Wisconsin Department of Natural Resources
5301 Rib Mountain Drive
Wausau, Wisconsin 54401

Re: September Progress Report
WAULECO, Inc.
Wausau, Wisconsin
Administrative Order No. NCD-91-04

BRRTS# 02-37-000006

Dear Ms. Gutknecht:

On behalf of WAULECO, Montgomery Watson is submitting two copies (enclosed) of the September Progress Report for the WAULECO, Inc. site in Wausau, Wisconsin. The report is submitted in fulfillment of Paragraph 41 of Administrative Order No. NCD-91-04.

If you have any questions or comments regarding this information, please call.

Sincerely,

MONTGOMERY WATSON

Patrick H. Lytle
Associate Engineer

Douglas J. Bach, P.E.
Project Manager

Enclosures: Monthly Report

cc: Wastewater Engineer - WDNR (Wausau, WI) (1)
J. Gehin - Wausau Utilities Director (1)
P. Peshek (3)
R. Brandt (1)
T. Dushek – MW Wauleco (1)

PHL/phl/vlr/DJB
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One Science Court
P.O. Box 5385
Madison, Wisconsin
53705-0385

Tel: 608 231 4747
Fax: 608 231 4777

WAULECO INCORPORATED
WAUSAU, WISCONSIN
MONTHLY REPORT
SEPTEMBER 1999

SUMMARY OF SEPTEMBER 1999 ACTIVITIES

Groundwater Extraction and Treatment System Operation

Treatment system performance data for this reporting period are summarized in Table 1. PCP screening (on-site gas chromatograph) results for the system effluent samples, which represent the water discharged to the municipal sewer, averaged 2 ug/L for the month of September, with a maximum single day concentration of 5 ug/L. These low PCP effluent levels are the result of higher removal efficiencies in the polishing filters. The carbon in these filers was replaced in July. The laboratory result for PCP in the system effluent was <3 ug/L on September 17, 1999. The on-site result for the same day was 1 ug/L. Both these results indicate PCP concentrations were well below the permit levels of 150 ug/L (monthly average) and 300 ug/L (daily maximum).

Laboratory results for mercury analyses of the FBR influent, FBR effluent, and system effluent samples collected on September 17 are included in Table 1. The mercury concentration in the system effluent samples (discharged to the sanitary sewer) was 0.37 ug/L.

PCP influent concentrations ranged from 3,626 ug/L to 13,655 ug/L during September (Table 1). PCP influent and effluent concentrations in the FBR are presented graphically both as individual data points and as a 30-day moving average in Figure 1. As shown in Figure 1, the influent PCP concentrations leveled off during September. FBR effluent concentrations stabilized as well. The average PCP removal efficiency for the FBR during September was 87% compared to an average of 89% during the previous year.

Daily groundwater flow through the treatment system (Table 2) ranged from 43 to 68 gallons per minute (gpm) during September. The majority of this fluctuation is due to varying log times for the flow totalizer, not from modifications of treatment system flowrates. Total treatment system efficiency (including carbon polishing units) continues to be greater than 99%.

Product Recovery

Product recovery data for the reporting period are presented in Table 3. Historic product recovery (since September 1990) compared to average water level deviation is presented in Figure 2. Water levels in the vicinity of the site decreased markedly during September, following a smaller decrease in August. Product recovery decreased to 997 gallons in September. This change from previous conditions is being evaluated and will be reported on in subsequent monthly reports. Approximately 85 percent of the product recovered during September came from the new extraction wells, with the most production from PW25, PW18, and PW10.

A comparison of the product recovery of each phase of well installations is presented in Figure 3. This figure illustrates the historical productivity of each phase of well installations. Cumulative product recovery of all wells is plotted on the secondary vertical axis.

Groundwater Monitoring

Groundwater elevation and product thickness data for July, August, and September are summarized in Table 4.

Upcoming Activities

Replacement of the carbon in the FBR is scheduled to occur in October. This will necessitate a short-term shutdown of the treatment system.

Two additional extraction wells were installed in September. Installation of the instrumentation and piping associated with the system expansion is expected to occur in October.

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TABLE 1

Above Ground Treatment System Data
Wauleco, Inc.
Wausau, Wisconsin

Parameter	UNIT	DATE	FBR Influent	FBR Effluent	FFR Effluent	Bag Filter Effluent	Filters1+2 Effluent	System Effluent	System Eff Dup
Biological Oxygen Demand	mg/L	9/17/99	14	4				<	
Chemical Oxygen Demand	mg/L	9/17/99	39.0	23.0				10.0	
Chloride	mg/L	9/17/99	186	177				175	
Dissolved Oxygen	mg/L	9/7/99	5.8	1.6	3.8				
	mg/L	9/13/99	5.4	2.1	4				
	mg/L	9/20/99	6	1.5	3.3				
	mg/L	9/27/99	5.6	1.7	4				
Nitrogen, Ammonia	mg/L	9/7/99	1.5	1.5	1				
	mg/L	9/13/99	2	1	1				
	mg/L	9/20/99	1.5	1	1				
	mg/L	9/27/99	2	0.8	1				
Nitrogen, Nitrate	mg/L	9/7/99	<	<	<				
	mg/L	9/13/99	<	<	<				
	mg/L	9/20/99	<	<	<				
	mg/L	9/27/99	<	<	<				
Nitrogen, Nitrate + Nitrite	mg/L	9/17/99	0.540	<				<	
Nitrogen, Total Kjeldahl	mg/L	9/17/99	1.31	1.01				0.770	
Pentachlorophenol-Screen	ug/L	9/1/99						2	
	ug/L	9/2/99						2	
	ug/L	9/3/99						4	
	ug/L	9/4/99						2	
	ug/L	9/5/99						2	
	ug/L	9/6/99						2	
	ug/L	9/7/99	9908	462	2647			2	
	ug/L	9/8/99						1	
	ug/L	9/9/99						1	
	ug/L	9/10/99						1	
	ug/L	9/11/99						2	
	ug/L	9/12/99						2	
	ug/L	9/13/99	8642	1969	1988			2	
	ug/L	9/14/99						1	
	ug/L	9/15/99						1	
	ug/L	9/16/99						1	
	ug/L	9/17/99						1	
	ug/L	9/18/99						1	
	ug/L	9/19/99						1	
	ug/L	9/20/99	13655	1963	2219			1	
	ug/L	9/21/99						2	
	ug/L	9/22/99						5	
	ug/L	9/23/99						1	

TABLE 1

Above Ground Treatment System Data
Wauleco, Inc.
Wausau, Wisconsin

Parameter	UNIT	DATE	FBR Influent	FBR Effluent	FFR Effluent	Bag Filter Effluent	Filters1+2 Effluent	System Effluent	System Eff Dup
	ug/L	9/24/99						1	
Pentachlorophenol-Screen	ug/L	9/25/99						1	
	ug/L	9/26/99						1	
	ug/L	9/27/99	3626	427	421			1	
	ug/L	9/28/99						2	
	ug/L	9/29/99						1	
	ug/L	9/30/99						2	
pH	S.U.	9/7/99	6.6	6.5	6.5				
	S.U.	9/13/99	6.7	6.6	6.7				
	S.U.	9/20/99	6.6	6.6	6.6				
	S.U.	9/27/99	6.6	6.5	6.5				
Phosphorus, Ortho	mg/L	9/17/99	<	0.2				0.2	
Phosphorus, Phosphate	mg/L	9/7/99	1	1	1				
	mg/L	9/13/99	1	0.6	0.6				
	mg/L	9/20/99	1.5	1.5	1.5				
	mg/L	9/27/99	1.5	1.5	1.5				
Solids, Total Suspended	mg/L	9/17/99	12	9		12	5	7	
Mercury	ug/L	9/17/99	1.0	0.89				0.37	
Phenols									
2,3,4,6-Tetrachlorophenol	ug/L	9/17/99	<	610	610	640	<	<	<
2,4,5-Trichlorophenol	ug/L	9/17/99	<	<	<	<	<	<	<
2,4,6-Trichlorophenol	ug/L	9/17/99	<	<	<	<	<	<	<
2,4-Dichlorophenol	ug/L	9/17/99	<	<	<	<	<	<	<
2,4-Dimethylphenol	ug/L	9/17/99	<	<	<	<	<	<	<
2,4-Dinitrophenol	ug/L	9/17/99	<	<	<	<	<	<	<
2,6-Dichlorophenol	ug/L	9/17/99	<	<	<	<	<	<	<
2-Chlorophenol	ug/L	9/17/99	<	<	<	<	<	<	<
2-Methylphenol	ug/L	9/17/99	<	<	<	<	<	<	<
2-Nitrophenol	ug/L	9/17/99	<	<	<	<	<	<	<
3&4-Methylphenol	ug/L	9/17/99	<	<	<	<	<	<	<
4,6-Dinitro-2-Methylphenol	ug/L	9/17/99	<	<	<	<	<	<	<
4-Chloro-3-Methylphenol	ug/L	9/17/99	<	<	<	<	<	<	<
4-Nitrophenol	ug/L	9/17/99	<	<	<	<	<	<	<
Pentachlorophenol	ug/L	9/17/99	20000	4600	4500	4800	110	<	<
Phenol	ug/L	9/17/99	<	<	<	<	<	<	<

TABLE 2

Treatment System Flows
Wauleco, Inc.
Wausau, Wisconsin

Date	Influent Groundwater Flow Rate [1] (gpm)	POTW Discharge Flow Rate [1] (gpm)	POTW Totalized Discharge (gal)
09/01/99	51.11	45.05	15,484,400
09/02/99	50.37	44.45	15,548,415
09/03/99	50.73	44.29	15,612,193
09/04/99	45.61	44.75	15,676,635
09/05/99	50.64	44.58	15,740,835
09/06/99	49.02	44.58	15,805,035
09/07/99	54.13	38.00	15,859,759
09/08/99	49.88	43.06	15,921,769
09/09/99	52.94	45.91	15,987,874
09/10/99	52.53	45.25	16,053,038
09/11/99	51.84	44.09	16,116,528
09/12/99	51.90	44.36	16,180,402
09/13/99	51.89	44.30	16,244,195
09/14/99	52.04	44.24	16,307,904
09/15/99	52.18	44.36	16,371,786
09/16/99	54.66	43.38	16,434,251
09/17/99	68.05	42.48	16,495,425
09/18/99	51.69	43.86	16,558,589
09/19/99	51.78	43.53	16,621,268
09/20/99	55.91	47.01	16,688,969
09/21/99	45.05	38.37	16,744,220
09/22/99	49.26	41.45	16,803,904
09/23/99	49.86	41.49	16,863,644
09/24/99	45.18	38.36	16,918,883
09/25/99	43.84	37.51	16,972,900
09/26/99	43.82	37.45	17,026,833
09/27/99	43.63	37.38	17,080,653
09/28/99	43.51	37.29	17,134,348
09/29/99	43.86	37.93	17,188,970
09/30/99	43.45	37.27	17,242,633
Average	50.01	42.20	
Total [2]:			1,823,102

Footnotes:

(1) Influent and POTW flow rates are daily averages. These may not be equal due to balancing in the treatment system and calibration of individual flowmeters.

(2) Total is the cumulative POTW discharge during the reporting period.

TABLE 3

Product Removal
(gallons per day)
Wauleco, Inc.
Wausau, Wisconsin

Date	PW04	PW05	PW07	PW09	PW10	PW11	PW12	PW13	PW15	PW16	PW17	PW18	PW19	PW20	PW21	PW22	PW23	PW24	PW25	PW26	PW27	Date Total
09/01/99	0.0	0.0	0.0	0.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	8.6	0.0	0.0	0.0	0.0	0.0	1.7	21.0	0.0	0.0	39.3
09/02/99	0.0	0.0	0.0	0.0	0.0	6.9	0.0	0.0	0.0	0.0	0.0	8.6	0.0	0.0	0.0	0.0	0.0	1.7	17.2	0.0	0.0	34.4
09/03/99	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	8.6	0.0	0.0	0.0	0.0	0.0	1.7	17.2	0.0	0.0	30.9
09/04/99	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	8.6	0.0	0.0	0.0	0.0	0.0	1.7	17.2	0.0	0.0	29.2
09/05/99	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	13.8	0.0	0.0	0.0	0.0	0.0	1.7	17.2	0.0	0.0	36.1
09/06/99	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	12.0	0.0	0.0	0.0	0.0	0.0	1.7	17.2	0.0	0.0	36.1
09/07/99	0.0	0.0	0.0	0.0	0.0	6.9	0.0	0.0	0.0	0.0	0.0	17.2	0.0	1.7	1.7	0.0	0.0	1.7	17.2	0.0	1.7	48.2
09/08/99	0.0	0.0	0.0	0.0	0.0	6.9	0.0	0.0	0.0	0.0	0.0	17.2	0.0	1.7	0.0	0.0	0.0	1.7	13.8	0.0	0.0	41.3
09/09/99	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	17.2	0.0	1.7	1.7	0.0	0.0	1.7	13.8	0.0	0.0	39.6
09/10/99	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	8.6	0.0	1.7	0.0	0.0	0.0	3.4	12.0	0.0	0.0	29.2
09/11/99	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	1.7	8.6	0.0	0.0	1.7	0.0	0.0	0.0	12.0	0.0	0.0	25.8
09/12/99	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	8.6	0.0	0.0	1.7	0.0	0.0	0.0	17.2	0.0	0.0	31.0
09/13/99	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	1.7	8.6	0.0	0.0	1.7	0.0	0.0	0.0	17.2	1.7	0.0	34.4
09/14/99	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	8.6	0.0	0.0	1.7	0.0	0.0	0.0	17.2	0.0	0.0	31.0
09/15/99	1.7	0.0	0.0	0.0	0.0	5.2	0.0	3.4	0.0	0.0	0.0	3.4	0.0	1.7	0.0	0.0	0.0	0.0	13.8	0.0	0.0	29.3
09/16/99	0.0	0.0	0.0	0.0	0.0	1.7	0.0	3.4	0.0	0.0	0.0	5.2	0.0	3.4	1.7	0.0	0.0	0.0	15.5	0.0	0.0	30.9
09/17/99	0.0	0.0	0.0	0.0	0.0	3.4	0.0	3.4	0.0	0.0	0.0	1.7	0.0	3.4	0.0	0.0	0.0	0.0	15.5	0.0	0.0	27.5
09/18/99	0.0	0.0	0.0	0.0	0.0	5.2	0.0	6.9	0.0	0.0	0.0	8.6	1.7	0.0	0.0	0.0	0.0	0.0	6.9	5.2	0.0	34.4
09/19/99	0.0	0.0	0.0	0.0	0.0	5.2	0.0	6.9	0.0	0.0	0.0	6.9	0.0	0.0	0.0	0.0	0.0	1.7	17.2	5.2	1.7	44.7
09/20/99	0.0	0.0	0.0	0.0	0.0	5.2	0.0	5.2	0.0	0.0	0.0	8.6	0.0	0.0	0.0	0.0	0.0	0.0	17.2	6.9	0.0	43.0
09/21/99	0.0	0.0	0.0	0.0	0.0	5.2	0.0	5.2	0.0	0.0	0.0	8.6	0.0	0.0	0.0	0.0	0.0	0.0	17.2	5.2	1.7	43.0
09/22/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	12.0	1.7	0.0	18.9
09/23/99	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	1.7	5.2	0.0	0.0	0.0	0.0	0.0	1.7	12.0	3.4	1.7	27.5
09/24/99	0.0	0.0	0.0	0.0	0.0	1.7	0.0	1.7	0.0	0.0	0.0	6.9	0.0	0.0	0.0	0.0	0.0	3.4	10.3	1.7	1.7	27.5
09/25/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	1.7	10.3	0.0	0.0	0.0	0.0	0.0	3.4	10.3	3.4	0.0	30.9
09/26/99	0.0	0.0	0.0	0.0	0.0	1.7	0.0	1.7	0.0	0.0	0.0	10.3	0.0	0.0	1.7	0.0	0.0	1.7	6.9	1.7	1.7	27.5
09/27/99	0.0	0.0	0.0	0.0	0.0	1.7	0.0	1.7	0.0	0.0	0.0	10.3	0.0	0.0	0.0	0.0	0.0	1.7	8.6	3.4	0.0	27.5
09/28/99	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	1.7	10.3	0.0	0.0	0.0	0.0	0.0	3.4	8.6	1.7	0.0	27.5
09/29/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	1.7	10.3	0.0	0.0	0.0	0.0	0.0	0.0	17.2	1.7	1.7	36.1
09/30/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	1.7	17.2	0.0	0.0	0.0	0.0	0.0	0.0	12.0	1.7	0.0	34.4
Well Total	1.7	0.0	0.0	0.0	0.0	100.8	0.0	46.4	0.0	0.0	12.0	283.8	1.7	15.5	13.8	0.0	0.0	36.1	428.7	44.7	12.0	997.3

TABLE 4

Groundwater Elevation Data
Wauleco, Inc.
Wausau, Wisconsin

Well	July 22 1999		August 16 1999		September 23 1999	
	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)
PW01	0.03	1162.42	-----	1162.47	0.05	1162.06
PW02	-----	1162.45	-----	1162.40	-----	1162.08
PW03	-----	1162.65	-----	1162.66	-----	1162.33
PW3S	0.22	1159.40	-----	-----	-----	-----
PW04	0.78	1159.72	0.70	1156.28	0.79	1155.54
PW05	1.14	1152.93	0.55	1152.20	0.29	1153.05
PW06	0.45	1161.45	-----	-----	-----	-----
PW07	0.16	1157.94	-----	1158.18	-----	1156.97
PW08	0.44	1160.69	-----	-----	-----	-----
PW9I	-----	1158.98	-----	-----	-----	1163.58
PW9O	-----	1161.03	-----	1162.85	-----	1161.82
PW10	-----	1163.34	0.03	1154.71	-----	1153.32
PW11	2.70	1156.75	1.86	1157.17	0.04	1159.81
PW12	0.33	1162.58	0.36	1162.75	0.35	1161.97
PW13	0.72	1158.00	0.35	1157.83	0.31	1158.51
PW14	0.22	1160.69	-----	-----	-----	-----
PW15	0.10	1153.73	0.06	1153.73	-----	1159.99
PW16	-----	1159.37	0.12	1159.41	0.26	1158.70
PW17	0.28	1156.99	0.26	1157.46	-----	1157.57
PW18	0.04	1159.72	1.22	1158.86	0.51	1159.03
PW19	0.85	1159.77	0.89	1159.79	0.43	1159.78
PW20	0.82	1159.38	0.63	1159.48	0.58	1159.22
PW21	0.41	1159.76	0.14	1159.93	0.71	1158.99
PW22	-----	1158.78	0.49	1157.18	0.76	1157.22
PW23	0.11	1158.98	0.21	1158.74	0.44	1158.39
PW24	0.25	1159.15	-----	1159.27	0.18	1158.98
PW25	0.27	1158.54	0.23	1158.39	0.16	1158.48
PW26	0.27	1158.77	-----	1158.34	0.19	1158.14
PW27	0.03	1159.34	0.07	1159.11	0.26	1158.43
P01	0.45	1160.24	0.46	1160.24	0.46	1159.82
OW01	-----	1163.02	-----	-----	-----	-----
W01A	-----	1163.31	-----	-----	-----	-----
W01B	-----	1162.20	-----	-----	-----	-----
W02	-----	1162.17	-----	1162.24	-----	1161.75
W03A	0.49	1160.42	0.45	1160.21	2.54	1157.44
W03B	-----	1161.41	-----	1161.27	-----	1160.95
W04A	0.15	1161.73	0.19	1161.58	0.44	1160.89
W04B	0.12	1161.71	-----	-----	-----	-----
W05	0.42	1160.19	1.10	1159.60	1.09	1159.21
W06R	-----	1163.02	0.32	1162.82	-----	1162.41
W07	0.26	1162.33	-----	-----	-----	-----
W08	-----	1173.69	-----	-----	-----	-----
W09	-----	1162.52	-----	-----	-----	-----
W10A	-----	1160.98	-----	-----	-----	-----
W10B	-----	1161.06	-----	-----	-----	-----
W11	-----	1160.97	-----	-----	-----	-----
W12	-----	1160.57	-----	-----	-----	-----
W13	-----	1161.57	-----	-----	-----	-----

TABLE 4

Groundwater Elevation Data
Wauleco, Inc.
Wausau, Wisconsin

Well	July 22 1999		August 16 1999		September 23 1999	
	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)
W14	-----	1159.80	-----	-----	-----	-----
W16	-----	1161.89	-----	-----	-----	-----
W17	0.28	1160.65	-----	-----	-----	-----
W18	-----	1161.00	-----	-----	-----	-----
W19	-----	1162.64	-----	-----	-----	-----
W21	-----	1160.80	-----	-----	-----	-----
W22	0.15	1160.99	0.33	1160.45	-----	1160.27
W23	-----	1160.96	-----	-----	-----	-----
W24A	-----	1160.93	-----	-----	-----	-----
W25	-----	1163.22	-----	-----	-----	-----
W26	-----	1160.99	-----	-----	-----	-----
W27	-----	1161.60	-----	-----	-----	-----
W28	-----	1160.96	-----	-----	-----	-----
W29	-----	1170.86	-----	-----	-----	-----
W30	0.67	1159.89	0.68	1159.96	1.04	1159.27
W31	-----	1160.80	-----	-----	-----	-----
W32	-----	1160.71	-----	-----	-----	-----
W33	0.06	1161.45	-----	-----	-----	-----
W34	0.12	1157.88	0.21	1157.87	0.11	1157.51
W35	0.46	1160.26	0.37	1160.29	0.87	1159.49
W36	-----	1161.31	-----	1161.42	-----	1160.97
W39	-----	1161.54	-----	-----	-----	-----
W40	0.78	1160.61	-----	-----	-----	-----
W41	-----	1166.05	-----	-----	-----	-----
W42	0.24	1162.08	-----	-----	-----	-----
W44	0.33	1160.51	0.48	1160.47	1.44	1158.98
W45	0.11	1161.27	0.30	1160.91	3.66	1156.80
W46	0.99	1159.56	1.04	1159.50	0.97	1159.21
W47	0.12	1156.84	0.51	1156.27	0.51	1155.94
W48	-----	1156.82	0.02	1156.73	0.21	1155.95
W49	0.35	1157.17	0.29	1156.98	0.81	1155.90
W66	-----	1162.98	-----	1163.03	-----	1162.63
W67	-----	1162.94	-----	1163.01	-----	1162.53
W68A	0.06	1162.83	-----	-----	-----	-----
W68B	-----	1162.88	-----	-----	-----	-----
W69	1.05	1160.52	1.04	1160.52	0.18	1160.88
W70B	-----	1162.57	-----	-----	-----	-----
River	-----	No Gage	-----	No Gage	-----	No Gage

Notes:
ft msl = feet mean sea level

FIGURE 1
FBR Influent and Effluent
PCP Concentrations

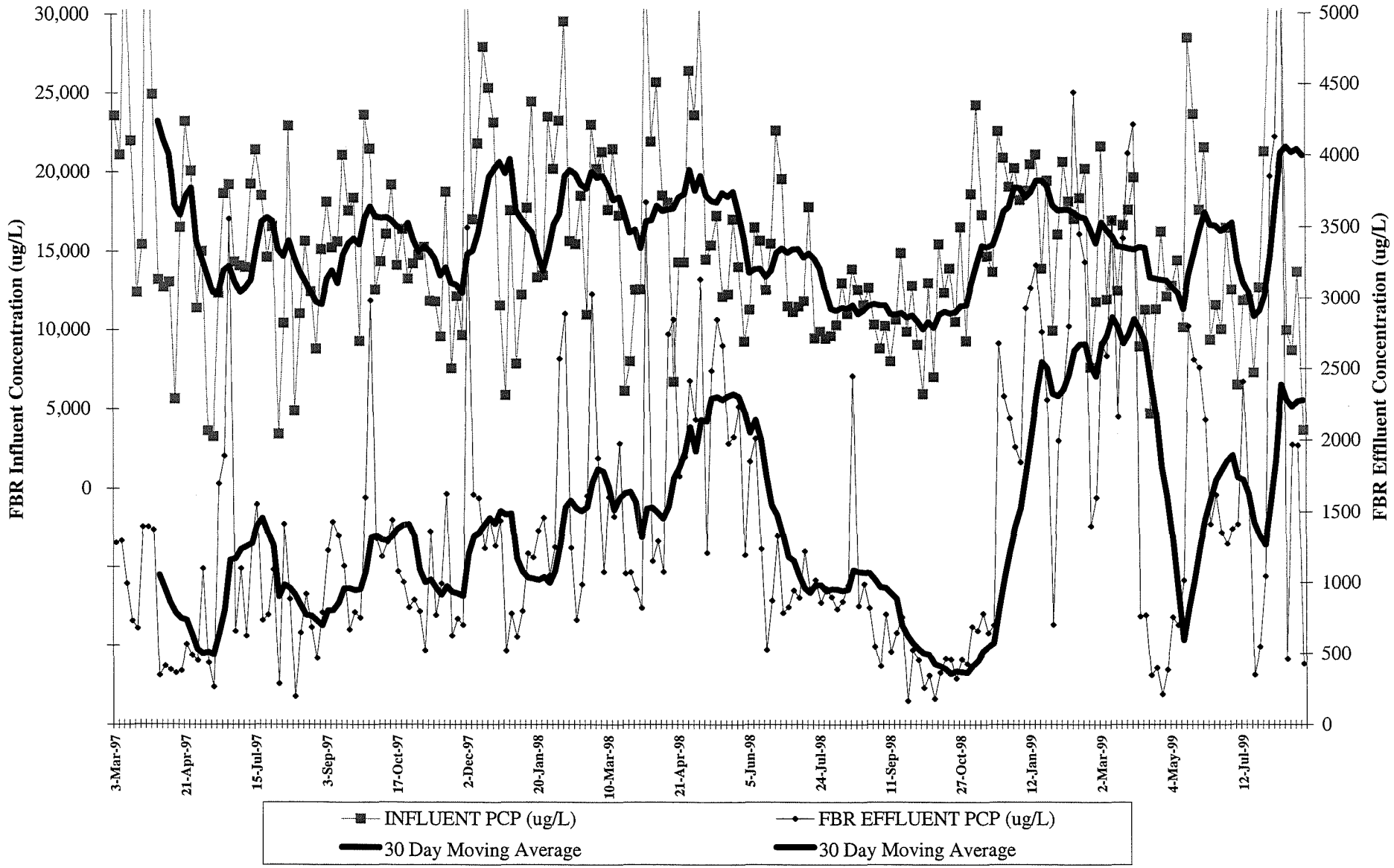
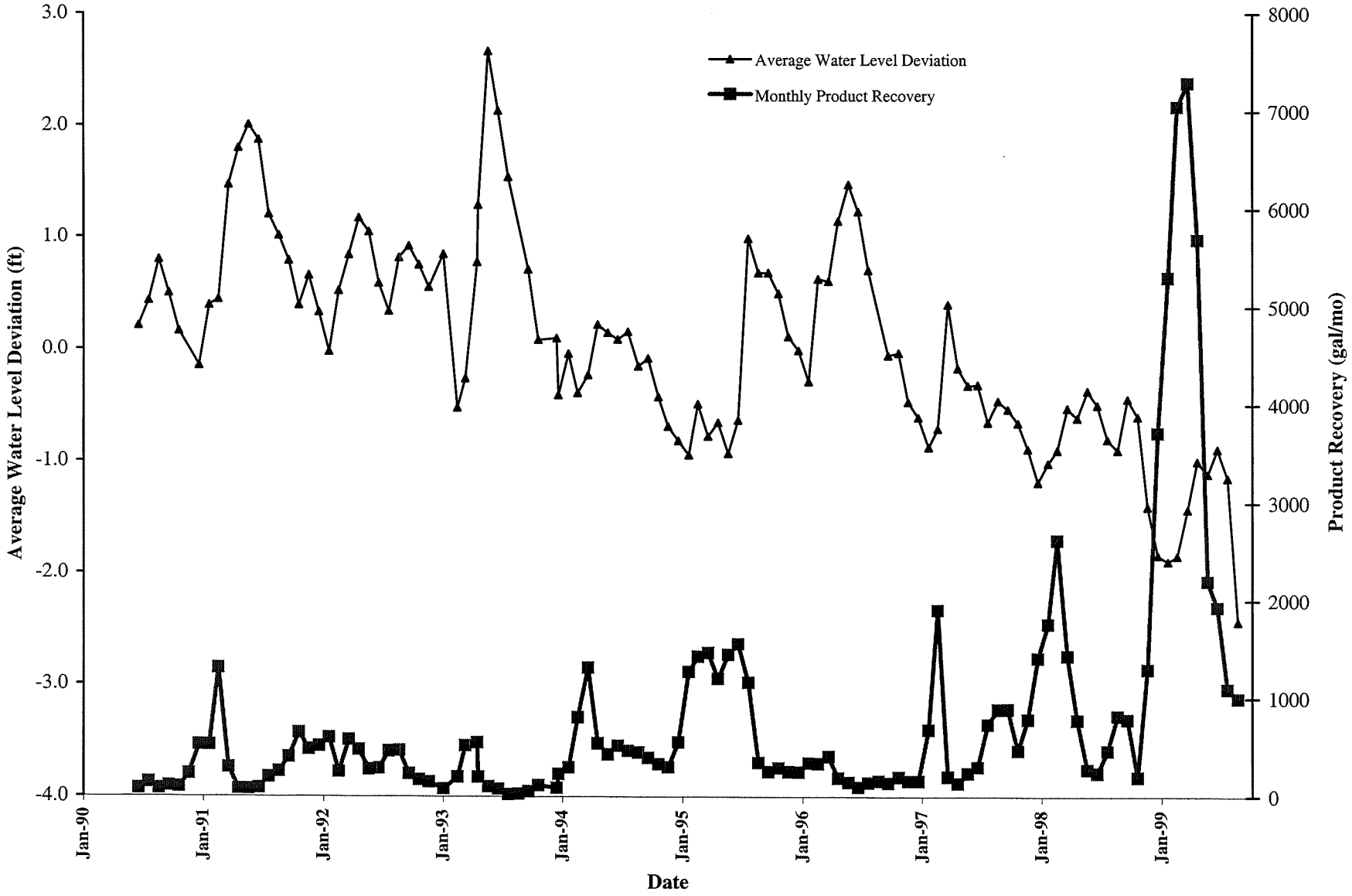


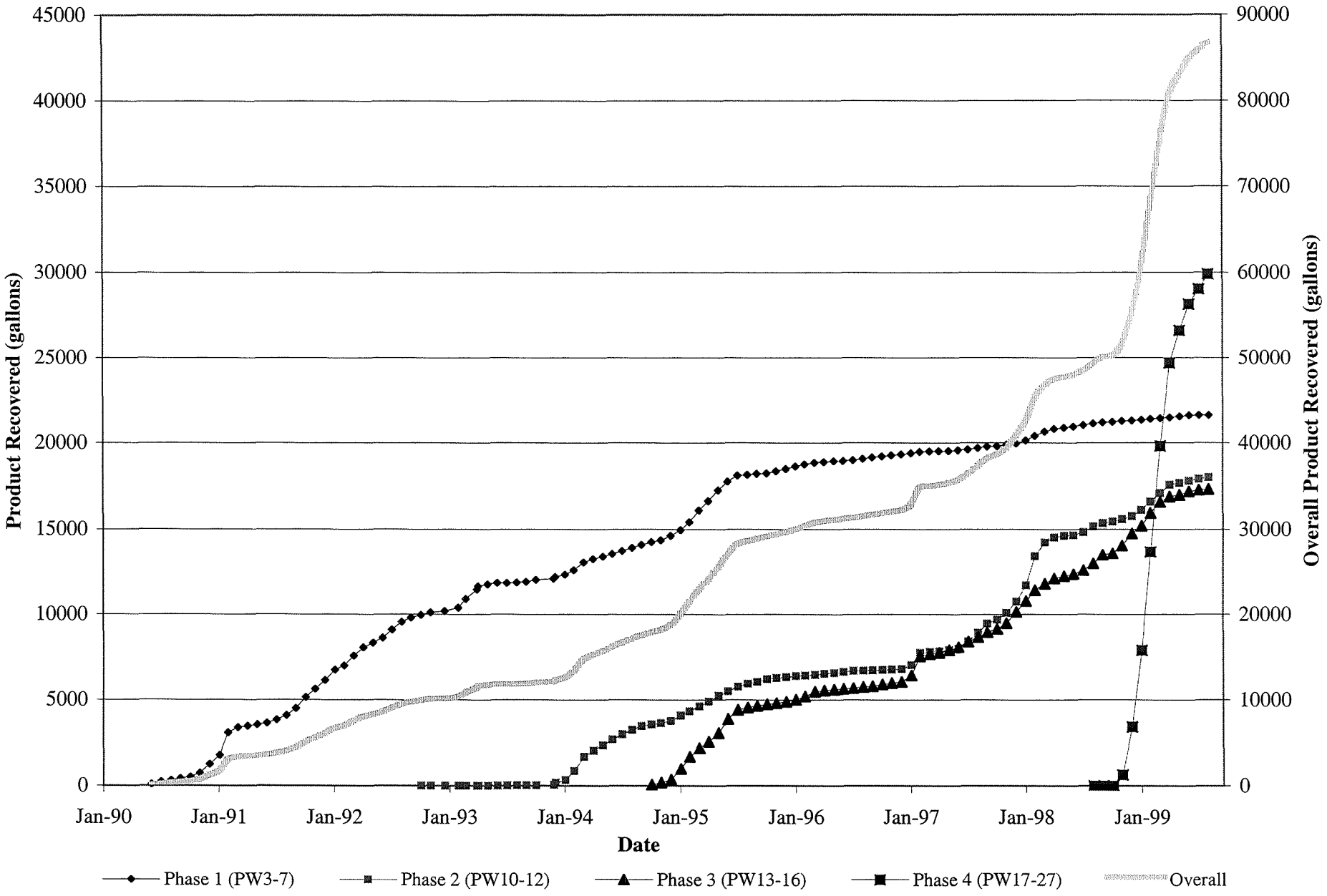
FIGURE 2
Average Water Level Deviation Versus Product Recovery Rates



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10/15/99

FIGURE 3
Cumulative Product Recovery by Phase and Overall



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10/15/99

9/28/99

MONTGOMERY WATSON

RECEIVED
SEP 30 1999
WAUSAU DNR

September 28, 1999

Ms. Lisa Gutknecht
Wisconsin Department of Natural Resources
5301 Rib Mountain Drive
Wausau, Wisconsin 54401

Re: August Progress Report
WAULECO, Inc.
Wausau, Wisconsin
Administrative Order No. NCD-91-04

BRRTS# 02-37-000006

Dear Ms. Gutknecht:

On behalf of WAULECO, Montgomery Watson is submitting two copies (enclosed) of the August Progress Report for the WAULECO, Inc. site in Wausau, Wisconsin. The report is submitted in fulfillment of Paragraph 41 of Administrative Order No. NCD-91-04.

If you have any questions or comments regarding this information, please call.

Sincerely,

MONTGOMERY WATSON

Patrick H. Lytle
Associate Engineer

Douglas J. Bach, P.E.
Project Manager

Enclosures: Monthly Report

cc: Wastewater Engineer - WDNR (Wausau, WI) (1)
J. Gehin - Wausau Utilities Director (1)
P. Peshek (3)
R. Brandt (1)
T. Dushek – MW Wauleco (1)

PHL/phl/ndj/DJB
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One Science Court
P.O. Box 5385
Madison, Wisconsin
53705-0385

Tel: 608 231 4747
Fax: 608 231 4777

Serving the World's Environmental Needs

WAULECO INCORPORATED
WAUSAU, WISCONSIN
MONTHLY REPORT
AUGUST 1999

SUMMARY OF AUGUST 1999 ACTIVITIES

Groundwater Extraction and Treatment System Operation

Treatment system performance data for this reporting period are summarized in Table 1. PCP screening (on-site gas chromatograph) results for the system effluent samples, which represent the water discharged to the municipal sewer, averaged 6 ug/L for the month of August, with a maximum single day concentration of 14 ug/L. These lower PCP effluent levels are most likely the result of higher removal efficiencies in the polishing filters. The carbon in these filers was replaced in July. The laboratory result for PCP in the system effluent was <3 ug/L on August 17, 1999. The on-site result for the same day was 5 ug/L. Both these results indicate PCP concentrations were well below the permit levels of 150 ug/L (monthly average) and 300 ug/L (daily maximum).

Laboratory results for mercury analyses of the FBR influent, FBR effluent, and system effluent samples collected on August 17 are included in Table 1. The mercury concentration in the system effluent samples (discharged to the sanitary sewer) was 0.3 ug/L.

PCP influent concentrations ranged from 12,653 ug/L to 47,626 ug/L during August (Table 1). PCP influent and effluent concentrations in the FBR are presented graphically both as individual data points and as a 30-day moving average in Figure 1. As shown in Figure 1, the influent PCP concentrations increased during August. FBR effluent concentrations increased as well. The average PCP removal efficiency for the FBR during August was 91% compared to an average of 90% during the previous year. This corresponds to the removal efficiency calculated from the August 17 laboratory result, 92%.

Daily groundwater flow through the treatment system (Table 2) ranged from 28 to 53 gallons per minute (gpm) during August. The majority of this fluctuation is due to varying log times for the flow totalizer, not from modifications of treatment system flowrates. Total treatment system efficiency (including carbon polishing units) continues to be greater than 99%.

Product Recovery

Product recovery data for the reporting period are presented in Table 3. Historic product recovery (since August 1990) compared to average water level deviation is presented in Figure 2. Water levels in the vicinity of the site decreased slightly during August, following an increase in July. Product recovery decreased to 1,093 gallons in August. Approximately 83 percent of the product recovered during August came from the new extraction wells, with the most production from PW18, PW24, PW25, and PW11.

A comparison of the product recovery of each phase of well installations is presented in Figure 3. This figure illustrates the historical productivity of each phase of well installations. Cumulative product recovery of all wells is plotted on the secondary vertical axis.

Groundwater Monitoring

Groundwater elevation and product thickness data for June, July, and August are summarized in Table 4.

Upcoming Activities

Test borings near the northern boundary of the site were completed in early September. Data collected from these boring will be used to site the two additional extraction wells near the neighboring 3M property. Installation of the new extraction wells and the associated system expansion is expected to occur in October.

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TABLES

TABLE 1

Above Ground Treatment System Data
Wauleco, Inc.
Wausau, Wisconsin

Parameter	UNIT	DATE	FBR Influent	FBR Effluent	FFR Effluent	Bag Filter Effluent	Filters1+2 Effluent	System Effluent	System Eff Dup
Biological Oxygen Demand	mg/L	8/17/99	13	4				<	
Chemical Oxygen Demand	mg/L	8/17/99	61	52				44	
Chloride	mg/L	8/17/99	160	170				171	
Dissolved Oxygen	mg/L	8/2/99	6.2	1.5	5				
	mg/L	8/9/99	5.6	1.2	4				
	mg/L	8/16/99	5.9	1.5	4.8				
	mg/L	8/23/99	7.3	1.8	4.5				
	mg/L	8/30/99	5.5	1.1	3.2				
Nitrogen, Ammonia	mg/L	8/2/99	1.5	0.3	0.3				
	mg/L	8/9/99	1.5	0.2	0.2				
	mg/L	8/16/99	1.0	1.0	1.0				
	mg/L	8/23/99	1.5	0.4	0.6				
	mg/L	8/30/99	1.5	0.8	1.0				
Nitrogen, Nitrate	mg/L	8/2/99	2.0	2.0	2.0				
	mg/L	8/9/99	<	<	<				
	mg/L	8/16/99	<	<	<				
	mg/L	8/23/99	<	<	<				
	mg/L	8/30/99	<	<	<				
Nitrogen, Nitrate + Nitrite	mg/L	8/17/99	0.33	0.15				<	
Nitrogen, Total Kjeldahl	mg/L	8/17/99	2.02	1.24				0.96	
Pentachlorophenol-Screen	ug/L	8/1/99						5	
	ug/L	8/2/99	12653	546	435			9	
	ug/L	8/3/99						5	
	ug/L	8/4/99						4	
	ug/L	8/5/99						3	
	ug/L	8/6/99						2	
	ug/L	8/7/99						2	
	ug/L	8/8/99						2	
	ug/L	8/9/99	21193	1045	768			2	
	ug/L	8/10/99						10	
	ug/L	8/11/99						7	
	ug/L	8/12/99						2	
	ug/L	8/13/99						11	
	ug/L	8/14/99						4	
	ug/L	8/15/99						3	
	ug/L	8/16/99	31378	3851	3324			2	
	ug/L	8/17/99						5	
	ug/L	8/18/99						6	
	ug/L	8/19/99						9	
	ug/L	8/20/99						5	
	ug/L	8/21/99						8	
	ug/L	8/22/99						12	
	ug/L	8/23/99	47626	4127	4292			10	
	ug/L	8/24/99						8	

TABLE 1

Above Ground Treatment System Data
Wauleco, Inc.
Wausau, Wisconsin

Parameter	UNIT	DATE	FBR Influent	FBR Effluent	FFR Effluent	Bag Filter Effluent	Filters1+2 Effluent	System Effluent	System Eff Dup
Pentachlorophenol-Screen	ug/L	8/25/99						7	
	ug/L	8/26/99						3	
	ug/L	8/27/99						10	
	ug/L	8/28/99						14	
	ug/L	8/29/99						6	
	ug/L	8/30/99	40000	6111	5206			7	
	ug/L	8/31/99						4	
pH	S.U.	8/2/99	6.7	6.5	6.65				
	S.U.	8/9/99	6.7	6.6	6.6				
	S.U.	8/16/99	6.7	6.6	6.6				
	S.U.	8/23/99	6.6	6.6	6.5				
	S.U.	8/30/99	6.6	6.5	6.5				
Phosphorus, Ortho	mg/L	8/17/99	0.20	0.38				0.27	
Phosphorus, Phosphate	mg/L	8/2/99	0.1	0.1	0.1				
	mg/L	8/9/99	1.5	1.5	1.5				
	mg/L	8/16/99	1.5	1.5	1.5				
	mg/L	8/23/99	2.0	2.0	2.0				
	mg/L	8/30/99	1.5	1.5	1.5				
Solids, Total Suspended	mg/L	8/17/99	8	9		<	4	<	
Mercury	ug/L	8/17/99	1.3	0.7				0.3	
Phenols									
2,3,5,6-Tetrachlorophenol	ug/L	8/17/99	<	<	<	<	<	<	<
2,4,5-Trichlorophenol	ug/L	8/17/99	<	<	<	<	<	<	<
2,4,6-Trichlorophenol	ug/L	8/17/99	<	<	<	<	<	<	<
2,4-Dichlorophenol	ug/L	8/17/99	<	<	<	<	<	<	<
2,4-Dimethylphenol	ug/L	8/17/99	<	<	<	<	<	7.2	3.3
2,4-Dinitrophenol	ug/L	8/17/99	<	<	<	<	<	<	<
2,6-Dichlorophenol	ug/L	8/17/99	<	<	<	<	<	<	<
2-Chlorophenol	ug/L	8/17/99	<	<	<	<	<	<	<
2-Methylphenol	ug/L	8/17/99	<	<	<	<	<	<	<
2-Nitrophenol	ug/L	8/17/99	<	<	<	<	<	<	<
3&4-Methylphenol	ug/L	8/17/99	<	<	<	<	<	<	<
4,6-Dinitro-2-Methylphenol	ug/L	8/17/99	<	<	<	<	<	<	<
4-Chloro-3-Methylphenol	ug/L	8/17/99	<	<	<	<	<	<	<
4-Nitrophenol	ug/L	8/17/99	<	<	<	<	<	<	<
Pentachlorophenol	ug/L	8/17/99	18000	1400	1700	1900	<	<	<
Phenol	ug/L	8/17/99	<	<	<	<	<	<	<

TABLE 2

Treatment System Flows
Wauleco, Inc.
Wausau, Wisconsin

Date	Influent Groundwater Flow Rate [1] (gpm)	POTW Discharge Flow Rate [1] (gpm)	POTW Totalized Discharge (gal)
08/01/99	38.08	39.03	13,556,571
08/02/99	45.27	41.12	13,615,780
08/03/99	50.12	45.81	13,681,740
08/04/99	49.53	45.33	13,747,013
08/05/99	49.75	44.77	13,811,477
08/06/99	50.45	45.17	13,876,519
08/07/99	50.42	51.03	13,950,000
08/08/99	51.83	54.62	14,028,651
08/09/99	28.91	26.09	14,066,217
08/10/99	43.20	41.38	14,125,798
08/11/99	50.90	45.55	14,191,394
08/12/99	27.55	26.71	14,229,863
08/13/99	47.25	39.94	14,287,370
08/14/99	52.00	46.28	14,354,009
08/15/99	51.47	45.67	14,419,768
08/16/99	50.48	44.70	14,484,129
08/17/99	50.63	44.75	14,548,562
08/18/99	50.91	45.38	14,613,909
08/19/99	51.09	45.27	14,679,093
08/20/99	50.62	44.62	14,743,346
08/21/99	53.43	46.26	14,809,955
08/22/99	49.84	50.89	14,883,241
08/23/99	36.13	31.76	14,928,977
08/24/99	46.87	42.67	14,990,422
08/25/99	49.94	42.79	15,052,037
08/26/99	45.40	44.34	15,115,887
08/27/99	50.27	44.13	15,179,440
08/28/99	46.76	41.13	15,238,660
08/29/99	46.57	40.93	15,297,594
08/30/99	47.01	41.04	15,356,690
08/31/99	49.84	43.64	15,419,531
Average	47.18	42.99	
Total [2]:			1,919,169

Footnotes:
(1) Influent and POTW flow rates are daily averages. These may not be equal due to balancing in the treatment system and calibration of individual flowmeters.
(2) Total is the cumulative POTW discharge during the reporting period.

JLV/jlv/PHL
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TABLE 3

Product Removal
(gallons per day)
Wauleco, Inc.
Wausau, Wisconsin

Date	PW04	PW05	PW07	PW09	PW10	PW11	PW12	PW13	PW15	PW16	PW17	PW18	PW19	PW20	PW21	PW22	PW23	PW24	PW25	PW26	PW27	Date Total
08/01/99	2.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	15.5	0.0	1.7	0.0	0.0	0.0	1.7	5.0	0.0	0.0	30.9
08/02/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	15.5	0.0	1.7	0.0	0.0	0.0	1.7	3.4	0.0	0.0	25.8
08/03/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	17.2	0.0	3.4	0.0	0.0	0.0	3.4	3.4	0.0	1.7	32.7
08/04/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	17.0	0.0	3.4	0.0	0.0	0.0	6.9	3.4	0.0	1.7	37.6
08/05/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	15.5	0.0	3.4	0.0	0.0	0.0	6.9	3.4	0.0	1.7	34.4
08/06/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	20.6	0.0	5.2	0.0	0.0	0.0	8.6	3.4	0.0	1.7	43.0
08/07/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	5.0	1.7	14.0	0.0	1.7	0.0	0.0	0.0	5.0	3.4	0.0	3.4	39.3
08/08/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	0.0	3.4	0.0	0.0	0.0	6.9	5.2	0.0	3.4	25.8
08/09/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.6	0.0	3.0	0.0	0.0	0.0	8.6	3.4	0.0	3.4	27.1
08/10/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.6	0.0	3.4	0.0	0.0	0.0	8.6	1.7	0.0	3.4	25.8
08/11/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.6	0.0	3.4	0.0	0.0	0.0	8.6	1.7	0.0	3.4	25.8
08/12/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.0	0.0	3.4	0.0	0.0	0.0	8.6	3.4	0.0	1.7	34.2
08/13/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.5	0.0	3.4	0.0	0.0	0.0	5.0	5.0	0.0	1.7	30.6
08/14/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.2	0.0	1.7	0.0	0.0	0.0	6.9	6.9	0.0	1.7	34.4
08/15/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.0	0.0	3.4	0.0	0.0	0.0	8.6	8.6	0.0	0.0	37.6
08/16/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.5	0.0	1.7	0.0	0.0	0.0	8.6	8.6	0.0	1.7	36.1
08/17/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.2	0.0	3.0	0.0	0.0	0.0	8.0	8.6	0.0	1.7	38.5
08/18/99	1.7	0.0	0.0	0.0	0.0	3.4	0.0	3.4	0.0	2.0	1.7	3.4	5.2	3.4	1.7	0.0	0.0	1.7	5.2	1.7	0.0	34.7
08/19/99	0.0	0.0	0.0	0.0	0.0	3.4	0.0	3.4	0.0	0.0	1.7	5.2	5.2	1.7	0.0	0.0	0.0	0.0	5.2	0.0	0.0	25.8
08/20/99	0.0	0.0	0.0	0.0	0.0	3.4	0.0	3.4	0.0	0.0	1.7	5.2	5.2	1.7	1.7	0.0	1.7	0.0	7.0	0.0	0.0	31.1
08/21/99	0.0	0.0	0.0	0.0	0.0	3.4	0.0	3.4	0.0	0.0	3.4	3.4	3.4	1.7	0.0	0.0	0.0	0.0	8.6	0.0	0.0	27.5
08/22/99	1.7	0.0	0.0	0.0	0.0	8.6	0.0	3.4	0.0	0.0	1.7	6.9	5.2	1.7	1.7	0.0	0.0	0.0	8.6	0.0	0.0	39.6
08/23/99	0.0	0.0	0.0	0.0	0.0	5.2	0.0	3.4	0.0	0.0	1.7	6.9	3.4	1.7	0.0	0.0	0.0	1.7	8.6	1.7	0.0	34.4
08/24/99	0.0	0.0	0.0	0.0	0.0	5.2	0.0	3.4	0.0	0.0	3.4	6.9	3.4	1.7	0.0	0.0	1.7	0.0	8.6	0.0	0.0	34.4
08/25/99	0.0	0.0	0.0	0.0	0.0	6.9	0.0	3.4	0.0	0.0	1.7	6.9	3.4	1.7	1.7	0.0	0.0	0.0	8.6	0.0	0.0	34.4
08/26/99	0.0	0.0	0.0	0.0	0.0	9.0	0.0	3.4	0.0	0.0	1.7	6.9	3.4	1.7	0.0	0.0	0.0	0.0	8.6	0.0	0.0	34.8
08/27/99	0.0	0.0	0.0	0.0	0.0	8.6	0.0	3.4	0.0	0.0	3.4	8.6	3.4	1.7	0.0	0.0	1.7	1.7	13.8	0.0	0.0	46.4
08/28/99	0.0	0.0	0.0	0.0	0.0	8.6	0.0	3.4	0.0	0.0	1.7	8.6	3.4	1.7	1.7	0.0	0.0	0.0	13.8	1.7	0.0	44.7
08/29/99	0.0	0.0	0.0	0.0	0.0	8.6	0.0	3.4	0.0	0.0	1.7	17.2	3.4	0.0	0.0	0.0	0.0	0.0	8.6	0.0	0.0	43.0
08/30/99	0.0	0.0	0.0	0.0	0.0	8.6	0.0	3.4	0.0	0.0	1.7	17.2	6.9	1.7	0.0	0.0	1.7	0.0	8.6	0.0	0.0	49.9
08/31/99	0.0	0.0	0.0	0.0	0.0	17.0	0.0	3.4	0.0	0.0	1.7	17.0	5.2	0.0	0.0	0.0	0.0	1.7	6.9	0.0	0.0	52.9
Well Total	5.4	0.0	0.0	0.0	0.0	100.0	0.0	77.0	0.0	7.0	31.0	367.5	60.2	73.1	8.6	0.0	6.9	119.5	199.3	5.2	32.7	1093.2

TABLE 4

Groundwater Elevation Data
Wauleco, Inc.
Wausau, Wisconsin

Well	June 30 1999		July 22 1999		August 16 1999	
	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)
PW01	0.10	1162.02	0.03	1162.42	-----	1162.47
PW02	-----	-----	-----	1162.45	-----	1162.40
PW03	-----	1162.21	-----	1162.65	-----	1162.66
PW3S	0.29	1159.14	0.22	1159.40	-----	-----
PW04	1.35	1155.90	0.78	1159.72	0.70	1156.28
PW05	0.68	1150.83	1.14	1152.93	0.55	1152.20
PW06	-----	-----	0.45	1161.45	-----	-----
PW07	0.02	1157.83	0.16	1157.94	-----	1158.18
PW08	0.39	1160.36	0.44	1160.69	-----	-----
PW9I	-----	1161.78	-----	1158.98	-----	-----
PW9O	-----	1160.86	-----	1161.03	-----	1162.85
PW10	-----	1153.41	-----	1163.34	0.03	1154.71
PW11	0.37	1158.06	2.70	1156.75	1.86	1157.17
PW12	0.40	1162.18	0.33	1162.58	0.36	1162.75
PW13	0.73	1158.57	0.72	1158.00	0.35	1157.83
PW14	0.25	1160.18	0.22	1160.69	-----	-----
PW15	-----	1153.98	0.10	1153.73	0.06	1153.73
PW16	0.04	1159.19	-----	1159.37	0.12	1159.41
PW17	0.21	1156.47	0.28	1156.99	0.26	1157.46
PW18	0.36	1159.22	0.04	1159.72	1.22	1158.86
PW19	0.48	1159.83	0.85	1159.77	0.89	1159.79
PW20	0.44	1159.35	0.82	1159.38	0.63	1159.48
PW21	0.80	1159.21	0.41	1159.76	0.14	1159.93
PW22	-----	1157.50	-----	1158.78	0.49	1157.18
PW23	0.12	1158.78	0.11	1158.98	0.21	1158.74
PW24	0.15	1159.08	0.25	1159.15	-----	1159.27
PW25	0.59	1158.17	0.27	1158.54	0.23	1158.39
PW26	0.27	1158.32	0.27	1158.77	-----	1158.34
PW27	0.24	1158.77	0.03	1159.34	0.07	1159.11
P01	0.47	1159.95	0.45	1160.24	0.46	1160.24
OW01	-----	-----	-----	1163.02	-----	-----
W01A	-----	-----	-----	1163.31	-----	-----
W01B	-----	-----	-----	1162.20	-----	-----
W02	0.48	1161.72	-----	1162.17	-----	1162.24
W03A	0.47	1159.94	0.49	1160.42	0.45	1160.21
W03B	-----	1161.09	-----	1161.41	-----	1161.27
W04A	0.42	1161.12	0.15	1161.73	0.19	1161.58
W04B	0.19	1161.31	0.12	1161.71	-----	-----
W05	0.57	1159.83	0.42	1160.19	1.10	1159.60
W06R	0.17	1162.52	-----	1163.02	0.32	1162.82
W07	-----	-----	0.26	1162.33	-----	-----
W08	-----	-----	-----	1173.69	-----	-----
W09	-----	-----	-----	1162.52	-----	-----
W10A	-----	-----	-----	1160.98	-----	-----
W10B	-----	-----	-----	1161.06	-----	-----
W11	-----	-----	-----	1160.97	-----	-----
W12	-----	-----	-----	1160.57	-----	-----
W13	-----	-----	-----	1161.57	-----	-----

TABLE 4

Groundwater Elevation Data
Wauleco, Inc.
Wausau, Wisconsin

Well	June 30 1999		July 22 1999		August 16 1999	
	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)
W14	-----	-----	-----	1159.80	-----	-----
W16	-----	-----	-----	1161.89	-----	-----
W17	0.31	1160.19	0.28	1160.65	-----	-----
W18	-----	-----	-----	1161.00	-----	-----
W19	-----	-----	-----	1162.64	-----	-----
W21	-----	-----	-----	1160.80	-----	-----
W22	0.53	1160.15	0.15	1160.99	0.33	1160.45
W23	-----	-----	-----	1160.96	-----	-----
W24A	-----	-----	-----	1160.93	-----	-----
W25	-----	-----	-----	1163.22	-----	-----
W26	-----	-----	-----	1160.99	-----	-----
W27	-----	-----	-----	1161.60	-----	-----
W28	-----	-----	-----	1160.96	-----	-----
W29	-----	-----	-----	1170.86	-----	-----
W30	0.84	1159.53	0.67	1159.89	0.68	1159.96
W31	-----	-----	-----	1160.80	-----	-----
W32	-----	-----	-----	1160.71	-----	-----
W33	0.21	1160.98	0.06	1161.45	-----	-----
W34	0.21	1157.52	0.12	1157.88	0.21	1157.87
W35	0.55	1159.97	0.46	1160.26	0.37	1160.29
W36	-----	1160.96	-----	1161.31	-----	1161.42
W39	0.02	1161.20	-----	1161.54	-----	-----
W40	0.79	1160.14	0.78	1160.61	-----	-----
W41	-----	-----	-----	1166.05	-----	-----
W42	0.13	1161.84	0.24	1162.08	-----	-----
W44	0.50	1160.16	0.33	1160.51	0.48	1160.47
W45	0.09	1160.60	0.11	1161.27	0.30	1160.91
W46	1.13	1159.22	0.99	1159.56	1.04	1159.50
W47	0.05	1156.48	0.12	1156.84	0.51	1156.27
W48	0.15	1156.39	-----	1156.82	0.02	1156.73
W49	0.41	1156.67	0.35	1157.17	0.29	1156.98
W66	-----	1162.62	-----	1162.98	-----	1163.03
W67	-----	1162.59	-----	1162.94	-----	1163.01
W68A	0.23	1162.37	0.06	1162.83	-----	-----
W68B	-----	1163.34	-----	1162.88	-----	-----
W69	1.08	1160.17	1.05	1160.52	1.04	1160.52
W70B	-----	1162.22	-----	1162.57	-----	-----
River	-----	No Gage	-----	No Gage	-----	No Gage

Notes:
ft msl = feet mean sea level

FIGURES

FIGURE 1
FBR Influent and Effluent
PCP Concentrations

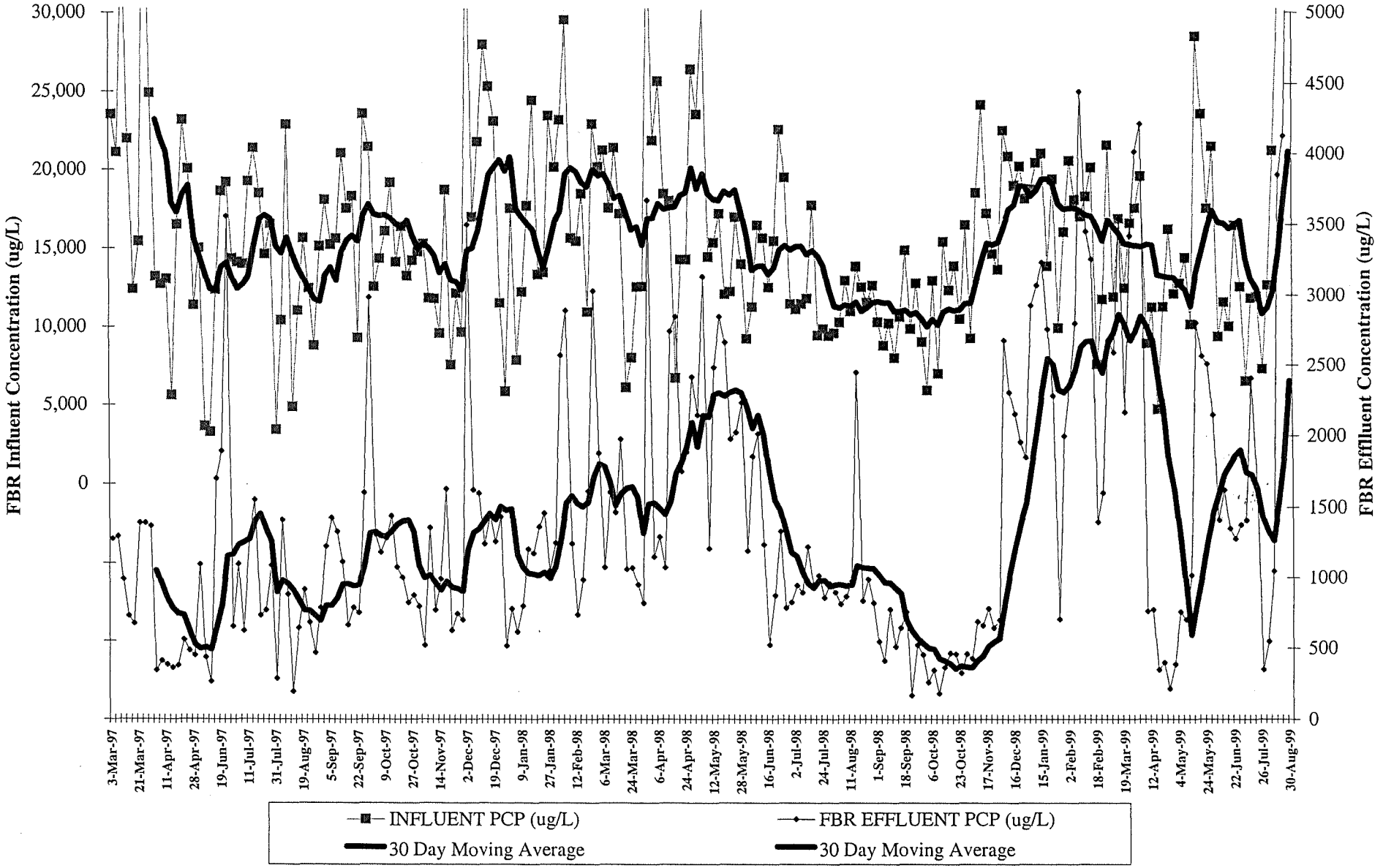
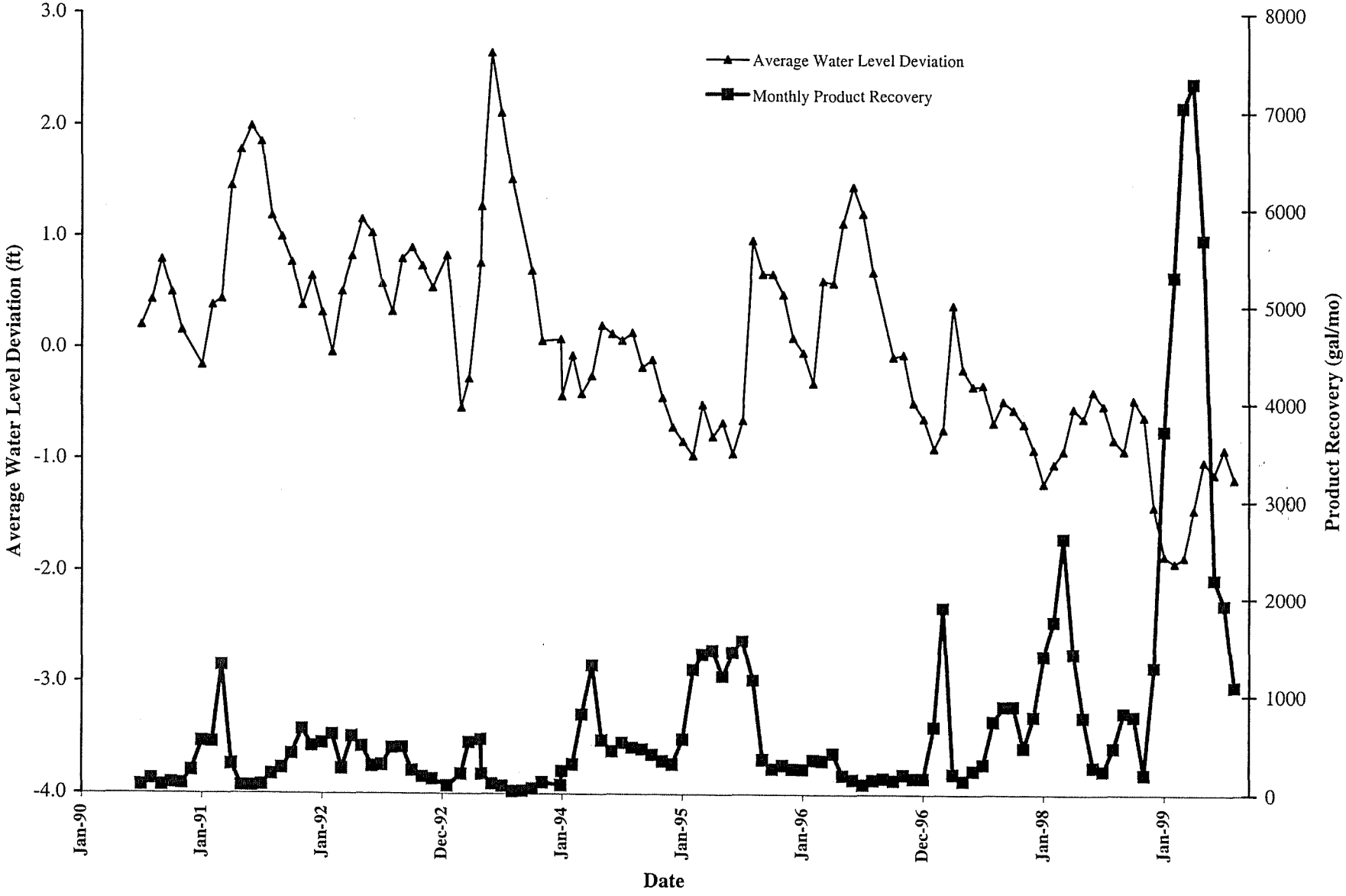


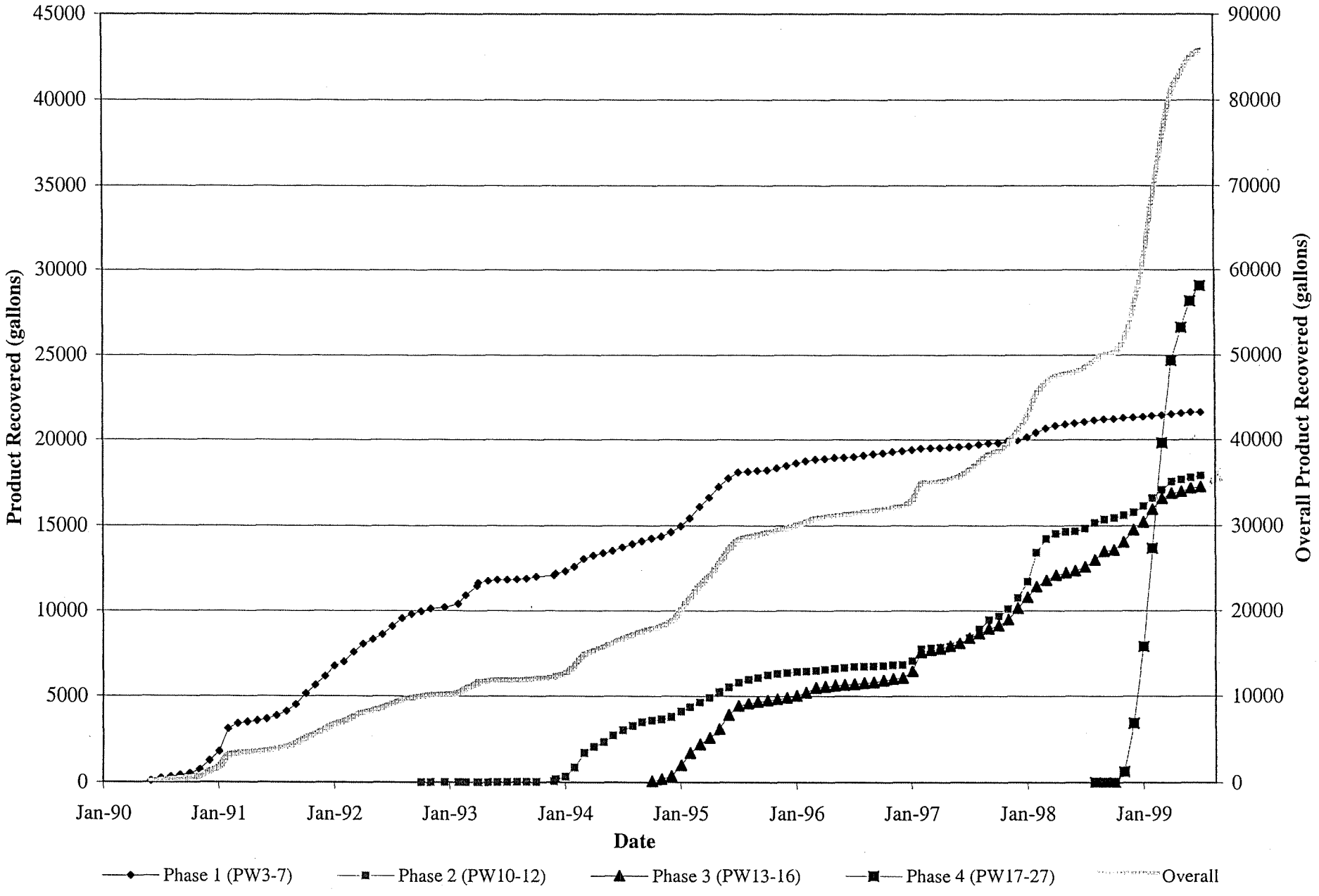
FIGURE 2
Average Water Level Deviation Versus Product Recovery Rates



M:\jobs\Wauleco\onm1999\monthly.xls(FIG2wtlvl)

9/17/99

FIGURE 3
Cumulative Product Recovery by Phase and Overall



8/31/99

MONTGOMERY WATSON

RECEIVED
SEP - 1 1999
WAUSAU DNR

August 31, 1999

Ms. Lisa Gutknecht
Wisconsin Department of Natural Resources
5301 Rib Mountain Drive
Wausau, Wisconsin 54401

Re: July Progress Report
WAULECO, Inc.
Wausau, Wisconsin
Administrative Order No. NCD-91-04

BRRTS# 02-37-000006

Dear Ms. Gutknecht:

On behalf of WAULECO, Montgomery Watson is submitting two copies (enclosed) of the July Progress Report for the WAULECO, Inc. site in Wausau, Wisconsin. The report is submitted in fulfillment of Paragraph 41 of Administrative Order No. NCD-91-04.

If you have any questions or comments regarding this information, please call.

Sincerely,

MONTGOMERY WATSON

Patrick H. Lytle
Associate Engineer

Douglas J. Bach, P.E.
Project Manager

Enclosures: Monthly Report

cc: Wastewater Engineer - WDNR (Wausau, WI) (1)
J. Gehin - Wausau Utilities Director (1)
P. Peshek (3)
R. Brandt (1)
T. Dushek – MW Wauleco (1)

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One Science Court
P.O. Box 5385
Madison, Wisconsin
53705-0385

Tel: 608 231 4747
Fax: 608 231 4777

Serving the World's Environmental Needs

WAULECO INCORPORATED
WAUSAU, WISCONSIN
MONTHLY REPORT
JULY 1999

SUMMARY OF JULY 1999 ACTIVITIES

Groundwater Extraction and Treatment System Operation

Treatment system performance data for this reporting period are summarized in Table 1. PCP screening (on-site gas chromatograph) results for the system effluent samples, which represent the water discharged to the municipal sewer, averaged 49 ug/L for the month of July, with a maximum single day concentration of 121 ug/L. Higher effluent levels of PCP occurred during the middle of the month, when the carbon in two of the polishing filters was being replaced and thus the wastewater was passing through less carbon. The laboratory result for PCP in the system effluent was 17 ug/L on July 23, 1999. The on-site result for the same day was 25 ug/L. Both these results indicate PCP concentrations were below the permit levels of 150 ug/L (monthly average) and 300 ug/L (daily maximum).

The improved correlation between off-site laboratory result and on-site GC result is due to improved maintenance and analytical procedures being implemented at the site. As these modifications are completed, another performance evaluation sample will be split for analysis by both the on-site instrument and CTI Laboratories.

Laboratory results for mercury analyses of the FBR influent, FBR effluent, and system effluent samples collected on July 23 are included in Table 1. The mercury concentration in the system effluent samples (discharged to the sanitary sewer) was 0.4 ug/L.

PCP influent concentrations ranged from 6,462 ug/L to 11,889 ug/L during July (Table 1). PCP influent and effluent concentrations in the FBR are presented graphically both as individual data points and as a 30-day moving average in Figure 1. As shown in Figure 1, the influent PCP concentrations generally declined during July. FBR effluent concentrations decreased as well, except for a brief period mid-month, when carbon change out occurred. The average PCP removal efficiency for the FBR during July was 85% compared to an average of 90% during the previous year.

Daily groundwater flow through the treatment system (Table 2) ranged from 22 to 70 gallons per minute (gpm) during July. Total treatment system efficiency (including carbon polishing units) continues to be greater than 99%.

Product Recovery

Product recovery data for the reporting period are presented in Table 3. Historic product recovery (since July 1990) compared to average water level deviation is presented in Figure 2. Water levels in the vicinity of the site increased slightly during July, following a decrease in

June. Product recovery decreased to 1,933 gallons in July. This decrease is significantly less than the decrease from May to June. Approximately 80 percent of the product recovered during July came from the new extraction wells, with the most production from PW18, PW20, PW24, and PW25.

A comparison of the product recovery of each phase of well installations is presented in Figure 3. This figure illustrates the historical productivity of each phase of well installations. Cumulative product recovery of all wells is also plotted on the secondary vertical axis.

Groundwater Monitoring

Groundwater elevation and product thickness data for May, June, and July are summarized in Table 4.

Upcoming Activities

In cooperation with 3M, the neighboring facility, Wauleco has elected to further expand the groundwater extraction and treatment system by installing two additional extraction wells near the northern boundary of the site. The design for these extraction wells is currently in progress. Installation of the new extraction wells and the associated system expansion is expected to occur in October.

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TABLES

TABLE 1

Above Ground Treatment System Data
Wauleco, Inc.
Wausau, Wisconsin

Parameter	UNIT	DATE	FBR Influent	FBR Effluent	FFR Effluent	Bag Filter Effluent	Filters1+2 Effluent	System Effluent	System Effluent DUP
Biological Oxygen Demand	mg/L	7/23/99	21	4				<	
Chemical Oxygen Demand	mg/L	7/23/99	51	28				23	
Chloride	mg/L	7/23/99	169	171				170	
Dissolved Oxygen	mg/L	7/6/99	6.6	2	2.8				
	mg/L	7/12/99	6.6	2	4.6				
	mg/L	7/19/99	5.4	2	3.4				
	mg/L	7/26/99	6.1	3.6	4.1				
Nitrogen, Ammonia	mg/L	7/6/99	1.5	1	1				
	mg/L	7/12/99	2	1	1				
	mg/L	7/19/99	1.5	1	1				
	mg/L	7/26/99	3	1	1				
Nitrogen, Nitrate	mg/L	7/6/99	<	<	<				
	mg/L	7/12/99	<	<	<				
	mg/L	7/19/99	<	<	<				
	mg/L	7/26/99	<	<	<				
Nitrogen, Nitrate + Nitrite	mg/L	7/23/99	0.3	<				<	
Nitrogen, Total Kjeldahl	mg/L	7/23/99	2.29	1.31				0.93	
Pentachlorophenol-Screen	ug/L	7/1/99						1	
	ug/L	7/2/99						63	
	ug/L	7/3/99						32	
	ug/L	7/4/99						41	
	ug/L	7/5/99						32	
	ug/L	7/6/99	6462	1411	2426			97	
	ug/L	7/7/99						100	
	ug/L	7/8/99						90	
	ug/L	7/9/99						121	
	ug/L	7/10/99						70	
	ug/L	7/11/99						62	
	ug/L	7/12/99	11806	2406	1747			72	
	ug/L	7/13/99						65	
	ug/L	7/14/99						62	
	ug/L	7/15/99						68	
	ug/L	7/16/99						25	
	ug/L	7/17/99						35	
	ug/L	7/18/99						79	
	ug/L	7/19/99	11889	1633	514			47	
	ug/L	7/20/99						79	
	ug/L	7/21/99						53	
	ug/L	7/22/99						48	
	ug/L	7/23/99						25	
	ug/L	7/24/99						32	
	ug/L	7/25/99						21	

TABLE 1

Above Ground Treatment System Data
Wauleco, Inc.
Wausau, Wisconsin

Parameter	UNIT	DATE	FBR Influent	FBR Effluent	FFR Effluent	Bag Filter Effluent	Filters1+2 Effluent	System Effluent	System Effluent DUP
Pentachlorophenol-Screen	ug/L	7/26/99	7236	349	393			24	
	ug/L	7/27/99						18	
	ug/L	7/28/99						12	
	ug/L	7/29/99						13	
	ug/L	7/30/99						21	
	ug/L	7/31/99						20	
pH	S.U.	7/6/99	6.6	6.4	6.5				
	S.U.	7/12/99	5.9	5.7	5.6				
	S.U.	7/19/99	6.5	6.7	6.4				
	S.U.	7/26/99	6.8	6.4	6.7				
Phosphorus, Ortho	mg/L	7/23/99	0.6	0.4				0.37	
Phosphorus, Phosphate	mg/L	7/6/99	2	8	10				
	mg/L	7/12/99	2	1	1				
	mg/L	7/19/99	1	1	1				
	mg/L	7/26/99	2	1	1				
Solids, Total Suspended	mg/L	7/23/99	6	9		8	<	<	
Mercury	ug/L	7/23/99	1.1	1.0				0.4	
Phenols									
2,3,5,6-Tetrachlorophenol	ug/L	7/23/99	<	<	53	49	<	<	3.9
2,4,5-Trichlorophenol	ug/L	7/23/99	<	<	<	<	<	<	<
2,4,6-Trichlorophenol	ug/L	7/23/99	<	<	<	<	<	<	<
2,4-Dichlorophenol	ug/L	7/23/99	<	<	<	<	<	<	<
2,4-Dimethylphenol	ug/L	7/23/99	<	<	<	<	<	<	<
2,4-Dinitrophenol	ug/L	7/23/99	<	<	<	<	<	<	<
2,6-Dichlorophenol	ug/L	7/23/99	<	<	<	<	<	<	8.9
2-Chlorophenol	ug/L	7/23/99	<	<	<	<	<	<	<
2-Methylphenol	ug/L	7/23/99	<	<	<	<	<	<	<
2-Nitrophenol	ug/L	7/23/99	<	<	<	<	<	<	<
3&4-Methylphenol	ug/L	7/23/99	<	<	<	<	<	<	<
4,6-Dinitro-2-Methylphenol	ug/L	7/23/99	<	<	<	<	<	<	<
4-Chloro-3-Methylphenol	ug/L	7/23/99	<	<	<	<	<	<	<
4-Nitrophenol	ug/L	7/23/99	<	<	<	<	<	<	<
Pentachlorophenol	ug/L	7/23/99	12001.1	351	300	270	<	17	20
Phenol	ug/L	7/23/99	<	<	<	<	<	<	<

TABLE 2

Treatment System Flows
Wauleco, Inc.
Wausau, Wisconsin

Date	Influent Groundwater Flow Rate [1] (gpm)	POTW Discharge Flow Rate [1] (gpm)	POTW Totalized Discharge (gal)
07/01/99	47.19	43.62	12,010,893
07/02/99	46.80	43.74	12,073,880
07/03/99	45.91	52.86	12,150,000
07/04/99	57.16	39.48	12,206,851
07/05/99	54.22	44.46	12,270,868
07/06/99	32.96	26.70	12,309,315
07/07/99	43.59	33.39	12,357,395
07/08/99	46.75	44.02	12,420,789
07/09/99	46.19	42.82	12,482,450
07/10/99	52.89	33.02	12,530,000
07/11/99	48.68	34.72	12,580,000
07/12/99	46.45	35.69	12,631,394
07/13/99	36.55	30.53	12,675,352
07/14/99	66.61	52.81	12,751,401
07/15/99	26.87	23.65	12,785,455
07/16/99	45.85	14.04	12,805,675
07/17/99	40.84	23.28	12,839,195
07/18/99	69.71	28.34	12,880,000
07/19/99	22.39	27.78	12,920,000
07/20/99	48.13	34.72	12,970,000
07/21/99	51.39	31.25	12,879,445
07/22/99	50.04	47.52	12,947,872
07/23/99	49.64	46.24	13,014,451
07/24/99	49.45	45.83	13,080,450
07/25/99	50.91	46.50	13,147,411
07/26/99	47.83	43.82	13,210,510
07/27/99	46.87	42.78	13,272,112
07/28/99	47.15	43.38	13,334,575
07/29/99	51.44	47.22	13,402,567
07/30/99	47.34	42.55	13,463,837
07/31/99	27.90	25.36	13,500,362
Average	46.63	37.81	
Total [2]:			1,552,280

Footnotes:

(1) Influent and POTW flow rates are daily averages. These may not be equal due to balancing in the treatment system and calibration of individual flowmeters.

(2) Total is the cumulative POTW discharge during the reporting period.

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TABLE 3

Product Removal
(gallons per day)
Wauleco, Inc.
Wausau, Wisconsin

Date	PW04	PW05	PW07	PW09	PW10	PW11	PW12	PW13	PW15	PW16	PW17	PW18	PW19	PW20	PW21	PW22	PW23	PW24	PW25	PW26	PW27	Date Total
07/01/99	1.7	0.0	0.0	0.0	0.0	3.4	0.0	9.0	0.0	0.0	1.7	14.0	0.0	3.4	0.0	0.0	0.0	8.6	14.0	0.0	3.4	59.4
07/02/99	1.7	0.0	0.0	0.0	0.0	3.4	0.0	6.9	0.0	1.7	1.7	18.9	0.0	1.7	0.0	0.0	0.0	6.9	29.2	1.7	3.4	77.4
07/03/99	1.7	0.0	0.0	0.0	0.0	3.4	0.0	8.6	0.0	1.7	1.7	20.6	0.0	3.4	0.0	0.0	1.7	8.6	10.3	0.0	3.4	65.4
07/04/99	1.7	0.0	0.0	0.0	0.0	3.4	0.0	8.6	0.0	0.0	1.7	12.0	0.0	3.4	0.0	0.0	0.0	8.6	12.0	0.0	3.4	55.0
07/05/99	1.7	0.0	0.0	0.0	0.0	3.4	0.0	8.6	0.0	1.7	1.7	18.9	1.7	3.4	0.0	0.0	0.0	8.6	8.6	1.7	3.4	63.6
07/06/99	1.7	0.0	0.0	0.0	0.0	3.4	0.0	8.6	0.0	0.0	1.7	20.6	0.0	3.4	0.0	0.0	0.0	8.6	10.3	0.0	3.4	61.9
07/07/99	1.7	0.0	0.0	0.0	0.0	3.4	0.0	10.0	0.0	0.0	1.7	12.0	0.0	3.4	0.0	0.0	0.0	10.0	8.6	0.0	5.2	56.1
07/08/99	1.7	0.0	0.0	0.0	0.0	3.4	0.0	6.9	0.0	1.7	1.7	18.9	0.0	3.4	0.0	0.0	0.0	5.2	10.3	1.7	5.0	60.0
07/09/99	1.7	0.0	0.0	0.0	0.0	3.0	0.0	8.6	0.0	0.0	1.7	20.6	1.7	3.4	1.7	0.0	0.0	6.9	14.0	0.0	3.4	66.9
07/10/99	1.7	0.0	0.0	0.0	0.0	3.4	0.0	8.6	0.0	0.0	1.7	12.0	0.0	3.4	0.0	0.0	1.7	6.9	49.9	0.0	3.4	92.8
07/11/99	1.7	0.0	0.0	0.0	0.0	3.4	0.0	8.6	0.0	1.7	1.7	18.9	0.0	3.4	0.0	0.0	0.0	6.9	6.0	0.0	5.2	57.6
07/12/99	1.7	0.0	0.0	0.0	0.0	3.4	0.0	8.6	0.0	1.7	1.7	20.6	1.7	1.7	1.7	0.0	0.0	6.9	10.3	1.7	3.4	65.4
07/13/99	1.7	0.0	0.0	0.0	0.0	5.2	0.0	10.0	0.0	1.7	1.7	12.0	0.0	3.4	0.0	0.0	0.0	6.9	13.8	0.0	3.4	59.8
07/14/99	1.7	0.0	0.0	0.0	0.0	5.2	0.0	6.9	0.0	0.0	1.7	25.8	0.0	1.7	0.0	0.0	0.0	5.2	18.0	1.7	3.4	71.3
07/15/99	1.7	0.0	0.0	0.0	0.0	3.4	0.0	8.6	0.0	1.7	1.7	26.0	0.0	1.7	1.7	0.0	0.0	8.0	21.0	0.0	3.4	79.1
07/16/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.6	0.0	0.0	1.7	25.8	0.0	1.7	0.0	0.0	1.7	1.7	15.5	1.7	1.7	60.2
07/17/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	1.7	26.0	0.0	1.7	0.0	0.0	0.0	3.4	17.2	1.7	0.0	57.0
07/18/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	0.0	0.0	1.7	25.8	0.0	1.7	0.0	0.0	1.7	3.4	19.0	0.0	0.0	60.3
07/19/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	1.7	26.0	0.0	3.0	0.0	0.0	0.0	3.4	15.5	0.0	1.7	56.5
07/20/99	3.4	0.0	0.0	0.0	0.0	8.6	0.0	5.2	0.0	0.0	0.0	15.5	0.0	5.2	0.0	0.0	0.0	3.4	5.2	3.4	5.2	55.0
07/21/99	3.4	0.0	0.0	0.0	0.0	5.2	0.0	3.4	0.0	0.0	0.0	17.2	0.0	6.9	0.0	0.0	0.0	3.4	5.2	3.4	5.2	53.3
07/22/99	3.4	0.0	0.0	0.0	0.0	6.9	0.0	3.0	0.0	0.0	1.7	19.0	0.0	6.9	0.0	0.0	0.0	3.4	5.2	5.2	5.2	59.8
07/23/99	3.4	0.0	0.0	0.0	0.0	5.2	0.0	1.7	0.0	0.0	0.0	15.5	0.0	6.9	0.0	0.0	0.0	3.4	5.2	7.0	7.0	55.3
07/24/99	1.0	0.0	0.0	0.0	0.0	2.0	0.0	1.7	0.0	0.0	1.7	17.2	0.0	6.9	0.0	0.0	0.0	3.4	5.2	3.4	3.4	46.0
07/25/99	1.7	0.0	0.0	0.0	0.0	5.2	0.0	1.7	0.0	0.0	1.7	19.0	0.0	6.9	0.0	0.0	0.0	3.4	3.4	3.4	5.2	51.7
07/26/99	1.7	0.0	0.0	0.0	0.0	5.2	0.0	1.7	0.0	0.0	1.7	25.8	0.0	12.0	0.0	0.0	0.0	3.4	5.2	3.4	5.2	65.3
07/27/99	1.7	0.0	0.0	0.0	0.0	1.7	0.0	1.7	0.0	0.0	3.0	26.0	0.0	5.2	0.0	0.0	0.0	3.4	5.0	3.4	5.2	56.4
07/28/99	6.9	0.0	0.0	0.0	0.0	10.3	0.0	1.7	0.0	0.0	0.0	15.5	8.6	6.9	1.7	0.0	0.0	0.0	12.0	0.0	1.7	65.4
07/29/99	5.2	0.0	0.0	0.0	0.0	6.9	0.0	1.7	0.0	0.0	0.0	17.2	8.6	6.9	1.7	0.0	0.0	0.0	17.2	0.0	1.7	67.1
07/30/99	5.2	0.0	0.0	0.0	0.0	6.9	0.0	1.7	0.0	0.0	1.7	17.2	8.6	6.9	1.7	0.0	0.0	0.0	17.2	0.0	1.7	68.8
07/31/99	3.4	0.0	0.0	0.0	0.0	6.0	0.0	1.7	0.0	0.0	0.0	15.0	8.0	6.9	3.4	0.0	0.0	0.0	17.0	0.0	1.7	63.2
Well Total	66.4	0.0	0.0	0.0	0.0	124.5	0.0	179.9	0.0	13.8	44.3	595.7	39.0	137.1	13.8	0.0	6.9	152.2	406.4	44.8	108.3	1932.9

TABLE 4

Groundwater Elevation Data
Wauleco, Inc.
Wausau, Wisconsin

Well	June 08 1999		June 30 1999		July 22 1999	
	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)
PW01	0.08	1162.16	0.10	1162.02	0.03	1162.42
PW02	-----	1162.23	-----	-----	-----	1162.45
PW03	-----	1162.32	-----	1162.21	-----	1162.65
PW3S	0.19	1159.56	0.29	1159.14	0.22	1159.40
PW04	-----	1161.12	1.35	1155.90	0.78	1159.72
PW05	0.50	1153.62	0.68	1150.83	1.14	1152.93
PW06	0.45	1161.31	-----	-----	0.45	1161.45
PW07	-----	1157.72	0.02	1157.83	0.16	1157.94
PW08	0.40	1160.38	0.39	1160.36	0.44	1160.69
PW9I	-----	-----	-----	1161.78	-----	1158.98
PW9O	-----	1162.27	-----	1160.86	-----	1161.03
PW10	-----	1160.87	-----	1153.41	-----	1163.34
PW11	0.22	1160.55	0.37	1158.06	2.70	1156.75
PW12	0.38	1162.23	0.40	1162.18	0.33	1162.58
PW13	0.92	1160.10	0.73	1158.57	0.72	1158.00
PW14	0.29	1160.41	0.25	1160.18	0.22	1160.69
PW15	-----	1153.87	-----	1153.98	0.10	1153.73
PW16	0.82	1159.18	0.04	1159.19	-----	1159.37
PW17	0.14	1156.94	0.21	1156.47	0.28	1156.99
PW18	0.31	1159.69	0.36	1159.22	0.04	1159.72
PW19	0.82	1159.85	0.48	1159.83	0.85	1159.77
PW20	0.83	1159.36	0.44	1159.35	0.82	1159.38
PW21	0.68	1159.96	0.80	1159.21	0.41	1159.76
PW22	-----	1159.08	-----	1157.50	-----	1158.78
PW23	0.16	1158.64	0.12	1158.78	0.11	1158.98
PW24	0.55	1158.88	0.15	1159.08	0.25	1159.15
PW25	0.33	1158.60	0.59	1158.17	0.27	1158.54
PW26	0.07	1158.95	0.27	1158.32	0.27	1158.77
PW27	0.44	1158.55	0.24	1158.77	0.03	1159.34
P01	1.09	1159.65	0.47	1159.95	0.45	1160.24
OW01	-----	1162.73	-----	-----	-----	1163.02
W01A	-----	1162.79	-----	-----	-----	1163.31
W01B	-----	1162.78	-----	-----	-----	1162.20
W02	0.49	1161.73	0.48	1161.72	-----	1162.17
W03A	0.48	1160.24	0.47	1159.94	0.49	1160.42
W03B	-----	1161.24	-----	1161.09	-----	1161.41
W04A	0.19	1161.55	0.42	1161.12	0.15	1161.73
W04B	0.17	1161.56	0.19	1161.31	0.12	1161.71
W05	0.35	1160.35	0.57	1159.83	0.42	1160.19
W06R	0.04	1162.70	0.17	1162.52	-----	1163.02
W07	0.13	1162.22	-----	-----	0.26	1162.33
W08	-----	1173.17	-----	-----	-----	1173.69
W09	-----	1162.34	-----	-----	-----	1162.52
W10A	-----	1160.87	-----	-----	-----	1160.98
W10B	-----	1160.90	-----	-----	-----	1161.06
W11	-----	1160.81	-----	-----	-----	1160.97
W12	-----	1160.48	-----	-----	-----	1160.57
W13	-----	1161.25	-----	-----	-----	1161.57

TABLE 4

Groundwater Elevation Data
Wauleco, Inc.
Wausau, Wisconsin

Well	June 08 1999		June 30 1999		July 22 1999	
	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)
W14	-----	1159.64	-----	-----	-----	1159.80
W16	-----	1161.60	-----	-----	-----	1161.89
W17	0.36	1160.34	0.31	1160.19	0.28	1160.65
W18	-----	1160.87	-----	-----	-----	1161.00
W19	0.05	1162.14	-----	-----	-----	1162.64
W21	-----	1160.76	-----	-----	-----	1160.80
W22	0.47	1160.58	0.53	1160.15	0.15	1160.99
W23	-----	1160.80	-----	-----	-----	1160.96
W24A	-----	1160.78	-----	-----	-----	1160.93
W25	-----	1162.86	-----	-----	-----	1163.22
W26	-----	1160.82	-----	-----	-----	1160.99
W27	-----	1161.31	-----	-----	-----	1161.60
W28	-----	1160.87	-----	-----	-----	1160.96
W29	-----	1160.74	-----	-----	-----	1170.86
W30	0.61	1160.01	0.84	1159.53	0.67	1159.89
W31	-----	1160.84	-----	-----	-----	1160.80
W32	-----	1160.84	-----	-----	-----	1160.71
W33	0.14	1161.26	0.21	1160.98	0.06	1161.45
W34	0.21	1157.78	0.21	1157.52	0.12	1157.88
W35	0.66	1160.24	0.55	1159.97	0.46	1160.26
W36	-----	1161.53	-----	1160.96	-----	1161.31
W39	-----	1161.53	0.02	1161.20	-----	1161.54
W40	0.83	1160.41	0.79	1160.14	0.78	1160.61
W41	-----	1161.82	-----	-----	-----	1166.05
W42	0.14	1161.99	0.13	1161.84	0.24	1162.08
W44	0.37	1160.49	0.50	1160.16	0.33	1160.51
W45	0.11	1160.82	0.09	1160.60	0.11	1161.27
W46	1.11	1159.61	1.13	1159.22	0.99	1159.56
W47	0.06	1157.33	0.05	1156.48	0.12	1156.84
W48	0.07	1156.54	0.15	1156.39	-----	1156.82
W49	0.14	1157.08	0.41	1156.67	0.35	1157.17
W66	-----	1162.61	-----	1162.62	-----	1162.98
W67	-----	1162.67	-----	1162.59	-----	1162.94
W68A	0.25	1162.41	0.23	1162.37	0.06	1162.83
W68B	-----	1162.54	-----	1163.34	-----	1162.88
W69	1.06	1160.40	1.08	1160.17	1.05	1160.52
W70B	-----	1162.21	-----	1162.22	-----	1162.57
River	-----	No Gage	-----	No Gage	-----	No Gage

Notes:

ft msl = feet mean sea level

May water levels collected June 8 as part of semiannual groundwater sampling event

FIGURES

FIGURE 1
FBR Influent and Effluent
PCP Concentrations

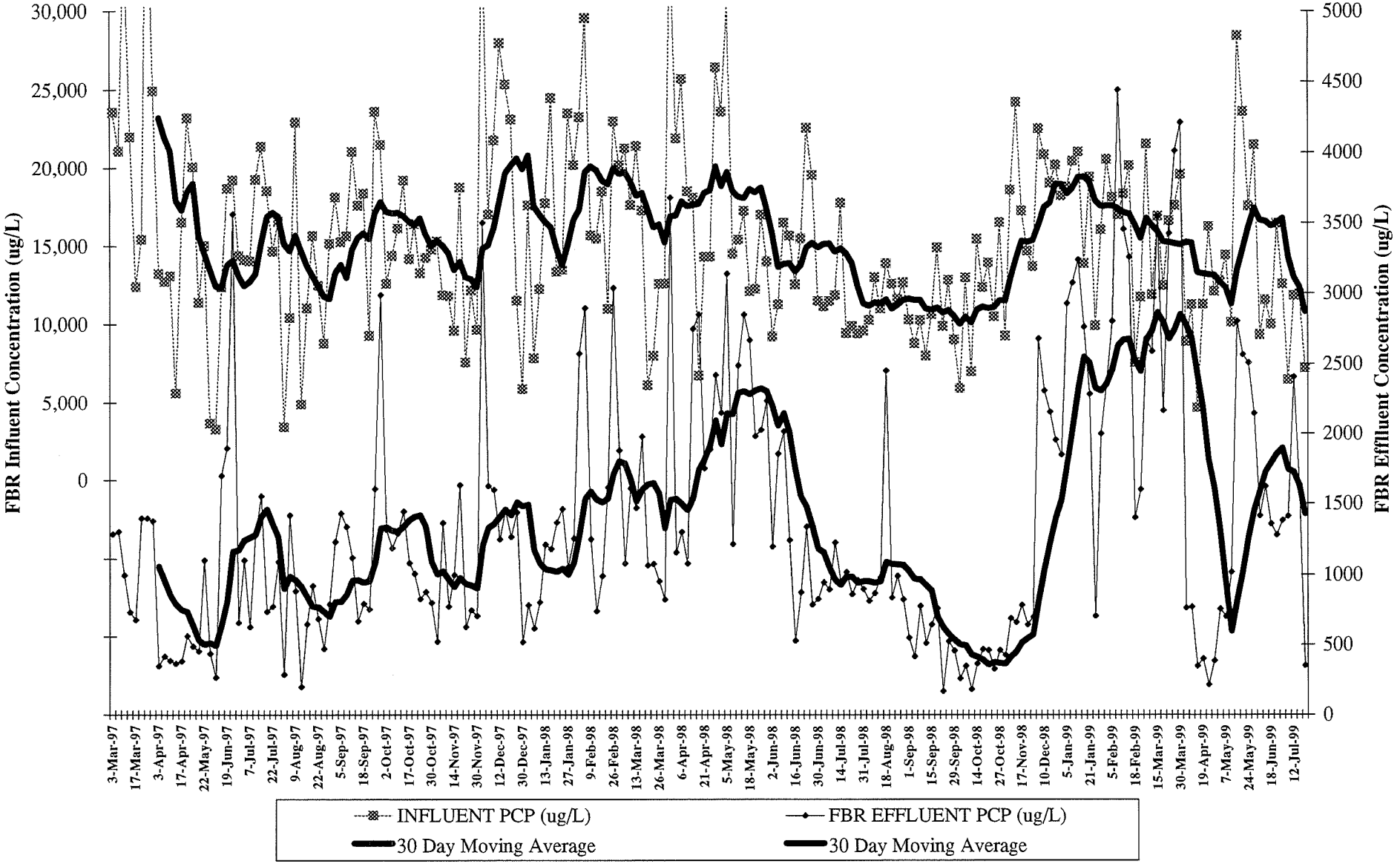
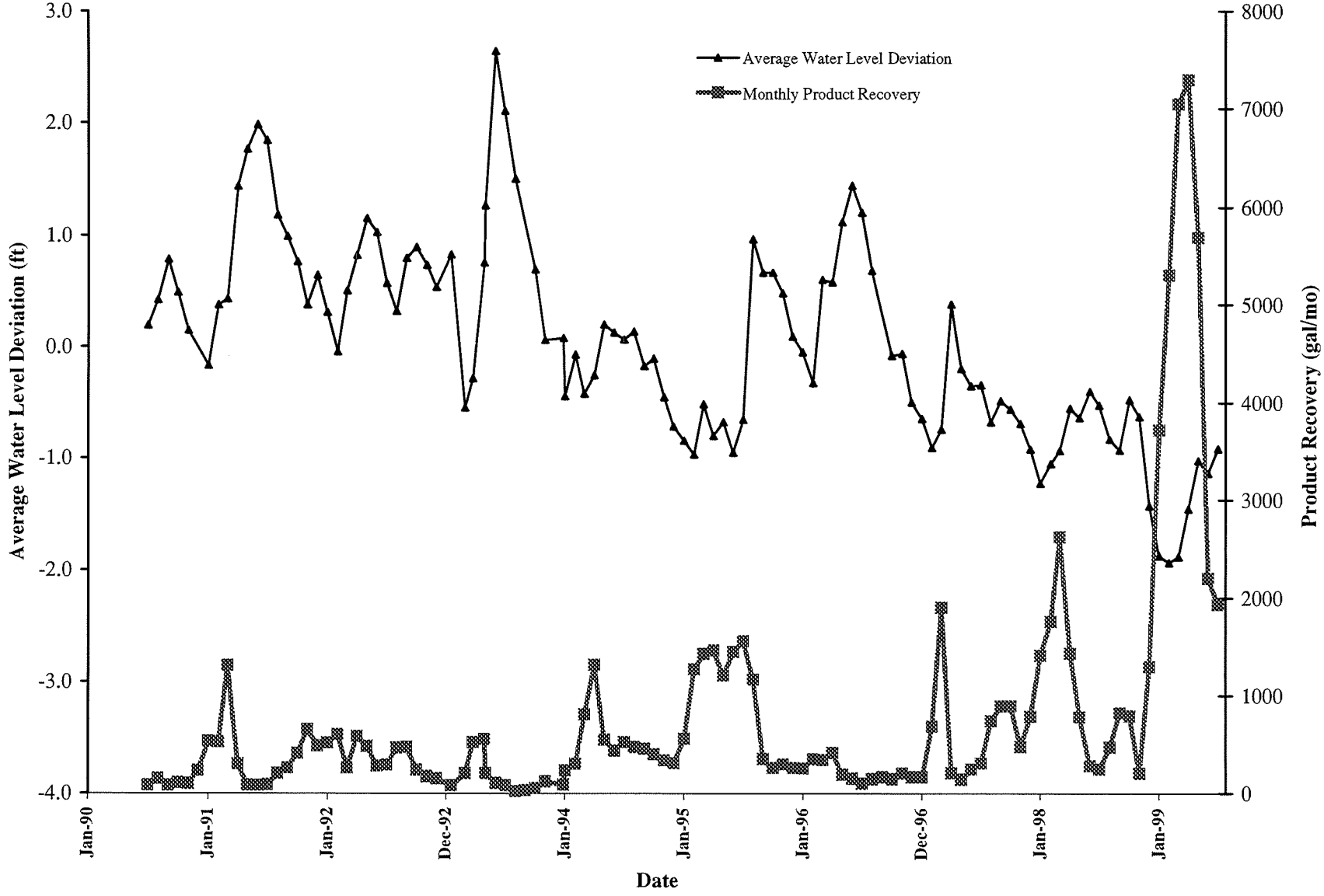


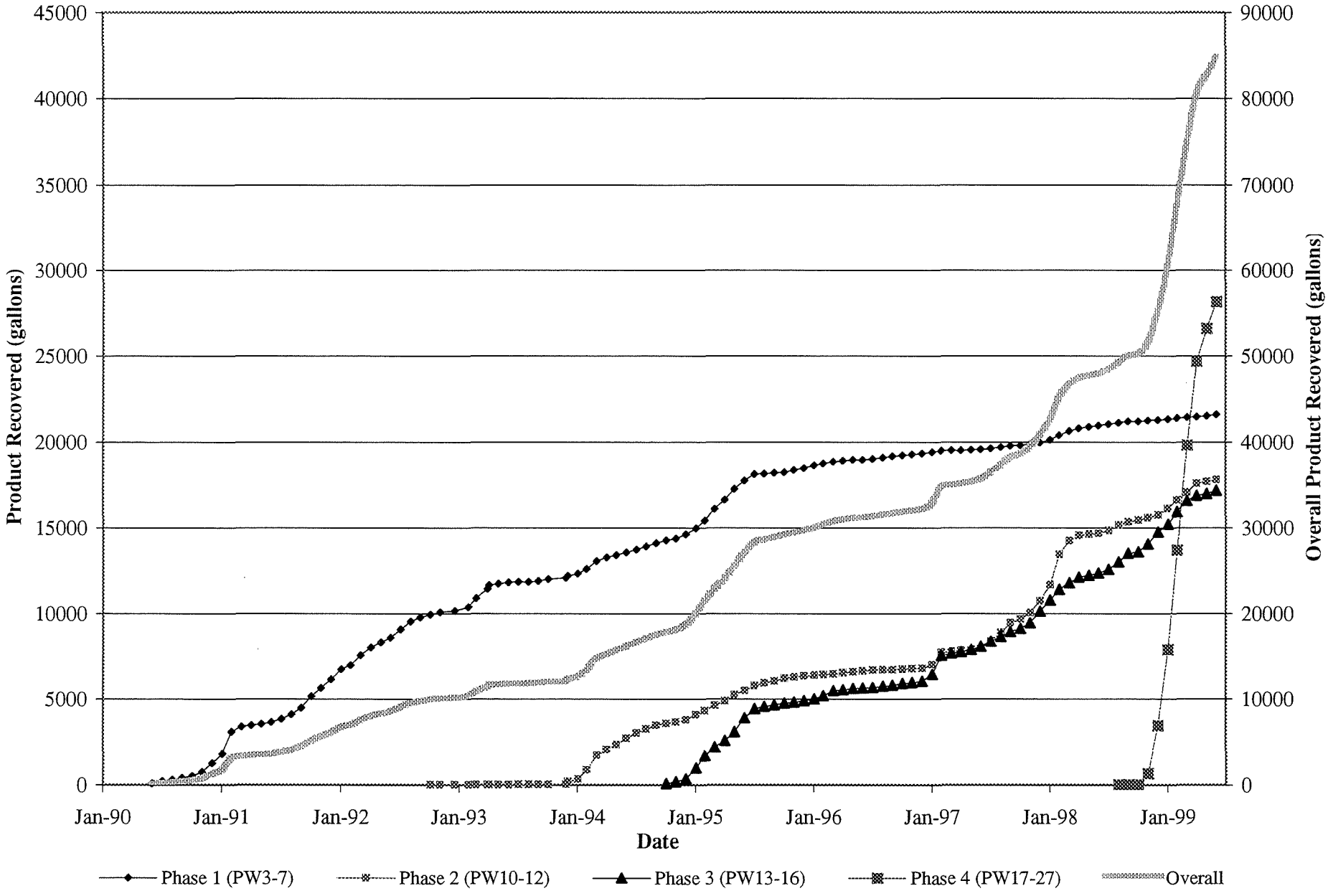
FIGURE 2
Average Water Level Deviation Versus Product Recovery Rates



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8/14/99

FIGURE 3
Cumulative Product Recovery by Phase and Overall



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8/14/99

7/30/99

MONTGOMERY WATSON

RECEIVED
JUL 30 1999
WAUSAU DNR

July 29, 1999

Ms. Lisa Gutknecht
Wisconsin Department of Natural Resources
5301 Rib Mountain Drive
Wausau, Wisconsin 54401

Re: June Progress Report
WAULECO, Inc.
Wausau, Wisconsin
Administrative Order No. NCD-91-04

BRRTS# 02-37-000006

Dear Ms. Gutknecht:

On behalf of WAULECO, Montgomery Watson is submitting two copies (enclosed) of the June Progress Report for the WAULECO, Inc. site in Wausau, Wisconsin. The report is submitted in fulfillment of Paragraph 41 of Administrative Order No. NCD-91-04.

If you have any questions or comments regarding this information, please call.

Sincerely,

MONTGOMERY WATSON

Patrick H. Lytle
Associate Engineer

Douglas J. Bach, P.E.
Project Manager

Enclosures: Monthly Report

cc: Wastewater Engineer - WDNR (Wausau, WI) (1)
J. Gehin - Wausau Utilities Director (1)
P. Peshek (3)
R. Brandt (1)

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One Science Court
P.O. Box 5385
Madison, Wisconsin
53705-0385

Tel: 608 231 4747
Fax: 608 231 4777

Serving the World's Environmental Needs

WAULECO INCORPORATED
WAUSAU, WISCONSIN
MONTHLY REPORT
JUNE 1999

SUMMARY OF JUNE 1999 ACTIVITIES

Groundwater Extraction and Treatment System Operation

Treatment system performance data for this reporting period are summarized in Table 1. PCP screening (on-site gas chromatograph) results for the system effluent samples, which represent the water discharged to the municipal sewer, averaged 26 ug/L for the month of June, with a maximum single day concentration of 37 ug/L. The laboratory result for PCP in the system effluent was 120 ug/L. The on-site result for the same day was 20 ug/L. These results indicate PCP concentrations were below the permit levels of 150 ug/L (monthly average) and 300 ug/L (daily maximum). These figures indicate that the discrepancy in on-site and laboratory analytical results continued during June.

As discussed in the May monthly report, CTI was retained to perform a thorough analysis and inspection of the on-site gas chromatograph to determine the cause of the inconsistency. This evaluation was performed on June 18, 1999. A written report was prepared by CTI, which recommended a number of operational and maintenance modifications that should produce improved results. The recommendations outlined in this report are currently being implemented at the site. As these modifications are completed, another performance evaluation sample will be split for analysis by both the on-site instrument and CTI Laboratories. In the meantime, if PCP is detected by the on-site GC in effluent samples at a concentration greater than 40 ug/L, an additional verification sample will immediately be collected and sent to an off-site laboratory for analysis.

Laboratory results for mercury analyses of the FBR influent, FBR effluent, and system effluent samples collected on June 30 are included in Table 1. The mercury concentration in the system effluent samples (discharged to the sanitary sewer) was 0.3 ug/L.

PCP influent concentrations ranged from 9,323 ug/L to 16,439 ug/L during June (Table 1). PCP influent and effluent concentrations in the FBR are presented graphically both as individual data points and as a 30-day moving average in Figure 1. As shown in Figure 1, the influent PCP concentrations remained elevated following a sharp increase in May. FBR effluent concentrations increased as well, due to increased influent PCP levels and biosolids buildup on the carbon. The average PCP removal efficiency for the FBR during June was 88% compared to an average of 90% during the previous year.

Daily groundwater flow through the treatment system (Table 2) ranged from 33 to 64 gallons per minute (gpm) during June. A computer failure on June 11 prevented data collection from June 12 through June 29. The computer was back online June 30. The computer failure did not disrupt operation of the treatment system, other than requiring manual adjustment and data gathering. Total treatment system efficiency (including carbon polishing units) continues to be greater than 99%.

Product Recovery

Product recovery data for the reporting period are presented in Table 3. Historic product recovery (since July 1990) compared to average water level deviation is presented in Figure 2. As of late June, water levels in the vicinity of the site decreased slightly, following an increase in May. Product recovery decreased to 2,202 gallons in June. This decrease is a delayed effect of the higher water levels experienced in May and closely resembles declines in product recovery typically experienced each late-spring and early-summer (for example, April 1997 and May 1998). Increased water levels are also the probable cause of increased influent PCP concentrations, as additional residual product was dissolved into the groundwater. Approximately 87 percent of the product recovered during June came from the new extraction wells, with the most production from PW18, PW24, and PW25.

A comparison of the product recovery of each phase of well installations is presented in Figure 3. This figure illustrates the historical productivity of each phase of well installations. Cumulative product recovery of all wells is also plotted on the secondary vertical axis.

Groundwater Monitoring

Groundwater elevation and product thickness data for April, May, and June are summarized in Table 4.

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TABLE 1

Above Ground Treatment System Data
Wauleco, Inc.
Wausau, Wisconsin

Parameter	UNIT	DATE	FBR Influent	FBR Effluent	FFR Effluent	Bag Filter Effluent	Filters1+2 Effluent	System Effluent	System Effluent DUP
Biological Oxygen Demand	mg/L	6/30/99	18	11				2	
Chemical Oxygen Demand	mg/L	6/30/99	71	67				52	
Chloride	mg/L	6/30/99	177	181				177	
Dissolved Oxygen	mg/L	6/3/99	8	2.7	5.2				
	mg/L	6/15/99	7.8	2.9	5.4				
	mg/L	6/22/99	7	2.7	4.4				
	mg/L	6/30/99	6.1	1.4	3.8				
Nitrogen, Ammonia	mg/L	6/3/99	3	<	<				
	mg/L	6/15/99	3	1	<				
	mg/L	6/22/99	3	<	<				
	mg/L	6/30/99	1	1	1				
Nitrogen, Nitrate	mg/L	6/3/99	<	<	<				
	mg/L	6/15/99	<	<	<				
	mg/L	6/22/99	<	<	<				
	mg/L	6/30/99	<	<	<				
Nitrogen, Nitrate + Nitrite	mg/L	6/30/99	0.37	0.16				<	
Nitrogen, Total Kjeldahl	mg/L	6/30/99	1.82	1.64				1.04	
Orthophosphate	mg/L	6/30/99	0.12	<				0.39	
Pentachlorophenol-Screen	ug/L	6/1/99						20	
	ug/L	6/2/99						34	
	ug/L	6/3/99	9323	1412	1454			23	
	ug/L	6/4/99						23	
	ug/L	6/5/99						25	
	ug/L	6/6/99						25	
	ug/L	6/7/99						25	
	ug/L	6/8/99						30	
	ug/L	6/9/99						30	
	ug/L	6/10/99						32	
	ug/L	6/11/99						21	
	ug/L	6/12/99						13	
	ug/L	6/13/99						13	
	ug/L	6/14/99						13	
	ug/L	6/15/99	11543	1621	1535			26	
	ug/L	6/16/99						16	
	ug/L	6/17/99						29	
	ug/L	6/18/99	9987	1354	1235			34	
	ug/L	6/19/99						31	
	ug/L	6/20/99						31	
	ug/L	6/21/99						31	
	ug/L	6/22/99	16439	1278	1135			18	
	ug/L	6/23/99						37	

TABLE 1

Above Ground Treatment System Data
Wauleco, Inc.
Wausau, Wisconsin

Parameter	UNIT	DATE	FBR Influent	FBR Effluent	FFR Effluent	Bag Filter Effluent	Filters1+2 Effluent	System Effluent	System Effluent DUP
	ug/L	6/24/99						30	
	ug/L	6/25/99						29	
	ug/L	6/26/99						34	
	ug/L	6/27/99						34	
	ug/L	6/28/99						34	
	ug/L	6/29/99						27	
	ug/L	6/30/99	12546	1379	1200			20	
pH	S.U.	6/3/99	6.9	6.8	6.8				
	S.U.	6/15/99	6.9	6.8	6.8				
	S.U.	6/22/99	6.8	6.7	6.7				
	S.U.	6/30/99	6.5	6.5	6.4				
Phosphorus, Phosphate	mg/L	6/3/99	2	1	1				
	mg/L	6/15/99	2	1	1				
	mg/L	6/22/99	2	2	2				
	mg/L	6/30/99	5.5	4	3.5				
Solids, Total Suspended	mg/L	6/30/99	<	9		12	5	<	
Mercury	ug/L	6/30/99	0.7	0.6				0.3	
Phenols									
2,4,5-Trichlorophenol	ug/L	6/30/99	<	<	<	<	<	<	<
2,4,6-Trichlorophenol	ug/L	6/30/99	<	<	<	<	<	<	<
2,4-Dichlorophenol	ug/L	6/30/99	<	<	<	<	<	<	<
2,4-Dimethylphenol	ug/L	6/30/99	<	<	<	<	<	<	<
2,4-Dinitrophenol	ug/L	6/30/99	<	<	<	<	<	<	<
2,6-Dichlorophenol	ug/L	6/30/99	<	<	<	<	<	<	<
2-Chlorophenol	ug/L	6/30/99	<	<	<	<	<	<	<
2-Methylphenol	ug/L	6/30/99	<	<	<	<	<	<	<
2-Nitrophenol	ug/L	6/30/99	<	<	<	<	<	<	<
3&4-Methylphenol	ug/L	6/30/99	<	<	<	<	<	<	<
4,6-Dinitro-2-Methylphenol	ug/L	6/30/99	<	<	<	<	<	<	<
4-Chloro-3-Methylphenol	ug/L	6/30/99	<	<	<	<	<	<	<
4-Nitrophenol	ug/L	6/30/99	<	<	<	<	<	<	<
Pentachlorophenol	ug/L	6/30/99	5600	4300	3400	3800	2700	120	99
Phenol	ug/L	6/30/99	<	<	<	<	<	<	<
2,3,5,6-Tetrachlorophenol	ug/L	6/30/99	<	800	670	730	580	24	26

TABLE 2

Treatment System Flows
Wauleco, Inc.
Wausau, Wisconsin

Date	Influent Groundwater Flow Rate [1] (gpm)	POTW Discharge Flow Rate [1] (gpm)		POTW Totalized Discharge (gal)
06/01/99	32.81	29.95		10,132,830
06/02/99	48.86	45.78		10,198,758
06/03/99	48.34	43.36		10,261,193
06/04/99	50.75	45.35		10,326,503
06/05/99	63.69	56.77		10,408,249
06/06/99	45.43	32.00		10,454,331
06/07/99	47.49	31.71		10,500,000
06/08/99	53.02	57.44		10,582,713
06/09/99	36.61	32.01		10,628,811
06/10/99	46.11	41.59		10,688,694
06/11/99	52.52	43.79		10,751,753
6/12/1999 [3]				
06/13/99				
06/14/99				
06/15/99				
06/16/99				
06/17/99				
06/18/99				
06/19/99				
06/20/99				
06/21/99				
06/22/99				
06/23/99				
06/24/99				
06/25/99				
06/26/99				
06/27/99				
06/28/99				
06/29/99				
06/30/99	48.43	43.73	[4]	11,948,082
Average	47.84	41.96		
Total [2]:				1,858,381

Footnotes:

(1) Influent and POTW flow rates are daily averages. These may not be equal due to balancing in the treatment system and calibration of individual flowmeters.

(2) Total is the cumulative POTW discharge during the reporting period.

(3) Computer failure on June 11; data unavailable for June 12 - June 29

(4) Flowrates reported for 6/30 represent the average of June 12 - June 30 flows

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TABLE 3

Product Removal
(gallons per day)
Wauleco, Inc.
Wausau, Wisconsin

Date	PW04	PW05	PW07	PW09	PW10	PW11	PW12	PW13	PW15	PW16	PW17	PW18	PW19	PW20	PW21	PW22	PW23	PW24	PW25	PW26	PW27	Date Total
06/01/99	0.0	0.0	0.0	0.0	4.0	25.0	0.0	5.0	0.0	0.0	0.0	35.0	0.0	3.4	0.0	0.0	5.0	30.0	35.0	0.0	0.0	142.4
06/02/99	1.7	0.0	0.0	0.0	0.0	12.0	0.0	8.6	0.0	0.0	0.0	50.0	0.0	10.0	0.0	0.0	1.7	12.0	26.0	0.0	5.2	127.3
06/03/99	5.2	0.0	0.0	0.0	1.7	6.9	0.0	3.4	0.0	0.0	0.0	60.0	1.7	8.6	0.0	0.0	1.7	6.9	25.8	0.0	5.2	127.1
06/04/99	3.4	0.0	0.0	0.0	0.0	5.2	0.0	3.4	0.0	0.0	0.0	50.0	1.7	8.6	0.0	0.0	3.4	5.2	26.0	0.0	6.9	113.8
06/05/99	1.7	0.0	0.0	0.0	0.0	12.0	0.0	5.2	0.0	0.0	0.0	24.1	0.0	19.0	0.0	0.0	0.0	8.6	25.8	1.7	3.4	101.5
06/06/99	1.7	0.0	0.0	0.0	0.0	6.9	0.0	5.2	0.0	0.0	0.0	27.0	0.0	1.7	0.0	0.0	0.0	3.4	28.0	0.0	3.4	77.4
06/07/99	1.7	0.0	0.0	0.0	0.0	8.0	0.0	5.2	0.0	0.0	0.0	25.8	0.0	3.4	0.0	0.0	0.0	3.4	15.5	0.0	1.7	64.8
06/08/99	1.7	0.0	0.0	0.0	0.0	3.0	0.0	3.4	0.0	0.0	0.0	26.0	0.0	3.4	0.0	0.0	0.0	3.4	17.2	0.0	3.4	61.7
06/09/99	1.7	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	25.8	0.0	3.4	0.0	0.0	0.0	3.4	19.0	1.7	3.4	62.0
06/10/99	1.7	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	28.0	1.7	3.4	0.0	0.0	0.0	3.4	15.5	0.0	3.4	60.7
06/11/99	1.7	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	25.8	0.0	3.4	0.0	0.0	0.0	3.4	17.2	0.0	3.4	56.8
06/12/99	1.7	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	28.0	0.0	3.4	0.0	0.0	0.0	8.6	17.0	0.0	5.0	65.5
06/13/99	1.7	0.0	0.0	0.0	0.0	1.7	0.0	1.7	0.0	0.0	0.0	25.8	0.0	3.4	0.0	0.0	0.0	12.0	15.5	1.7	3.4	67.1
06/14/99	1.7	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	28.0	0.0	6.9	0.0	0.0	0.0	12.0	17.2	0.0	5.2	72.7
06/15/99	1.7	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	25.8	0.0	6.9	0.0	0.0	0.0	12.0	19.0	0.0	5.2	74.0
06/16/99	1.7	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	28.0	1.7	6.9	0.0	0.0	0.0	16.0	15.5	0.0	5.2	78.4
06/17/99	1.7	0.0	0.0	0.0	0.0	1.7	0.0	3.4	0.0	0.0	0.0	19.0	0.0	3.4	0.0	0.0	0.0	17.2	17.2	0.0	5.2	68.9
06/18/99	3.4	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	19.0	0.0	3.4	0.0	0.0	1.7	19.0	19.0	1.7	5.2	75.9
06/19/99	1.7	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	19.0	0.0	3.4	0.0	0.0	1.7	15.5	15.5	0.0	5.2	65.4
06/20/99	1.7	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	10.3	1.7	3.4	0.0	0.0	1.7	17.2	17.2	0.0	5.2	63.6
06/21/99	6.9	0.0	0.0	0.0	0.0	1.7	0.0	3.4	0.0	0.0	0.0	12.0	0.0	3.4	0.0	0.0	0.0	19.0	19.0	0.0	3.4	68.9
06/22/99	3.4	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	15.5	0.0	3.4	0.0	0.0	1.7	6.9	25.8	0.0	3.4	65.4
06/23/99	3.4	0.0	0.0	0.0	0.0	1.7	0.0	3.4	0.0	0.0	0.0	17.2	0.0	3.4	0.0	0.0	1.7	8.6	28.0	1.7	1.7	71.0
06/24/99	1.7	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	19.0	1.7	3.4	0.0	0.0	0.0	8.6	15.5	0.0	1.7	55.1
06/25/99	1.7	0.0	0.0	0.0	0.0	1.7	0.0	3.4	0.0	0.0	0.0	15.5	0.0	3.4	0.0	0.0	1.7	5.2	17.2	0.0	3.0	52.9
06/26/99	1.7	0.0	0.0	0.0	0.0	1.7	0.0	1.7	0.0	0.0	0.0	17.2	0.0	3.4	0.0	0.0	1.7	3.4	17.0	1.7	1.7	51.4
06/27/99	1.7	0.0	0.0	0.0	0.0	1.7	0.0	1.7	0.0	0.0	0.0	19.0	0.0	3.4	0.0	0.0	1.7	3.4	15.5	0.0	5.2	53.4
06/28/99	1.7	0.0	0.0	0.0	0.0	1.7	0.0	3.4	0.0	0.0	0.0	15.5	1.7	3.4	0.0	0.0	1.7	6.9	17.2	0.0	5.2	58.5
06/29/99	1.7	0.0	0.0	0.0	0.0	1.7	0.0	1.7	0.0	0.0	0.0	17.2	0.0	3.4	0.0	0.0	2.0	3.4	8.6	0.0	5.2	45.0
06/30/99	1.7	0.0	0.0	0.0	0.0	6.9	0.0	2.0	0.0	0.0	0.0	19.0	0.0	5.0	0.0	0.0	1.7	5.0	5.0	1.7	5.2	53.2
Well Total	65.3	0.0	0.0	0.0	5.7	101.4	0.0	105.0	0.0	0.0	0.0	747.4	12.0	145.8	0.0	0.0	31.1	283.4	572.8	12.0	119.8	2201.7

TABLE 4

Groundwater Elevation Data
Wauleco, Inc.
Wausau, Wisconsin

Well	April 30 1999		June 08 1999		June 30 1999	
	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)
PW01	0.05	1161.72	0.08	1162.16	0.10	1162.02
PW02	-----	1161.75	-----	1162.23	-----	-----
PW03	-----	1161.96	-----	1162.32	-----	1162.21
PW3S	0.31	1158.89	0.19	1159.56	0.29	1159.14
PW04	1.80	1154.50	-----	1161.12	1.35	1155.90
PW05	1.18	1153.23	0.50	1153.62	0.68	1150.83
PW06	-----	1160.94	0.45	1161.31	-----	-----
PW07	-----	1156.70	-----	1157.72	0.02	1157.83
PW08	0.47	1159.94	0.40	1160.38	0.39	1160.36
PW9I	-----	1162.08	-----	-----	-----	-----
PW9O	-----	1161.14	-----	1162.27	-----	1160.86
PW10	0.45	1158.81	-----	1160.87	-----	1153.41
PW11	1.40	1157.95	0.22	1160.55	0.37	1158.06
PW12	0.30	1161.81	0.38	1162.23	0.40	1162.18
PW13	0.40	1159.00	0.92	1160.10	0.73	1158.57
PW14	0.22	1160.55	0.29	1160.41	0.25	1160.18
PW15	-----	1154.31	-----	1153.87	-----	1153.98
PW16	-----	1159.38	0.82	1159.18	0.04	1159.19
PW17	0.40	1156.24	0.14	1156.94	0.21	1156.47
PW18	1.40	1158.54	0.31	1159.69	0.36	1159.22
PW19	1.60	1158.42	0.82	1159.85	0.48	1159.83
PW20	1.00	1158.82	0.83	1159.36	0.44	1159.35
PW21	1.60	1158.69	0.68	1159.96	0.80	1159.21
PW22	-----	1157.30	-----	1159.08	-----	1157.50
PW23	0.30	1158.87	0.16	1158.64	0.12	1158.78
PW24	1.50	1158.28	0.55	1158.88	0.15	1159.08
PW25	0.30	1158.62	0.33	1158.60	0.59	1158.17
PW26	0.10	1158.90	0.07	1158.95	0.27	1158.32
PW27	0.60	1158.91	0.44	1158.55	0.24	1158.77
P01	0.54	1159.80	1.09	1159.65	0.47	1159.95
OW01	-----	1162.24	-----	1162.73	-----	-----
W01A	-----	1162.30	-----	1162.79	-----	-----
W01B	-----	1162.44	-----	1162.78	-----	-----
W02	0.41	1161.50	0.49	1161.73	0.48	1161.72
W03A	0.50	1160.41	0.48	1160.24	0.47	1159.94
W03B	-----	1161.44	-----	1161.24	-----	1161.09
W04A	0.39	1160.91	0.19	1161.55	0.42	1161.12
W04B	0.50	1161.53	0.17	1161.56	0.19	1161.31
W05	0.52	1159.72	0.35	1160.35	0.57	1159.83
W06R	-----	1162.20	0.04	1162.70	0.17	1162.52
W07	-----	1161.62	0.13	1162.22	-----	-----
W08	-----	1170.66	-----	1173.17	-----	-----
W09	-----	1162.41	-----	1162.34	-----	-----
W10A	-----	1161.22	-----	1160.87	-----	-----
W10B	-----	1161.21	-----	1160.90	-----	-----
W11	-----	1161.21	-----	1160.81	-----	-----
W12	-----	1160.15	-----	1160.48	-----	-----
W13	-----	1161.67	-----	1161.25	-----	-----

TABLE 4

Groundwater Elevation Data
Wauleco, Inc.
Wausau, Wisconsin

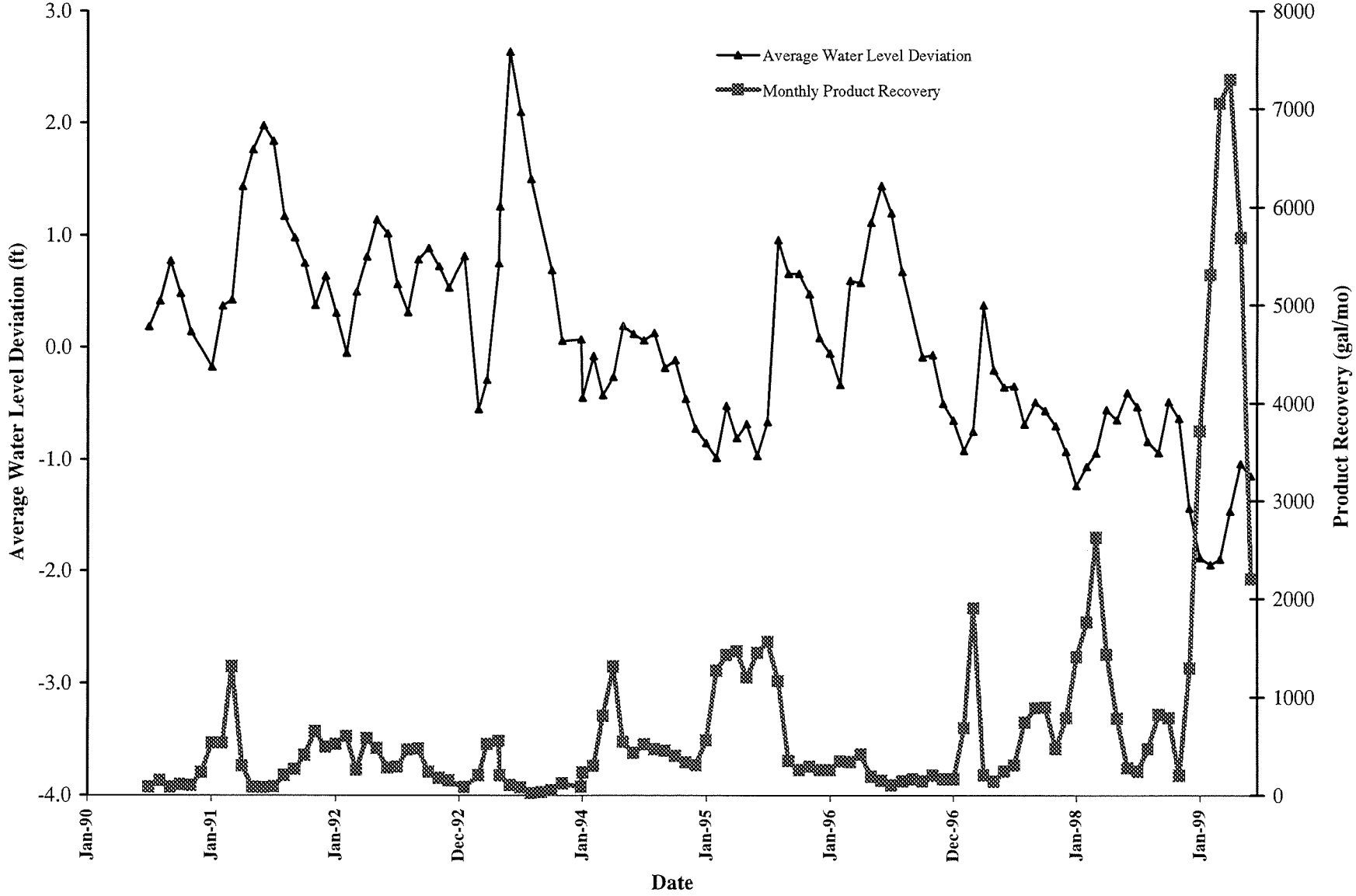
Well	April 30 1999		June 08 1999		June 30 1999	
	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)
W14	-----	1159.94	-----	1159.64	-----	-----
W16	-----	1162.09	-----	1161.60	-----	-----
W17	0.38	1160.29	0.36	1160.34	0.31	1160.19
W18	-----	1161.14	-----	1160.87	-----	-----
W19	-----	1162.07	0.05	1162.14	-----	-----
W21	-----	1160.89	-----	1160.76	-----	-----
W22	-----	1161.05	0.47	1160.58	0.53	1160.15
W23	-----	1161.12	-----	1160.80	-----	-----
W24A	-----	1161.08	-----	1160.78	-----	-----
W25	-----	1162.52	-----	1162.86	-----	-----
W26	-----	1161.17	-----	1160.82	-----	-----
W27	-----	1161.88	-----	1161.31	-----	-----
W28	-----	1161.10	-----	1160.87	-----	-----
W29	-----	1161.13	-----	1160.74	-----	-----
W30	0.80	1159.46	0.61	1160.01	0.84	1159.53
W31	-----	1160.87	-----	1160.84	-----	-----
W32	-----	1160.91	-----	1160.84	-----	-----
W33	0.78	1160.69	0.14	1161.26	0.21	1160.98
W34	0.20	1157.42	0.21	1157.78	0.21	1157.52
W35	0.32	1159.92	0.66	1160.24	0.55	1159.97
W36	-----	1160.83	-----	1161.53	-----	1160.96
W39	-----	1160.72	-----	1161.53	0.02	1161.20
W40	0.80	1160.29	0.83	1160.41	0.79	1160.14
W41	-----	1165.97	-----	1161.82	-----	-----
W42	0.15	1161.22	0.14	1161.99	0.13	1161.84
W44	0.39	1160.16	0.37	1160.49	0.50	1160.16
W45	0.12	1160.76	0.11	1160.82	0.09	1160.60
W46	1.04	1159.06	1.11	1159.61	1.13	1159.22
W47	1.26	1155.72	0.06	1157.33	0.05	1156.48
W48	0.04	1156.71	0.07	1156.54	0.15	1156.39
W49	-----	1157.31	0.14	1157.08	0.41	1156.67
W66	-----	1162.27	-----	1162.61	-----	1162.62
W67	-----	1162.13	-----	1162.67	-----	1162.59
W68A	0.22	1161.96	0.25	1162.41	0.23	1162.37
W68B	-----	1162.21	-----	1162.54	-----	1163.34
W69	0.88	1160.19	1.06	1160.40	1.08	1160.17
W70B	-----	1161.87	-----	1162.21	-----	1162.22
River	-----	No Gage	-----	No Gage	-----	No Gage

Notes:

ft msl = feet mean sea level

May water levels collected June 8 as part of semiannual groundwater sampling event

FIGURE 2
Average Water Level Deviation Versus Product Recovery Rates



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7/12/99

FIGURE 3
Cumulative Product Recovery by Phase and Overall

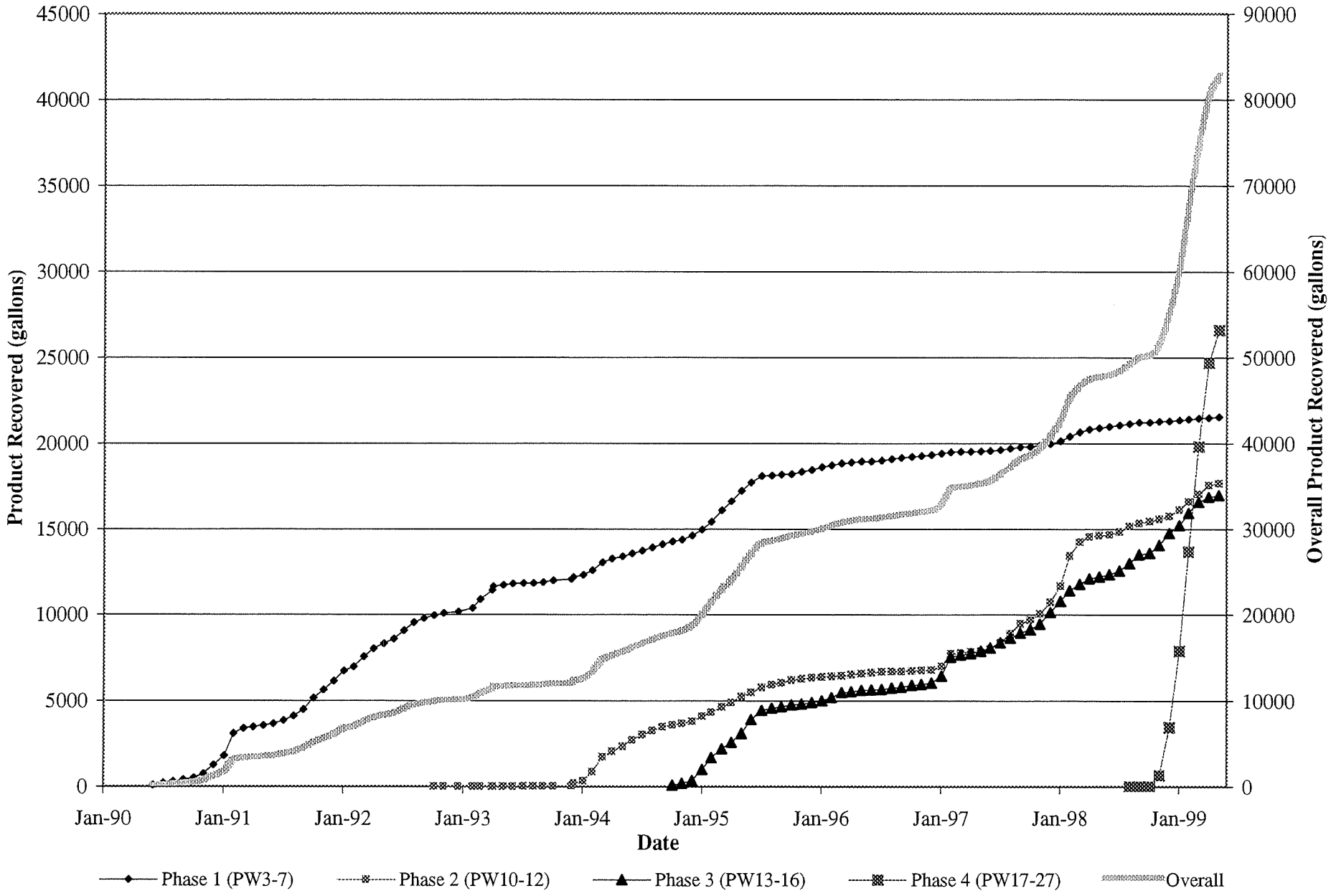
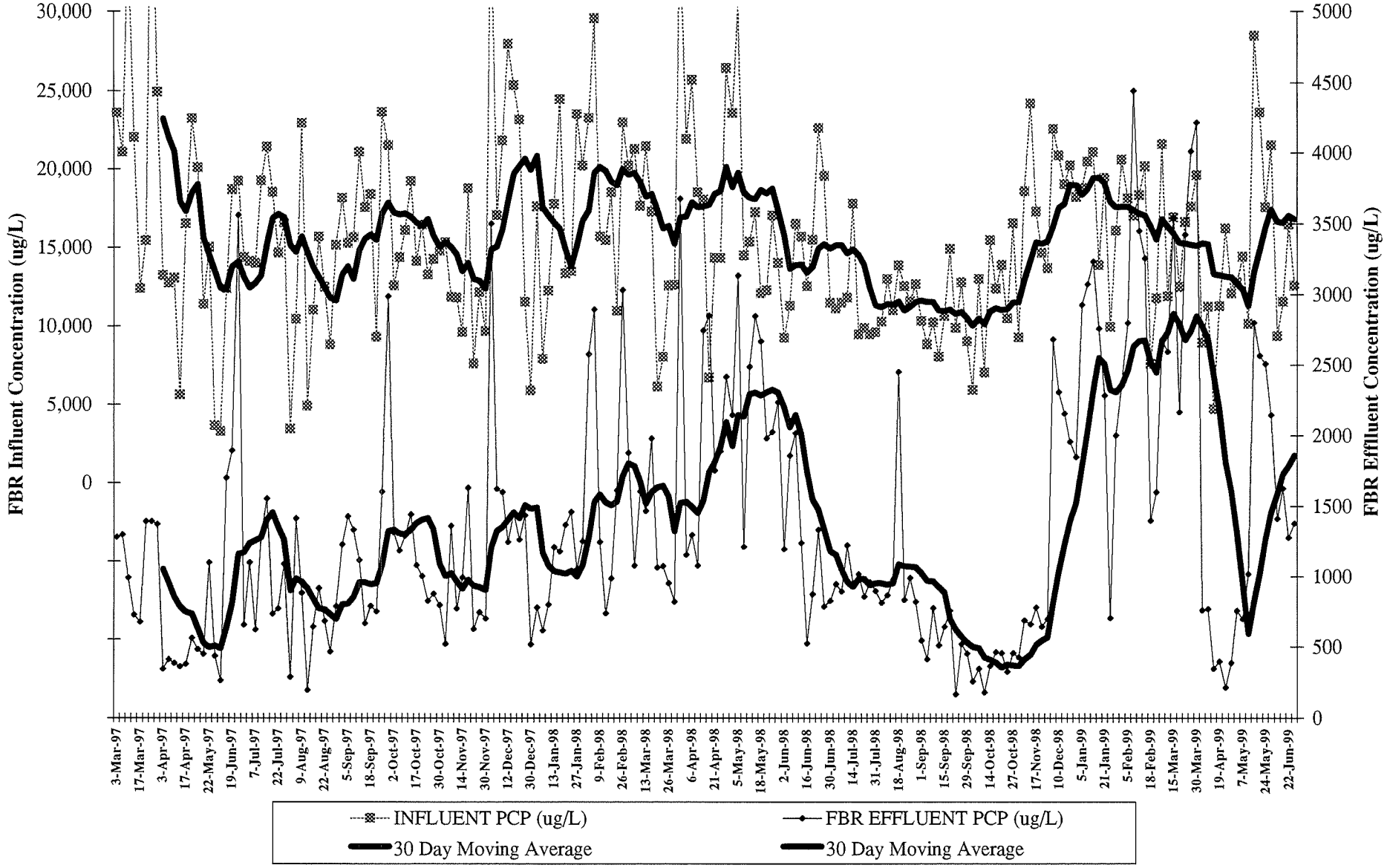


FIGURE 1
FBR Influent and Effluent
PCP Concentrations



6/18/99

MONTGOMERY WATSON

RECEIVED
JUN 18 1999
WAUSAU DNR

June 17, 1999

Ms. Lisa Gutknecht
Wisconsin Department of Natural Resources
5301 Rib Mountain Drive
Wausau, Wisconsin 54401

Re: May Progress Report
WAULECO, Inc.
Wausau, Wisconsin
Administrative Order No. NCD-91-04

BRRTS# 02-37-000006

Dear Ms. Gutknecht:

On behalf of WAULECO, Montgomery Watson is submitting two copies (enclosed) of the May Progress Report for the WAULECO, Inc. site in Wausau, Wisconsin. The report is submitted in fulfillment of Paragraph 41 of Administrative Order No. NCD-91-04.

If you have any questions or comments regarding this information, please call.

Sincerely,

MONTGOMERY WATSON

Patrick H. Lytle
Associate Engineer

Douglas J. Bach, P.E.
Project Manager

Enclosures: Monthly Report

cc: Wastewater Engineer - WDNR (Wausau, WI) (1)
J. Gehin - Wausau Utilities Director (1)
P. Peshek (3)
R. Brandt (1)

PHL/phl/vlr/DJB
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One Science Court
P.O. Box 5385
Madison, Wisconsin
53705-0385

Tel: 608 231 4747
Fax: 608 231 4777

WAULECO INCORPORATED
WAUSAU, WISCONSIN
MONTHLY REPORT
MAY 1999

SUMMARY OF MAY 1999 ACTIVITIES

Groundwater Extraction and Treatment System Operation

Treatment system performance data for this reporting period are summarized in Table 1. PCP screening (on-site gas chromatograph) results for the system effluent samples, which represent the water discharged to the municipal sewer, averaged 23 ug/L for the month of May, with a maximum single day concentration of 40 ug/L. The laboratory result for PCP in the system effluent was 53 ug/L. The on-site result for the same day was 28 ug/L. These results indicate PCP concentrations were well below the permit levels of 150 ug/L (monthly average) and 300 ug/L (daily maximum).

In an effort to determine the source of the discrepancy between CTI Laboratories and on-site instrument results, a performance evaluation (PE) sample was analyzed in May. This sample was split for analysis by both the on-site instrument and CTI Laboratories. The result obtained by the on-site instrument was not consistent with the unknown's actual PCP concentration or CTI's result. Consequently, CTI has been retained to perform a thorough analysis and inspection of the on-site instrument to determine the cause of the inaccuracy. As stated in the March report, if PCP is detected by the on-site GC in effluent samples at a concentration greater than 40 ug/L, an additional verification sample will immediately be collected and sent to an off-site laboratory for analysis.

Laboratory results for mercury analyses of the FBR influent, FBR effluent, and system effluent samples collected on May 17 are included in Table 1. The mercury concentration in the system effluent samples (discharged to the sanitary sewer) was 0.34 ug/L.

PCP influent concentrations ranged from 10,112 ug/L to 28,417 ug/L during May 1999 (Table 1). PCP influent and effluent concentrations in the FBR are presented graphically both as individual data points and as a 30-day moving average in Figure 1. As shown in Figure 1, the influent PCP concentrations increased significantly during May, resulting in increased effluent concentrations. The average PCP removal efficiency for the FBR during May was 91% compared to an average of 90% during the previous year.

Daily groundwater flow through the treatment system (Table 2) ranged from 38 to 58 gallons per minute (gpm) during May. Total treatment system efficiency (including carbon polishing units) continues to be greater than 99%.

Product Recovery

Product recovery data for the reporting period are presented in Table 3. Historic product recovery (since July 1990) compared to average water level deviation is presented in Figure 2. The effect of the new extraction wells on groundwater levels is also shown on Figure 2. Water levels in the vicinity of the site increased in May due to increased recharge from spring rainfall. Product recovery decreased accordingly, to 5,740 gallons. This recovery is still the third highest on record at the site. Increased water levels are also the probable cause of increased influent PCP concentrations, as additional residual product was dissolved into the groundwater. Approximately 85 percent of the product recovered during May came from the new extraction wells, with the most production from PW11, PW18, PW20, PW24, and PW25.

A comparison of the product recovery of each phase of well installations is presented in Figure 3. This figure illustrates the historical productivity of each phase of well installations. Cumulative product recovery of all wells is also plotted on the secondary vertical axis. Total cumulative recovery now exceeds 80,000 gallons.

Groundwater Monitoring

Groundwater elevation and product thickness data for March, April, and May are summarized in Table 4. The summer round of semi-annual groundwater monitoring occurred in early June.

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TABLE 1

Above Ground Treatment System Data
Wauleco, Inc.
Wausau, Wisconsin

Parameter	UNIT	DATE	FBR Influent	FBR Effluent	FFR Effluent	Bag Filter Effluent	Filters1+2 Effluent	System Effluent	System Effluent (dup)
Biological Oxygen Demand	mg/L	5/17/99	14	4				<	
Chemical Oxygen Demand	mg/L	5/17/99	36	17				57	
Chloride	mg/L	5/17/99	170	171				171	
Dissolved Oxygen	mg/L	5/4/99	6	2.8	4.3				
	mg/L	5/12/99	6.7	1.4	3.7				
	mg/L	5/19/99	6.7	2.1	4.3				
	mg/L	5/27/99	8	2.1	3.5				
Nitrogen, Ammonia	mg/L	5/4/99	3	<	<				
	mg/L	5/12/99	4	2	1				
	mg/L	5/19/99	3	<	<				
	mg/L	5/27/99	3	<	<				
Nitrogen, Nitrate	mg/L	5/4/99	<	<	<				
	mg/L	5/12/99	<	<	<				
	mg/L	5/19/99	<	<	<				
	mg/L	5/27/99	<	<	<				
Nitrogen, Nitrate + Nitrite	mg/L	5/17/99	0.38	<				<	
Nitrogen, Total Kjeldahl	mg/L	5/17/99	1.82	1.37				1.24	
Pentachlorophenol-Screen	ug/L	5/1/99						4	
	ug/L	5/2/99						4	
	ug/L	5/3/99						4	
	ug/L	5/4/99	12769	755	632			8	
	ug/L	5/5/99						5	
	ug/L	5/6/99						12	
	ug/L	5/7/99	14378	699	712			13	
	ug/L	5/8/99						8	
	ug/L	5/9/99						40	
	ug/L	5/10/99						20	
	ug/L	5/11/99						20	
	ug/L	5/12/99	10112	1016	1019			18	
	ug/L	5/13/99						30	
	ug/L	5/14/99						26	
	ug/L	5/15/99						28	
	ug/L	5/16/99						28	
	ug/L	5/17/99						28	
	ug/L	5/18/99						34	
	ug/L	5/19/99	28417	2799	2419			38	
	ug/L	5/20/99						30	
	ug/L	5/21/99	23567	2564	2046			40	
	ug/L	5/22/99						33	
	ug/L	5/23/99						27	
	ug/L	5/24/99	17539	2507	2049			38	

TABLE 1

Above Ground Treatment System Data
Wauleco, Inc.
Wausau, Wisconsin

Parameter	UNIT	DATE	FBR Influent	FBR Effluent	FFR Effluent	Bag Filter Effluent	Filters1+2 Effluent	System Effluent	System Effluent (dup)
	ug/L	5/25/99						26	
	ug/L	5/26/99						31	
	ug/L	5/27/99	21462	2145	1886			24	
	ug/L	5/28/99						19	
	ug/L	5/29/99						23	
	ug/L	5/30/99						23	
	ug/L	5/31/99						23	
pH	S.U.	5/4/99	6.9	6.8	6.9				
	S.U.	5/12/99	6.5	6.4	6.6				
	S.U.	5/19/99	6.6	6.7	6.8				
	S.U.	5/27/99	6.8	6.7	6.6				
Phosphorus, Ortho	mg/L	5/17/99	1.83	1.71				1.91	
Phosphorus, Phosphate	mg/L	5/4/99	2	1	1				
	mg/L	5/12/99	4	3	2				
	mg/L	5/19/99	2	2	1				
	mg/L	5/27/99	2	1	<				
Solids, Total Suspended	mg/L	5/17/99	8	6		9	8	<	
Mercury	ug/L	5/17/99	1.1	0.65				0.34	
Phenols									
2,3,5,6-Tetrachlorophenol	ug/L	5/17/99	<	410	<	350	<	<	<
2,4,5-Trichlorophenol	ug/L	5/17/99	<	<	<	<	<	<	<
2,4,6-Trichlorophenol	ug/L	5/17/99	<	<	<	<	<	<	<
2,4-Dichlorophenol	ug/L	5/17/99	<	<	<	<	<	<	<
2,4-Dimethylphenol	ug/L	5/17/99	<	<	<	<	<	<	<
2,4-Dinitrophenol	ug/L	5/17/99	<	<	<	<	<	<	<
2,6-Dichlorophenol	ug/L	5/17/99	<	<	<	<	<	<	<
2-Chlorophenol	ug/L	5/17/99	<	<	<	<	<	<	<
2-Methylphenol	ug/L	5/17/99	<	<	<	<	<	<	<
2-Nitrophenol	ug/L	5/17/99	<	<	<	<	<	<	<
3&4-Methylphenol	ug/L	5/17/99	<	<	<	<	<	<	<
4,6-Dinitro-2-Methylphenol	ug/L	5/17/99	<	<	<	<	<	<	<
4-Chloro-3-Methylphenol	ug/L	5/17/99	<	<	<	<	<	<	<
4-Nitrophenol	ug/L	5/17/99	<	<	<	<	<	<	<
Pentachlorophenol	ug/L	5/17/99	14000	2300	1700	1800	1100	58	53
Phenol	ug/L	5/17/99	<	<	<	<	<	<	<

TABLE 2

Treatment System Flows
Wauleco, Inc.
Wausau, Wisconsin

Date	Influent Groundwater Flow Rate [1] (gpm)	POTW Discharge Flow Rate [1] (gpm)	POTW Totalized Discharge (gal)
05/01/99	38.10	22.88	8,200,000
05/02/99	40.90	41.67	8,260,000
05/03/99	49.50	48.85	8,330,349
05/04/99	40.80	35.24	8,381,097
05/05/99	46.30	40.28	8,439,100
05/06/99	50.40	44.93	8,503,795
05/07/99	48.90	43.23	8,566,043
05/08/99	44.90	40.18	8,623,904
05/09/99	54.80	51.37	8,697,871
05/10/99	42.60	38.13	8,752,775
05/11/99	48.70	43.01	8,814,712
05/12/99	48.60	43.13	8,876,816
05/13/99	49.50	44.07	8,940,281
05/14/99	47.90	42.85	9,001,982
05/15/99	47.90	47.23	9,070,000
05/16/99	57.70	47.38	9,138,230
05/17/99	45.00	40.34	9,196,321
05/18/99	45.40	40.29	9,254,342
05/19/99	48.20	43.41	9,316,846
05/20/99	48.50	43.50	9,379,490
05/21/99	49.10	44.03	9,442,887
05/22/99	43.60	43.44	9,505,439
05/23/99	46.00	37.89	9,560,000
05/24/99	48.30	47.79	9,628,821
05/25/99	49.70	45.08	9,693,738
05/26/99	45.20	45.40	9,759,113
05/27/99	49.00	43.29	9,821,449
05/28/99	49.20	44.38	9,885,355
05/29/99	55.10	48.99	9,955,901
05/30/99	57.80	51.56	10,030,148
05/31/99	46.10	41.36	10,089,701
Average	47.86	43.07	
Total [2]:			1,922,649

Footnotes:

(1) Influent and POTW flow rates are daily averages. These may not be equal due to balancing in the treatment system and calibration of individual flowmeters.

(2) Total is the cumulative POTW discharge during the reporting period.

JLV/jlv/PHL
group:\gopermd\oraproj\wauleco\tables\1999\MAY\Tables0599.xls(Tbl 2)

TABLE 3

Product Removal
(gallons per day)
Wauleco, Inc.
Wausau, Wisconsin

Date	PW04	PW05	PW07	PW09	PW10	PW11	PW12	PW13	PW15	PW16	PW17	PW18	PW19	PW20	PW21	PW22	PW23	PW24	PW25	PW26	PW27	Date Total
05/01/99	0.0	0.0	0.0	0.0	1.7	5.0	0.0	17.0	0.0	0.0	3.4	25.0	0.0	25.0	0.0	0.0	3.4	1.7	25.0	0.0	0.0	107.2
05/02/99	0.0	0.0	0.0	0.0	1.7	17.2	0.0	17.2	0.0	0.0	1.7	24.1	0.0	8.6	6.9	0.0	6.9	8.6	26.0	1.7	1.7	122.3
05/03/99	0.0	0.0	0.0	0.0	3.4	13.8	0.0	19.0	0.0	0.0	8.6	25.8	0.0	8.6	6.9	0.0	0.0	6.9	24.1	1.7	1.7	120.5
05/04/99	0.0	0.0	0.0	0.0	3.4	14.0	0.0	15.5	0.0	0.0	12.0	50.0	0.0	10.0	6.9	0.0	0.0	8.6	25.0	1.7	1.7	148.9
05/05/99	0.0	0.0	0.0	0.0	3.4	8.6	0.0	13.8	0.0	0.0	8.6	75.0	0.0	50.0	9.0	0.0	0.0	5.2	50.0	0.0	1.7	225.3
05/06/99	0.0	0.0	0.0	0.0	3.4	8.6	0.0	12.0	0.0	0.0	8.6	100.0	0.0	32.7	6.9	0.0	1.7	6.9	50.0	0.0	0.0	230.8
05/07/99	0.0	0.0	0.0	0.0	1.7	8.6	0.0	10.0	0.0	0.0	10.0	50.0	0.0	19.0	3.4	0.0	0.0	7.0	50.0	1.7	0.0	161.5
05/08/99	0.0	1.7	0.0	0.0	1.7	8.6	0.0	6.9	0.0	0.0	1.7	50.0	0.0	15.5	3.4	0.0	1.7	15.5	50.0	1.7	1.7	160.2
05/09/99	0.0	1.7	0.0	0.0	1.7	8.6	0.0	8.6	0.0	0.0	3.4	65.0	0.0	17.2	3.4	0.0	0.0	17.2	50.0	0.0	0.0	176.9
05/10/99	0.0	1.7	0.0	0.0	1.7	10.0	0.0	8.6	0.0	0.0	3.4	65.0	0.0	19.0	3.4	0.0	0.0	8.6	50.0	0.0	0.0	171.5
05/11/99	0.0	1.7	0.0	0.0	1.7	6.9	0.0	12.0	0.0	0.0	3.4	100.0	3.4	25.0	1.7	0.0	1.7	10.0	67.0	1.7	1.7	238.1
05/12/99	0.0	1.7	0.0	0.0	0.0	12.0	0.0	15.0	0.0	0.0	1.7	75.0	3.4	24.1	0.0	0.0	0.0	15.5	67.0	1.7	0.0	217.2
05/13/99	0.0	0.0	0.0	0.0	1.7	17.2	0.0	15.5	0.0	0.0	1.7	50.0	3.4	28.0	1.7	0.0	1.7	17.2	67.0	1.7	0.0	206.9
05/14/99	1.7	0.0	0.0	0.0	1.7	15.0	0.0	8.6	0.0	0.0	3.4	50.0	3.4	50.0	1.7	0.0	0.0	19.0	50.0	3.4	0.0	208.0
05/15/99	1.7	0.0	0.0	0.0	3.4	15.5	0.0	8.6	0.0	0.0	3.4	75.0	3.4	25.8	1.7	0.0	0.0	15.5	50.0	1.7	1.7	207.6
05/16/99	0.0	1.7	0.0	0.0	3.4	17.2	0.0	8.6	0.0	0.0	3.4	75.0	3.4	26.0	0.0	0.0	0.0	17.2	50.0	1.7	1.7	209.5
05/17/99	0.0	0.0	0.0	0.0	0.0	19.0	0.0	10.0	0.0	0.0	1.7	60.0	6.9	25.8	0.0	0.0	0.0	19.0	50.0	1.7	1.7	195.8
05/18/99	0.0	0.0	0.0	0.0	0.0	15.5	0.0	8.6	0.0	0.0	1.7	75.0	3.4	26.0	1.7	0.0	0.0	15.5	50.0	1.7	1.7	200.9
05/19/99	0.0	0.0	0.0	0.0	0.0	3.4	0.0	5.2	0.0	0.0	5.2	75.0	1.7	15.5	0.0	0.0	0.0	17.2	50.0	3.4	1.7	178.3
05/20/99	1.7	1.7	0.0	0.0	1.7	17.2	0.0	5.2	0.0	0.0	3.4	90.0	5.2	17.2	0.0	0.0	0.0	19.0	50.0	1.7	1.7	215.8
05/21/99	1.7	1.7	0.0	0.0	1.7	16.0	0.0	5.2	0.0	0.0	3.4	90.0	5.0	19.0	0.0	0.0	0.0	25.8	50.0	1.7	0.0	221.3
05/22/99	0.0	0.0	0.0	0.0	1.7	15.5	0.0	8.6	0.0	0.0	1.7	50.0	3.4	15.5	1.7	0.0	0.0	26.0	50.0	1.7	1.7	177.6
05/23/99	3.4	0.0	0.0	0.0	3.4	17.2	0.0	8.6	0.0	0.0	1.7	50.0	1.7	13.8	1.7	0.0	0.0	25.8	35.0	1.7	1.7	165.8
05/24/99	3.4	0.0	0.0	0.0	3.4	19.0	0.0	10.0	0.0	0.0	1.7	50.0	1.7	12.0	1.7	0.0	0.0	26.0	35.0	1.7	0.0	165.8
05/25/99	1.7	0.0	0.0	0.0	5.2	15.5	0.0	15.5	0.0	0.0	0.0	75.0	3.4	10.0	0.0	0.0	0.0	25.8	50.0	1.7	1.7	205.5
05/26/99	0.0	0.0	0.0	0.0	1.7	17.2	0.0	5.2	0.0	0.0	5.0	100.0	1.7	10.3	0.0	0.0	0.0	12.0	50.0	1.7	3.4	208.3
05/27/99	1.7	0.0	0.0	0.0	1.7	19.0	0.0	8.6	0.0	0.0	6.9	75.0	3.4	5.2	1.7	0.0	0.0	14.0	50.0	5.0	3.4	195.7
05/28/99	0.0	0.0	0.0	0.0	1.7	25.8	0.0	3.4	0.0	0.0	0.0	75.0	6.9	8.6	1.7	0.0	3.4	6.9	50.0	5.2	5.0	193.6
05/29/99	1.7	0.0	0.0	0.0	1.7	32.0	0.0	8.6	0.0	0.0	1.7	50.0	1.7	5.2	1.7	0.0	1.7	18.9	50.0	1.7	3.4	180.2
05/30/99	1.7	0.0	0.0	0.0	1.7	33.0	0.0	8.6	0.0	0.0	1.7	50.0	0.0	3.4	1.7	0.0	0.0	26.0	40.0	1.7	3.4	173.1
05/31/99	1.7	0.0	0.0	0.0	1.7	25.8	0.0	0.0	0.0	0.0	0.0	50.0	0.0	5.2	0.0	0.0	0.0	25.8	40.0	0.0	0.0	150.2
Well Total	22.4	13.7	0.0	0.0	63.6	477.8	0.0	308.0	0.0	0.0	114.7	1969.9	66.9	577.0	70.9	0.0	22.3	484.2	1451.1	53.2	44.5	5740.3

TABLE 4

Groundwater Elevation Data
Wauleco, Inc.
Wausau, Wisconsin

Well	March 30 1999		April 30 1999		June 08 1999	
	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)
PW01	0.09	1161.28	0.05	1161.72	0.08	1162.16
PW02	0.04	1161.33	-----	1161.75	-----	1162.23
PW03	-----	1161.56	-----	1161.96	-----	1162.32
PW3S	-----	-----	0.31	1158.89	0.19	1159.56
PW04	1.53	1155.05	1.80	1154.50	-----	1161.12
PW05	1.48	1152.63	1.18	1153.23	0.50	1153.62
PW06	-----	-----	-----	1160.94	0.45	1161.31
PW07	-----	1156.26	-----	1156.70	-----	1157.72
PW08	-----	-----	0.47	1159.94	0.40	1160.38
PW9I	-----	1163.58	-----	1162.08	-----	-----
PW9O	-----	1162.59	-----	1161.14	-----	1162.27
PW10	-----	1156.90	0.45	1158.81	-----	1160.87
PW11	1.36	1157.44	1.40	1157.95	0.22	1160.55
PW12	0.45	1161.21	0.30	1161.81	0.38	1162.23
PW13	2.13	1157.52	0.40	1159.00	0.92	1160.10
PW14	-----	-----	0.22	1160.55	0.29	1160.41
PW15	-----	1153.86	-----	1154.31	-----	1153.87
PW16	-----	1153.76	-----	1159.38	0.82	1159.18
PW17	0.57	1157.97	0.40	1156.24	0.14	1156.94
PW18	0.64	1158.68	1.40	1158.54	0.31	1159.69
PW19	1.21	1158.79	1.60	1158.42	0.82	1159.85
PW20	2.41	1157.57	1.00	1158.82	0.83	1159.36
PW21	2.60	1157.29	1.60	1158.69	0.68	1159.96
PW22	-----	1157.48	-----	1157.30	-----	1159.08
PW23	0.20	1159.05	0.30	1158.87	0.16	1158.64
PW24	0.75	1158.68	1.50	1158.28	0.55	1158.88
PW25	2.02	1156.85	0.30	1158.62	0.33	1158.60
PW26	0.09	1158.73	0.10	1158.90	0.07	1158.95
PW27	1.78	1157.38	0.60	1158.91	0.44	1158.55
P01	0.56	1159.48	0.54	1159.80	1.09	1159.65
OW01	-----	-----	-----	1162.24	-----	1162.73
W01A	-----	-----	-----	1162.30	-----	1162.79
W01B	-----	-----	-----	1162.44	-----	1162.78
W02	-----	-----	0.41	1161.50	0.49	1161.73
W03A	0.36	1159.75	0.50	1160.41	0.48	1160.24
W03B	-----	1160.98	-----	1161.44	-----	1161.24
W04A	0.52	1160.53	0.39	1160.91	0.19	1161.55
W04B	-----	-----	0.50	1161.53	0.17	1161.56
W05	0.47	1159.50	0.52	1159.72	0.35	1160.35
W06R	0.34	1161.53	-----	1162.20	0.04	1162.70
W07	-----	-----	-----	1161.62	0.13	1162.22
W08	-----	-----	-----	1170.66	-----	1173.17
W09	-----	-----	-----	1162.41	-----	1162.34
W10A	-----	-----	-----	1161.22	-----	1160.87
W10B	-----	-----	-----	1161.21	-----	1160.90
W11	-----	-----	-----	1161.21	-----	1160.81
W12	-----	-----	-----	1160.15	-----	1160.48
W13	-----	-----	-----	1161.67	-----	1161.25

TABLE 4

Groundwater Elevation Data
Wauleco, Inc.
Wausau, Wisconsin

Well	March 30 1999		April 30 1999		June 08 1999	
	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)
W14	-----	-----	-----	1159.94	-----	1159.64
W16	-----	-----	-----	1162.09	-----	1161.60
W17	-----	-----	0.38	1160.29	0.36	1160.34
W18	-----	-----	-----	1161.14	-----	1160.87
W19	-----	-----	-----	1162.07	0.05	1162.14
W21	-----	-----	-----	1160.89	-----	1160.76
W22	0.34	1160.12	-----	1161.05	0.47	1160.58
W23	-----	-----	-----	1161.12	-----	1160.80
W24A	-----	-----	-----	1161.08	-----	1160.78
W25	-----	-----	-----	1162.52	-----	1162.86
W26	-----	-----	-----	1161.17	-----	1160.82
W27	-----	-----	-----	1161.88	-----	1161.31
W28	-----	-----	-----	1161.10	-----	1160.87
W29	-----	-----	-----	1161.13	-----	1160.74
W30	0.92	1159.07	0.80	1159.46	0.61	1160.01
W31	-----	-----	-----	1160.87	-----	1160.84
W32	-----	-----	-----	1160.91	-----	1160.84
W33	-----	-----	0.78	1160.69	0.14	1161.26
W34	0.36	1156.98	0.20	1157.42	0.21	1157.78
W35	0.27	1159.71	0.32	1159.92	0.66	1160.24
W36	-----	1160.41	-----	1160.83	-----	1161.53
W39	-----	-----	-----	1160.72	-----	1161.53
W40	-----	-----	0.80	1160.29	0.83	1160.41
W41	-----	-----	-----	1165.97	-----	1161.82
W42	-----	-----	0.15	1161.22	0.14	1161.99
W44	0.22	1159.95	0.39	1160.16	0.37	1160.49
W45	0.08	1160.20	0.12	1160.76	0.11	1160.82
W46	1.17	1158.82	1.04	1159.06	1.11	1159.61
W47	1.86	1154.69	1.26	1155.72	0.06	1157.33
W48	-----	1156.24	0.04	1156.71	0.07	1156.54
W49	0.15	1156.48	-----	1157.31	0.14	1157.08
W66	-----	1161.81	-----	1162.27	-----	1162.61
W67	-----	1161.78	-----	1162.13	-----	1162.67
W68A	-----	-----	0.22	1161.96	0.25	1162.41
W68B	-----	-----	-----	1162.21	-----	1162.54
W69	0.73	1159.97	0.88	1160.19	1.06	1160.40
W70B	-----	-----	-----	1161.87	-----	1162.21
River	-----	No Gage	-----	No Gage	-----	No Gage

Notes:

ft msl = feet mean sea level

May water levels collected June 8 as part of semiannual groundwater sampling event

FIGURE 1
FBR Influent and Effluent
PCP Concentrations

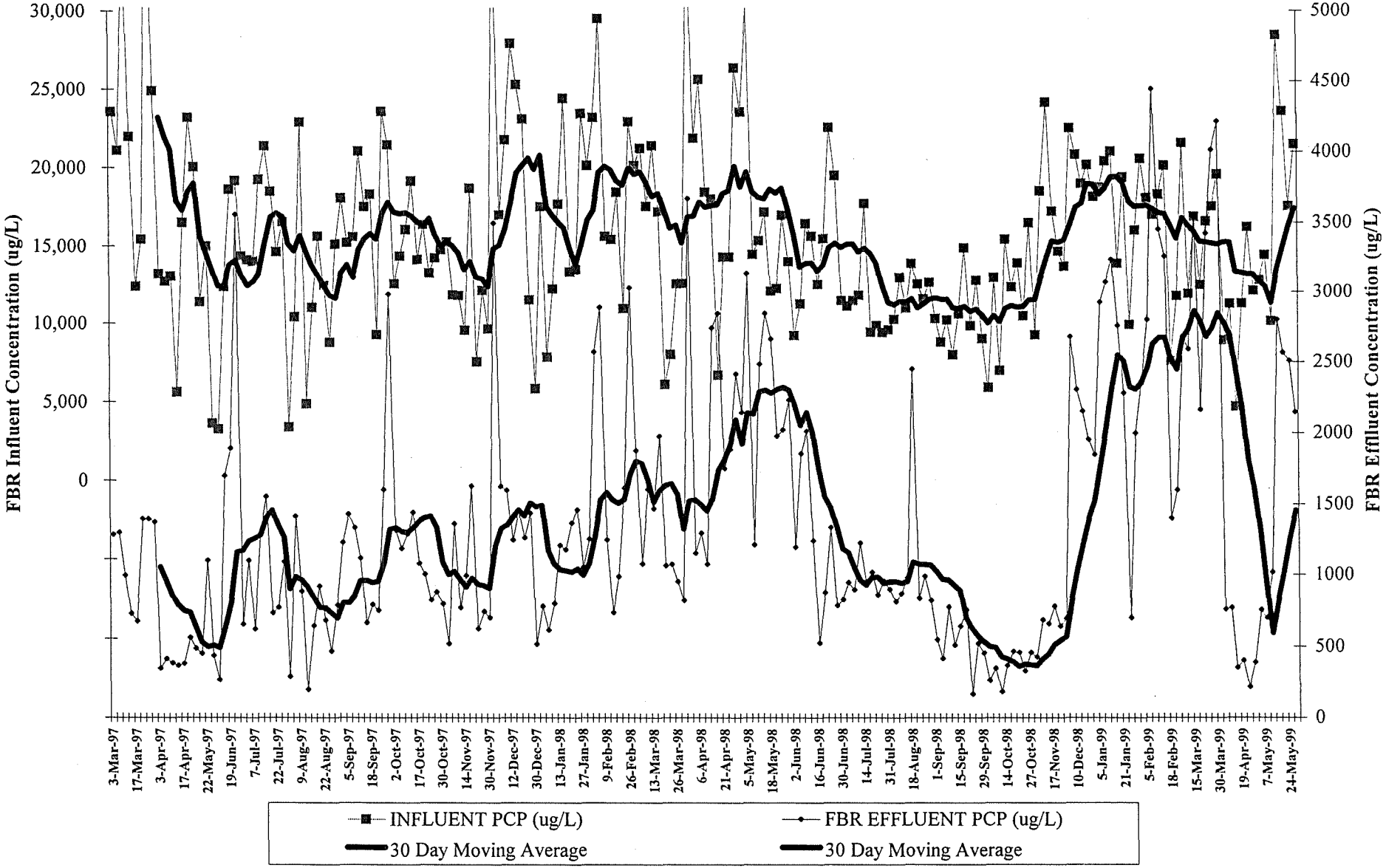
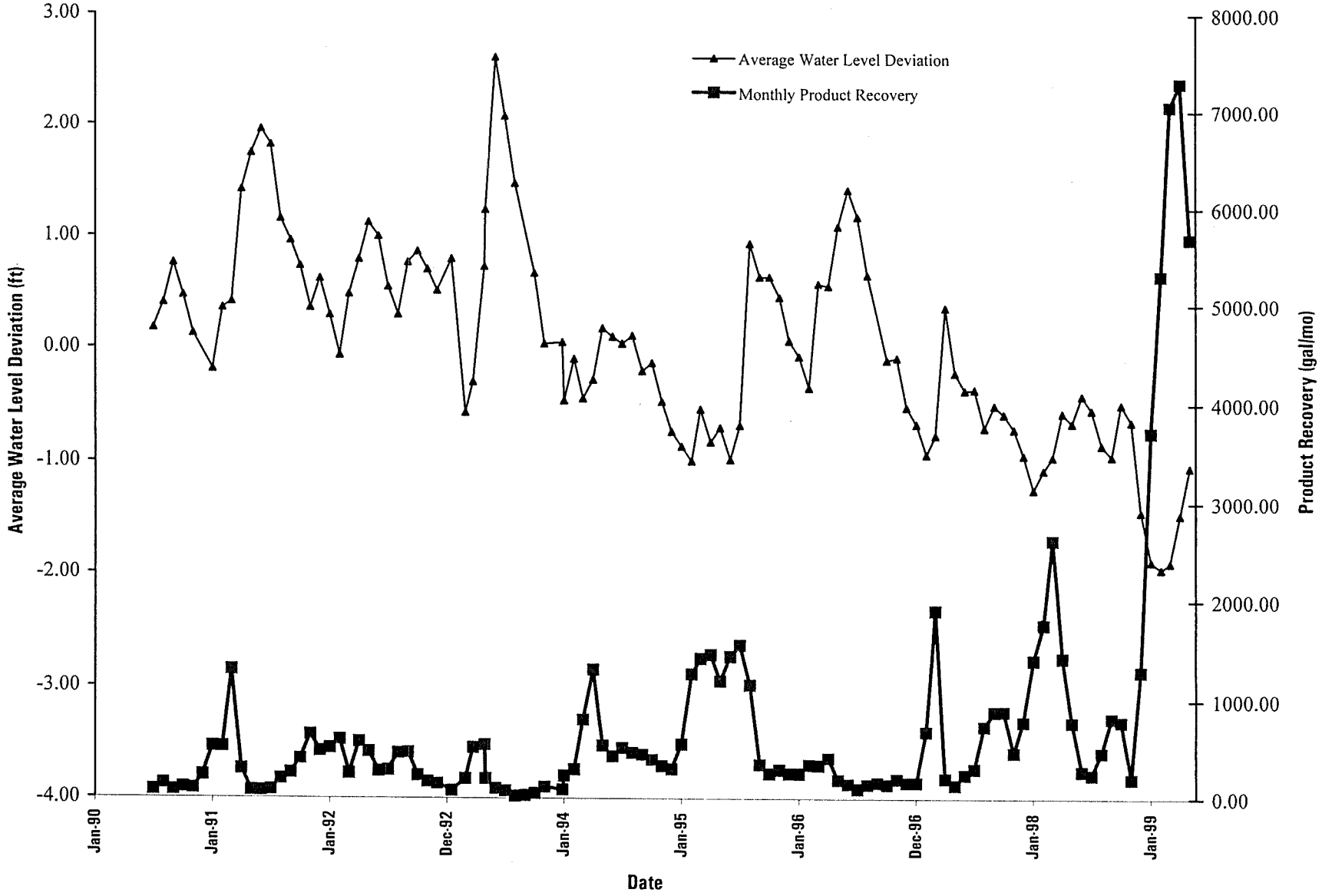


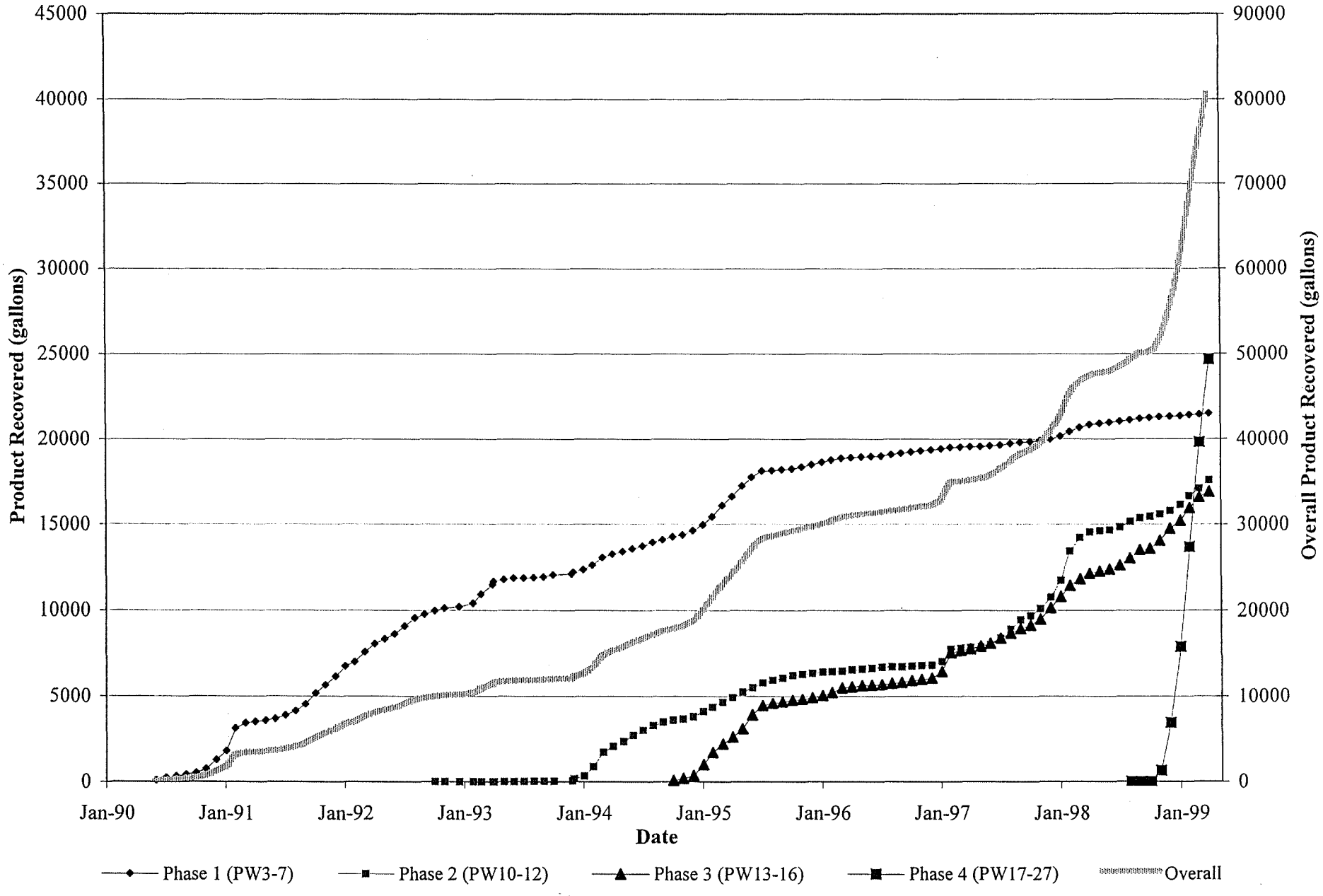
FIGURE 2
Average Water Level Deviation Versus Product Recovery Rates



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6/11/99

FIGURE 3
Cumulative Product Recovery by Phase and Overall



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6/11/99

6/2/99

MONTGOMERY WATSON

RECEIVED
JUN - 2 1999
WAUSAU DNR

May 27, 1999

Ms. Lisa Gutknecht
Wisconsin Department of Natural Resources
5301 Rib Mountain Drive
Wausau, Wisconsin 54401

Re: April Progress Report
WAULECO, Inc.
Wausau, Wisconsin
Administrative Order No. NCD-91-04

BRRTS# 02-37-000006

Dear Ms. Gutknecht:

On behalf of WAULECO, Montgomery Watson is submitting two copies (enclosed) of the April Progress Report for the WAULECO, Inc. site in Wausau, Wisconsin. The report is submitted in fulfillment of Paragraph 41 of Administrative Order No. NCD-91-04.

If you have any questions or comments regarding this information, please call.

Sincerely,

MONTGOMERY WATSON

Patrick H. Lytle
Associate Engineer

Douglas J. Bach, P.E.
Project Manager

Enclosures: Monthly Report

cc: Wastewater Engineer - WDNR (Wausau, WI) (1)
J. Gehin - Wausau Utilities Director (1)
P. Peshek (3)
R. Brandt (1)

PHL/phl/vlr/DJB
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One Science Court
P.O. Box 5385
Madison, Wisconsin
53705-0385

Tel: 608 231 4747
Fax: 608 231 4777

Serving the World's Environmental Needs

WAULECO INCORPORATED
WAUSAU, WISCONSIN
MONTHLY REPORT
APRIL 1999

SUMMARY OF APRIL 1999 ACTIVITIES

Groundwater Extraction and Treatment System Operation

Treatment system performance data for this reporting period are summarized in Table 1. PCP screening (on-site gas chromatograph) results for the system effluent samples, which represent the water discharged to the municipal sewer, averaged 13 ug/L for the month of April, with a maximum single day concentration of 98 ug/L. The laboratory result for PCP in the system effluent was 22 ug/L. The on-site result for the same day was 19 ug/L. These results indicate PCP concentrations were well below the permit levels of 150 ug/L (monthly average) and 300 ug/L (daily maximum).

Montgomery Watson's review of onsite and CTI Laboratories uncovered no notable deficiencies in quality control, sample extraction, and sample handling procedures. In addition, the discrepancies in PCP results observed during the previous two months were minimal during April. The review will culminate with the analysis of a performance evaluation (PE) sample by both labs in May. This sample will be split for analysis by both the on-site instrument and CTI Laboratories. Results will then be compared. As stated in the March report, if PCP is detected by the on-site GC in effluent samples at a concentration greater than 40 ug/L, an additional verification sample will immediately be collected and sent to an off-site laboratory for analysis. This situation did not occur during April, as results were generally below 20 ug/L.

Laboratory results for mercury analyses of the FBR influent, FBR effluent, and system effluent samples collected on April 9 are included in Table 1. The mercury concentration in the system effluent samples (discharged to the sanitary sewer) was <0.2 ug/L.

PCP influent concentrations ranged from 4,663 ug/L to 16,198 ug/L during April 1999 (Table 1). PCP influent and effluent concentrations in the FBR are presented graphically both as individual data points and as a 30-day moving average in Figure 1. As shown in Figure 1, the FBR effluent concentrations decreased significantly during the first half of April. The average PCP removal efficiency for the FBR during April was 95% compared to an average of 90% during the previous year. The increased PCP removal efficiency is attributable to the operational adjustments discussed in the last monthly report (scouring of biosolids and addition of carbon to the FBR).

Daily groundwater flow through the treatment system (Table 2) ranged from 9 to 52 gallons per minute (gpm) during April. The minimum flow was the result of a ruptured hose in the system's air compressor on April 18, which shut the system down for approximately 10 hours. Total treatment system efficiency (including carbon polishing units) continues to be greater than 99%.

Product Recovery

Product recovery data for the reporting period are presented in Table 3. Historic product recovery (since July 1990) compared to average water level deviation is presented in Figure 2. The effect of the new extraction wells on groundwater levels is also shown on Figure 2. Water levels in the vicinity of the site increased slightly during April, but remain at historically low levels. The slight increase is likely the result of the water table reaching a new equilibrium, as increased recharge from spring rainfall balances the increased extraction rate of the additional wells. During the forthcoming spring and summer months, however, increased precipitation will probably produce higher water levels. At the present, low water levels continue to have the intended effect of increasing product recovery to 7,276 gallons during the month of April, the highest product recovery ever recorded. Approximately 84 percent of the product recovered during April came from the new extraction wells, with the most production from PW18, PW20, and PW25.

A comparison of the product recovery of each phase of well installations is presented in Figure 3. This figure is revised slightly from the March monthly report to include PW13 with Phase 3 of the well installations. This figure illustrates the historical productivity of each phase of well installations. Cumulative product recovery of all wells is also plotted on the secondary vertical axis.

Groundwater Monitoring

Groundwater elevation and product thickness data for February, March, and April are summarized in Table 4.

Meetings

A meeting was held at the site with representatives of Wauleco, Inc. and Lisa Gutknecht of the WDNR on April 26 to discuss project progress, including the effect of recent upgrades to the extraction and treatment system.

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TABLE 1

Above Ground Treatment System Data
Wauleco, Inc.
Wausau, Wisconsin

Parameter	UNIT	DATE	FBR Influent	FBR Effluent	FFR Effluent	Bag Filter Effluent	Filters1+2 Effluent	System Effluent
Biological Oxygen Demand	mg/L	4/9/99	17	3				3
Chemical Oxygen Demand	mg/L	4/9/99	57	20				20
Chloride	mg/L	4/9/99	174	162				154
Dissolved Oxygen	mg/L	4/6/99	8	4.3	6.8			
	mg/L	4/12/99	2	1	1			
	mg/L	4/19/99	6.5	2.1	5.0			
	mg/L	4/29/99	6.2	2.2	4.4			
Nitrogen, Ammonia	mg/L	4/6/99	1	<	<			
	mg/L	4/12/99	<	<	<			
	mg/L	4/19/99	3	1	1			
	mg/L	4/29/99	2	<	<			
Nitrogen, Nitrate	mg/L	4/16/99	<	<	<			
	mg/L	4/12/99	1	<	3			
	mg/L	4/19/99	<	<	<			
	mg/L	4/29/99	<	<	<			
Nitrogen, Nitrate + Nitrite	mg/L	4/9/99	0.61	0.37				<
Nitrogen, Total Kjeldahl	mg/L	4/9/99	1.40	0.71				0.64
Pentachlorophenol-Screen	ug/L	4/1/99						40
	ug/L	4/2/99						25
	ug/L	4/3/99						25
	ug/L	4/4/99						25
	ug/L	4/5/99						25
	ug/L	4/6/99	8891	760	508			14
	ug/L	4/7/99						10
	ug/L	4/8/99						14
	ug/L	4/9/99						19
	ug/L	4/10/99						14
	ug/L	4/11/99						14
	ug/L	4/12/99	11222	769	546			14
	ug/L	4/13/99						18
	ug/L	4/14/99						13
	ug/L	4/15/99	4663	347	325			5
	ug/L	4/16/99						5
	ug/L	4/17/99						4
	ug/L	4/18/99						4
	ug/L	4/19/99	11245	398	350			4
	ug/L	4/20/99						6
	ug/L	4/21/99						9
	ug/L	4/22/99	16198	213	368			16
	ug/L	4/23/99						12
	ug/L	4/24/99						6
	ug/L	4/25/99						6
	ug/L	4/26/99						6
	ug/L	4/27/99						10
	ug/L	4/28/99						9
	ug/L	4/29/99	12079	385	411			5
	ug/L	4/30/99						8

TABLE 1

Above Ground Treatment System Data
Wauleco, Inc.
Wausau, Wisconsin

Parameter	UNIT	DATE	FBR Influent	FBR Effluent	FFR Effluent	Bag Filter Effluent	Filters1+2 Effluent	System Effluent
pH	S.U.	4/6/99	6.8	6.9	6.9			
	S.U.	4/12/99	6.5	6.3	6.2			
	S.U.	4/19/99	6.6	6.7	6.8			
	S.U.	4/29/99	6.8	6.9	6.9			
Phosphorus, Ortho	mg/L	4/9/99	1.11	0.860				1.05
Phosphorus, Phosphate	mg/L	4/6/99	2	1	2			
	mg/L	4/12/99	1	0	3			
	mg/L	4/19/99	2	1	1			
	mg/L	4/29/99	2	3	0.5			
Solids, Total Suspended	mg/L	4/9/99	<	6.00		<	<	<
Mercury	ug/L	4/9/99	0.58	0.36				<
Phenols								
2,3,4,6-Tetrachlorophenol	ug/L	4/9/99	<	<	<	<	<	3.80
2,4,5-Trichlorophenol	ug/L	4/9/99	<	<	<	<	<	<
2,4,6-Trichlorophenol	ug/L	4/9/99	<	<	<	<	<	<
2,4-Dichlorophenol	ug/L	4/9/99	<	<	<	<	<	<
2,4-Dimethylphenol	ug/L	4/9/99	<	<	<	<	<	<
2,4-Dinitrophenol	ug/L	4/9/99	<	<	<	<	<	<
2,6-Dichlorophenol	ug/L	4/9/99	<	<	<	<	<	<
2-Chlorophenol	ug/L	4/9/99	<	<	<	<	<	<
2-Methylphenol	ug/L	4/9/99	<	<	<	<	<	<
2-Nitrophenol	ug/L	4/9/99	<	<	<	<	<	<
3&4-Methylphenol	ug/L	4/9/99	<	<	<	<	<	<
4,6-Dinitro-2-Methylphenol	ug/L	4/9/99	<	<	<	<	<	<
4-Chloro-3-Methylphenol	ug/L	4/9/99	<	<	<	<	<	<
4-Nitrophenol	ug/L	4/9/99	<	<	<	<	<	<
Pentachlorophenol	ug/L	4/9/99	1000	310	300	370	200	22.0
Phenol	ug/L	4/9/99	<	<	<	<	<	<

TABLE 2

Treatment System Flows
Wauleco, Inc.
Wausau, Wisconsin

Date	Influent Groundwater Flow Rate [1] (gpm)	POTW Discharge Flow Rate [1] (gpm)	POTW Totalized Discharge (gal)
04/01/99	37.6	41.0	6,469,148
04/02/99	48.7	42.6	6,530,430
04/03/99	40.4	34.4	6,580,000
04/04/99	40.9	41.7	6,640,000
04/05/99	49.9	41.8	6,700,132
04/06/99	43.8	38.7	6,755,918
04/07/99	46.0	40.3	6,813,955
04/08/99	45.7	39.7	6,871,159
04/09/99	45.6	39.9	6,928,636
04/10/99	44.6	38.8	6,984,488
04/11/99	46.5	40.4	7,042,710
04/12/99	47.4	41.6	7,102,604
04/13/99	47.7	40.8	7,161,422
04/14/99	49.1	43.2	7,223,613
04/15/99	48.4	43.3	7,285,962
04/16/99	47.1	41.9	7,346,280
04/17/99	48.3	43.4	7,408,843
04/18/99	49.9	46.4	7,475,657
04/19/99	9.4	9.2	7,488,864
04/20/99	41.3	36.8	7,541,843
04/21/99	46.6	42.7	7,603,325
04/22/99	47.1	41.5	7,663,111
04/23/99	49.4	44.2	7,726,819
04/24/99	50.8	45.2	7,791,899
04/25/99	51.6	45.8	7,857,790
04/26/99	45.0	39.8	7,915,061
04/27/99	50.7	44.4	7,979,052
04/28/99	50.7	45.0	8,043,833
04/29/99	47.3	41.9	8,104,130
04/30/99	49.3	43.7	8,167,052
Average	45.6	40.7	
Total [2]:			1,756,998

Footnotes:

(1) Influent and POTW flow rates are daily averages. These may not be equal due to balancing in the treatment system and calibration of individual flowmeters.

(2) Total is the cumulative POTW discharge during the reporting period.

JLV/jlv/PHL
group:\gopermd\oraproj\wauleco\tables\1999\Mar\Tables0499X.xls(Tbl 2)

TABLE 3

Product Removal
(gallons per day)
Wauleco, Inc.
Wausau, Wisconsin

Date	PW04	PW05	PW07	PW09	PW10	PW11	PW12	PW13	PW15	PW16	PW17	PW18	PW19	PW20	PW21	PW22	PW23	PW24	PW25	PW26	PW27	Date Total
04/01/99	1.7	0	0	0	5	25	0	20	0	0	8	75	0	35	5	0	3.4	0	60	7	16	261
04/02/99	1.7	0	0	0	5.2	14	0	26	0	0	3.4	75	0	26	3.4	0	6.9	3.4	50	10	17	242
04/03/99	1.7	0	0	0	5.2	15	0	26	0	0	10	75	0	50	3.4	0	10	3.4	50	18	19	288
04/04/99	1.7	0	0	0	5.2	22	0	26	0	0	10	75	0	33	12	0	12	3.4	75	15	26	317
04/05/99	1.7	0	0	0	5.2	24	0	26	0	0	12	75	0	40	6.9	0	8.6	3.4	75	17	26	321
04/06/99	1.7	0	0	0	3.4	28	0	26	0	0	12	75	0	26	3.4	0	1.7	3.4	63	3.4	10	257
04/07/99	1.7	0	0	0	3.4	15	0	26	0	0	14	75	0	26	3.4	0	1.7	3.4	63	3.4	12	248
04/08/99	1.7	0	0	0	3.4	17	0	26	0	0	14	75	0	50	6.9	0	1.7	3.4	63	5.2	12	279
04/09/99	1.7	0	0	0	3.4	19	0	26	0	0	12	75	0	50	3.4	0	1.7	3.4	63	7	16	282
04/10/99	0	0	0	0	3.4	12	0	26	0	0	12	75	0	63	5.2	0	3	3.4	63	15	15	297
04/11/99	1.7	0	0	0	3.4	14	0	26	0	0	14	75	0	63	3.4	0	1.7	1.7	63	14	17	297
04/12/99	1.7	0	0	0	7	6.9	0	26	0	0	14	75	0	63	3.4	0	1.7	3.4	63	10	19	294
04/13/99	1.7	0	0	0	3.4	8.6	0	26	0	0	12	75	0	63	3.4	0	0	15	63	12	6.9	290
04/14/99	3.4	0	0	0	8.6	10	0	26	0	0	10	100	0	83	6.9	0	1.7	6.9	83	12	5.2	357
04/15/99	3.4	0	0	0	12	5	0	50	0	0	12	100	0	83	5	0	0	8.6	83	5.2	3.4	371
04/16/99	5.2	0	0	0	8.6	8.6	0	50	0	0	10	100	0	83	5	0	0	8.6	83	5.2	3.4	371
04/17/99	0	0	0	0	3.4	8.6	0	26	0	0	3.4	50	0	50	8.6	0	0	3.4	50	5.2	3.4	212
04/18/99	1.7	0	0	0	3.4	5.2	0	26	0	0	3.4	50	0	50	5.2	0	0	3.4	25	3.4	3.4	180
04/19/99	1.7	0	0	0	3.4	1.7	0	15	0	0	3.4	50	0	50	3.4	0	0	3.4	25	3.4	3.4	165
04/20/99	1.7	0	0	0	6.9	1.7	0	8.6	0	0	9	83	0	50	8.6	0	1.7	5.2	33	3.4	3.4	216
04/21/99	1.7	0	0	0	1.7	1.7	0	14	0	0	3.4	83	0	50	8.6	0	0	5.2	30	3.4	3.4	206
04/22/99	1.7	0	0	0	3.4	3.4	0	14	0	0	5.2	83	0	50	10	0	0	7	25	3.4	3.4	210
04/23/99	1.7	0	0	0	1.7	3.4	0	6.9	0	0	8.6	55	0	50	3.4	0	0	3.4	15	7	3.4	160
04/24/99	1.7	0	0	0	3.4	17	0	8.6	0	0	5.2	50	0	50	3.4	0	1.7	5.2	12	3.4	3.4	165
04/25/99	0	0	0	0	3.4	15	0	8.6	0	0	6.9	50	0	50	3.4	0	0	8.6	26	3.4	5	180
04/26/99	1.7	0	0	0	3.4	10	0	8.6	0	0	8.6	50	0	50	3.4	0	1.7	6.9	26	3.4	3.4	178
04/27/99	0	0	0	0	1.7	5.2	0	15	0	0	5.2	24	0	25	1.7	0	1.7	5.2	25	1.7	5.2	117
04/28/99	0	0	0	0	1.7	3.4	0	3.4	0	0	3.4	28	0	35	3.4	0	0	6.9	25	1.7	3.4	116
04/29/99	0	0	0	0	1.7	15	0	10	0	0	1.7	50	0	50	1.7	0	0	6.9	50	0	5.2	193
04/30/99	0	0	0	0	1.7	15	0	10	0	0	3.4	50	0	50	1.7	0	0	17	50	0	6.9	207
Well Total	46	0	0	0	127	353	0	632	0	0	251	2031	0	1497	147	0	63	163	1479	204	282	7276

TABLE 4

Groundwater Elevation Data
Wauleco, Inc.
Wausau, Wisconsin

Well	February 26 1999		March 30 1999		April 30 1999	
	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)
PW01	0.12	1161.16	0.09	1161.28	0.05	1161.72
PW02	-----	Frozen	0.04	1161.33	-----	1161.75
PW03	-----	1161.43	-----	1161.56	-----	1161.96
PW3S	-----	-----	-----	-----	0.31	1158.89
PW04	3.42	1153.50	1.53	1155.05	1.80	1154.50
PW05	0.66	1154.03	1.48	1152.63	1.18	1153.23
PW06	-----	-----	-----	-----	-----	1160.94
PW07	-----	1154.77	-----	1156.26	-----	1156.70
PW08	-----	-----	-----	-----	0.47	1159.94
PW9I	-----	1161.08	-----	1163.58	-----	1162.08
PW9O	0.12	1160.11	-----	1162.59	-----	1161.14
PW10	2.47	1155.73	-----	1156.90	0.45	1158.81
PW11	0.23	1158.00	1.36	1157.44	1.40	1157.95
PW12	0.46	1161.06	0.45	1161.21	0.30	1161.81
PW13	1.83	1157.47	2.13	1157.52	0.40	1159.00
PW14	-----	-----	-----	-----	0.22	1160.55
PW15	-----	1153.85	-----	1153.86	-----	1154.31
PW16	0.36	1158.59	-----	1153.76	-----	1159.38
PW17	0.36	1157.76	0.57	1157.97	0.40	1156.24
PW18	0.60	1158.20	0.64	1158.68	1.40	1158.54
PW19	0.46	1159.29	1.21	1158.79	1.60	1158.42
PW20	0.75	1158.87	2.41	1157.57	1.00	1158.82
PW21	-----	1159.91	2.60	1157.29	1.60	1158.69
PW22	-----	1158.04	-----	1157.48	-----	1157.30
PW23	0.75	1158.16	0.20	1159.05	0.30	1158.87
PW24	0.15	1159.10	0.75	1158.68	1.50	1158.28
PW25	0.31	1158.19	2.02	1156.85	0.30	1158.62
PW26	2.41	1156.72	0.09	1158.73	0.10	1158.90
PW27	2.21	1157.18	1.78	1157.38	0.60	1158.91
P01	0.58	1159.44	0.56	1159.48	0.54	1159.80
OW01	-----	-----	-----	-----	-----	1162.24
W01A	-----	-----	-----	-----	-----	1162.30
W01B	-----	-----	-----	-----	-----	1162.44
W02	-----	-----	-----	-----	0.41	1161.50
W03A	0.53	1159.46	0.36	1159.75	0.50	1160.41
W03B	-----	1159.83	-----	1160.98	-----	1161.44
W04A	0.74	1160.22	0.52	1160.53	0.39	1160.91
W04B	0.53	1161.07	-----	-----	0.50	1161.53
W05	-----	-----	0.47	1159.50	0.52	1159.72
W06R	-----	-----	0.34	1161.53	-----	1162.20
W07	-----	-----	-----	-----	-----	1161.62
W08	-----	-----	-----	-----	-----	1170.66
W09	-----	-----	-----	-----	-----	1162.41
W10A	-----	-----	-----	-----	-----	1161.22
W10B	-----	-----	-----	-----	-----	1161.21
W11	-----	-----	-----	-----	-----	1161.21
W12	-----	-----	-----	-----	-----	1160.15
W13	-----	-----	-----	-----	-----	1161.67

TABLE 4

Groundwater Elevation Data
Wauleco, Inc.
Wausau, Wisconsin

Well	February 26 1999		March 30 1999		April 30 1999	
	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)
W14	-----	-----	-----	-----	-----	1159.94
W16	-----	-----	-----	-----	-----	1162.09
W17	-----	-----	-----	-----	0.38	1160.29
W18	-----	-----	-----	-----	-----	1161.14
W19	-----	-----	-----	-----	-----	1162.07
W21	-----	-----	-----	-----	-----	1160.89
W22	-----	-----	0.34	1160.12	-----	1161.05
W23	-----	-----	-----	-----	-----	1161.12
W24A	-----	-----	-----	-----	-----	1161.08
W25	-----	-----	-----	-----	-----	1162.52
W26	-----	-----	-----	-----	-----	1161.17
W27	-----	-----	-----	-----	-----	1161.88
W28	-----	-----	-----	-----	-----	1161.10
W29	-----	-----	-----	-----	-----	1161.13
W30	-----	-----	0.92	1159.07	0.80	1159.46
W31	-----	-----	-----	-----	-----	1160.87
W32	-----	-----	-----	-----	-----	1160.91
W33	-----	-----	-----	-----	0.78	1160.69
W34	-----	1157.21	0.36	1156.98	0.20	1157.42
W35	0.68	1159.36	0.27	1159.71	0.32	1159.92
W36	-----	1160.44	-----	1160.41	-----	1160.83
W39	-----	-----	-----	-----	-----	1160.72
W40	-----	-----	-----	-----	0.80	1160.29
W41	-----	-----	-----	-----	-----	1165.97
W42	-----	-----	-----	-----	0.15	1161.22
W44	0.39	1159.84	0.22	1159.95	0.39	1160.16
W45	0.07	1160.08	0.08	1160.20	0.12	1160.76
W46	0.38	1159.48	1.17	1158.82	1.04	1159.06
W47	1.84	1154.52	1.86	1154.69	1.26	1155.72
W48	-----	1156.15	-----	1156.24	0.04	1156.71
W49	0.25	1156.29	0.15	1156.48	-----	1157.31
W66	-----	1161.68	-----	1161.81	-----	1162.27
W67	-----	1161.62	-----	1161.78	-----	1162.13
W68A	-----	-----	-----	-----	0.22	1161.96
W68B	-----	-----	-----	-----	-----	1162.21
W69	0.87	1159.73	0.73	1159.97	0.88	1160.19
W70B	-----	-----	-----	-----	-----	1161.87
River	-----	No Gage	-----	No Gage	-----	No Gage

Note:
ft msl = feet mean sea level

FIGURE 1
FBR Influent and Effluent
PCP Concentrations

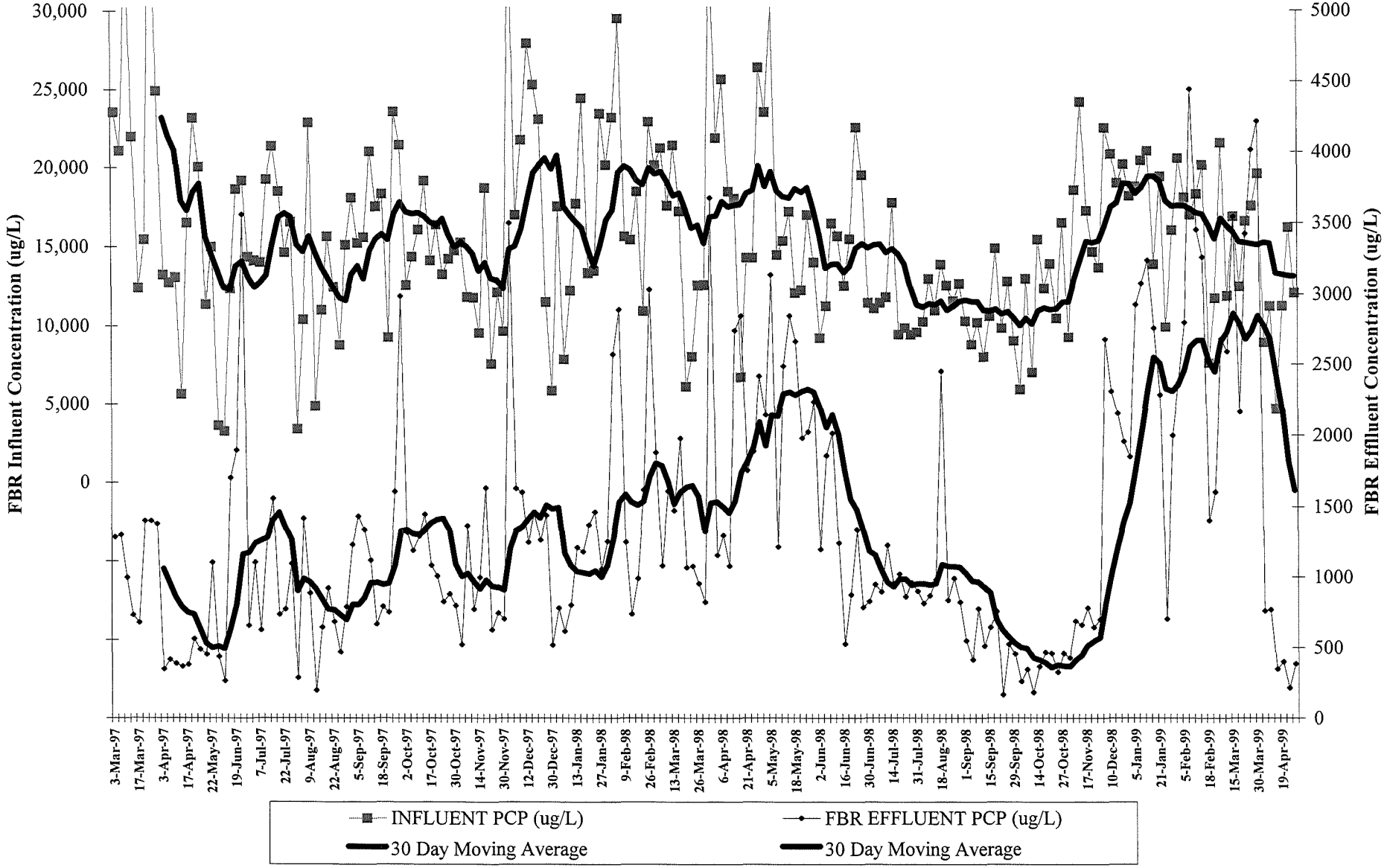
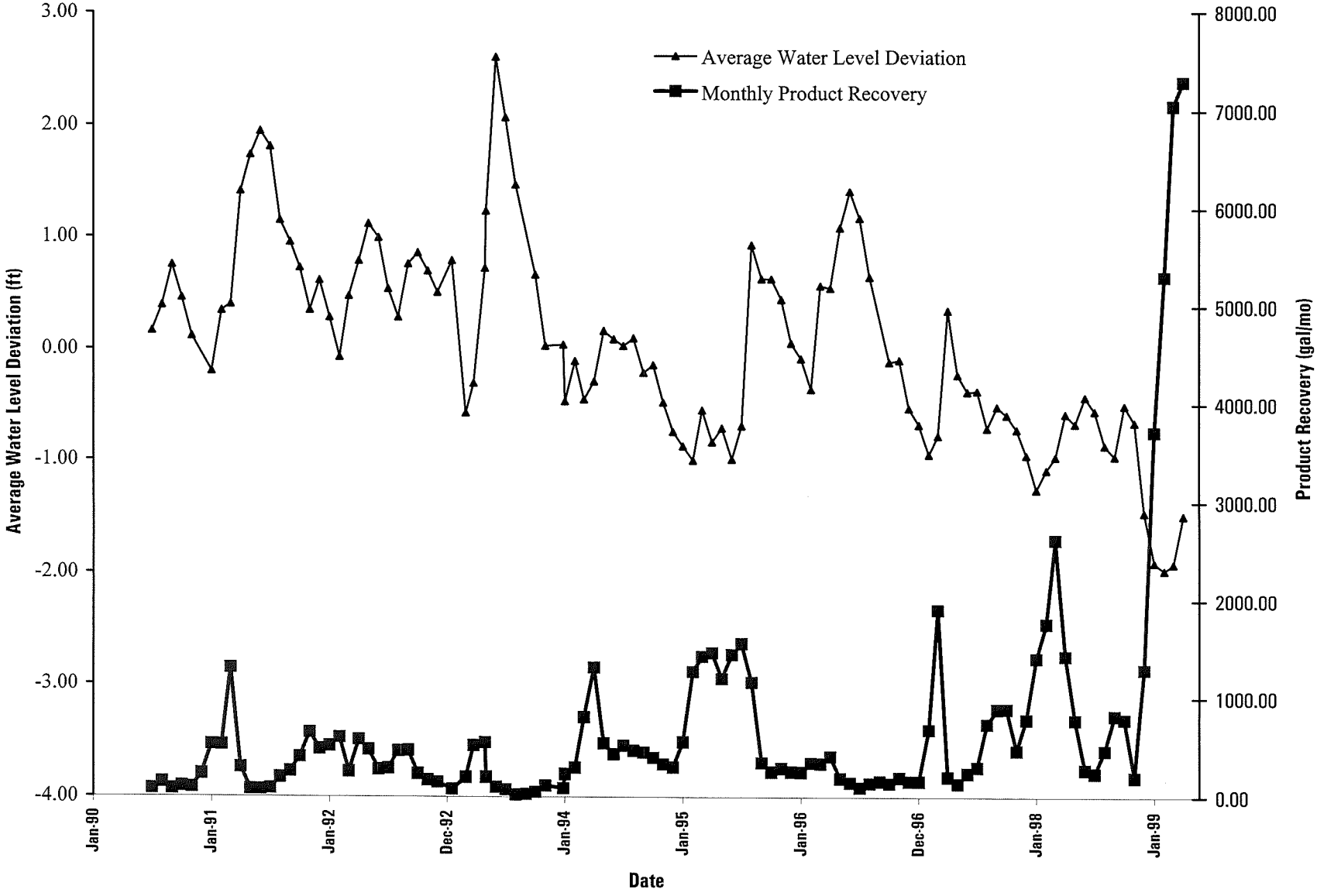


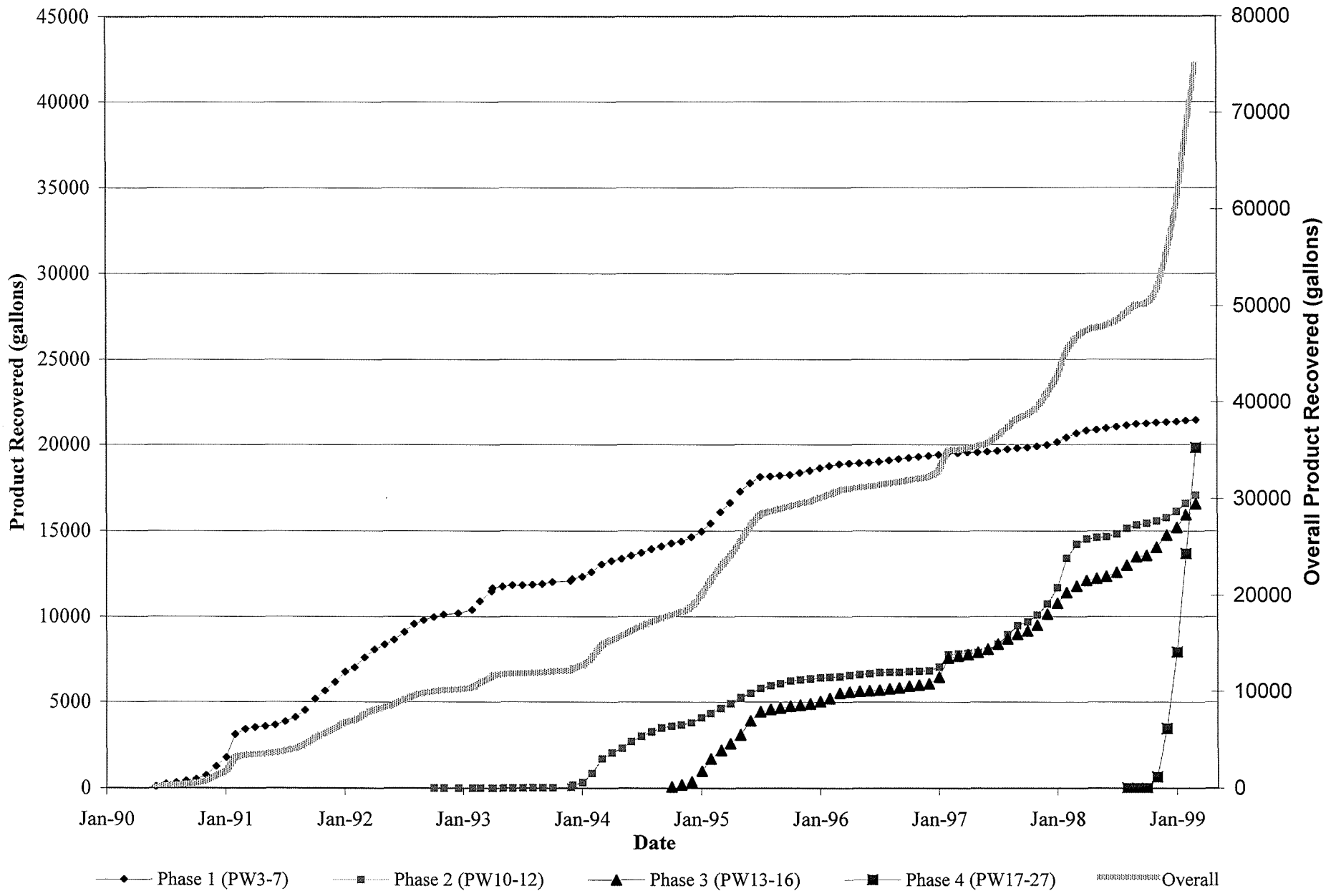
FIGURE 2
Average Water Level Deviation Versus Product Recovery Rates



M:\jobs\Wauleco\onm1999\monthly.xls(FIG2wtlvl)

5/19/99

FIGURE 3
Cumulative Product Recovery by Phase and Overall



M:\jobs\Wauleco\onm1999\monthly.xls(FIG3Prod Waves)

5/27/99

4/1/99

MONTGOMERY WATSON

April 6, 1999

RECEIVED
APR - 7 1999
WAUSAU DNR

Ms. Lisa Gutknecht
Wisconsin Department of Natural Resources
5301 Rib Mountain Drive
Wausau, Wisconsin 54401

Re: Construction Documentation Report
Remediation System Modifications
Wauleco Facility, Wausau

Dear Ms. Gutknecht:

Enclosed is one copy of the above referenced report related to the Wauleco remediation system expansion, which was completed in December 1998. This report is being submitted in compliance with the requirements of Wisconsin Administrative Code Chapter s. NR 724.15.

Please contact us if you have questions regarding this report. We look forward to seeing you at the site for the annual project status meeting on April 26.

Sincerely,

MONTGOMERY WATSON

Douglas J. Bach, P.E.
Project Manager

Enclosures: Construction Documentation Report

cc: Robert Brandt, Wauleco (w/encl)
Peter Peshek, Dewitt, Ross & Stevens (w/ 2 encl)

DJB/vlr/KJQ
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One Science Court
P.O. Box 5385
Madison, Wisconsin
53705-0385

Tel: 608 231 4747
Fax: 608 231 4777

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4/1/99

CONSTRUCTION DOCUMENTATION REPORT
REMEDIATION SYSTEM MODIFICATIONS

WAULECO INCORPORATED
WAUSAU FACILITY
WAUSAU, WISCONSIN

RECEIVED
APR - 7 1999
WAUSAU DNR

April 1999

Prepared For:
Wauleco, Inc.
Stevens Point, Wisconsin

• • •

Prepared By:
Montgomery Watson
Madison, Wisconsin

Project No. 1242057.0418.0101

MONTGOMERY WATSON

MONTGOMERY WATSON

April 6, 1999

Ms. Lisa Gutknecht
Wisconsin Department of Natural Resources
5301 Rib Mountain Drive
Wausau, Wisconsin 54401

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Remediation System Modifications
Wauleco Facility, Wausau

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Peter Peshek, Dewitt, Ross & Stevens (w/ 2 encl)

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1242057.04180101-MD

One Science Court
P.O. Box 5385
Madison, Wisconsin
53705-0385

Tel: 608 231 4747
Fax: 608 231 4777

CONSTRUCTION DOCUMENTATION REPORT
REMEDIATION SYSTEM MODIFICATIONS

WAULECO INCORPORATED
WAUSAU FACILITY
WAUSAU, WISCONSIN

April 1999

Prepared by: Joseph A. Larson — 4/6/99

Joseph A. Larson
Senior Field Service Coordinator

Date

Reviewed by: — 4.6.99

Douglas J. Bach, P.E.
Project Manager

Date

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D22	Electrical Details
D23	Electrical Details

LIST OF APPENDICES

Appendix

A - Boring Logs
B - Soil Gradations
C - Well Details
D - Well Development
E - Photographs

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1.0 INTRODUCTION

This Construction Documentation Report was prepared for Wauleco Inc. by Montgomery Watson. This report summarizes the modifications to the groundwater remediation system at the Wauleco, Inc. Facility located at 125 Rosecrans Street in Wausau, Wisconsin (see Drawing D15). The modifications to the existing Wauleco remediation system were initiated as the next logical step in the long term goal of eventual site closure and Brownfield redevelopment. To maintain this long term goal, Wauleco is continually evaluating current operations, and developing near-term project strategies. As part of the process, Wauleco established a continuous improvement standard for the management of the project. This standard has resulted in significant improvement to the rate of free product recovery (the key measure of remediation progress), while simultaneously reducing site operational costs. It became apparent that the potential for further product recovery improvements or cost savings would be minimal without further refinement to the existing system. Therefore, in 1997, Wauleco asked Montgomery Watson to:

1. Develop realistic remediation goals for the Wauleco site considering existing conditions, available technologies and their cost, the uncertainty associated with estimating the duration of remediation efforts, and the current and expected regulatory environment

2. Compare available remediation alternatives to the status quo and provide a recommendation for a near-term project strategy, as well as a summary of reasonable long-term expectations.

Based on Montgomery Watson's evaluation and recommendations, Wauleco chose to double the pumping capacity of the groundwater extraction and treatment system. Principal modifications to the system were as follows:

- Addition of 11 extraction wells, with associated plumbing and controls, to extract an additional 25 gpm of groundwater and recover free product from the vicinity of these wells.

- Addition of four 1,000 lb activated carbon units to treat the greater flow of water.

- Addition of a computerized control system to operate and monitor the 11 new wells and ten existing wells, and to allow remote monitoring of the entire system.

This report documents observations associated with the construction of modifications to the groundwater remediation system located at the Wauleco site. In addition, this report was prepared in consideration of Chapter NR 724 Wisconsin Administrative Code to satisfy the requirements for "documentation of construction and completion" described in NR 724.15.

1.1 GENERAL INFORMATION

- Project Title: Construction Documentation Report
  Remediation System Modifications
- Purpose: To record observations and test results associated with modifications to the groundwater remediation system at the Wauleco Inc. Wausau Facility
- Client: Wauleco Inc.
  Address: 125 Rosecrans Street
  Wausau, Wisconsin
- Contact: Mr. Robert Brandt
  Telephone: (715) 346-7489
- Consultant: Montgomery Watson
  Address: One Science Court
  Madison, Wisconsin 53711
- Contact: Mr. Douglas Bach
  Telephone: (608) 231-4747
  Fax: (608) 231-4777
- Site Name: Wauleco Inc
  Address: 125 Rosecrans Street
  Wausau, Wisconsin
  Location: NW ¼ of SE ¼ of Section 35, Township 29 North, Range 7 East (see Drawing D15)
- Summary of Nature and Extent of Contamination: See Section 1.2

1.2 BACKGROUND INFORMATION

The contamination at the Wauleco site resulted from the past releases of product consisting of 95% mineral spirits and 5% pentachlorophenol. This product is a non-aqueous phase liquid (NAPL), and does not mix easily with water. This product mixture is lighter than water and thus floats on top of water. Site contamination is characterized by a zone of free-phase product extending over much of the property and a zone of dissolved phase contamination that extends off-site. Prior to modification, the remediation system consisted of pumping groundwater at approximately 25 gpm from 10 extraction wells,

product removal, and treating the groundwater using a fluidized-bed biological reactor (FBR), fixed film reactor (FFR), sand filters, and carbon polishing. Remediation efforts since 1988 have been highly successful, resulting in the recovery of over 50,000 gallons of free phase product and the extraction of nearly 90 million gallons of contaminated groundwater.

The long term goals for remediation of the Wauleco site are to:

- Reduce the cost for ongoing remediation and monitoring such that reuse or sale of the property are feasible.
- Achieve conditions where passive bioremediation becomes the primary remediation technology for the site.

Achieving these long term remediation goals in as short a time as possible requires:

- Removal of as much free phase product as possible (i.e., the near term goal).
- Reducing the volume of residual product, thus reducing the source of dissolved PCP in groundwater.

The rate of free product removal is inversely related to changes in the groundwater levels. Therefore, the objective for removal of free product is dependent on the water levels. Doubling the groundwater pumping rate is designed to lower water levels which in turn allows submerged residual phase product to coalesce into free phase product, which is recoverable from the surface of the water table through extraction wells.

1.3 PROJECT APPROACH

The approach to this project is based on lowering the water table to maximize the amount of residual phase product available to coalesce into free product that is recoverable through extraction wells. Montgomery Watson's evaluation of available options indicated that a 50 gpm total groundwater flow from approximately double the number of extraction wells would provide the most cost effective means of increasing product recovery.

Specifically, the approach to the project included the installation of 11 additional extraction wells (with pumps and controls), installation of conveyance piping, construction of a modified pipe-header system, and secondary treatment system modifications.

1.4 PLAN SPECIFICATIONS

Montgomery Watson's role in this remediation project was to provide design and general contractor services. Montgomery Watson performed the system design and contracted with Terra Engineering and Construction of Madison, Wisconsin to construct the modifications to the groundwater remediation system.

1.5 DEVIATIONS FROM PLAN

All changes from the original plans are incorporated into the Construction Record Drawings D15-D23.

1.6 PUBLIC HEALTH AND ENVIRONMENTAL LAWS APPLICABLE TO THE CONTAMINATION

Pursuant to NR 724.15(3)(f), this subsection provides a brief description of the public health and environmental laws applicable to the contamination, including:

- Wisconsin 292.11, Statutes Hazardous Substances Spills which requires a person who possesses or controls a hazardous substance which is discharged or who causes the discharge of a hazardous substance to take the actions necessary to restore the environment to the extent practicable to minimize the harmful effects from the discharge to the air, lands, or waters of the State.

- Chapter NR 700, Wisconsin Administrative Code (WAC) is a comprehensive administrative rule package to govern environmental cleanups conducted by responsible parties. This code applies broadly to response actions, such as investigations and cleanups, taken under the State's Hazardous Substance Discharge Law, s. 292.11 statutes, including underground storage tanks.

- Chapter NR 720 WAC which establishes standards for allowing residual contaminants to be left on-site in soil, without posing a threat to human health or the environment.

- Chapter NR 140 WAC which establishes groundwater quality standards in the form of Enforcement Standards, and Preventive Action Limits intended to protect public health and welfare for substances detected in groundwater. Chapter NR 140 also establishes a range of responses which the WDNR may require if a groundwater standard is attained or exceeded.

2.0 SUMMARY OF REMEDIATION ACTIVITIES

Pursuant to NR 7245.15(3)(c), this section provides a synopsis of the remedial action. Remedial activities included the following:

- Preparation of Bid Documents
- Pilot Borings and Sampling
- Recovery Well Installation
- Conveyance Piping Installation
- Monitoring Building Construction
- Treatment Equipment Installation
- Recovery Well Development
- Disposal of Contaminated Soil

2.1 PREPARATION OF BID DOCUMENTS

Bid documents were prepared and bids were received from three contractors to construct the remediation system, including: 1) Terra Engineering and Construction Corporation, 2) Reconex, Inc., and 3) Phenco, Inc. The contract was awarded to Terra Engineering and Construction Corporation of Madison, Wisconsin. Subcontractors used by Wauleco included:

- Newton Electric Corporation - Electrical Contractor
- Boart Longyear Company - Drilling Contractor

Other subcontractors used by Terra included:

- County Concrete Corporation - Concrete Supplier
- Stainless Specialists, Inc. - Plumbing Contractor

2.2 PILOT BORINGS

Twelve pilot borings were drilled from August 4 through 6, 1998, to evaluate candidate locations for recovery wells. Samples were taken near the water table to verify the presence of residual phase product and to size the well screen for the extraction wells. See Appendix A for the boring logs.

2.3 RECOVERY WELL INSTALLATION

Eleven recovery wells, PW17 through PW27 were installed from September 14 through 22, 1998. Borings were done with 10¼-inch diameter hollow stem augers. The recovery wells were constructed of 8-inch diameter steel casing with 0.040 to 0.070-inch. slot stainless steel well screen. Twelve to 15 feet of well screen was used in each well with a 5-foot sump of solid steel well casing installed below the screen. Natural sand soil was used as a filter pack around the well screen and casing. A one-foot thick bentonite seal was placed at the ground surface. The well casings extend 1 ½ feet to 3 ½ feet above the ground surface. The well casing had a concrete slab poured around it for use as a building foundation later. A set of well construction details can be found in Appendix C. Also see photographs 1, 3, and 5 in Appendix E.

2.4 CONVEYANCE PIPING INSTALLATION

Conveyance piping was installed from the new extraction wells to the metering building and through four existing conveyance pipes to the main treatment facility. The four existing conveyance pipes were used to carry water from existing extraction wells PW4, PW9, PW13, and P15. All conveyance piping is 1 ½-inch diameter HDPE. The flow from the existing wells and new wells was metered in the meter building. The flow from all the wells was combined in a header which connected to the four existing conveyance pipes leading to the treatment building. The pipes were bedded in sand and covered with Styrofoam insulation to prevent freezing. For details of the pipe installation see details on drawing D23 and Photographs 1 through 4 in Appendix E.

2.5 WATER/PRODUCT PUMP INSTALLATION

There are two pumps in each extraction well. The water pump is a ¾ hp electric submersible which pumps water to the pitless adapter and through the piping network to the treatment system. The product pump is a small pneumatic unit that hangs at the pumping level of the well. The pneumatic pump moves the floating product out of the well and into a barrel sitting inside of the well house. The product pump assembly is placed inside of a screened 2-inch pipe for protection. There are also two floats that hang inside of the well. They are placed to define the upper and lower limits of the pumping level and are located one foot apart. The goal is to keep the pumping level between these floats. See the table on Drawing D18 for the specific information for each well.

2.6 METERING BUILDING INSTALLATION

The metering building was constructed at the location of the connection to the four existing conveyance pipes. The building was a 10-foot by 12-foot prefabricated design placed on a concrete slab. For details of the building, see Drawing D20. Inside the building a 3-inch diameter Schedule 80 PVC header combines the water flow of each individual well after the flow runs through a flow meter/totalizer. The combined flow is then conveyed through the four existing conveyance pipes to the treatment building. See Photographs 2 and 4 of Appendix E.

There is also a 2-inch diameter copper header in the metering building providing compressed air to power the product recovery pumps. A main control panel monitors flow, water levels, and pump status. Control and power wiring run to the individual well houses via conduit placed in the trenches during conveyance pipe installation.

2.7 TREATMENT EQUIPMENT INSTALLATION

The groundwater treatment equipment was in place and functioning prior to these system modifications. The oil water separator, fluidized-bed biological reactor and fixed film reactor (collectively referred to as primary treatment) needed no modifications to handle additional flow. Modifications were made to the final stages of the system to increase flow capacity and treatment capability.

A new bag filter was installed following primary treatment to collect solids and transport them to a settlement tank in the treatment building. The bag filter uses a 25 micron stainless steel screen and automatically backwashes when trapped solids increase the differential pressure across the filter above a predetermined level.

After leaving the bag filter the water flows through two 1,000-pound carbon treatment vessels connected in parallel. The activated carbon removes more of the remaining contaminants and traps any solids that may have passed through the bag filter. These first two (No. 1 and No. 2) carbon vessels can be backwashed with treated water to remove any solids that may accumulate within them.

The final treatment stage consists of six 1,000-pound carbon vessels (two new, four existing) connected in parallel. These units further reduce contaminant levels prior to discharge into the City of Wausau sanitary sewer system.

2.8 RECOVERY WELL DEVELOPMENT

The recovery wells were developed the week of October 5, 1998, prior to system start-up, by Boart Longyear Company. The wells were developed by a combination of surgeblock, pumping, and jetting. Approximately 250 gallons of water were removed from each well. See well development forms in Appendix D for detail of individual well development.

Development water was stored in two 400-gallon tanks and treated on-site before discharge to the Wausau Municipal Wastewater Treatment Plant.

2.9 DISPOSAL OF CONTAMINATED SOIL

Contaminated soil was generated during the installation of recovery wells PW17 through PW27. Approximately 20 cu yds of soil was generated during the drilling process. This soil was transported by A-1 transport on November 1, 1999 to Woodland RDF Inc. in South Elgin, Illinois for disposal.

2.10 CONTROL SYSTEM INSTALLATION

Two new control panels were installed as part of the system installation. One control panel was installed in the new metering building and controls all of the new extraction well product and submersible pumps. The other control panel was installed in the existing treatment building and controls the existing extraction well pumps. This control panel also receives signals from the treatment system that will shut down the extraction wells in the event of an alarm condition.

The two control panels communicate over fiber optic cable that was installed during trenching activities. The treatment building control panel is connected, via fiber optic cable, to an on-site computer containing man-machine interface (MMI) software. The software allows for monitoring and control of all system components from the computer. System operational data is collected daily and saved in a spreadsheet. The software also allows for remote monitoring and control of the system via a standard phone line connection.

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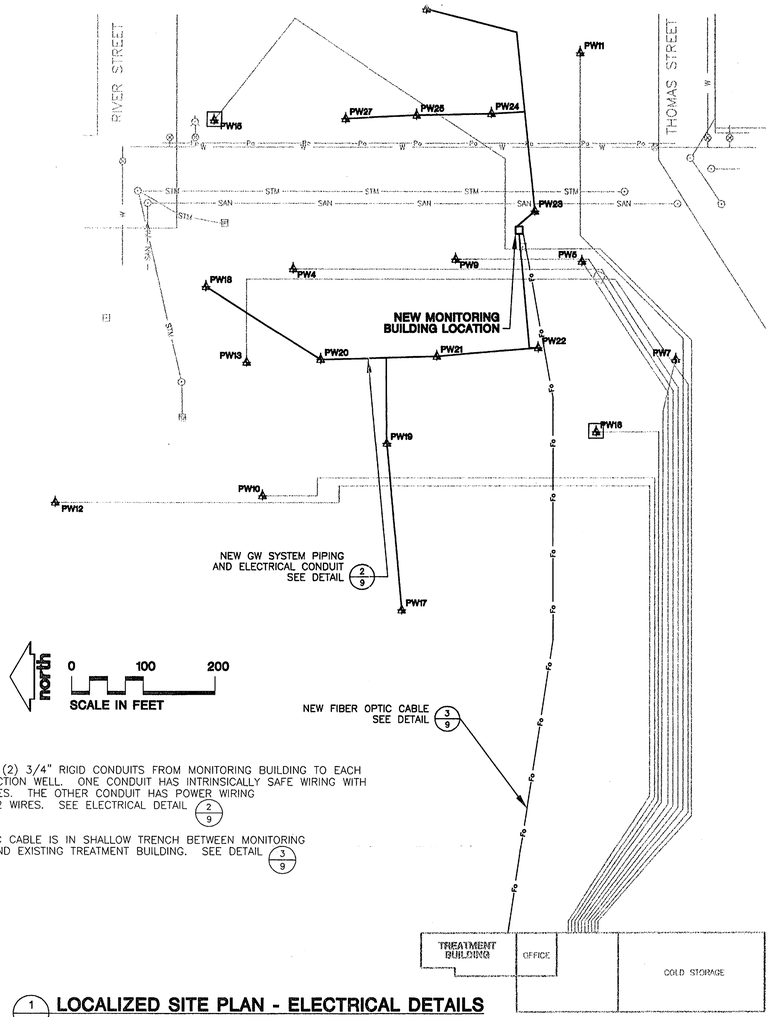
3.0 CONCLUSIONS

Based on field observations and documentation, Montgomery Watson concludes that the modification to the groundwater remediation system at the site has been installed in substantial conformance with the Construction Specifications.

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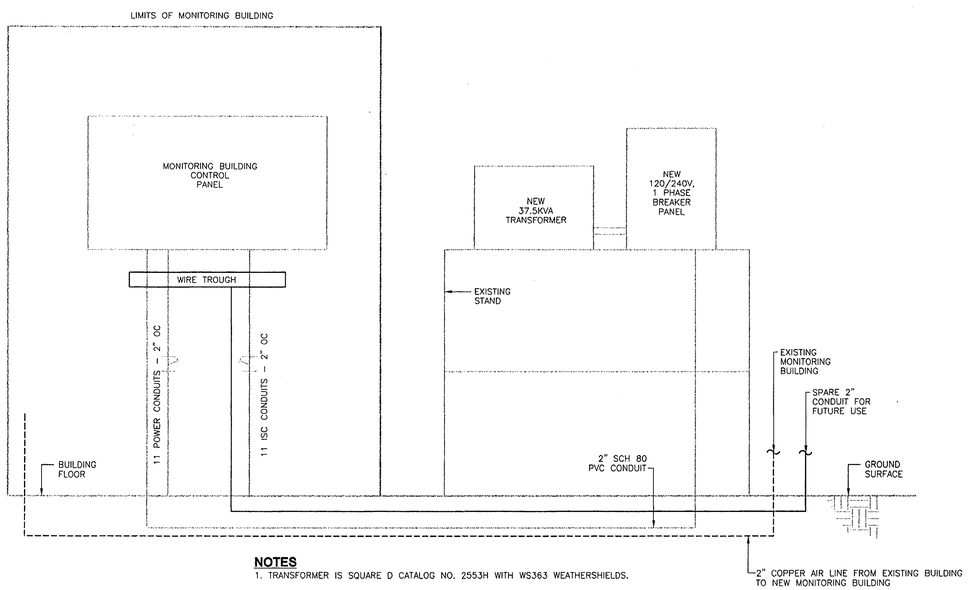
QUALITY CONTROL	Graphic Standards	DLF	1-15-99	Technical Review	JAL	1-25-99	Management Review
	Lead Professional	CRM	1-27-99	Project Manager			Other



NOTES

1. THERE ARE (2) 3/4" RIGID CONDUITS FROM MONITORING BUILDING TO EACH NEW EXTRACTION WELL. ONE CONDUIT HAS INTRINSICALLY SAFE WIRING WITH 8-#12 WIRES. THE OTHER CONDUIT HAS POWER WIRING WITH 7-#12 WIRES. SEE ELECTRICAL DETAIL 2/9
2. FIBER OPTIC CABLE IS IN SHALLOW TRENCH BETWEEN MONITORING BUILDING AND EXISTING TREATMENT BUILDING. SEE DETAIL 3/9

1/9 LOCALIZED SITE PLAN - ELECTRICAL DETAILS

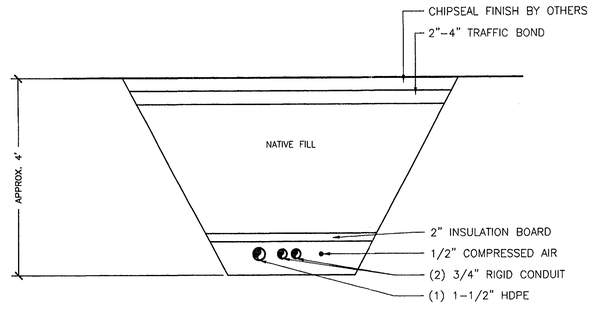


NOTES

1. TRANSFORMER IS SQUARE D CATALOG NO. 2553H WITH WS363 WEATHERSHIELDS.

5/9 CONTROL PANEL INSTALLATION

NOT TO SCALE

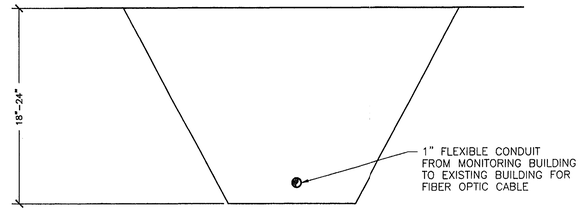


NOTES

1. WHERE PIPING CONVERTS FROM EXISTING DOUBLE CONTAINMENT HDPE PIPING TO SINGLE HDPE PIPING, FLEXIBLE FERNCO FITTINGS WERE INSTALLED AROUND CONTAINMENT PIPING TO NEW PIPING.

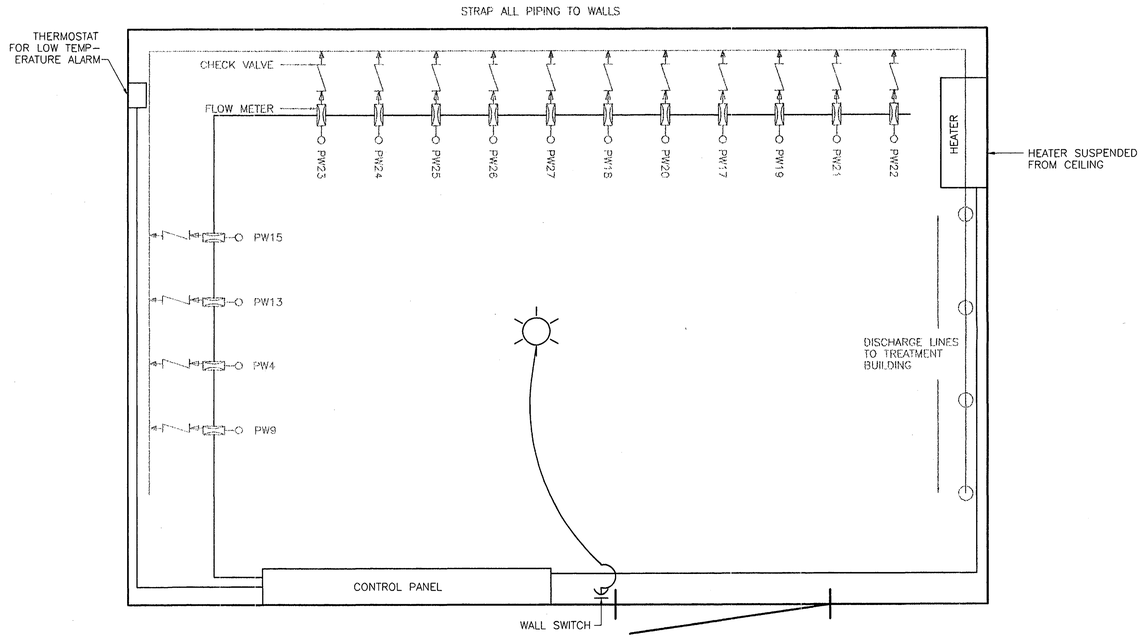
2/9 TYPICAL TRENCH SECTION

NOT TO SCALE



3/9 ELECTRICAL TRENCH SECTION

NOT TO SCALE



4/9 MONITORING BUILDING - ELECTRICAL DETAILS

0 1 2
SCALE IN FEET

Releases	Issuance/Revisions	Date	By	Apprvd.
	RECORD DRAWINGS	1-27-99	JAL	CRM

Drawn By DLF
Developed By JAL
Date 4.6.99
Approved By
Reference 1242057.04180101-D14
Consultants

ELECTRICAL DETAILS

GROUNDWATER EXTRACTION SYSTEM EXPANSION
CONSTRUCTION OBSERVATION REPORT
WAULECO INCORPORATED
125 ROSECRANS STREET
WAUSAU, WISCONSIN

Printed

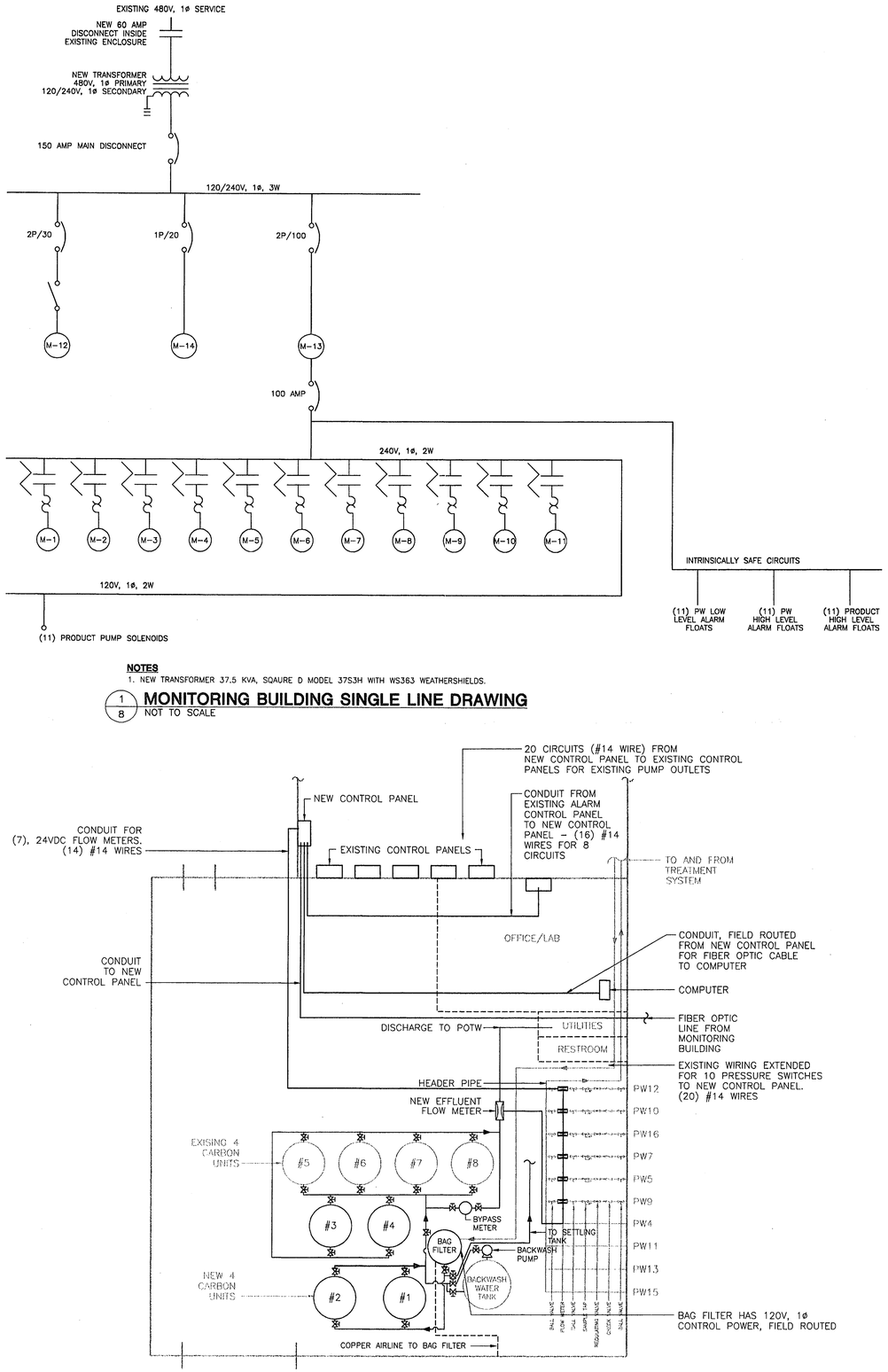
Sheet Number
9 of 9

Drawing Number
1242057
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MONTGOMERY WATSON

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QUALITY CONTROL	Graphic Standards	DJF	1-15-99	Technical Review	JAL	1-25-99	Management Review
	Lead Professional	CRM	1-27-99	Project Manager			Other



NOTES

1. NEW TRANSFORMER 37.5 KVA, SQAURE D MODEL 37S3H WITH WS363 WEATHERSHIELDS.

1/8 **MONITORING BUILDING SINGLE LINE DRAWING**
NOT TO SCALE

4/8 **EXISTING TREATMENT BUILDING WIRING**
NOT TO SCALE

EQUIPMENT SCHEDULE								
ITEM NO.	EQUIPMENT	LOAD OR HP	VOLTS	PH	PANEL	CB SIZE	CONDUIT AND WIRE SIZE	FLA
M-1	PW17 PUMP	3/4 HP	240	1	CP	--	3/4" - #12	6.9
M-2	PW18 PUMP	3/4 HP	240	1	CP	--	3/4" - #12	6.9
M-3	PW19 PUMP	3/4 HP	240	1	CP	--	3/4" - #12	6.9
M-4	PW20 PUMP	3/4 HP	240	1	CP	--	3/4" - #12	6.9
M-5	PW21 PUMP	3/4 HP	240	1	CP	--	3/4" - #12	6.9
M-6	PW22 PUMP	3/4 HP	240	1	CP	--	3/4" - #12	6.9
M-7	PW23 PUMP	3/4 HP	240	1	CP	--	3/4" - #12	6.9
M-8	PW24 PUMP	3/4 HP	240	1	CP	--	3/4" - #12	6.9
M-9	PW25 PUMP	3/4 HP	240	1	CP	--	3/4" - #12	6.9
M-10	PW26 PUMP	3/4 HP	240	1	CP	--	3/4" - #12	6.9
M-11	PW27 PUMP	3/4 HP	240	1	CP	--	3/4" - #12	6.9
M-12	HEATER	3KW	240	1	LC	30	3/4" - #10	12.5
M-13	CONTROL PANEL	FRAC.	240	1	LC	100	1 1/2" - 1/0	80
M-14	OUTLET	FRAC.	120	1	LC	20	3/4" - #12	--

Notes:

1. CP= Control Panel
2. LC= Load Center, Square D Model QO130M140, 150 amp panel with main breaker mounted inside existing enclosure.

2/8 **MONITORING BUILDING EQUIPMENT SCHEDULE**

INPUT/OUTPUT SCHEDULE
Monitoring Building Control Panel

	INPUTS (ALL 24VDC)	STATUS	ISC	XMIT REGISTER		OUTPUTS (ALL 120VAC)	XMIT REGISTER
1	PW17 PUMP AUTO SWITCH	N.O.		70001	1	PW17 PUMP	80001
2	PW17 PRODUCT PUMP SOLENOID AUTO SWITCH	N.O.		70002	2	PW17 PRODUCT PUMP SOLENOID	80002
3	PW18 PUMP AUTO SWITCH	N.O.		70003	3	PW18 PUMP	80003
4	PW18 PRODUCT PUMP SOLENOID AUTO SWITCH	N.O.		70004	4	PW18 PRODUCT PUMP SOLENOID	80004
5	PW19 PUMP AUTO SWITCH	N.O.		70005	5	PW19 PUMP	80005
6	PW19 PRODUCT PUMP SOLENOID AUTO SWITCH	N.O.		70006	6	PW19 PRODUCT PUMP SOLENOID	80006
7	PW20 PUMP AUTO SWITCH	N.O.		70007	7	PW20 PUMP	80007
8	PW20 PRODUCT PUMP SOLENOID AUTO SWITCH	N.O.		70008	8	PW20 PRODUCT PUMP SOLENOID	80008
9	PW21 PUMP AUTO SWITCH	N.O.		70009	9	PW21 PUMP	80009
10	PW21 PRODUCT PUMP SOLENOID AUTO SWITCH	N.O.		70010	10	PW21 PRODUCT PUMP SOLENOID	80010
11	PW22 PUMP AUTO SWITCH	N.O.		70011	11	PW22 PUMP	80011
12	PW22 PRODUCT PUMP SOLENOID AUTO SWITCH	N.O.		70012	12	PW22 PRODUCT PUMP SOLENOID	80012
13	PW23 PUMP AUTO SWITCH	N.O.		70013	13	PW23 PUMP	80013
14	PW23 PRODUCT PUMP SOLENOID AUTO SWITCH	N.O.		70014	14	PW23 PRODUCT PUMP SOLENOID	80014
15	PW24 PUMP AUTO SWITCH	N.O.		70015	15	PW24 PUMP	80015
16	PW24 PRODUCT PUMP SOLENOID AUTO SWITCH	N.O.		70016	16	PW24 PRODUCT PUMP SOLENOID	80016
17	PW25 PUMP AUTO SWITCH	N.O.		70017	17	PW25 PUMP	80017
18	PW25 PRODUCT PUMP SOLENOID AUTO SWITCH	N.O.		70018	18	PW25 PRODUCT PUMP SOLENOID	80018
19	PW26 PUMP AUTO SWITCH	N.O.		70019	19	PW26 PUMP	80019
20	PW26 PRODUCT PUMP SOLENOID AUTO SWITCH	N.O.		70020	20	PW26 PRODUCT PUMP SOLENOID	80020
21	PW27 PUMP AUTO SWITCH	N.O.		70021	21	PW27 PUMP	80021
22	PW27 PRODUCT PUMP SOLENOID AUTO SWITCH	N.O.		70022	22	PW27 PRODUCT PUMP SOLENOID	80022
23	RESET SWITCH	N.O.		70023	23	FAULT LIGHT	80023
24	SPARE	N.O.		70024	24	SPARE	80024
25	PW17 FEEDBACK	N.O.		70025	25	SPARE	80025
26	PW18 FEEDBACK	N.O.		70026	26	SPARE	80026
27	PW19 FEEDBACK	N.O.		70027	27	SPARE	80027
28	PW20 FEEDBACK	N.O.		70028	28	SPARE	80028
29	PW21 FEEDBACK	N.O.		70029	29	SPARE	80029
30	PW22 FEEDBACK	N.O.		70030	30	SPARE	80030
31	PW23 FEEDBACK	N.O.		70031	31	SPARE	80031
32	PW24 FEEDBACK	N.O.		70032	32	EXISTING PRODUCT PUMPS SOLENOID	80032
33	PW25 FEEDBACK	N.O.		70033			
34	PW26 FEEDBACK	N.O.		70034			
35	PW27 FEEDBACK	N.O.		70035			
36	PW17 FLOW METER	N.O.		70036			
37	PW18 FLOW METER	N.O.		70037			
38	PW19 FLOW METER	N.O.		70038			
39	PW20 FLOW METER	N.O.		70039			
40	PW21 FLOW METER	N.O.		70040			
41	PW22 FLOW METER	N.O.		70041			
42	PW23 FLOW METER	N.O.		70042			
43	PW24 FLOW METER	N.O.		70043			
44	PW25 FLOW METER	N.O.		70044			
45	PW26 FLOW METER	N.O.		70045			
46	PW27 FLOW METER	N.O.		70046			
47	PW4 FLOW METER	N.O.		70047			
48	PW9 FLOW METER	N.O.		70048			
49	PW13 FLOW METER	N.O.		70049			
50	PW15 FLOW METER	N.O.		70050			
51	MONITORING BUILDING LOW TEMP. ALARM	N.O.		70051			
52	SPARE			70052			
53	SPARE			70053			
54	SPARE			70054			
55	SPARE			70055			
56	SPARE			70056			
57	SPARE			70057			
58	SPARE			70058			
59	SPARE			70059			
60	SPARE			70060			
61	SPARE			70061			
62	SPARE			70062			
63	SPARE		YES	70063			
64	PW17 LOW LEVEL ALARM FLOAT	N.O.	YES	70064			
65	PW17 HIGH LEVEL ALARM FLOAT	N.O.	YES	70065			
66	PW17 PRODUCT TANK HIGH LEVEL FLOAT	N.C.	YES	70066			
67	PW18 LOW LEVEL ALARM FLOAT	N.O.	YES	70067			
68	PW18 HIGH LEVEL ALARM FLOAT	N.O.	YES	70068			
69	PW18 PRODUCT TANK HIGH LEVEL FLOAT	N.C.	YES	70069			
70	PW19 LOW LEVEL ALARM FLOAT	N.O.	YES	70070			
71	PW19 HIGH LEVEL ALARM FLOAT	N.O.	YES	70071			
72	PW19 PRODUCT TANK HIGH LEVEL FLOAT	N.C.	YES	70072			
73	PW20 LOW LEVEL ALARM FLOAT	N.O.	YES	70073			
74	PW20 HIGH LEVEL ALARM FLOAT	N.O.	YES	70074			
75	PW20 PRODUCT TANK HIGH LEVEL FLOAT	N.C.	YES	70075			
76	PW21 LOW LEVEL ALARM FLOAT	N.O.	YES	70076			
77	PW21 HIGH LEVEL ALARM FLOAT	N.O.	YES	70077			
78	PW21 PRODUCT TANK HIGH LEVEL FLOAT	N.C.	YES	70078			
79	PW22 LOW LEVEL ALARM FLOAT	N.O.	YES	70079			
80	PW22 HIGH LEVEL ALARM FLOAT	N.O.	YES	70080			
81	PW22 PRODUCT TANK HIGH LEVEL FLOAT	N.C.	YES	70081			
82	PW23 LOW LEVEL ALARM FLOAT	N.O.	YES	70082			
83	PW23 HIGH LEVEL ALARM FLOAT	N.O.	YES	70083			
84	PW23 PRODUCT TANK HIGH LEVEL FLOAT	N.C.	YES	70084			
85	PW24 LOW LEVEL ALARM FLOAT	N.O.	YES	70085			
86	PW24 HIGH LEVEL ALARM FLOAT	N.O.	YES	70086			
87	PW24 PRODUCT TANK HIGH LEVEL FLOAT	N.C.	YES	70087			
88	PW25 LOW LEVEL ALARM FLOAT	N.O.	YES	70088			
89	PW25 HIGH LEVEL ALARM FLOAT	N.O.	YES	70089			
90	PW25 PRODUCT TANK HIGH LEVEL FLOAT	N.C.	YES	70090			
91	PW26 LOW LEVEL ALARM FLOAT	N.O.	YES	70091			
92	PW26 HIGH LEVEL ALARM FLOAT	N.O.	YES	70092			
93	PW26 PRODUCT TANK HIGH LEVEL FLOAT	N.C.	YES	70093			
94	PW27 LOW LEVEL ALARM FLOAT	N.O.	YES	70094			
95	PW27 HIGH LEVEL ALARM FLOAT	N.O.	YES	70095			
96	PW27 PRODUCT TANK HIGH LEVEL FLOAT	N.C.	YES	70096			

INPUT/OUTPUT SCHEDULE
Treatment Building Control Panel

	INPUTS	STATUS	VOLTS	XMIT REGISTER		OUTPUTS	VOLTS
1	PW4 PUMP AUTO SWITCH	N.O.	24VDC		1	PW4 PUMP	120VAC
2	PW5 PUMP AUTO SWITCH	N.O.	24VDC		2	PW5 PUMP	120VAC
3	PW7 PUMP AUTO SWITCH	N.O.	24VDC		3	PW7 PUMP	120VAC
4	PW9 PUMP AUTO SWITCH	N.O.	24VDC		4	PW9 PUMP	120VAC
5	PW10 PUMP AUTO SWITCH	N.O.	24VDC		5	PW10 PUMP	120VAC
6	PW11 PUMP AUTO SWITCH	N.O.	24VDC		6	PW11 PUMP	120VAC
7	PW12 PUMP AUTO SWITCH	N.O.	24VDC		7	PW12 PUMP	120VAC
8	PW13 PUMP AUTO SWITCH	N.O.	24VDC		8	PW13 PUMP	120VAC
9	PW15 PUMP AUTO SWITCH	N.O.	24VDC		9	PW15 PUMP	120VAC
10	PW12 FLOW METER	N.O.	24VDC		10	PW16 PUMP	120VAC
11	PW5 FLOW METER	N.O.	24VDC		11	FAULT LIGHT	120VAC
12	PW7 FLOW METER	N.O.	24VDC		12	SPARE	120VAC
13	PW10 FLOW METER	N.O.	24VDC		13	SPARE	120VAC
14	PW11 FLOW METER	N.O.	24VDC		14	PUMPING WELLS OFF LIGHT	120VAC
15	PW16 FLOW METER	N.O.	24VDC		15	FBR INFLUENT TANK HIGH LIGHT	120VAC
16	TOTAL SYSTEM EFFLUENT FLOW METER	N.O.	24VDC		16	AUTODIALER ENABLE	120VAC
17	PW4 FEEDBACK	N.O.	120VAC	00401			
18	PW5 FEEDBACK	N.O.	120VAC				
19	PW7 FEEDBACK	N.O.	120VAC				
20	PW9 FEEDBACK	N.O.	120VAC	00402			
21	PW10 FEEDBACK	N.O.	120VAC				
22	PW11 FEEDBACK	N.O.	120VAC				
23	PW12 FEEDBACK	N.O.	120VAC				
24	PW13 FEEDBACK	N.O.	120VAC	00403			
25	PW15 FEEDBACK	N.O.	120VAC	00404			
26	PW16 FEEDBACK	N.O.	120VAC				
27	PW4 WELL PRESSURE SWITCH	N.O.	120VAC				
28	PW5 WELL PRESSURE SWITCH	N.O.	120VAC				
29	PW7 WELL PRESSURE SWITCH	N.O.	120VAC				
30	PW9 WELL PRESSURE SWITCH	N.O.	120VAC				
31	PW10 WELL PRESSURE SWITCH	N.O.	120VAC				
32	PW11 WELL PRESSURE SWITCH	N.O.	120VAC				
33	PW12 WELL PRESSURE SWITCH	N.O.	120VAC				
34	PW13 WELL PRESSURE SWITCH	N.O.	120VAC				
35	PW15 WELL PRESSURE SWITCH	N.O.	120VAC				
36	PW16 WELL PRESSURE SWITCH	N.O.	120VAC				
37	EFFLUENT PUMP FEEDBACK	N.O.	120VAC				
38	PW16 PUMP AUTO SWITCH	N.O.	120VAC				
39	SPARE		120VAC				
40	SPARE		120VAC				
41	SPARE		120VAC				
42	SPARE		120VAC				
43	SPARE		120VAC				
44	SPARE		120VAC				
45	SPARE		120VAC				
46	SPARE		120VAC				
47	SPARE		120VAC				
48	SPARE		120VAC				
49	SPARE	N.O.	120VAC				
50	SPARE	N.O.	120VAC				
51	O/W SEPARATOR HIGH LEVEL	N.C.	120VAC	00426			
52	FBR INFLUENT TANK HIGH LEVEL	N.C.	120VAC	00427			
53	SPARE	N.C.	120VAC				
54	AIR COMPRESSOR FAILED	N.O.	120VAC	00429			
55	RECYCLE PUMP OFF	N.O.	120VAC	00430			
56	AUTODIALER SWITCH	N.O.	120VAC				

ISC= Intrinsically Safe Circuit

Monitoring Building Control Panel Hardware Requirements- PC-A984-131 PLC, Primary 5 slot rack, Secondary 5 slot rack, (6) AS-BDEP-217 24VDC 16 point Input Cards, (2) AS-BDAP-218 120VAC 16 point Output Cards

Treatment Building Control Panel Hardware Requirements- PC-E984-241 PLC, Primary 5 slot rack, Secondary 5 slot rack, (2) AS-BDEP-218 120VAC 16 point Input Cards, (1) AS-BDEP-217 24VDC 16 point Input Card, (1) AS-BDAP-218 16 point Output Card

3/8 **INPUT/OUTPUT SCHEDULE**

Developed By JAL
Drawn By
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Date 4-6-99
Reference 1242057.04180101-D13
Consultants

Releases	Issuance/Revisions	Date	By	Apprvd.
	RECORD DRAWINGS	1-27-99	JAL	CRM

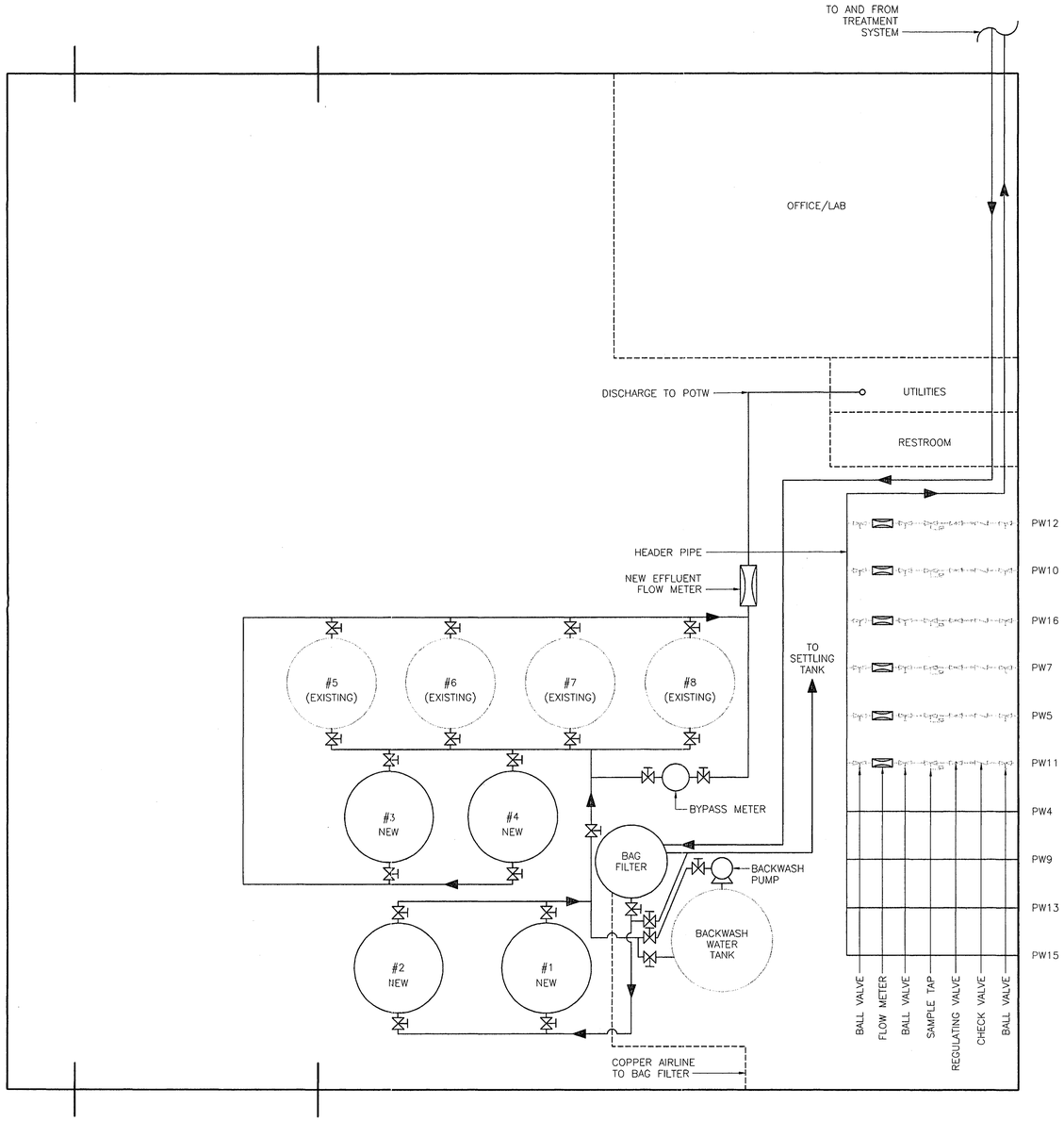
ELECTRICAL DETAILS
GROUNDWATER EXTRACTION SYSTEM EXPANSION
CONSTRUCTION OBSERVATION REPORT
WAULECO INCORPORATED
125 ROSECRANS STREET
WAUSAU, WISCONSIN

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Sheet Number
8 of 9
Drawing Number
1242057
04180101 D22

MONTGOMERY WATSON

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QUALITY CONTROL	Graphic Standards	DLF	1-15-99	Technical Review	JAL	1-25-99	Management Review
	Lead Reviewer	CRM	1-27-99	Project Manager			Other



1/7 **TREATMENT SYSTEM ADDITION DETAILS**
NOT TO SCALE

NOTES

1. NEW CARBON UNITS PLACED IN PARALLEL AS SHOWN.
2. ALL FLOW REGULATING DEVICES ON PW4, PW9, PW13, AND PW15 REMOVED AND 2" SCH 80 PVC PIPE CONNECTED TO HEADER PIPE.
3. NEW 3/4" FLOW METERS INSTALLED ON PW5, PW7, PW10, PW11, PW12, AND PW16 LINES.

Releases	Issuance/Revisions	Date	By	Approvd.
	RECORD DRAWINGS	1-27-99	JAL	CRM

Developed By JAL
Drawn By
Approved By
Date 4.6.99
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Consultants

TREATMENT SYSTEM DETAILS

GROUNDWATER EXTRACTION SYSTEM EXPANSION
CONSTRUCTION OBSERVATION REPORT
WAULECO INCORPORATED
125 ROSECRANS STREET
WAUSAU, WISCONSIN

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Sheet Number
7 of 9

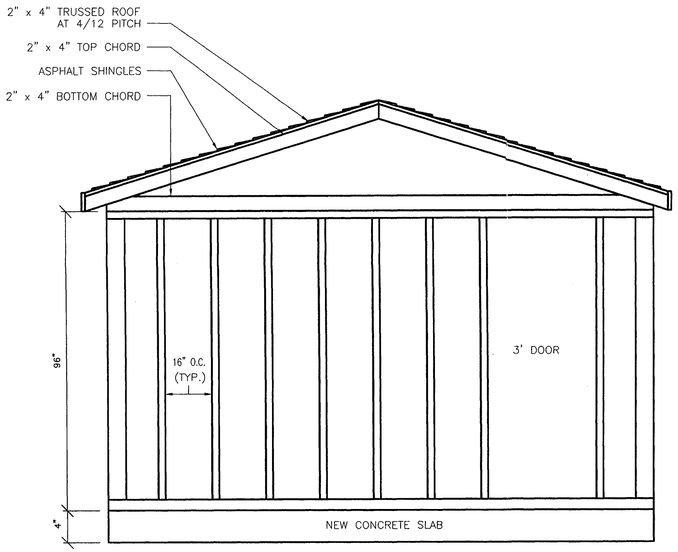
Drawing Number
1242057
04180101 **D21**

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QUALITY CONTROL	Graphic Standards	DLF	1-15-99
	Lead Reviewer	CRM	1-27-99

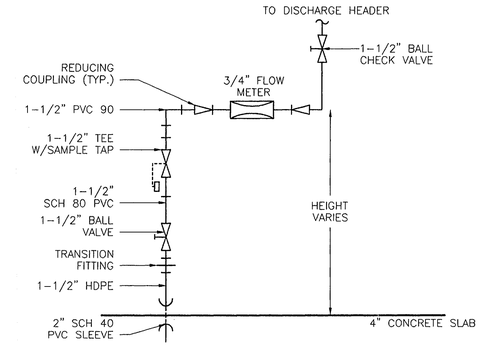
Project Manager			
Technical Review	JAL	1-25-99	Management Review



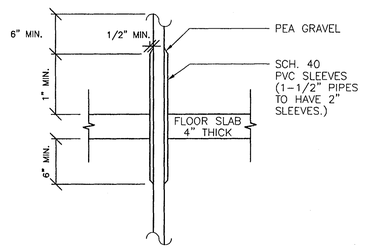
1/6 **BUILDING DETAIL**

BUILDING NOTES

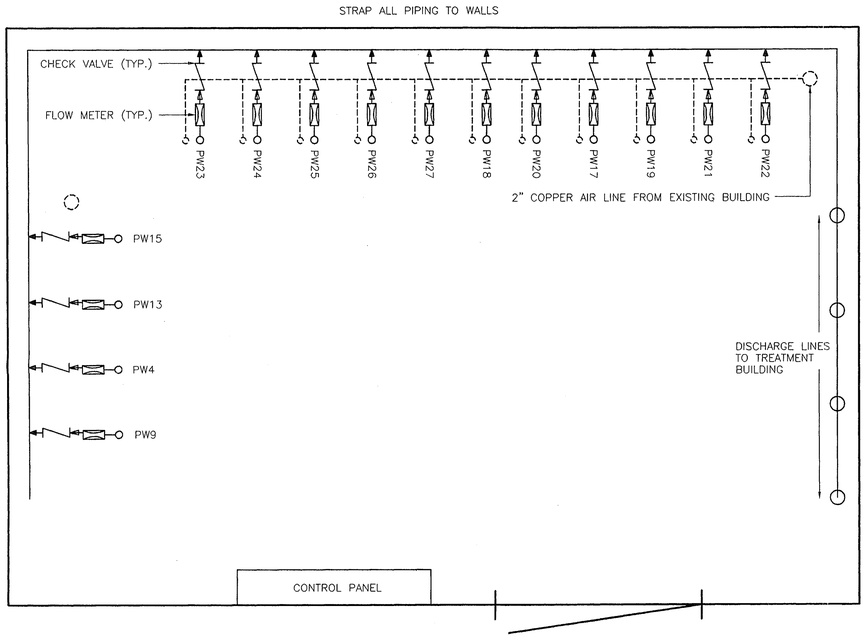
1. PREFABRICATED 8'x12'x8' BUILDING SET UP ON SLAB.
2. CONCRETE PAD 8'x12'x4" THICK. LOCATION OF CONCRETE OF PAD AS SHOWN ON DRAWING D6.
3. CONCRETE REINFORCED WITH SIX BY SIX, 10/10 WIRE MESH. MESH OVERLAPPED ON BOX AT SEAMS. CONCRETE MIXTURE RATED AT 3000 psi.
4. TOP OF SLAB ELEVATION 4" ABOVE EXISTING GRADE ELEVATION.
5. ALL PIPING SLEEVED OR BOXED THROUGH CONCRETE SLAB. SEE DETAILS 3 AND 4 FOR FLOOR PENETRATION DETAILS.
6. WALLS ARE EIGHT FEET HIGH.
7. TWO BY FOUR METAL STUDS, SIXTEEN INCHES ON CENTER.
8. EXTERIOR OF WALLS COVERED WITH WHITE VINYL SIDING.
9. WALLS INSULATED WITH MINIMUM R-11 INSULATION AND VAPOR BARRIER.
10. DRYWALL INSIDE WALLS WITH PAINTED FINISH.
11. 6'-8" HIGH BY 3' WIDE PULL-OUT STEEL DOOR.
12. LOCKABLE DOOR HANDLE ON DOOR.
13. DOOR OPENS OUTWARD.
14. FOUR TO TWELVE PITCH WITH METAL TRUSSES 24" ON CENTER.
15. COVERED WITH 1/2" CDX ROOF SHEATHING.
16. PLYWOOD COVERED WITH TAR PAPER (30 LB.)
17. ROOF NAILED WITH BLACK ASPHALT SHINGLES.
18. ATTIC VENTED WITH ALUMINUM CONTINUOUS RIDGE VENT.
19. ALUMINUM CONTINUOUS VENT IN SOFFIT.
20. GABLE ENDS EXTEND ONE FOOT OVER.
21. ROOF INSULATED WITH MINIMUM R19 INSULATION AND VAPOR BARRIER.



3/6 **TYPICAL EXTRACTION WELL PIPE RISER**
NOT TO SCALE



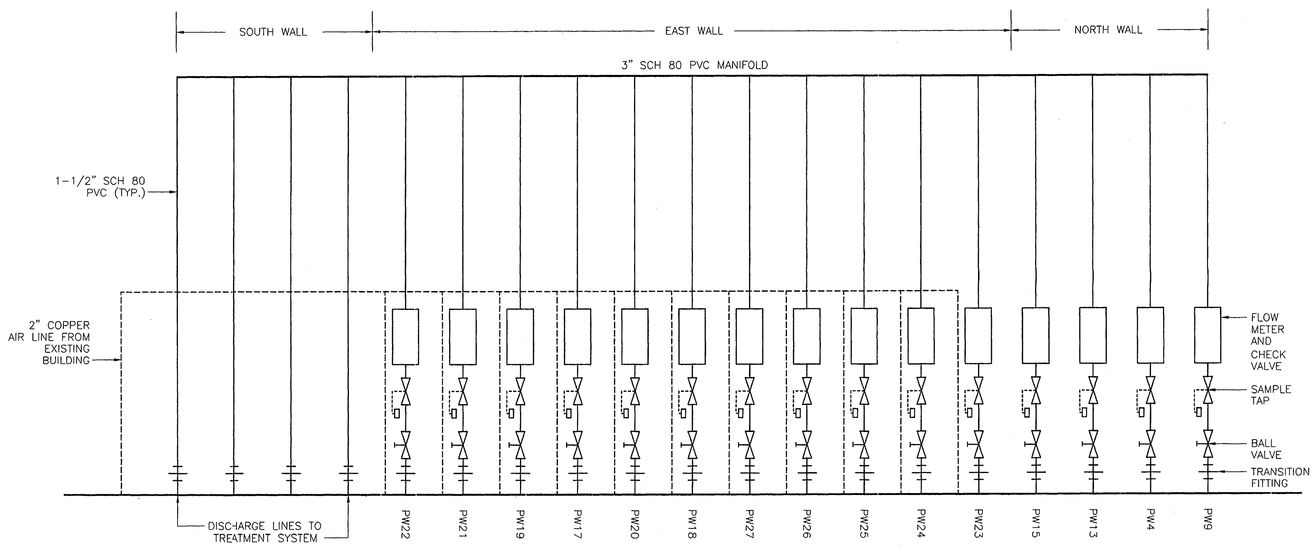
4/6 **(TYPICAL) FLOOR SLEEVE**
NOT TO SCALE



NOTES
1. 2" COPPER MANIFOLD WITH 1/2" COPPER AIR INES TO EACH NEW EXTRACTION WELL.

2/6 **MONITORING BUILDING PLAN VIEW**

0 1 2
SCALE IN FEET



NOTES
1. DISCHARGE LINES ARE THE PIPING ROUTED FROM PW4, PW9, PW13, AND PW15.

5/6 **PIPING CROSS-SECTION**
NOT TO SCALE

Releases	Issuance/Revisions	Date	By	Apprvd.
	RECORD DRAWINGS	1-27-99	JAL	CRM

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Approved By
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Reference 1242057.04180101-D11
Consultants

MONITORING BUILDING AND PIPING DETAILS

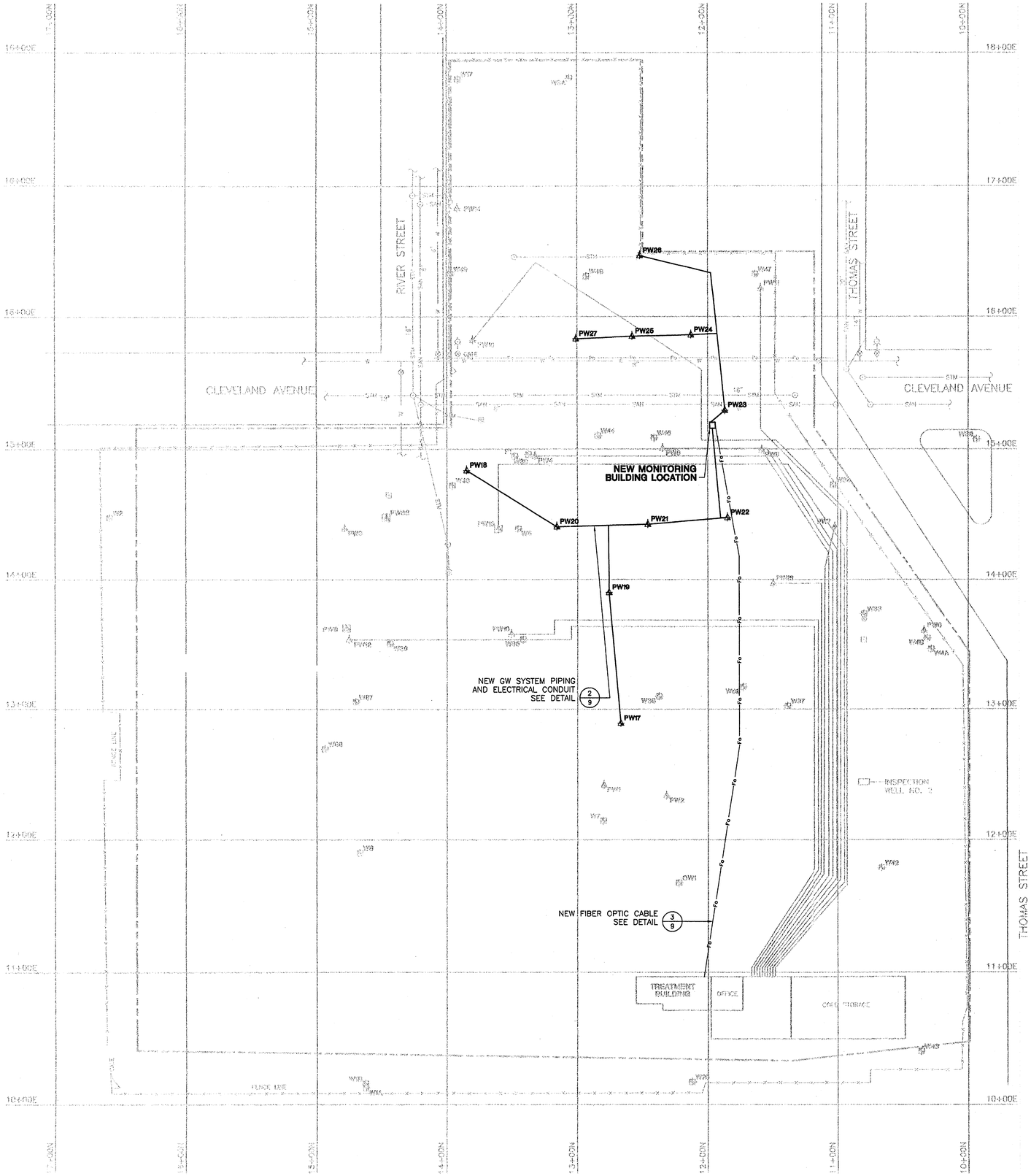
GROUNDWATER EXTRACTION SYSTEM EXPANSION
CONSTRUCTION OBSERVATION REPORT
WAULECO INCORPORATED
125 ROSECRANS STREET
WAUSAU, WISCONSIN

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Sheet Number 6 of 9
Drawing Number 1242057 04180101 D20

MONTGOMERY WATSON

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DRAWN BY	Graphic Standards	DLF	1-16-99	Technical Review	JAL	1-25-99	Management Review
CHECKED	Lead Professional	DLF	1-26-99	Project Manager			Other



LEGEND

- APPROXIMATE PROPERTY LINE
- OHP — OVERHEAD POWER
- SAN — SANITARY SEWER
- STM — STORM SEWER
- W — WATER MAIN
- EXISTING GROUNDWATER EXTRACTION SYSTEM PIPING AND ELECTRICAL CONDUIT
- FENCE LINE
- EXISTING GROUNDWATER MONITORING WELL LOCATION AND NUMBER
- EXISTING COMBINED PRODUCT/GROUNDWATER EXTRACTION WELL LOCATION AND NUMBER
- BUBBLER JUNCTION BOX
- CATCH BASIN
- ELECTRICAL PULL BOX
- MANHOLE
- FIRE HYDRANT
- VALVE
- Fo — NEW FIBER OPTIC CABLE
- NEW GW PIPING AND ELECTRICAL CONDUIT

NOTE

EXISTING CONDITIONS SURVEY PROVIDED ON DISK BY CENTRAL WISCONSIN ENGINEERS, INC., AND FROM PHENCO ENVIRONMENTAL CONSTRUCTION INC. AS BUILT PLAN DATED 12-15-92. UTILITY LOCATIONS, (STORM SEWER, SANITARY SEWER, WATER LINES, VALVES AND HYDRANTS), INTERPOLATED FROM UTILITY DRAWINGS PROVIDED BY THE CITY OF WAUSAU ENGINEERING DEPARTMENT. NO DATE OR SCALE NOTED ON DRAWINGS PROVIDED BY CITY.

north

0 40 80

SCALE IN FEET

Releases	Issuance/Revisions	Date	By	Apprvd.
	RECORD DRAWINGS	1-27-99	JAL	CRM

Developed By JAL
Drawn By DLF
Approved By
Date 4.6.99
Reference 1242057.04180101-D10
Consultants

GROUNDWATER EXTRACTION WELL AND TRENCHING LOCATIONS

GROUNDWATER EXTRACTION SYSTEM EXPANSION
CONSTRUCTION OBSERVATION REPORT
WAULECO INCORPORATED
125 ROSECRANS STREET
WAUSAU, WISCONSIN

Printed APR 6 1999

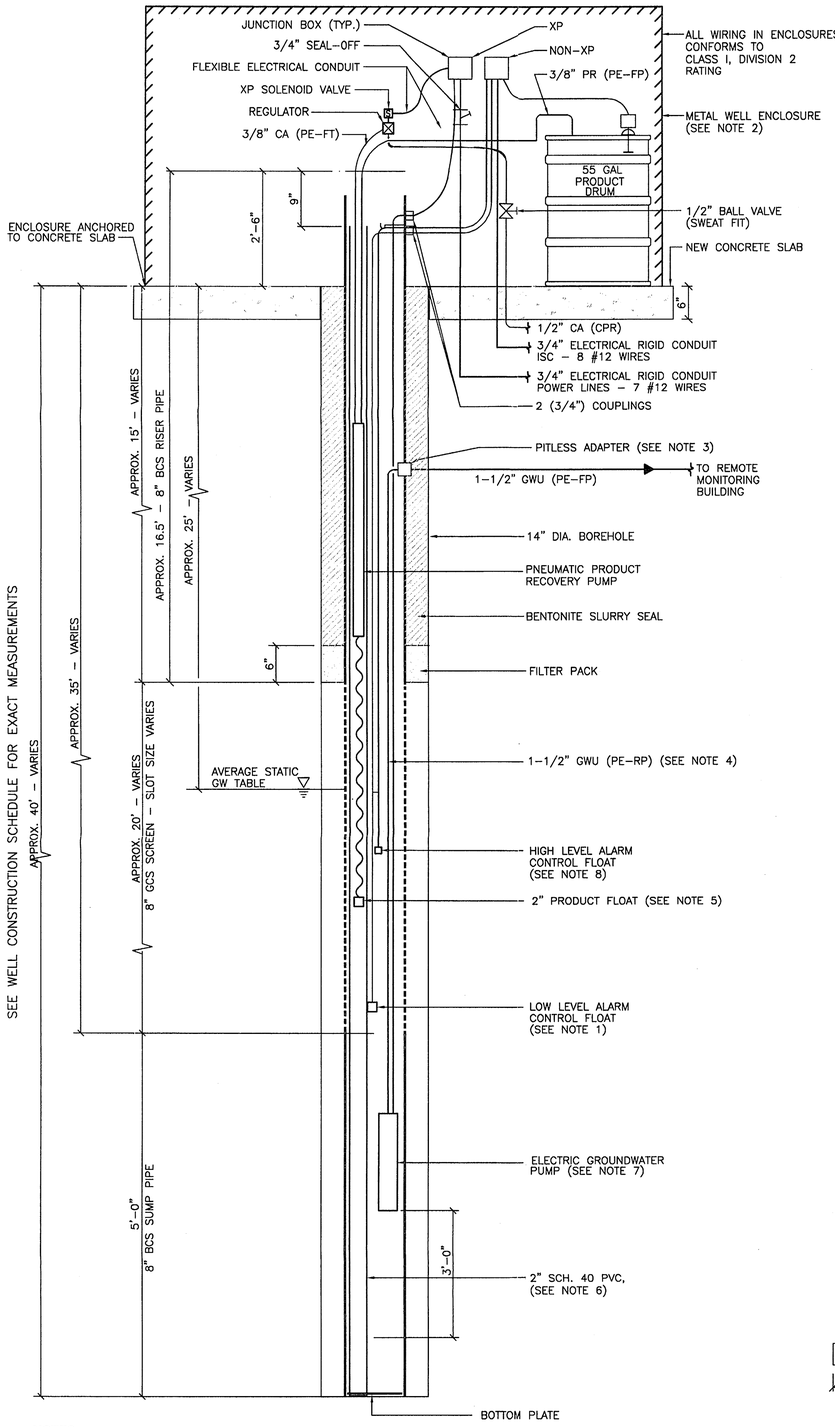
Sheet Number 5 of 9

Drawing Number 1242057 04180101 D19

MONTGOMERY WATSON

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QUALITY CONTROL | Graphic Standards DJE 1-15-99 | Technical Review JAL 1-25-99 | Management Review
Lead Professional | Project Manager | Other



NOTES

1. LOW LEVEL ALARM FLOAT FOR ELECTRIC PUMP CONTROL, SET ABOVE PUMP INTAKE.
2. STEEL ENCLOSURE INSTALLED ON CONCRETE SLAB AT EACH WELL LOCATION.
3. MAAS MODEL J 1-1/2" PITLESS ADAPTOR.
4. BRONZE COMPRESSION COUPLINGS FOR POLYETHYLENE RISER PIPING.
5. PRODUCT PUMP FLOAT MOUNTED AT HIGH LEVEL ALARM FLOAT HEIGHT, WITH 3'-0" MOVEMENT FROM THIS POINT.
6. SCHEDULE 40 WELL SCREEN (0.010" SLOT) PLACED AT LOWER 20' OF WELL.
7. ELECTRICAL PUMPS MOUNTED SUCH THAT INTAKE OF PUMP IS AT TOP OF SUMP.
8. HIGH LEVEL ALARM FLOAT IS SET BELOW THE WELL STATIC WATER LEVEL.
9. 40' OF 2" PVC PIPE IN WELL FOR MONITORING EQUIPMENT USE. PIPE HAS 3/8" PERFORATION IN LOWER 20'.
10. ELECTRICAL BOXES MOUNTED ON CONDUIT.

2/4 COMBINED PRODUCT/GROUNDWATER EXTRACTION WELL DETAIL (TYP.)

NOT TO SCALE

WELL CONSTRUCTION SUMMARY

Well No.	North Site Coord.	East Site Coord.	Date Installed	Well Depth from Ground Surface (ft)	Depth of Intake of Water Pump from TOC (ft)	Depth of Low Level Float from TOC (ft)	Depth of High Level Float from TOC (ft)	Range of Product Pump from TOC (ft)	Static Water Level Below TOC (ft)	Well Riser Pipe		Well Screen			Well Sump	
										Length (ft)	Material	Length (ft)	Material	Screen Size	Length (ft)	Material
PW17	1267	1289	9/22/98	41.2	38.0	~32	~31	30 to 33	~27.0	23.2	8" BCS	15	8" SST	#40	5	8" BCS
PW18	1385	1484	9/21/98	40.9	38.0	~31	~30	29 to 32	~27.0	25.5	8" BCS	12	8" SST	#70	5	8" BCS
PW19	1276	1390	9/21/98	39.2	38.0	~33	~32	31 to 34	~29.2	25.5	8" BCS	12	8" SST	#70	5	8" BCS
PW20	1316	1441	9/18/98	40.0	37.0	~31	~30	29 to 32	~27.9	25.0	8" BCS	12	8" SST	#70	5	8" BCS
PW21	1246	1443	9/17/98	39.8	36.0	~30	~29	28 to 31	~27.5	21.0	8" BCS	15	8" SST	#70	5	8" BCS
PW22	1185	1448	9/17/98	37.9	36.0	~34	~33	32 to 35	~27.6	21.0	8" BCS	15	8" SST	#70	5	8" BCS
PW23	1187	1529	9/16/98	39.6	36.0	~30	~29	28 to 31	~26.6	21.0	8" BCS	15	8" SST	#60	5	8" BCS
PW24	1213	1586	9/15/98	39.6	36.0	~29	~28	27 to 30	~25.7	21.0	8" BCS	15	8" SST	#70	5	8" BCS
PW25	1258	1585	9/15/98	38.5	36.0	~31	~30	29 to 32	~26.0	20.8	8" BCS	15	8" SST	#60	5	8" BCS
PW26	1252	1647	9/16/98	40.0	37.0	~30	~29	28 to 31	~25.6	24.9	8" BCS	12	8" SST	#70	5	8" BCS
PW27	1301	1583	9/14/98	39.8	36.0	~29	~28	27 to 30	~24.8	21.0	8" BCS	15	8" SST	#70	5	8" BCS

ELEVATIONS, MSL

Well	Current Ground Elev. (ft)	Current TOC Elev. (ft)	Well Bottom Elev. (ft)	Intake Water Pump Elev. (ft)	Low Level Alarm Float Elev. (ft)	High Level Alarm Float Elev. (ft)	Range Product Pump Elev. (ft)	Static Water Level Elev. (ft)	Top of Screen Elev. (ft)	Bottom of Screen Elev. (ft)
PW17	1189.8	1191.84	1148.6	1153.8	1159.8	1160.8	1161.8 to 1158.8	1164.8	1168.6	1153.6
PW18	1188.2	1190.14	1147.3	1152.1	1159.1	1160.1	1161.1 to 1158.1	1163.1	1164.6	1152.6
PW19	1189.0	1192.62	1149.8	1154.6	1159.6	1160.6	1161.6 to 1158.6	1163.4	1167.1	1155.1
PW20	1189.0	1191.32	1149.0	1154.3	1160.3	1161.3	1162.3 to 1159.3	1163.4	1166.3	1154.3
PW21	1188.7	1190.19	1148.9	1154.2	1160.2	1161.2	1162.2 to 1159.2	1162.7	1169.2	1154.2
PW22	1188.9	1192.30	1151.0	1156.3	1158.3	1159.3	1160.3 to 1157.3	1164.7	1171.3	1156.3
PW23	1187.8	1188.47	1148.2	1153.5	1159.5	1160.5	1161.5 to 1158.5	1162.9	1168.5	1153.5
PW24	1186.6	1188.28	1147.0	1152.3	1159.3	1160.3	1161.3 to 1158.3	1162.6	1167.3	1152.3
PW25	1186.8	1189.52	1148.3	1153.5	1158.5	1159.5	1160.5 to 1157.5	1163.5	1168.3	1153.7
PW26	1186.6	1188.80	1146.6	1151.8	1158.8	1159.8	1160.8 to 1157.8	1163.2	1163.9	1151.9
PW27	1187.0	1188.51	1147.2	1152.5	1159.5	1160.5	1161.5 to 1158.5	1163.7	1167.5	1152.5

NOTES
TOC = TOP OF CASING
BCS = BLACK CARBON STEEL
SST = STAINLESS STEEL

1/4 WELL CONSTRUCTION SCHEDULE

PROFILE VIEW

PLAN VIEW

NOTES

1. A 6'x6'x4" CONCRETE SLAB WAS PLACED AROUND ALL NEW EXTRACTION WELLS.
2. AN ADDITIONAL 4" OF CONCRETE WAS INSTALLED AROUND EXISTING WELLS PW-5, PW-10, AND PW-11.
3. CONCRETE APRON WAS INSTALLED AT ALL NEW EXTRACTION WELLS AND EXISTING WELLS PW-4, PW-5, PW-9, AND PW-11.
4. OWNER-SUPPLIED STEEL WELL ENCLOSURES INSTALLED ON CONCRETE PADS.
5. ENCLOSURES ANCHORED TO CONCRETE USING A THREADED ANCHOR AND BOLTS ALLOWING FOR FUTURE REMOVAL OF THE ENCLOSURE.

3/4 WELL ENCLOSURES AND CONCRETE SLAB DETAILS

Drawn By DLF
Developed By JAL
Approved By
Date 4-6-99
Reference 1242057.04180101-D9
Consultants

Releases	Issuance/Revisions	Date	By	Apprvd.
	RECORD DRAWINGS	1-27-99	JAL	CRM

PRODUCT/EXTRACTION WELL DETAILS

GROUNDWATER EXTRACTION SYSTEM EXPANSION
CONSTRUCTION OBSERVATION REPORT
WAULECO INCORPORATED
125 ROSECRANS STREET
WAUSAU, WISCONSIN

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QUALITY CONTROL	Graphic Standards	DLF	1-15-99	Technical Review	JAL	1-25-99	Management Review
	Lead Professional	CRM	1-29-99	Project Manager			Other

LIMITS OF EXISTING TREATMENT BUILDING

COMPUTER W/MMI CONTROL INTERFACE

OFFICE

ALARM PANEL

FIBER OPTIC CABLE

TRANSFER PUMP

BACKWASH TANK

FLOW METER

CHECK VALVE

NEW CARBON UNITS

EXISTING CARBON UNITS

TO SOLIDS TANK AND FILTER PRESS

TO AIR COMPRESSOR

#1 #2 #3 #4 #5 #6 #7 #8

BACKWASHABLE BAG FILTER

EFFLUENT FLOW METER

DISCHARGE TO POTW

FLOW METER

EXISTING TREATMENT SYSTEM

TREATMENT BUILDING CONTROL PANEL

FIBER OPTIC CABLE

CONTROL PANEL

MONITORING BUILDING

PW9 PW4 PW13 PW15

PW22 PW21 PW19 PW17 PW20 PW18 PW27 PW26 PW25 PW24 PW23

CU-CA

PE-GWU

SOLENOID VALVE

PRODUCT HIGH LEVEL CONTROLS

PRODUCT STORAGE DRUMS

PRODUCT PUMPS

LEVEL CONTROLS

SUBMERSIBLE PUMPS

PW22 PW21 PW19 PW17 PW20 PW18 PW27 PW26 PW25 PW24 PW23

NEW WELLS CONNECTED TO NEW CONTROL SYSTEM

PE-GWU

PW15 PW13 PW4 PW9 PW12 PW10 PW16 PW7 PW5 PW11

EXISITING WELLS CONNECTED TO EXISTING CONTROL SYSTEM

Releases	Issuance/Revisions	Date	By	Apprvd.
	RECORD DRAWINGS	1-27-99	JAL	CRM

Developed By JAL

Drawn By

Approved By

Date 4.6.99

Reference 1242057.04180101-D8

Consultants

PROCESS AND INSTRUMENTATION DIAGRAM

GROUNDWATER EXTRACTION SYSTEM EXPANSION
CONSTRUCTION OBSERVATION REPORT
WAULECO INCORPORATED
125 ROSECRANS STREET
WAUSAU, WISCONSIN

Printed APR 6 1999

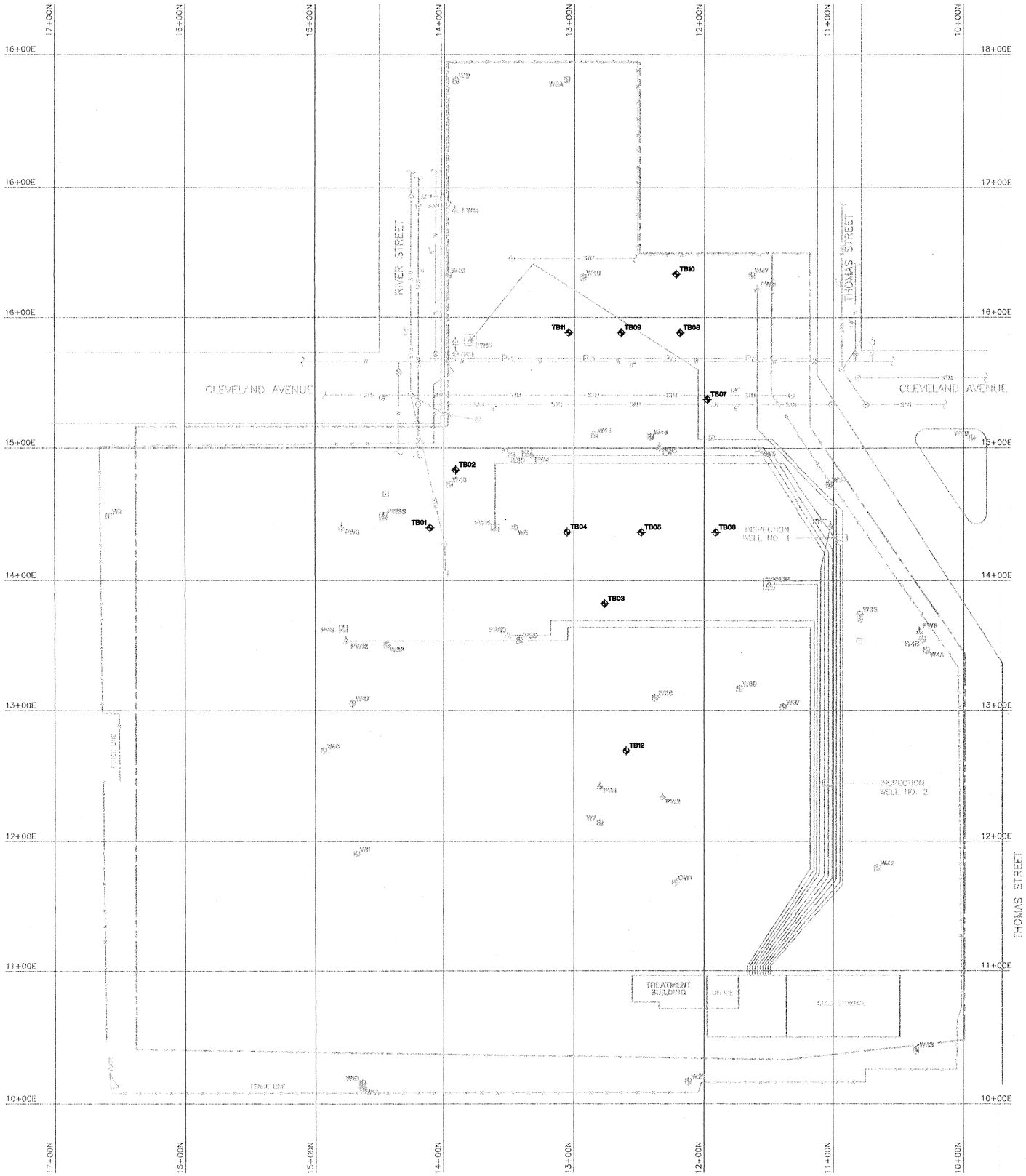
Sheet Number 3 of 9

Drawing Number 1242057 04180101 D17

MONTGOMERY WATSON

This document has been developed for a specific application and purpose and shall not be used without the written approval of Montgomery Watson.

QUALITY CONTROL | Graphic Standards DJE 1-13-99 | Lead Professional | Technical Review JAL 1-25-99 | Project Manager | Management Review | Other



LEGEND

- APPROXIMATE PROPERTY LINE
- OVERHEAD POWER
- SANITARY SEWER
- STORM SEWER
- WATER MAIN
- EXISTING GROUNDWATER EXTRACTION SYSTEM PIPING AND ELECTRICAL CONDUIT
- FENCE LINE
- EXISTING GROUNDWATER MONITORING WELL LOCATION AND NUMBER
- EXISTING COMBINED PRODUCT/GROUNDWATER EXTRACTION WELL LOCATION AND NUMBER
- BUBBLER JUNCTION BOX
- CATCH BASIN
- ELECTRICAL PULL BOX
- MANHOLE
- FIRE HYDRANT
- VALVE
- TB01 PILOT TEST BORING LOCATION AND NUMBER

NOTE

EXISTING CONDITIONS SURVEY PROVIDED ON DISK BY CENTRAL WISCONSIN ENGINEERS, INC., AND FROM PHENCO ENVIRONMENTAL CONSTRUCTION INC. AS BUILT PLAN DATED 12-15-92. UTILITY LOCATIONS, (STORM SEWER, SANITARY SEWER, WATER LINES, VALVES AND HYDRANTS), INTERPOLATED FROM UTILITY DRAWINGS PROVIDED BY THE CITY OF WAUSAU ENGINEERING DEPARTMENT. NO DATE OR SCALE NOTED ON DRAWINGS PROVIDED BY CITY.

Developed By JAL | Drawn By DLF
Approved By | Date 4-6-99
Reference 1242057.04180101-D7
Consultants

Releases	Issuance/Revisions	Date	By	Apprvd.
	RECORD DRAWINGS	1/26/99	JAL	CRM

PILOT TEST BORING LOCATIONS

GROUNDWATER EXTRACTION SYSTEM EXPANSION
CONSTRUCTION OBSERVATION REPORT
WAULECO INCORPORATED
125 ROSECRANS STREET
WAUSAU, WISCONSIN

Printed APR 6 1999

Sheet Number 2 of 9

Drawing Number 1242057 04180101 D16

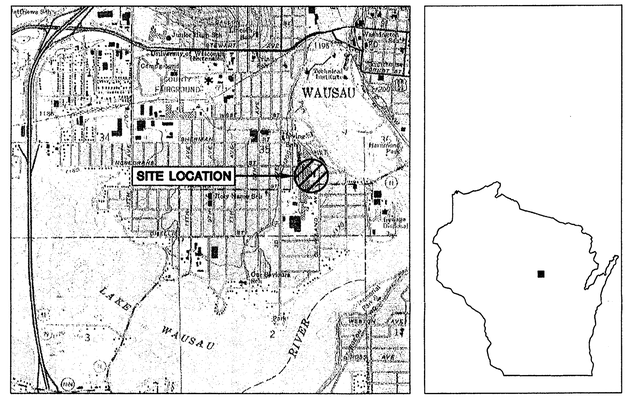
MONTGOMERY WATSON

MONTGOMERY WATSON

GROUNDWATER EXTRACTION SYSTEM EXPANSION CONSTRUCTION OBSERVATION REPORT WAULECO INCORPORATED 125 ROSECRANS STREET WAUSAU, WISCONSIN

LIST OF DRAWINGS

SHEET NUMBER	TITLE	DRAWING NUMBER
1	TITLE SHEET	1242057.04180101-D15
2	PILOT TEST BORING LOCATIONS	1242057.04180101-D16
3	PROCESS AND INSTRUMENTATION DIAGRAM	1242057.04180101-D17
4	PRODUCT/EXTRACTION WELL DETAILS	1242057.04180101-D18
5	GROUNDWATER EXTRACTION WELL AND TRENCHING LOCATIONS	1242057.04180101-D19
6	MONITORING BUILDING AND PIPING DETAILS	1242057.04180101-D20
7	TREATMENT SYSTEM DETAILS AND SUPPLIED EQUIPMENT	1242057.04180101-D21
8	ELECTRICAL DETAILS	1242057.04180101-D22
9	ELECTRICAL DETAILS	1242057.04180101-D23



SITE LOCATION MAP

north

0 2000 4000

SCALE IN FEET

PREPARED FOR:

WAULECO INC.

PREPARED BY:

MONTGOMERY WATSON
MADISON, WISCONSIN

MONTGOMERY WATSON

GROUNDWATER EXTRACTION SYSTEM EXPANSION
CONSTRUCTION OBSERVATION REPORT
WAULECO INCORPORATED
125 ROSECRANS STREET
WAUSAU, WISCONSIN

A

BORING LOGS

BOART LONGYEAR

FIELD BORING LOG

Sheet 1 Of

FOR Wavleo

LOCATION Wausau Elev.

Job No. 242057048 0101

Boring No. PB-1

GROUND WATER — While drilling 28.5 — Before casing removal — After casing removal — Time after drilling — Depth to water — Depth to cave-in

Start 8-5-98
Unit B-57
Chief Larry

Casing/Probe
Weight 300#
Drop

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Unconfined Strength	Boulders	Blows on Casing Size	Blows on Probe Size	Drilling Method
						Asphalt and Basecourse			3 1/4		HSA
						Br F-C sand w/trace silt, little gravel					
1	M	7	32			0 ppm					
		45	15	18		0 ppm					
2	M	11	25			0 ppm					
		29	26	20		2 ppm					
3	M	17	25			200 ppm					
		26	20	22		200 ppm					
4	M	17	21			250 ppm					
	W	18	15	24		300 ppm					
5	W	8	19			100 ppm					
		22	22	22		50 ppm					
6	W	3	3			100 ppm					
	M	4	1			Brown lean clay					
						E.O.B 35.0					
						→ Redrilled w/ 4 1/4 Augers to install 2" Dia PVC tube for CPN downhole probe E.O.B. 35.0					
						Used 40' Sch 40 PVC					
						20 bags BB #7 fine Sand (10 mesh)					

smear zone 25.0' to 32.0'

analytical @ 29.0

sieve @

SS

HSA

BOART LONGYEAR

FIELD BORING LOG

Sheet 1 Of 1

FOR Wausau

LOCATION Wausau, WI Elev.

Job No. 142057.048010

Boring No. PB-2

GROUND WATER: While drilling 27.5' | Before casing removal | After casing removal | Time after drilling | Depth to water | Depth to cave-in

Start 8-5-98
Unit B-57
Chief Larry

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Unconfined Strength	Boulders	Blows on Casing Size	Blows on Probe Size	Drilling Method
						Asphalt and Basecourse					HSA
						Brown f-c Sand w/ Trsilt, lit gr.					
1	M	10	13			5ppm					
		13	14	16"		2ppm					
2	M	10	15			2ppm					
		15	9	14"		50ppm					
3	M	6	6			160ppm					
		12	9	20		200ppm@tip					
4	M/W	6	7			300ppm					
		5	5	20		350ppm					
5		18	16			300ppm					
		15	6			110ppm					
						50ppm					
						120ppm					
						40ppm					
						Smear Zone 24-30'					55
						analytical @ 27.0'					
						Sieve @ 31.0'					
						Brown lean clay					HSA
						E.O.B. 35.0					

BOART LONGYEAR

FIELD BORING LOG

Sheet 1 Of 1

FOR Woolco

LOCATION Wausau, WI Elev.

Job No. [illegible]

Boring No. PB-3

GROUND WATER

While drilling 28.5 Time after drilling

Before casing removal Depth to water

After casing removal Depth to cave-in

Start 2-6-88

Unit ARV B-57

Chief

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Unconfined Strength	Boulders	Blows on Casing Size 3 1/4	Blows on Probe Size	Drilling Method
						Casing/Probe Weight Drop					
						Brown F-C sand w/trace silt & lt brn gr					HSA
						6-8" thick concrete					
						Brown F-C Sand w/trace silt little gr.					
						fill to 24.0'					
1	M	12	15			0 ppm					SS
		18	23	16		0					
2	M	8	6			10 ppm					
		7	25	20		110 ppm					
3	M	23	30			180 ppm					
		30	27	20		250 ppm					
4	M	20	20			250 ppm					
	W	15	10	14		250 ppm					
5	W	9	6			250 ppm					
		5	6	2		100 ppm					
6	W	14	5			120 ppm					
		7	9	16		20 ppm					
						Br F-C sand w/Tr silt, lt brn gr.					
						Analytical @ 27.5'					
						Sieve @ 33					
						Brown lean clay					
						E.O.B 36.0'					

BOART LONGYEAR

FIELD BORING LOG

Sheet 1 Of 1

FOR Wauleco

LOCATION Wausau WI Elev.

Job No. 124205.2048.0101

Boring No. PB-4

GROUND WATER
While drilling 28.5' Time after drilling
Before casing removal Depth to water
After casing removal Depth to cave-in

Start 8-5-98
Unit B-57
Chief Larry

Casing/Probe
Weight 300#
Drop

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Unconfined Strength	Boulders	Blows on Casing Size	Blows on Probe Size	Drilling Method
						Asphalt and Basecourse					HSA
						Brown F-C Sand w Tr Silt/Lithegn.					
1	M	8	18			0ppm					
		16	19	12"		0ppm					
2	m	17	15			50ppm					
		15	18	18"		300 ppm					
3	M	8	20			300ppm					
		27	18	20"		300ppm					
4	W	11	18			300ppm					
		15	15	18"		150ppm					
5	W	6	7			50ppm					
		7	9	2"		30ppm					
6	W	7	9			30ppm					
		8	8	14"		Brown leanclay					
7	W	11	3			E.O.B. 35.0					
	m	2	4								

Smearzone 24.5 to 29.0'

analytical @ 27.0'
Sieve @ 32'

SS

BOART LONGYEAR

FIELD BORING LOG

Sheet 1 Of 1

FOR Wauleco

LOCATION Wausau WI Elev.

Job No. 12V208TOUP101

Boring No. SB-5

GROUND WATER: While drilling — Time after drilling — Before casing removal — Depth to water — After casing removal — Depth to cave-in

Start 9-6-18
Unit ATV B-57
Chief Mike

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Unconfined Strength	Boulders	Blows on Casing Size	Blows on Probe Size	Drilling Method
						Casing/Probe — Weight 300# — Drop					
						Asphalt & Basecourse			3 1/4		HSA
						Grey F-M silty sand 3m fill					
						6-8" concrete layer					
						Grey F-M silty sand 3m fill					
1	M	14	6			0 ppm					SS
		10	10	20		8 ppm					
2	M	6	9			3 ppm					
		12	14	20		10 ppm					
3	M	9	13			Brown F-C sand w/Tr silt little gr 160					
		13	12	14		120 ppm					
4	M	8	10			120 ppm					
	W	13	15	14		analytical @ 28.0'					
5	W	5	6			250 ppm					
		6	8	18		Sieve @ 31.0'					
						100 ppm					
						30 ppm					HSA
						5 ppm					
						Brown lean clay					
						E.O.B. 37.0'					

BOART LONGYEAR

FIELD BORING LOG

Sheet 1 Of 1

FOR Wa-Fe

LOCATION Wayne Ave Elev.

Job No. 2026-97-[illegible]

Boring No. SB-6

GROUND WATER
While drilling 28.0
Before casing removal
After casing removal
Time after drilling
Depth to water
Depth to cave-in

Start 2-6-98
Unit B57
Chief Larry

Casing/Probe
Weight 300#
Drop

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Unconfined Strength	Boulders	Blows on Casing Size 4¼	Blows on Probe Size	Drilling Method
						Asphalt + base course					HSA
						Gr F-C Sand w/ Trace Silt Fine gravel					
						F. 11					
						10" Concrete					
						Brown F-C Sand w/ Trace Silt Fine gr					
1	M	4	4			10 ppm					SS
		13	21	14		7 ppm					
2	M	13	20			5 ppm					
		20	21	12		5 ppm					
3	M	15	17			10 ppm					
		13	13	22		180 ppm					
4	M	9	10			180 ppm					
	W	10	12	18		180 ppm					
5	W	12	13			180 ppm					
	W	10	15	14		60 ppm					HSA
						analytical @ 29'					
						Sieve @ 31'					
						Brown					
						E.O.B. 38.0					
						Instal 2" Dia sch 40 pvc access tube					
						40' of sch 40 PVC 2" Dia					
						20 bags BB-7 fine Sand					

BOART LONGYEAR

FIELD BORING LOG

Sheet 1 Of 1

FOR Wawiec

LOCATION Wausau, WI Elev.

Job No. 242057.0481.010

Boring No. PB-7

GROUND WATER: While drilling 27.0' | Before casing removal | After casing removal | Time after drilling | Depth to water | Depth to cave-in

Start 2-5-98
Unit B-57
Chief Larry

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Casing/Probe Weight 300# Drop	Unconfined Strength	Boulders	Blows on Casing Size	Blows on Probe Size	Drilling Method
						Asphalt + Base course						HSA
						Brown F-C Sand w/ Trace 1/4" gravel						
						hit concrete or large rock moved 5' west						
1	M	24	33			0 ppm						SS
		47	50/5	14"		0 ppm						
2	m	~~20~~	~~20~~			150 ppm						
		48	50	2"		200 ppm						
3	m	31	33			300 ppm						
		43	48	18"		300 ppm						
4	W	6	7			100						
		8	9	16"		5 ppm						
5	W	5	5			3 ppm						HSA
		5	7									

Smear zone 24' to 28'

analytical @ 26'

Sieve @ 30-31'

clay @ 35.5'

E.O.B @ 35.5'

BOART LONGYEAR

FIELD BORING LOG

Sheet 1 Of

FOR Wausau

LOCATION Wausau, WI Elev.

Job No. 242057.04 & 1.03

Boring No. PB-8

GROUND WATER: While drilling 27.0 | Before casing removal | After casing removal | Time after drilling | Depth to water | Depth to cave-in

Start 8-4-98
Unit BK-50
Chief Larry

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Unconfined Strength	Boulders	Blows on Casing Size	Blows on Probe Size	Drilling Method
						Asphalt + base course					HSA
						Brown F-C sand w/ fr silt little gravel					
1	M	6	8			2ppm					SS
		10	12	12"		60ppm					
2	M	14	19			300ppm					
		27	31	16"		320ppm					
3	M	18	28			320ppm					
		31	34	20"		350 ppm					
4	W	11	8			380ppm					
		5	6			250ppm					
5		6	7			10ppm					
		8	10			0ppm					
						Brown lean clay					
						E.O.B. 35.0					

Casing/Probe
Weight 300 lb
Drop

smear zone 22.5 to 28.0'

analytical @ 27.0'

sieve @ 31.0'

BOART LONGYEAR

FIELD BORING LOG

Sheet 1 Of 1

FOR Wausau

LOCATION Wausau, WI Elev.

Job No. 124057.0481.010

Boring No. PB-9

GROUND WATER: While drilling ____ Time after drilling ____ ____; Before casing removal ____ Depth to water ____ ____; After casing removal ____ Depth to cave-in ____ ____

Start 6-4-98
Unit BK-56
Chief Lowry

Casing/Probe
Weight 300 #
Drop

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Unconfined Strength	Boulders	Blows on Casing Size	Blows on Probe Size	Drilling Method
						Asphalt and base course					HSA
						Brown F-C sand w/Tr silt little gravel					
					5						
					10						
					15						
					20						
1	M	9	10			10 ppm					SS
		10	13	18"		210 ppm — Top of smear zone @ 22.0'					
2	M	6	10			300 ppm					
		11	12	22"		To 30'					
3	m	11	15		25	310 ppm					
	w	15	15	24"		350 ppm					
4	W	8	12			300 ppm					
		11	10	16"		40 ppm					
5	W	8	10			20 ppm					
		10	14	22"	30	50 ppm					
						5 ppm					HSA
						analytical sample @ 27.0'					
						sieve analysis @ 31.0'					SS
					35						
6	M	2	2			Brown lean clay					HSA
		3	4								
						E.O.B. 37.0'					
					40						
					45						

BOART LONGYEAR

FIELD BORING LOG

Sheet 1 Of 1

FOR Wauleco

LOCATION Wausau WI Elev.

Job No. 247057.048.010

Boring No. PB-10

GROUND WATER: While drilling 26.0 | Before casing removal | After casing removal | Time after drilling | Depth to water | Depth to cave-in

Start 9-4-98
Unit BK-56
Chief Larry

Casing/Probe
Weight 300#
Drop

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Unconfined Strength	Boulders	Blows on Casing Size	Blows on Probe Size	Drilling Method
						Asphalt and base course			3 1/4		HSA
						Brown F-C sand w/ Tr silt, little gravel					
						Blind Drill to					
						clean					
		12	8			Br. F-C Sand, w/ little silt, Trgr.					
		8	8	14"		Hno 300ppm smear zone starts @ 22'	No Rec. w/140# hammer Try 300#				
		13	12								
		10	13	16"		Hno 250ppm					
	M	8	11								
	W	12	13	18"		400 ppm Analytical sample 27.0'					
		13	18								
		20	23	24"		250 ppm					
		8	10								
		11	13	20"		30 ppm Sample for Sieve @ 31.0' less gravel after 32'					
						soft Brown lean clay					
						stiff Brown lean clay					
						E.O.B. 43.0					
											HSA

BOART LONGYEAR

FIELD BORING LOG

Sheet 1 Of 1

FOR Navisco

LOCATION Wauseon Elev.

Job No. 242057.0001.0101

Boring No. PB-11

GROUND WATER
While drilling 28.0 Time after drilling
Before casing removal Depth to water
After casing removal Depth to cave-in

Start 8-4-98
Unit BK-56
Chief Larry

Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS	Unconfined Strength	Boulders	Blows on Casing Size	Blows on Probe Size	Drilling Method
						Casing/Probe Weight 300# Drop					
						Asphalt and Basecourse					HSA
						Brown F-C sand w/ Tr silt little gravel					
						5					
						10					
						15					
						20					
1	M	6	6			Hnu 5 ppm occasional large weathered Rock area.					
		8	13	14"							
2	M	8	10			Hnu 350 ppm					
		13	14	20"		Smear zone @ 23.5' (Start)					
3	M	8	13			25 Hnu 350 ppm					
	M	23	50	27"		350 ppm analytical sample 27.0'					
4	M	27	30			150 ppm — End smear zone					
	W	31	33	22"		Hnu 5 ppm sieve @ 31.0'					
5		10	13			30 8 ppm					
		13	17	22"							SS
											HSA
						35 Soft Brown lean clay					
						Stiff Brown lean clay					
						40 EOB 40'					
						45					

BOART LONGYEAR

FIELD BORING LOG

Sheet 1 Of 1

FOR Waldco

LOCATION Wixom MI Elev.

Job No. 124205.0000.0101

Boring No. PB12

GROUND WATER
While drilling 29.0' Time after drilling
Before casing removal Depth to water
After casing removal Depth to cave-in

Start 8-5-98
Unit B-57
Chief Larry

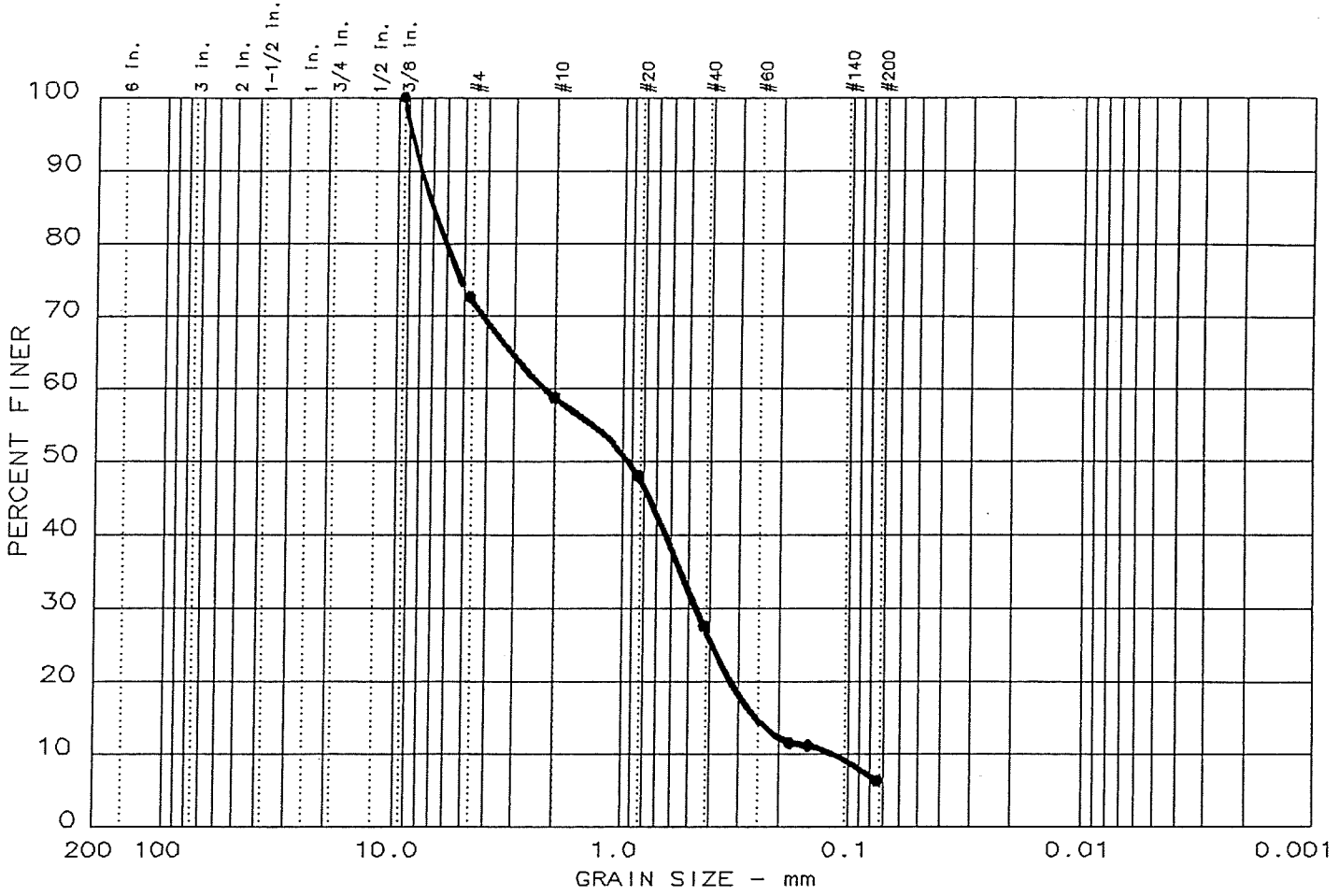
Sample No.	Moisture	Blows on Sampler 0/6	Blows on Sampler 6/12	Sample Recovery	Total Blows	VISUAL FIELD CLASSIFICATION AND REMARKS (Casing/Probe, Weight, Drop)	Unconfined Strength	Boulders	Blows on Casing Size	Blows on Probe Size	Drilling Method
						Asphalt and Base course			4½"		HSA
						Brown F-C Sand w/trace silt, gravel					
1	m	17	20			0					SS
		20	21	12		2ppm					
2	m	12	20			10ppm					
		23	15	16		10ppm					
3	m	8	23			120ppm					
		31	41	18		300ppm					
4	m	21	31			300ppm					
	w	48	47	20		200 ppm					
5	w	7	8			175 ppm					
		9	8	10		20 ppm					
6	w	6	8			10 ppm					
		8	7	2		5ppm					
7	w	6	3								
	m	3	4								
						Brown lean clay					
						E.O.B 38.0'					
						Instal 2" dia sch 40 pvc access tube @38' - 40' pvc - 21 bags BB-7 Sand					

Sieve @ 35'
analytical @ 27.5'

B

SOIL GRADATIONS

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
●	8	0.0	27.4	66.3	6.3	

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	-----	-----	4.75	2.22	0.94	0.459	0.2493	0.1166	0.81	19.1

MATERIAL DESCRIPTION	USCS	AASHTO
● Brown F-C SAND, Some Gravel, Trace Silt & Clay	SP-SM	A-1-b

Project No.: 95164.54
Project: Mont-Watson, 124205704810101 / Wauleco
● Location: Sample: PB-1 207879

Date: August 26, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT

CGC, Inc.

Remarks:

Tested By: DWA

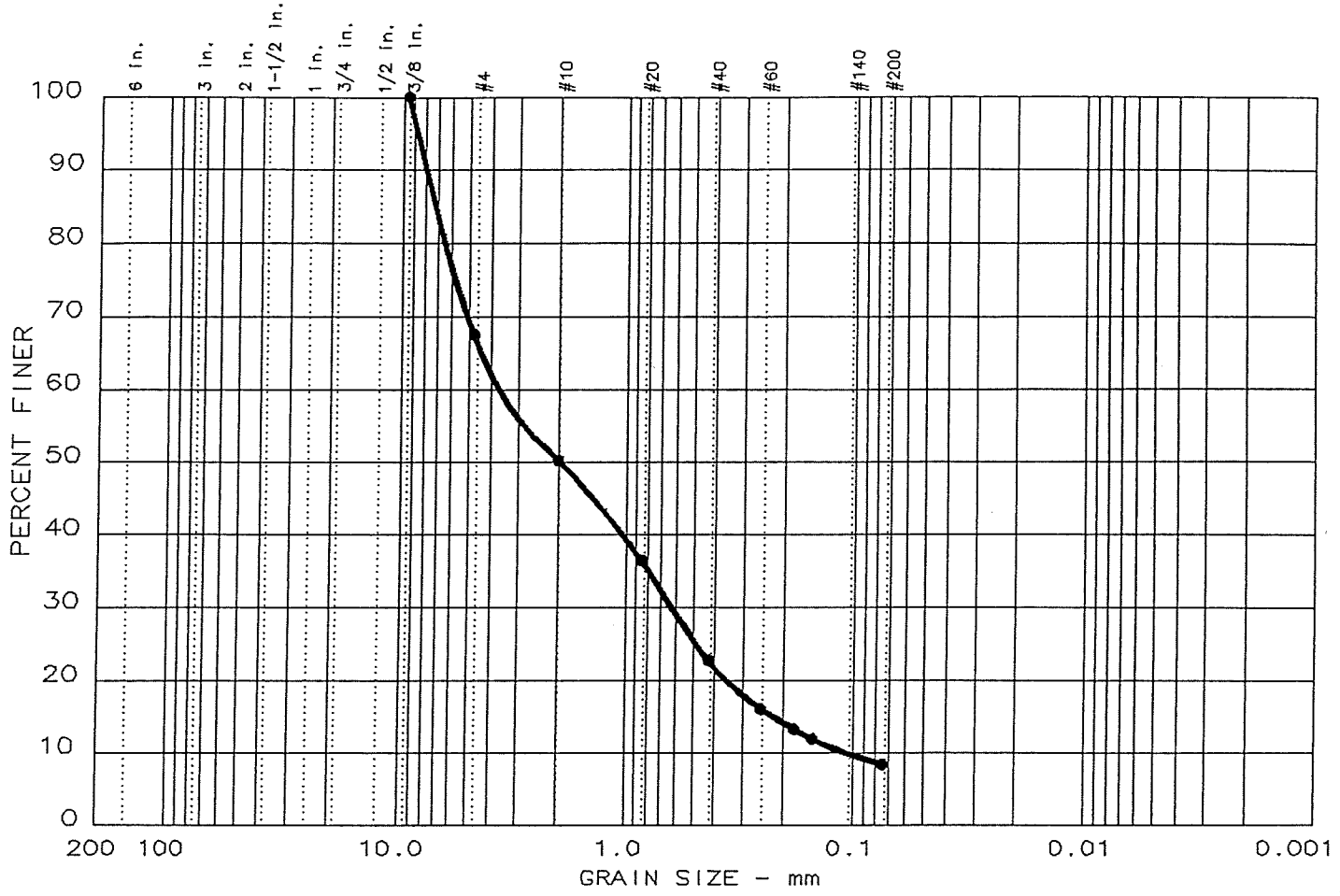
Input By : DWA

Checked By : WWW

Approved By : WWW

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
●	9	0.0	32.6	59.0	8.4	

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	-----	-----	7.13	3.66	1.96	0.620	0.2200	0.1053	1.00	34.7

MATERIAL DESCRIPTION	USCS	AASHTO
● Brown F-C SAND, Some Gravel, Little Silt & Clay	SP-SM	A-1-a

Project No.: 95164.54
Project: Mont-Watson, 124205704810101 / Wauleco
● Location: Sample: PB-2 207880

Date: August 26, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT

CGC, Inc.

Remarks:

Tested By: DWA

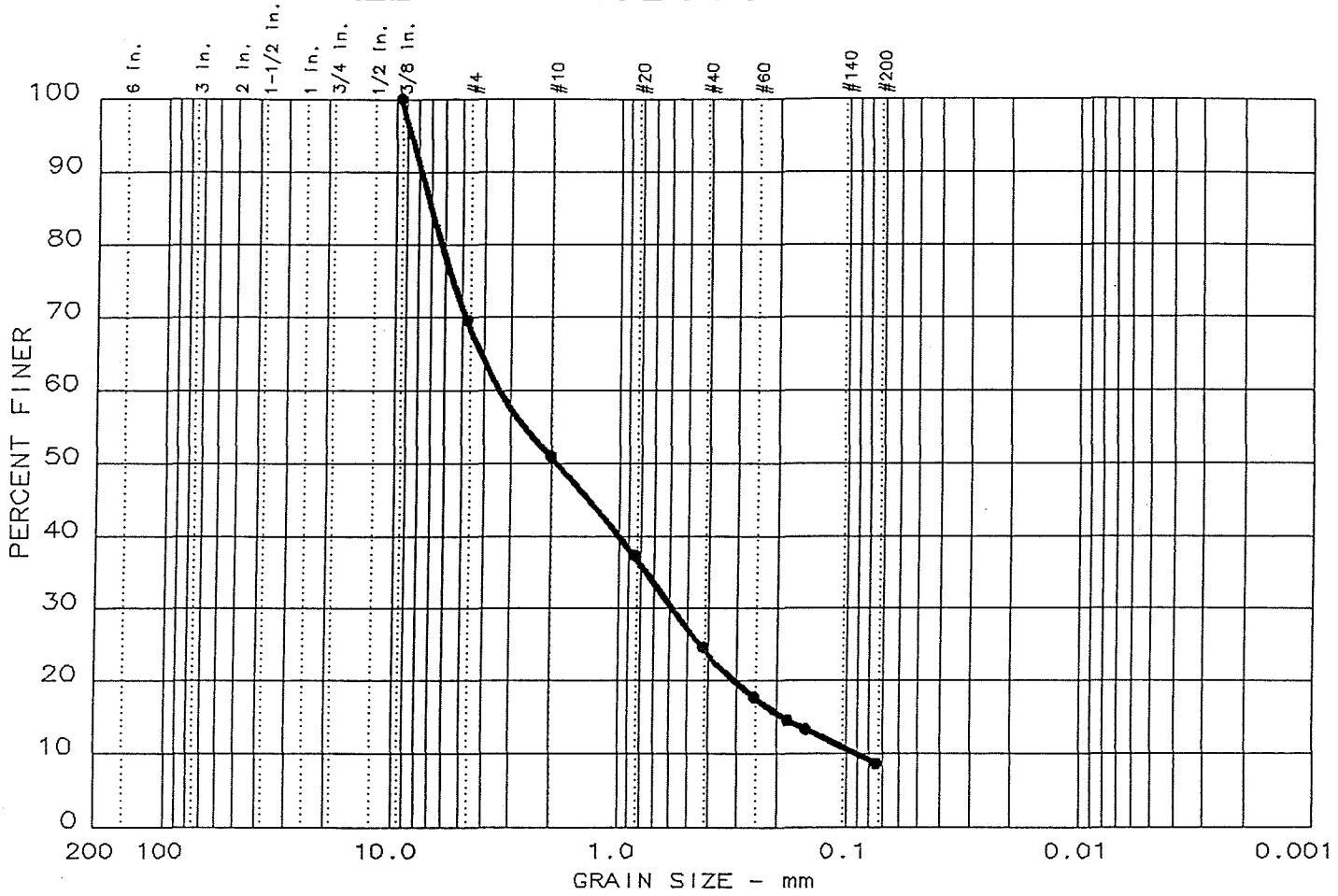
Input By : DWA

Checked By : WWW

Approved By : WWW

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
●	10	0.0	30.5	60.9	8.6	

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	-----	-----	6.95	3.37	1.87	0.578	0.1892	0.0906	1.10	37.2

MATERIAL DESCRIPTION	USCS	AASHTO
● Brown F-C SAND, Some Gravel, Little Silt & Clay	SW-SM	A-1-b

Project No.: 95164.54
Project: Mont-Watson, 124205704810101 / Wauleco
● Location: Sample: PB-3 207881

Date: August 26, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT

CGC, Inc.

Remarks:

Tested By: DWA

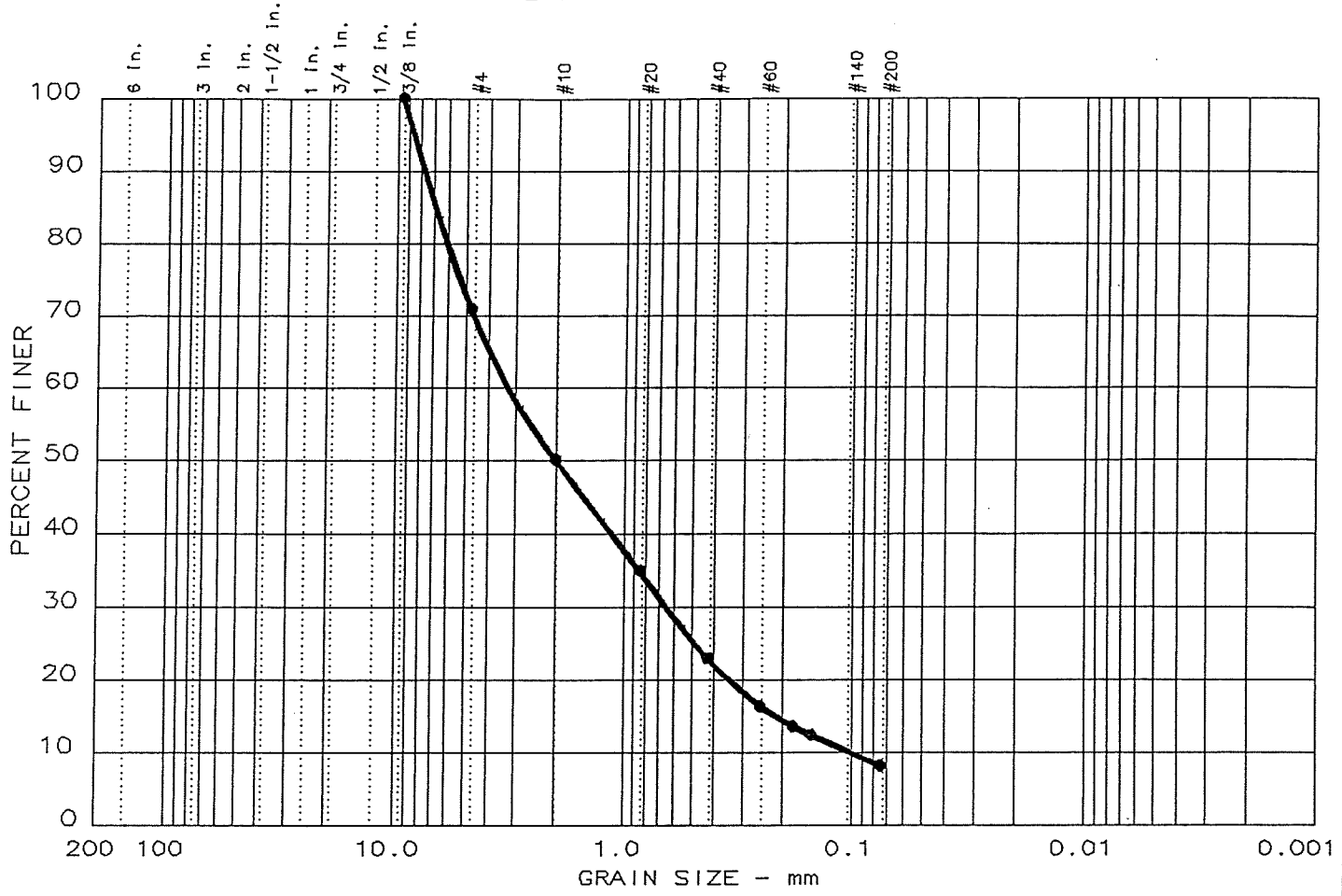
Input By : DWA

Checked By : WWW

Approved By : WWW

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
●	11	0.0	29.1	62.7	8.2	

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	-----	-----	6.81	3.22	1.99	0.643	0.2128	0.1007	1.27	32.0

MATERIAL DESCRIPTION	USCS	AASHTO
● Brown F-C SAND, Some Gravel, Little Silt & Clay	SW-SM	A-1-b

Project No.: 95164.54
Project: Mont-Watson, 124205704810101 / Wauleco
● Location: Sample: PB-4 207882

Date: August 26, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT

CGC, Inc.

Remarks:

Tested By: DWA

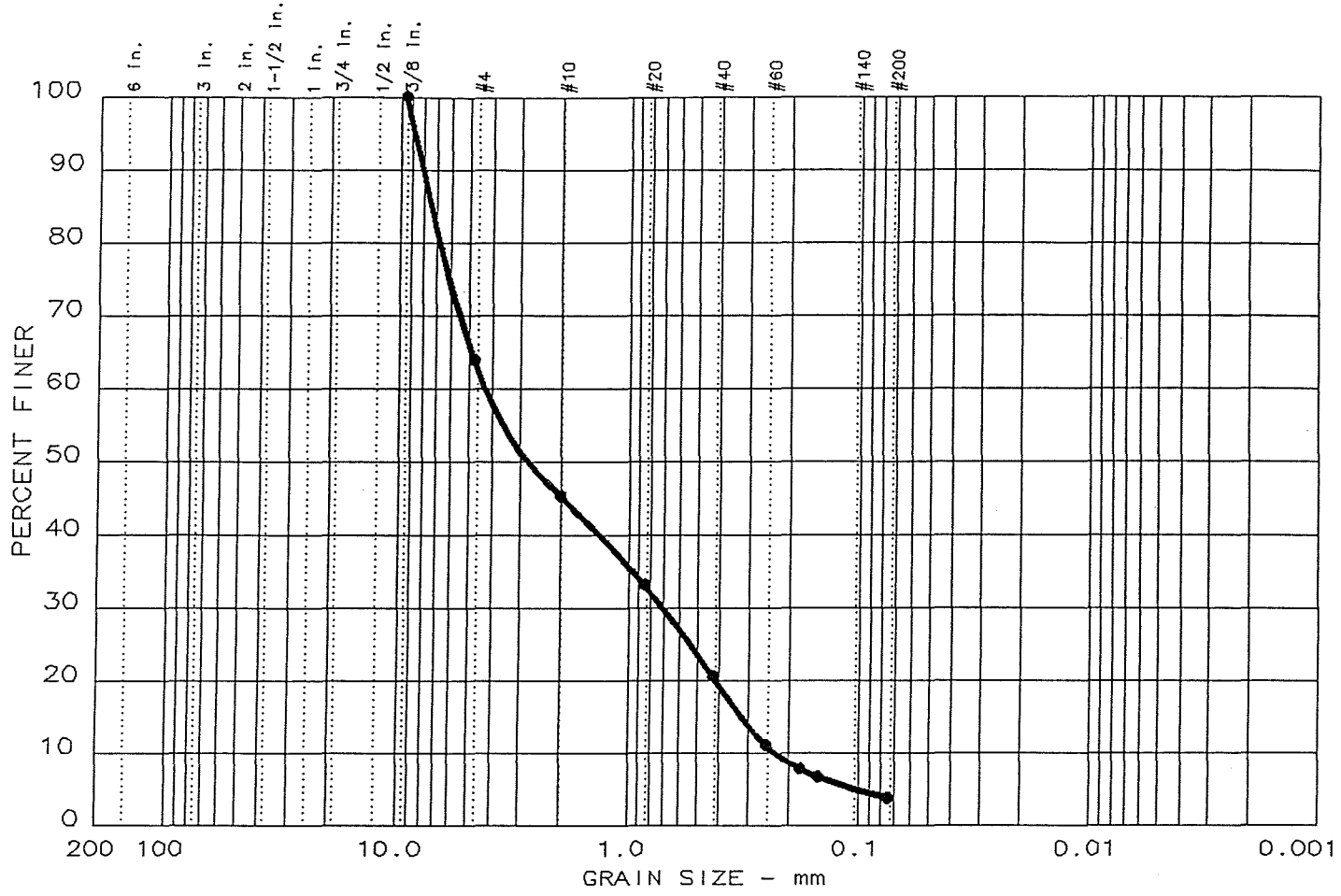
Input By : DWA

Checked By : WWW

Approved By : WWW

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
●	12	0.0	36.1	60.1	3.8	

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	-----	-----	7.33	4.25	2.78	0.697	0.3151	0.2283	0.50	18.6

MATERIAL DESCRIPTION	USCS	AASHTO
● Brown F-C SAND & GRAVEL, Trace Silt	SP	A-1-a

Project No.: 95164.54
Project: Mont-Watson, 124205704810101 / Wauleco
● Location: Sample: PB-5 207883

Date: August 26, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT

CGC, Inc.

Remarks:

Tested By: DWA

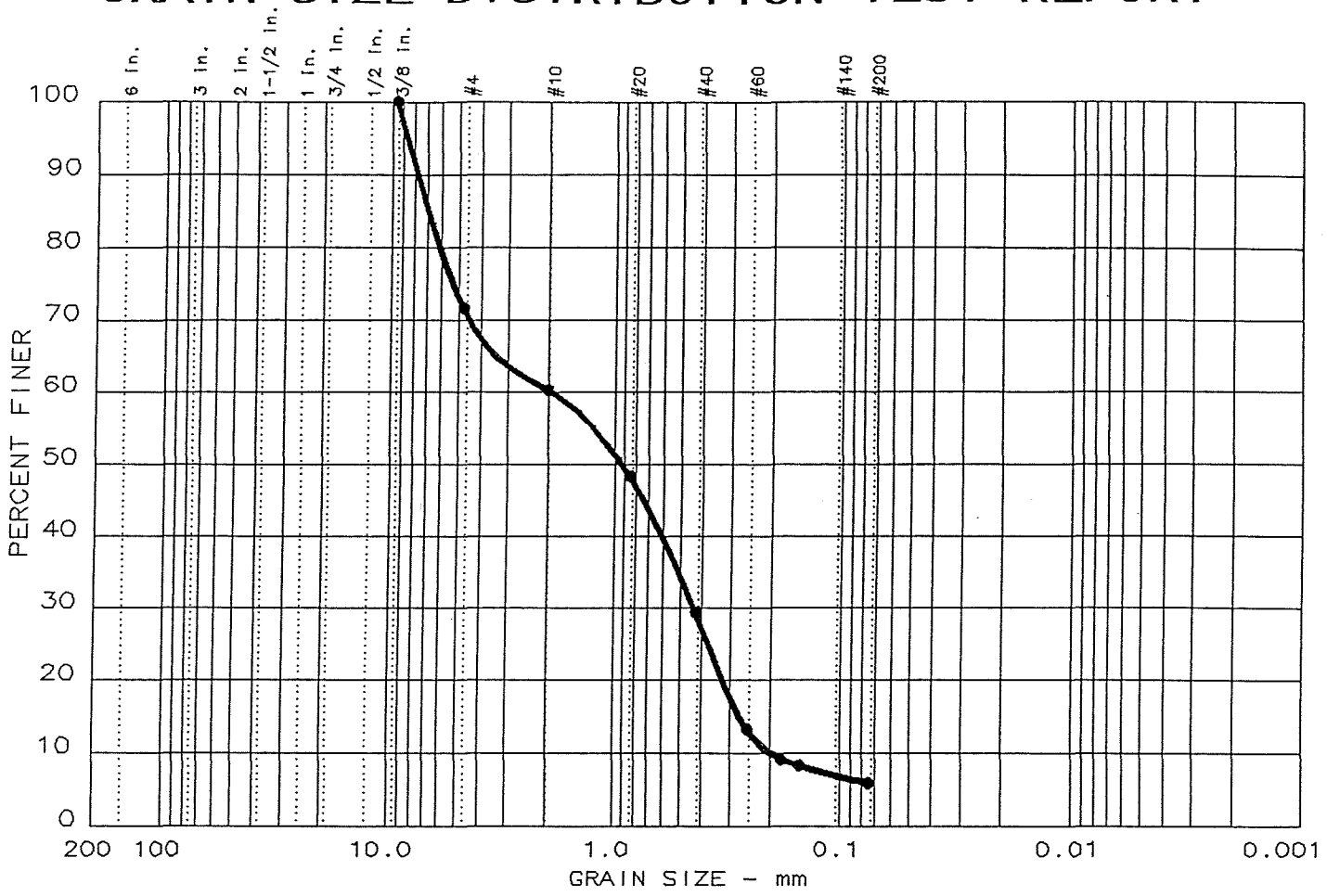
Input By : DWA

Checked By : WWW

Approved By : WWW

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
●	13	0.0	28.5	65.6	5.9	

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	-----	-----	6.88	1.94	0.92	0.433	0.2698	0.1977	0.49	9.8

MATERIAL DESCRIPTION	USCS	AASHTO
● Brown F-C SAND, Some Gravel, Little Silt & Clay	SP SM	A-1-b

Project No.: 95164.54
Project: Mont-Watson, 124205704810101 / Wauleco
● Location: Sample: PB-6 207884

Date: August 26, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT

CGC, Inc.

Remarks:

Tested By: DWA

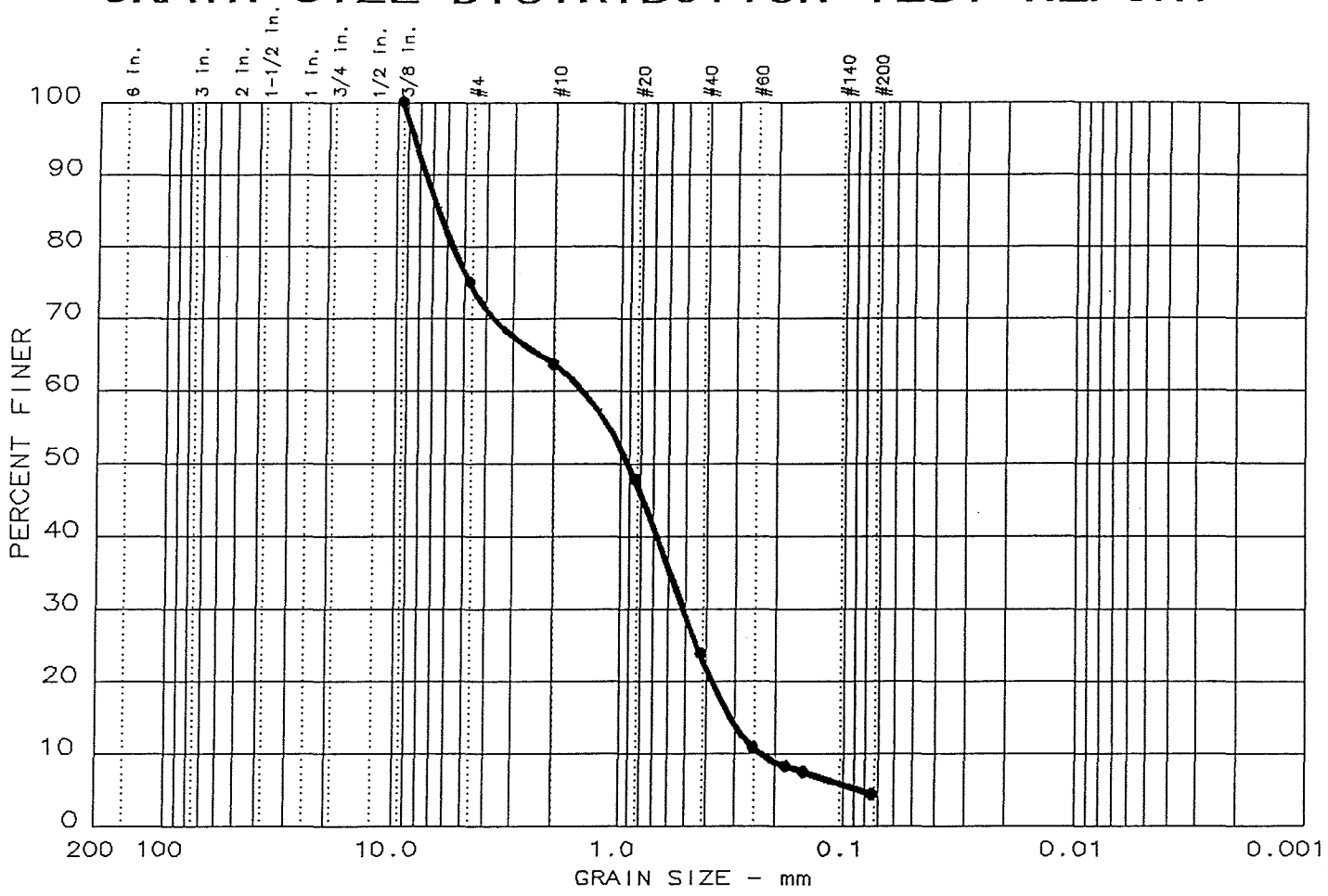
Input By : DWA

Checked By : WWW

Approved By : WWW

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
●	14	0.0	25.0	70.6	4.4	

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	-----	-----	6.53	1.48	0.91	0.506	0.3087	0.2315	0.75	6.4

MATERIAL DESCRIPTION	USCS	AASHTO
● Brown F-C SAND, Some Gravel, Trace Silt & Clay	SP	A-1-b

Project No.: 95164.54
Project: Mont-Watson, 124205704810101 / Wauleco
● Location: Sample: PB-7 207885

Date: August 26, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT

CGC, Inc.

Remarks:

Tested By: DWA

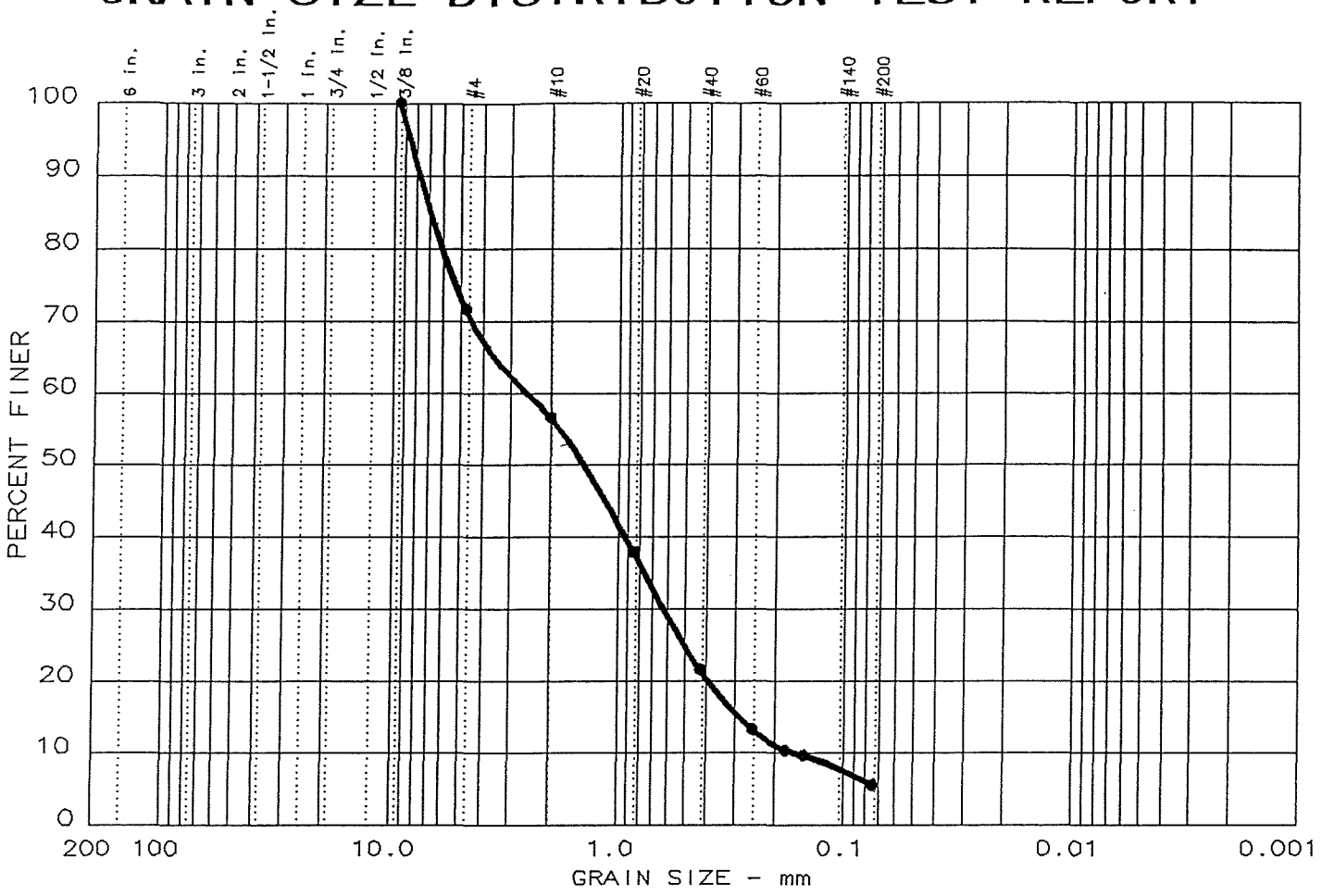
Input By : DWA

Checked By : WWW

Approved By : WWW

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
●	15	0.0	28.4	66.1	5.5	

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	-----	-----	6.84	2.51	1.41	0.616	0.2848	0.1601	0.94	15.7

MATERIAL DESCRIPTION	USCS	AASHTO
● Brown F-C SAND, Some Gravel, Little Silt & Clay	SP-SM	A-1-b

Project No.: 95164.54
Project: Mont-Watson, 124205704810101 / Wauleco
● Location: Sample: PB-8 207886

Date: August 26, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT

CGC, Inc.

Remarks:

Tested By: DWA

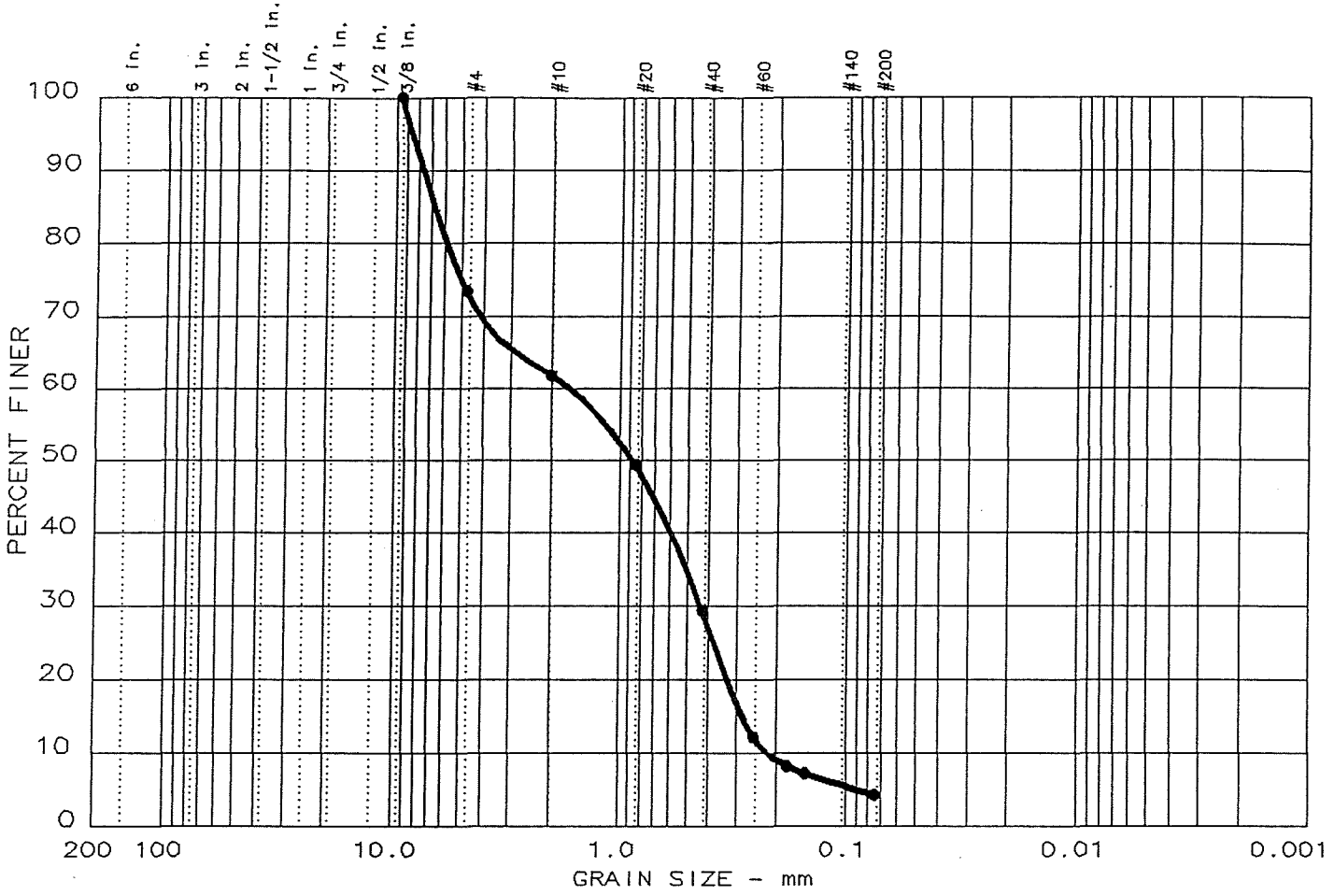
Input By : DWA

Checked By : WWW

Approved By : WWW

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
●	16	0.0	26.6	69.1	4.3	

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	-----	-----	6.68	1.66	0.87	0.432	0.2786	0.2188	0.51	7.6

MATERIAL DESCRIPTION	USCS	AASHTO
● Brown F-C SAND, Some Gravel, Trace Silt & Clay	SP-SM	A-1-b

Project No.: 95164.54
Project: Mont-Watson, 124205704810101 / Wauleco
● Location: Sample: PB-9 207887

Date: August 26, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT

CGC, Inc.

Remarks:

Tested By: DWA

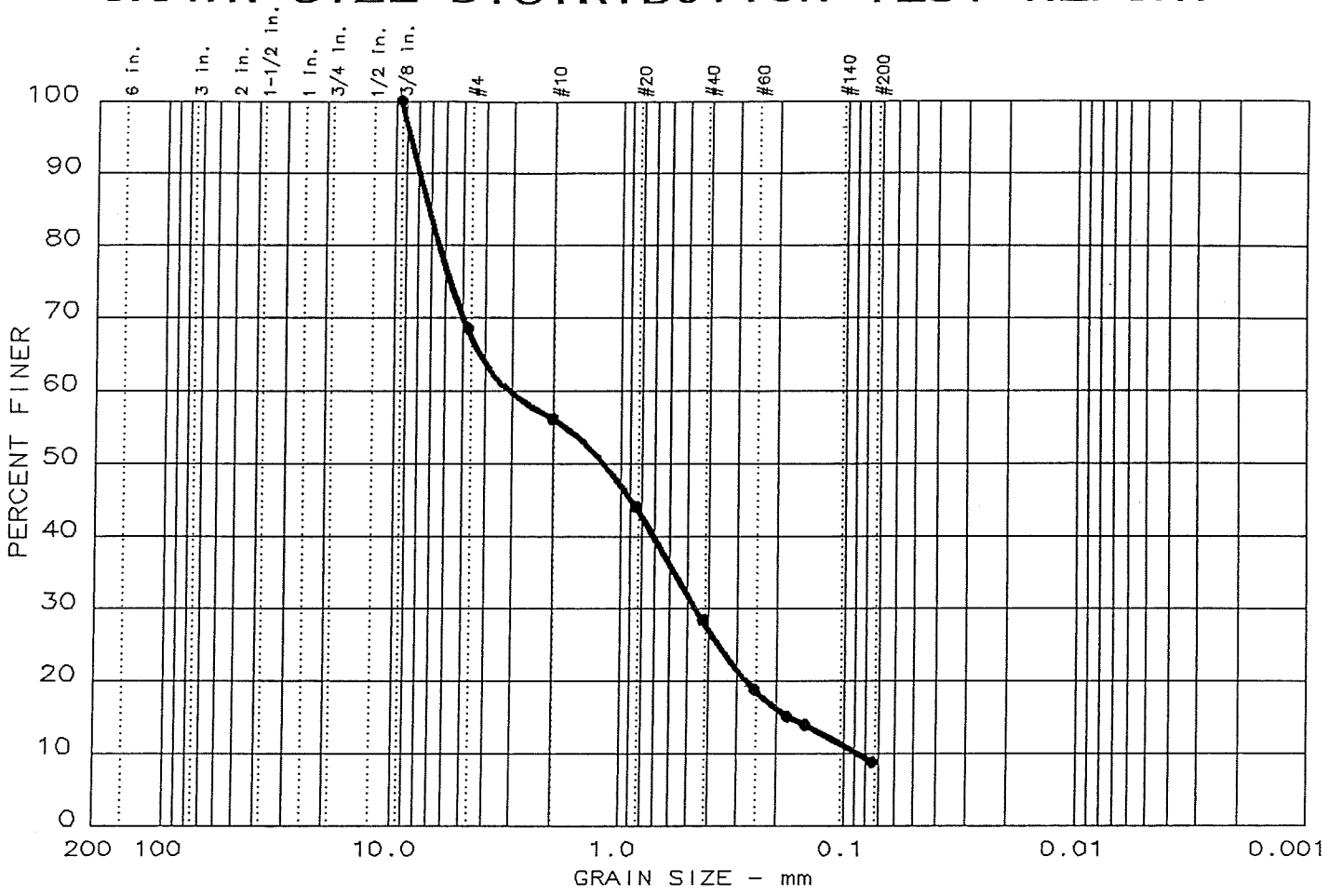
Input By : DWA

Checked By : WWW

Approved By : WWW

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
●	17	0.0	31.6	59.6	8.8	

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	-----	-----	7.11	3.10	1.18	0.454	0.1766	0.0865	0.77	35.9

MATERIAL DESCRIPTION	USCS	AASHTO
● Brown F-C SAND, Some Gravel, Little Silt & Clay	SP-SM	A-1-b

Project No.: 95164.54
Project: Mont-Watson, 124205704810101 / Wauleco
● Location: Sample: PB-10 207888

Date: August 26, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT

CGC, Inc.

Remarks:

Tested By: DWA

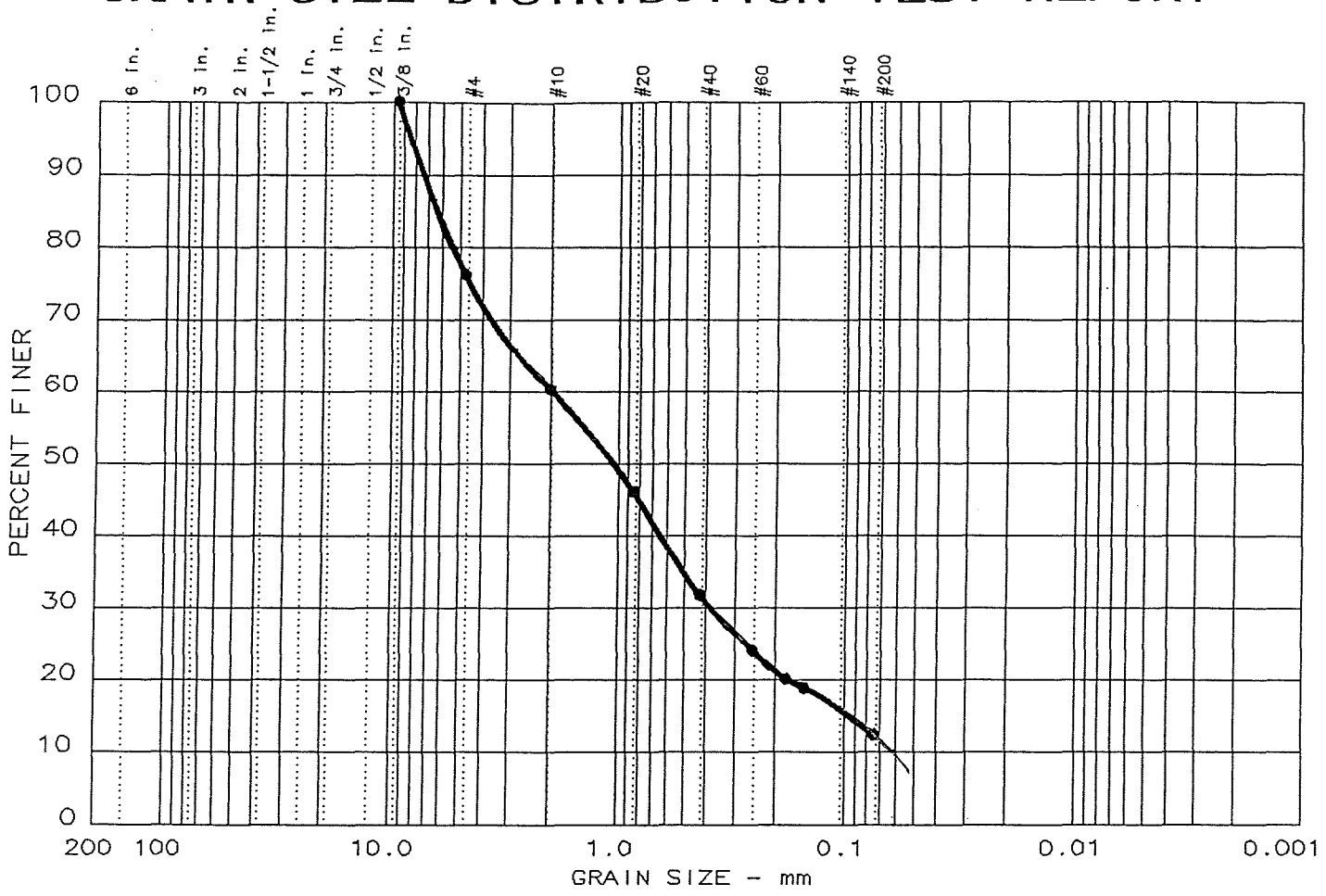
Input By : DWA

Checked By : WWW

Approved By : WWW

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
●	18	0.0	23.8	63.8	12.4	

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	-----	-----	6.31	1.95	1.04	0.380	0.0944	0.0625		

MATERIAL DESCRIPTION	USCS	AASHTO
● Brown F-C SAND, Some Gravel, Some Silt & Clay	SM	A-1-b

Project No.: 95164.54
Project: Mont-Watson, 124205704810101 / Wauleco
● Location: Sample: PB-11 207889

Date: August 26, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT

CGC, Inc.

Remarks:

Tested By: DWA

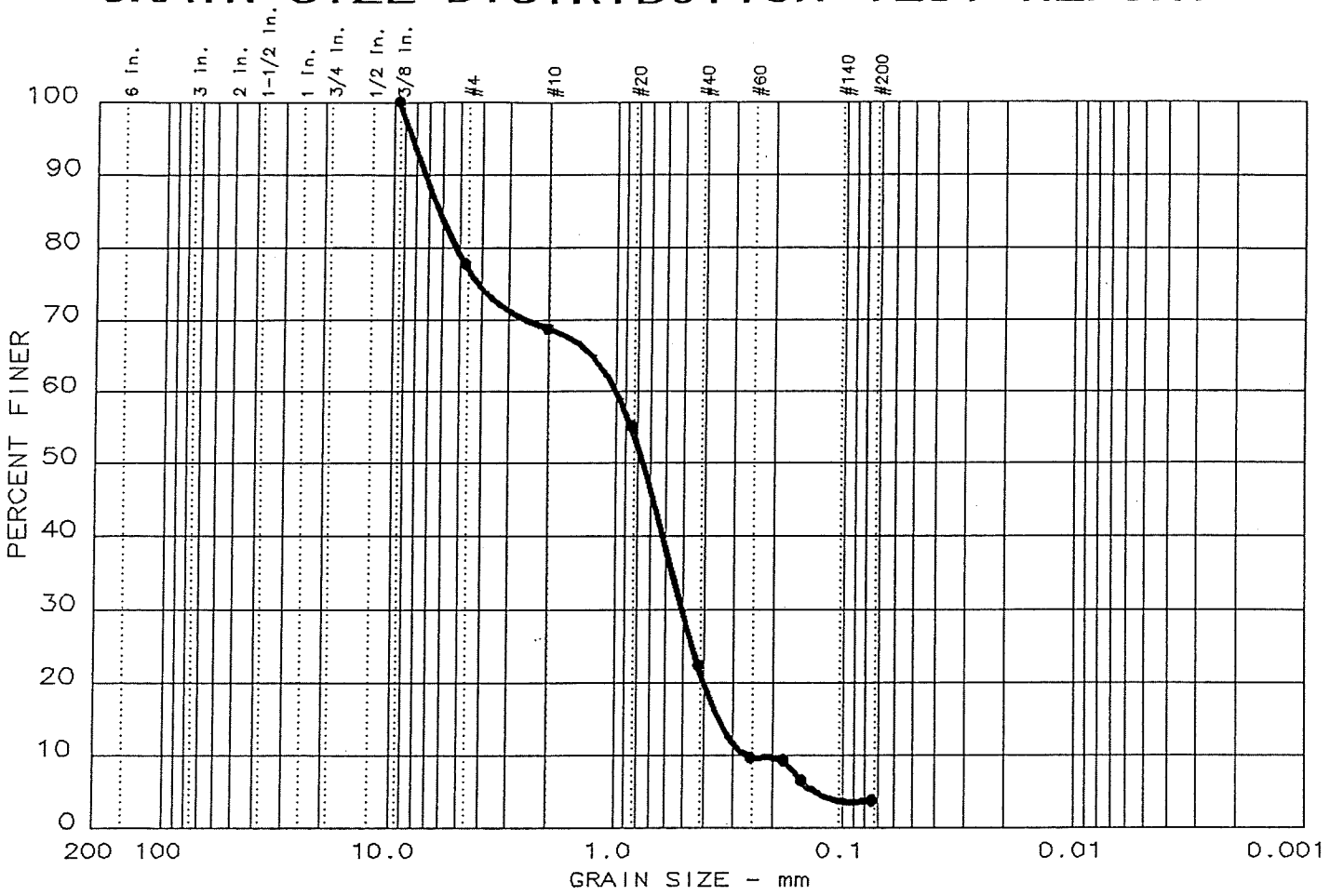
Input By : DWA

Checked By : WWW

Approved By : WWW

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
●	19	0.0	22.2	74.0	3.8	

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	-----	-----	6.17	0.99	0.75	0.501	0.3428	0.2600	0.98	3.8

MATERIAL DESCRIPTION	USCS	AASHTO
● Brown F-C SAND, Some Gravel, Trace Silt & Clay	SP	A-1-b

Project No.: 95164.54
Project: Mont-Watson, 124205704810101 / Wauleco
● Location: Sample: PB-12 207890

Date: August 26, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT

CGC, Inc.

Remarks:

Tested By: DWA

Input By : DWA

Checked By : WWW

Approved By : WWW

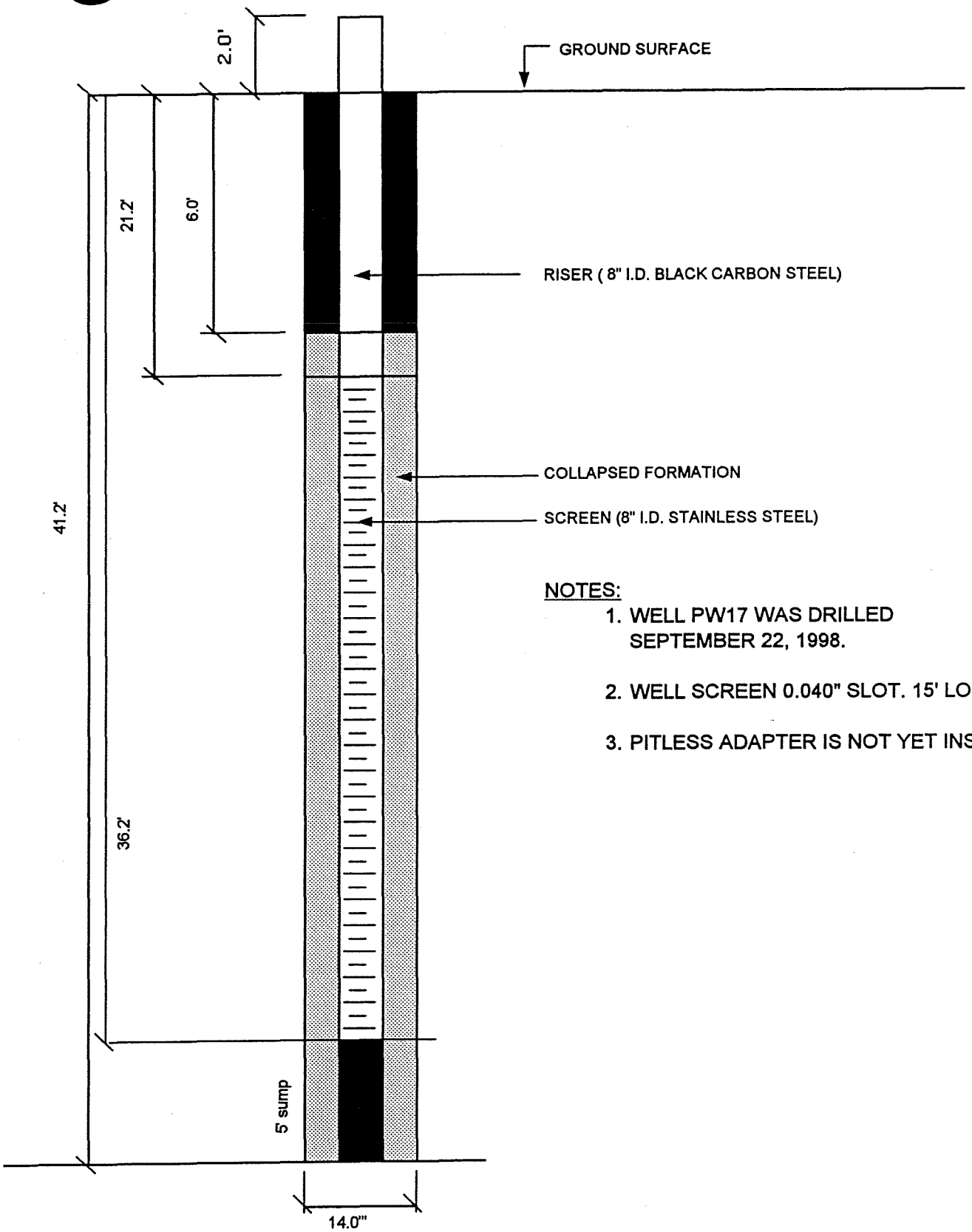
Figure No. _____

C

WELL DETAILS

MONTGOMERY WATSON

WELL CONSTRUCTION DETAIL
EXTRACTION WELL PW17



NOTES:

1. WELL PW17 WAS DRILLED SEPTEMBER 22, 1998.
2. WELL SCREEN 0.040" SLOT. 15' LONG
3. PITLESS ADAPTER IS NOT YET INSTALLED.

NOT TO SCALE

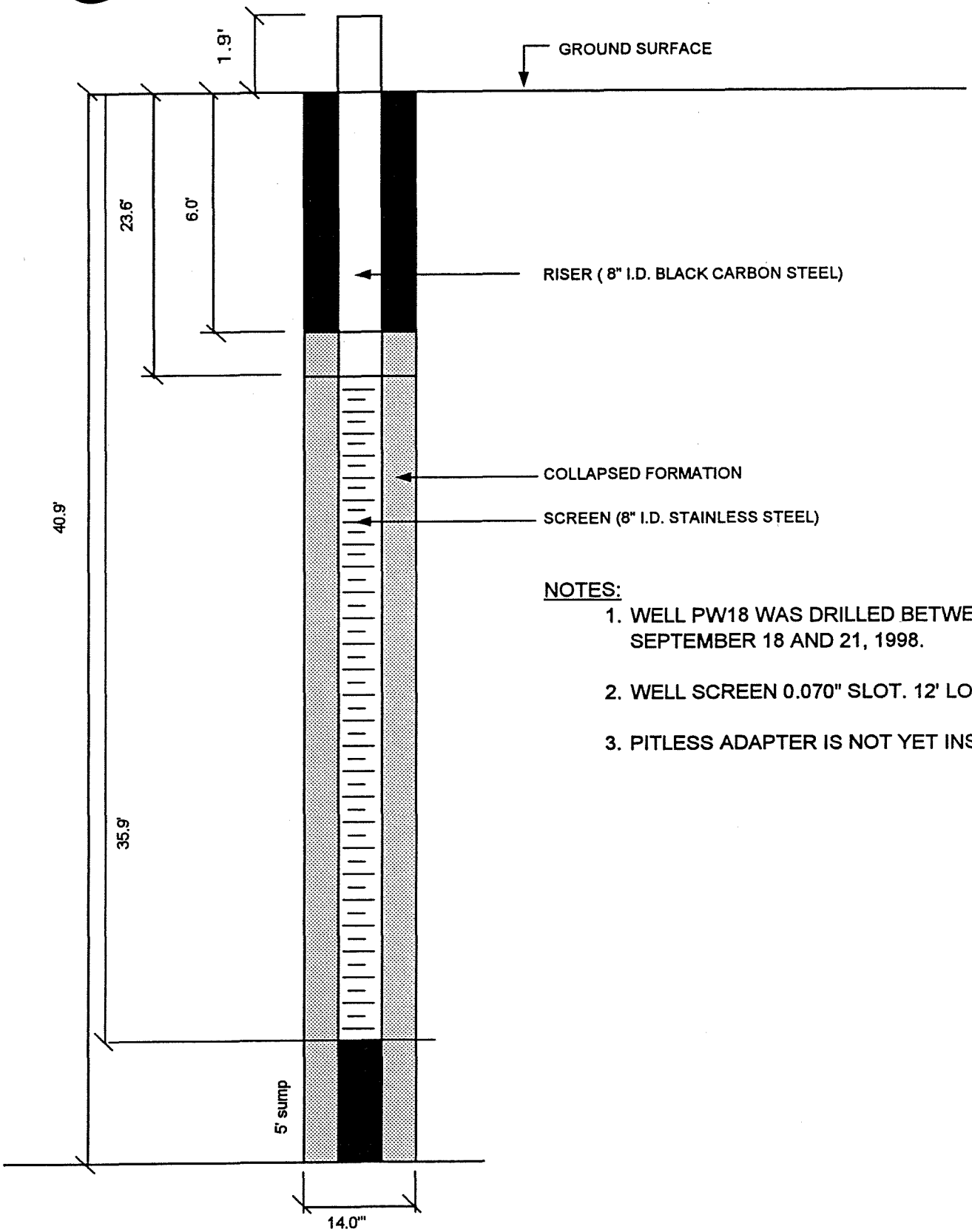
LEAD PROFESSIONAL MEH

TECHNICAL REVIEW

M:\jobs\1242\057\gint\pw17.xls

MONTGOMERY WATSON

WELL CONSTRUCTION DETAIL
EXTRACTION WELL PW18



NOTES:

1. WELL PW18 WAS DRILLED BETWEEN SEPTEMBER 18 AND 21, 1998.
2. WELL SCREEN 0.070" SLOT. 12' LONG
3. PITLESS ADAPTER IS NOT YET INSTALLED.

NOT TO SCALE

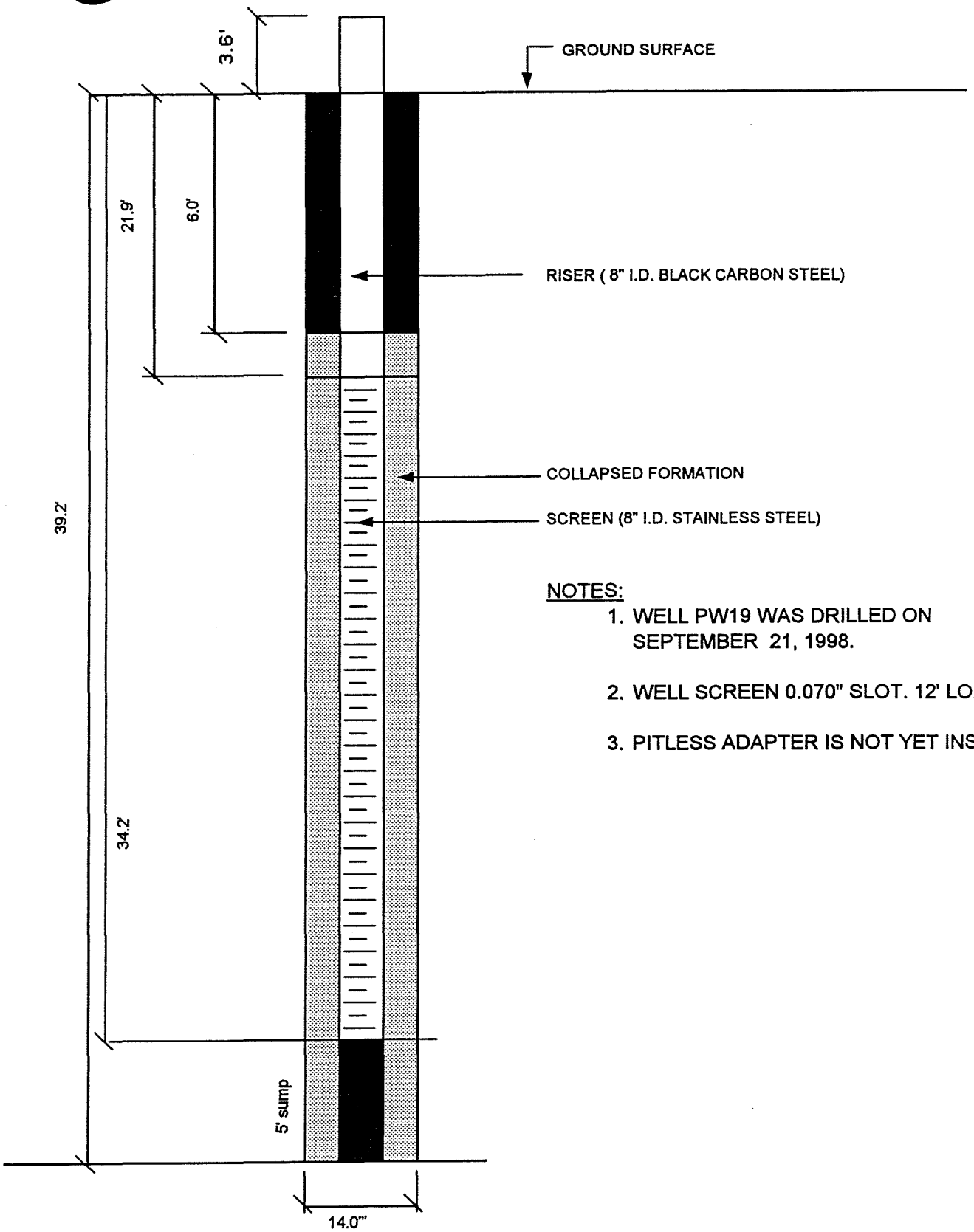
LEAD PROFESSIONAL TJM

TECHNICAL REVIEW _____

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MONTGOMERY WATSON

WELL CONSTRUCTION DETAIL
EXTRACTION WELL PW19



NOTES:

1. WELL PW19 WAS DRILLED ON SEPTEMBER 21, 1998.
2. WELL SCREEN 0.070" SLOT. 12' LONG
3. PITLESS ADAPTER IS NOT YET INSTALLED.

NOT TO SCALE

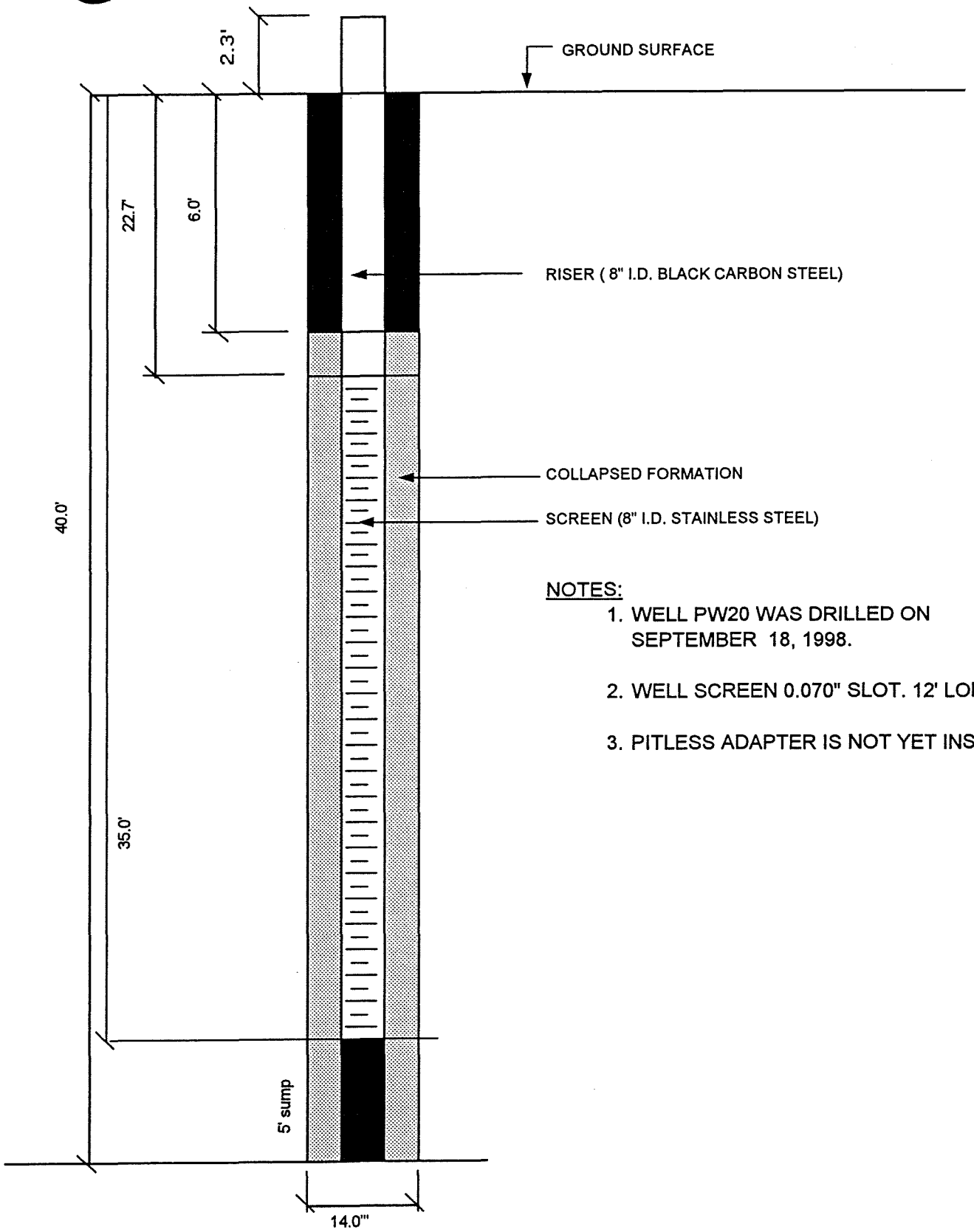
LEAD PROFESSIONAL TJM

TECHNICAL REVIEW

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MONTGOMERY WATSON

WELL CONSTRUCTION DETAIL
EXTRACTION WELL PW20



NOTES:

1. WELL PW20 WAS DRILLED ON SEPTEMBER 18, 1998.
2. WELL SCREEN 0.070" SLOT. 12' LONG
3. PITLESS ADAPTER IS NOT YET INSTALLED.

NOT TO SCALE

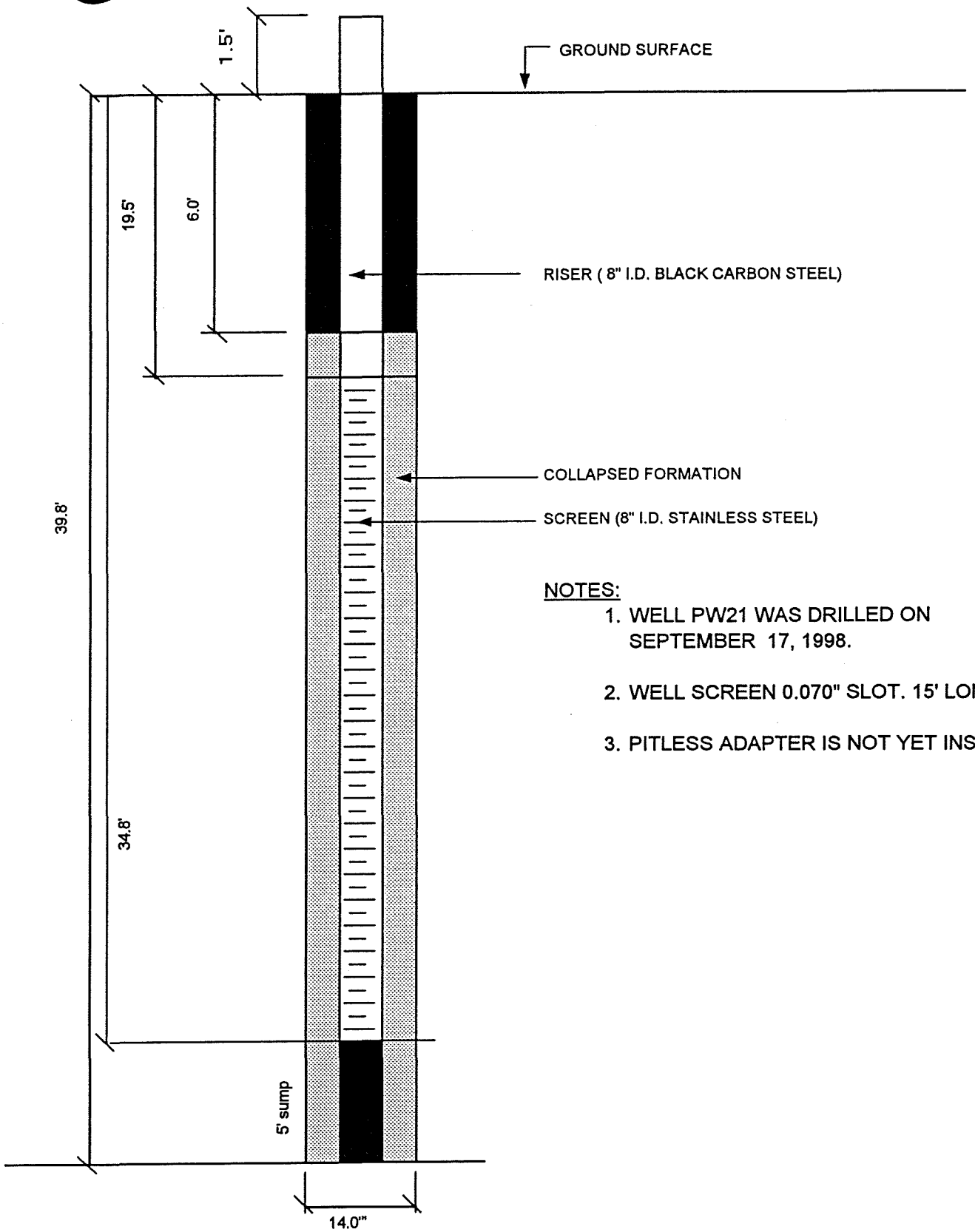
LEAD PROFESSIONAL TJM

TECHNICAL REVIEW

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MONTGOMERY WATSON

WELL CONSTRUCTION DETAIL
EXTRACTION WELL PW21



NOTES:

1. WELL PW21 WAS DRILLED ON SEPTEMBER 17, 1998.
2. WELL SCREEN 0.070" SLOT. 15' LONG
3. PITLESS ADAPTER IS NOT YET INSTALLED.

NOT TO SCALE

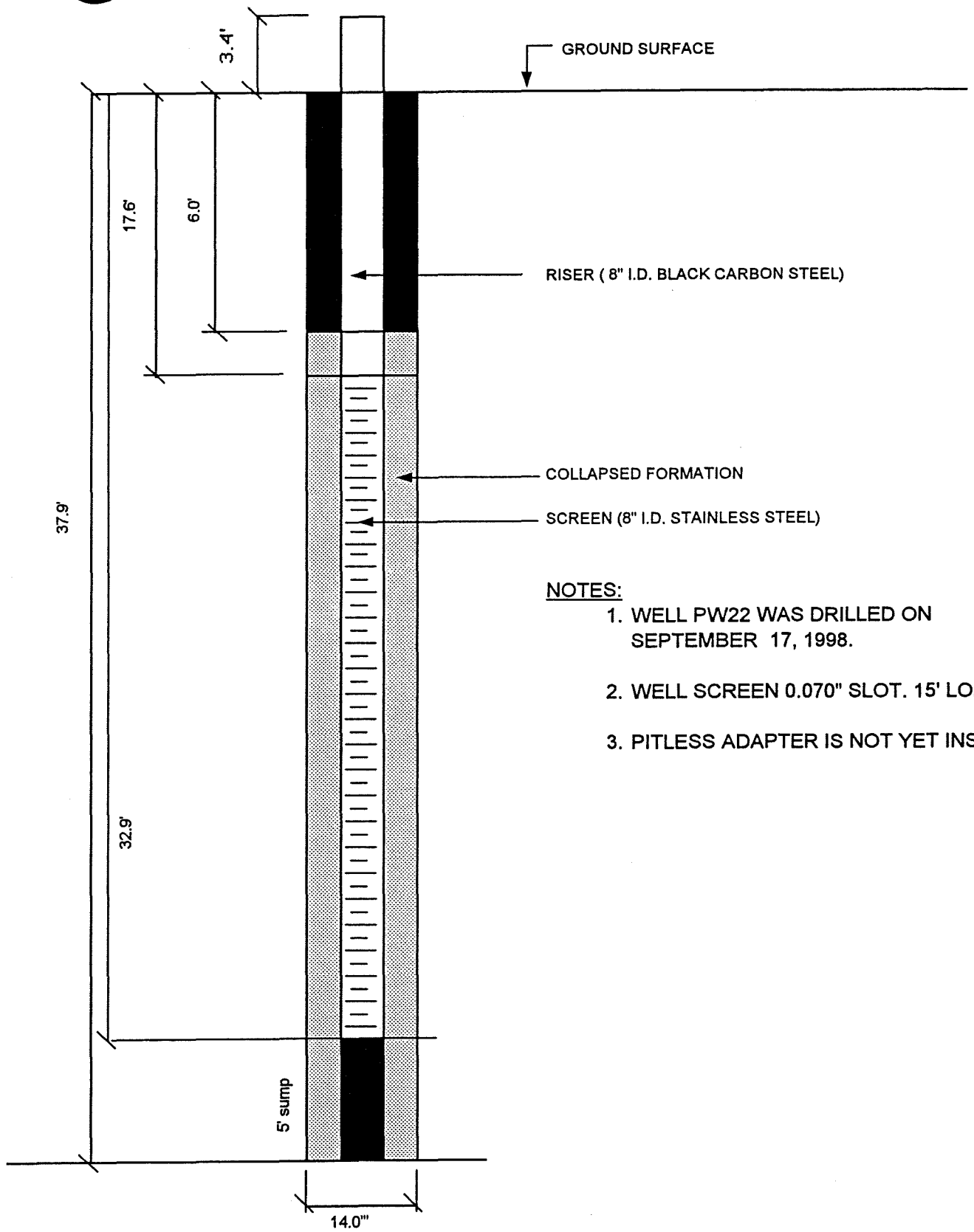
LEAD PROFESSIONAL TJM

TECHNICAL REVIEW

M:\jobs\1242\057\gint\pw21.xls

MONTGOMERY WATSON

WELL CONSTRUCTION DETAIL
EXTRACTION WELL PW22



NOTES:

1. WELL PW22 WAS DRILLED ON SEPTEMBER 17, 1998.
2. WELL SCREEN 0.070" SLOT. 15' LONG
3. PITLESS ADAPTER IS NOT YET INSTALLED.

NOT TO SCALE

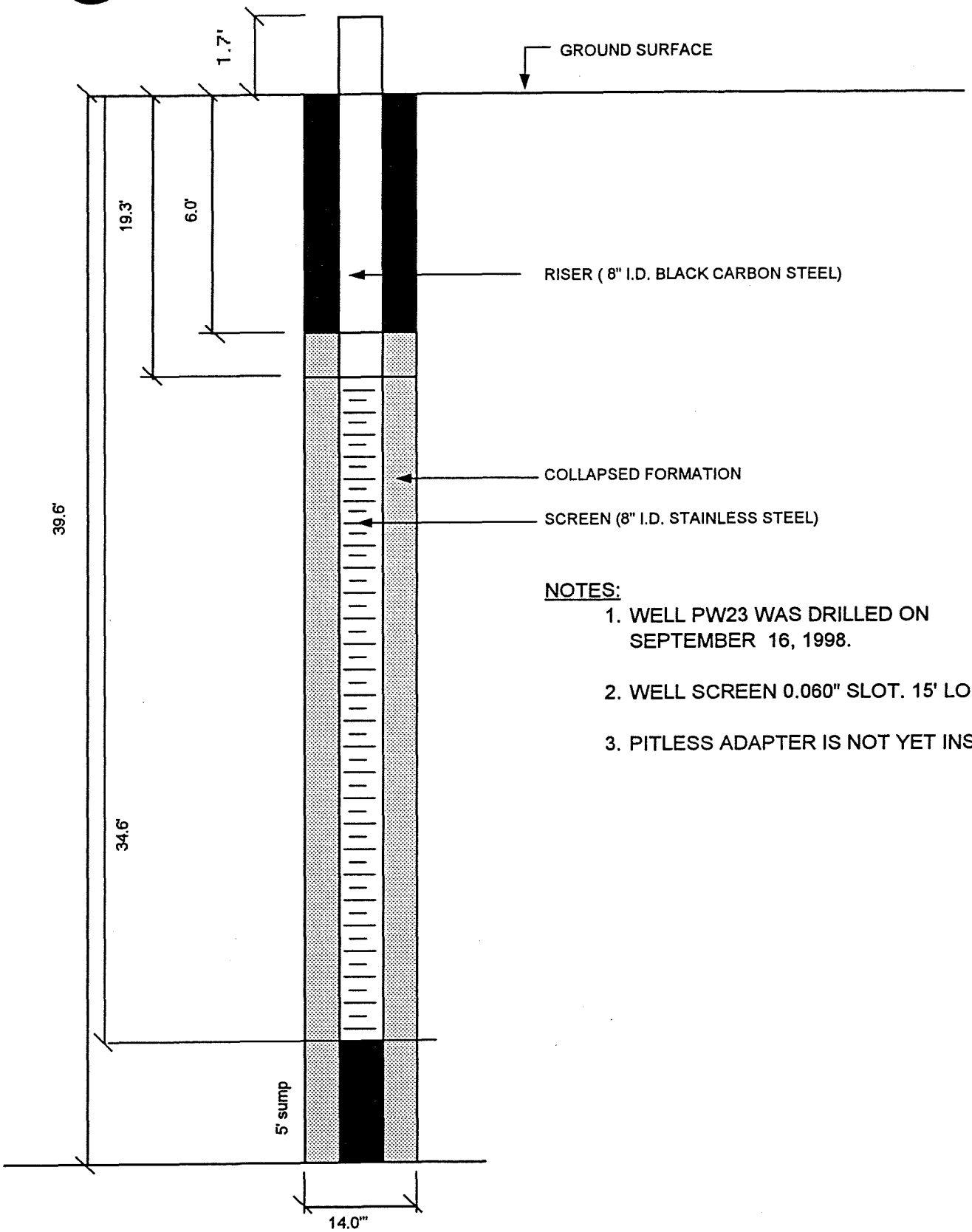
LEAD PROFESSIONAL TJM

TECHNICAL REVIEW

M:\jobs\1242\057\gint\pw22.xls

MONTGOMERY WATSON

WELL CONSTRUCTION DETAIL
EXTRACTION WELL PW23



NOTES:

1. WELL PW23 WAS DRILLED ON SEPTEMBER 16, 1998.
2. WELL SCREEN 0.060" SLOT. 15' LONG
3. PITLESS ADAPTER IS NOT YET INSTALLED.

NOT TO SCALE

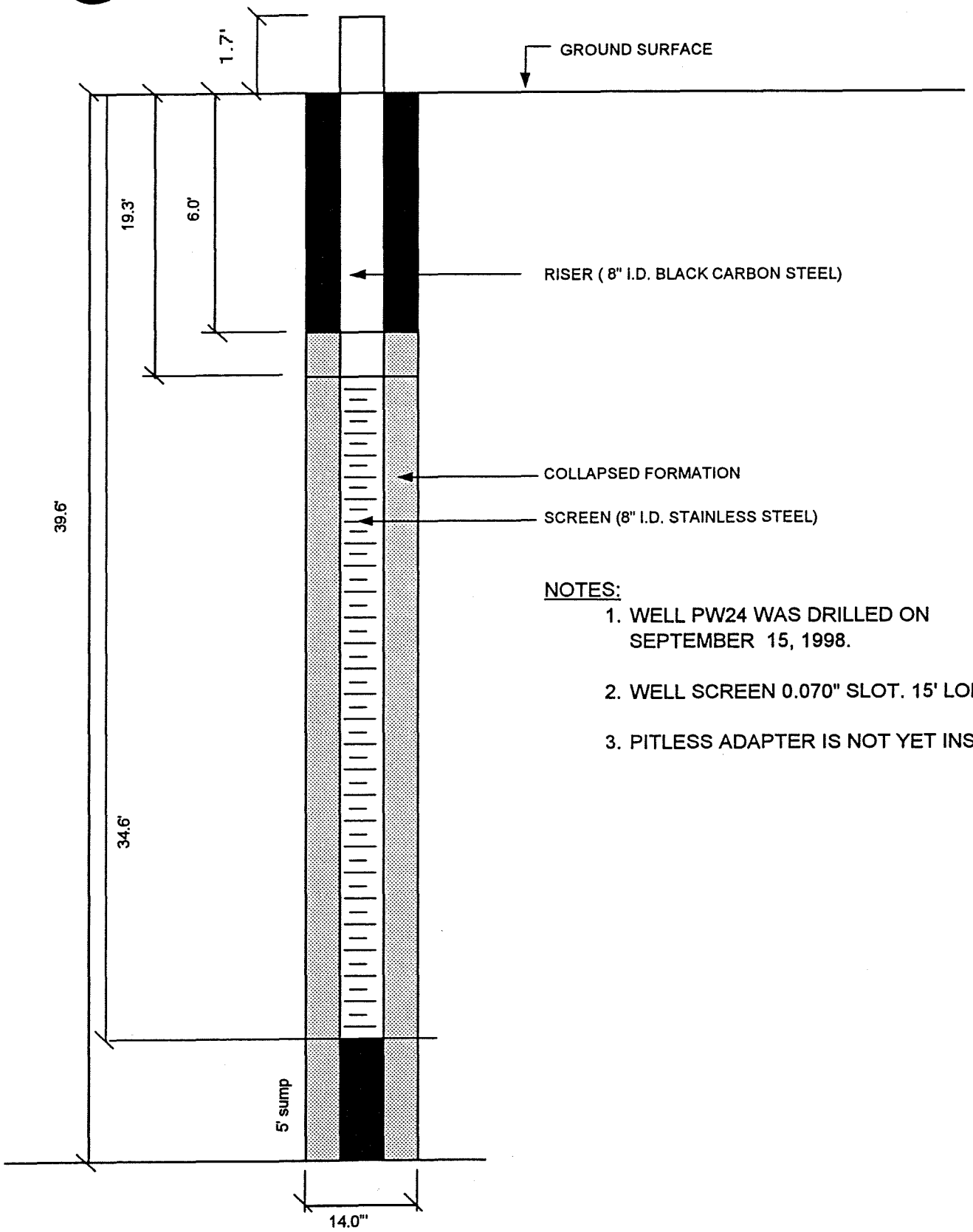
LEAD PROFESSIONAL TJM

TECHNICAL REVIEW

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MONTGOMERY WATSON

WELL CONSTRUCTION DETAIL
EXTRACTION WELL PW24



NOTES:

1. WELL PW24 WAS DRILLED ON SEPTEMBER 15, 1998.
2. WELL SCREEN 0.070" SLOT. 15' LONG
3. PITLESS ADAPTER IS NOT YET INSTALLED.

NOT TO SCALE

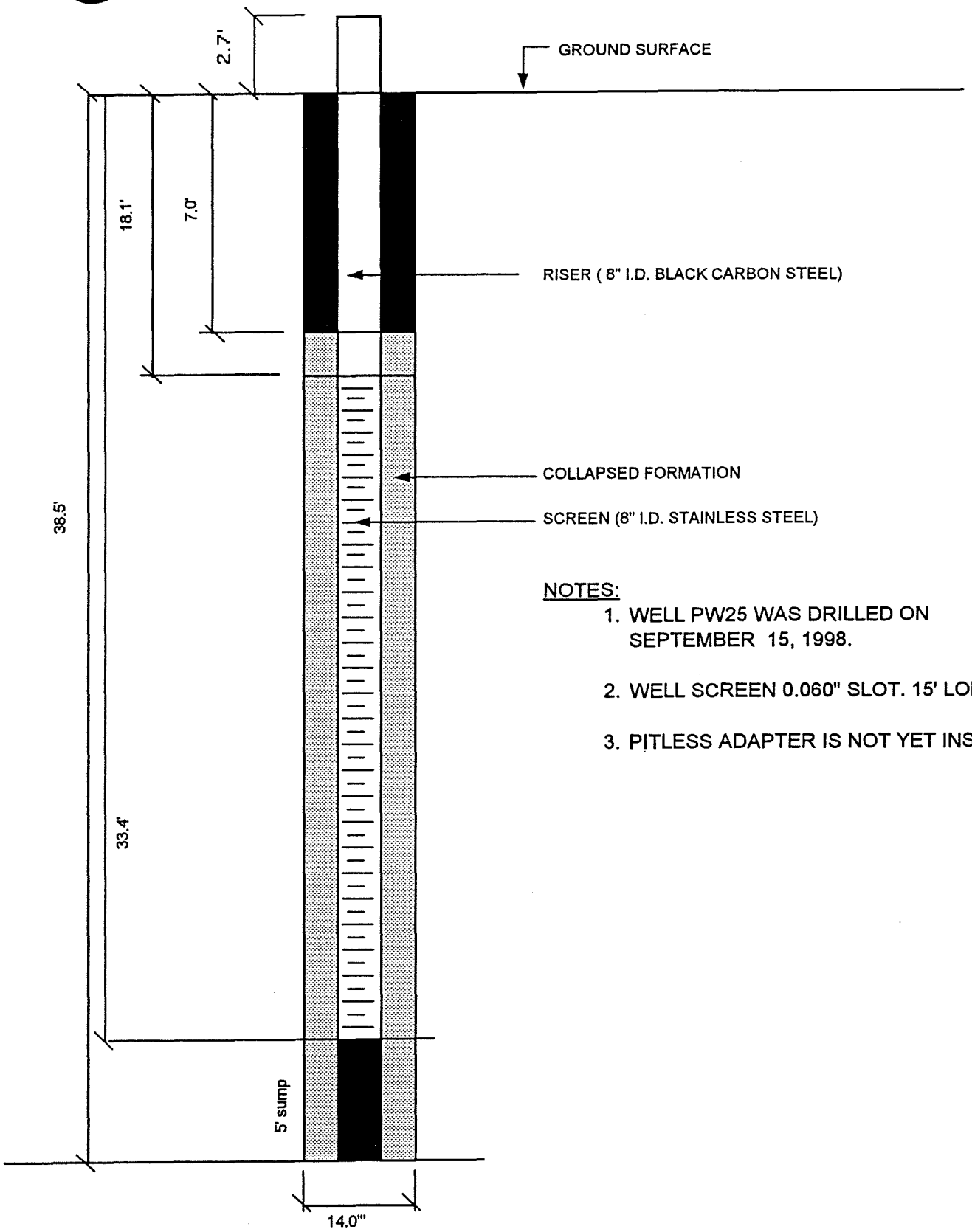
LEAD PROFESSIONAL TJM

TECHNICAL REVIEW

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MONTGOMERY WATSON

WELL CONSTRUCTION DETAIL
EXTRACTION WELL PW25



NOTES:

1. WELL PW25 WAS DRILLED ON SEPTEMBER 15, 1998.
2. WELL SCREEN 0.060" SLOT. 15' LONG
3. PITLESS ADAPTER IS NOT YET INSTALLED.

NOT TO SCALE

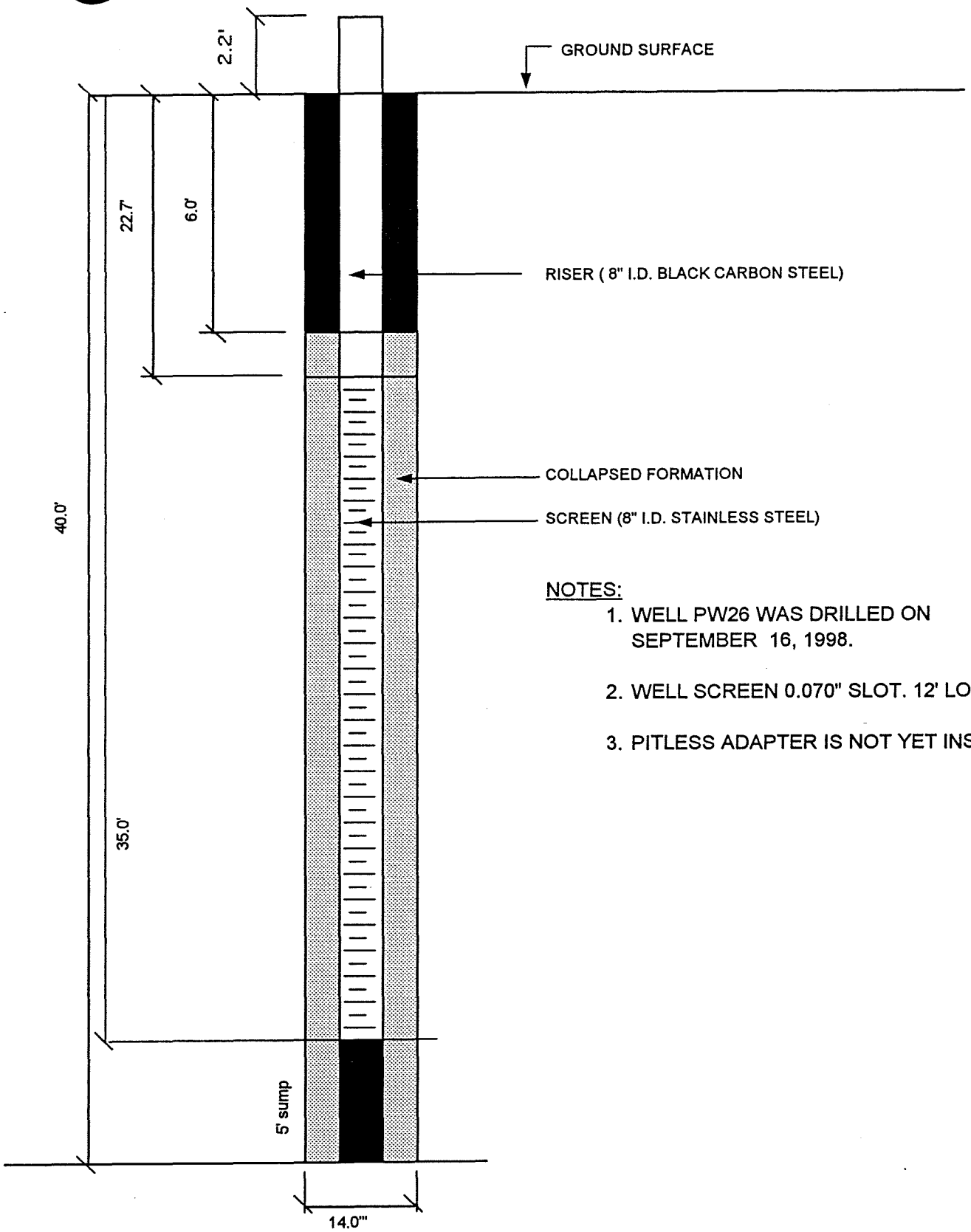
LEAD PROFESSIONAL TJM

TECHNICAL REVIEW

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MONTGOMERY WATSON

WELL CONSTRUCTION DETAIL
EXTRACTION WELL PW26



NOTES:

1. WELL PW26 WAS DRILLED ON SEPTEMBER 16, 1998.
2. WELL SCREEN 0.070" SLOT. 12' LONG
3. PITLESS ADAPTER IS NOT YET INSTALLED.

NOT TO SCALE

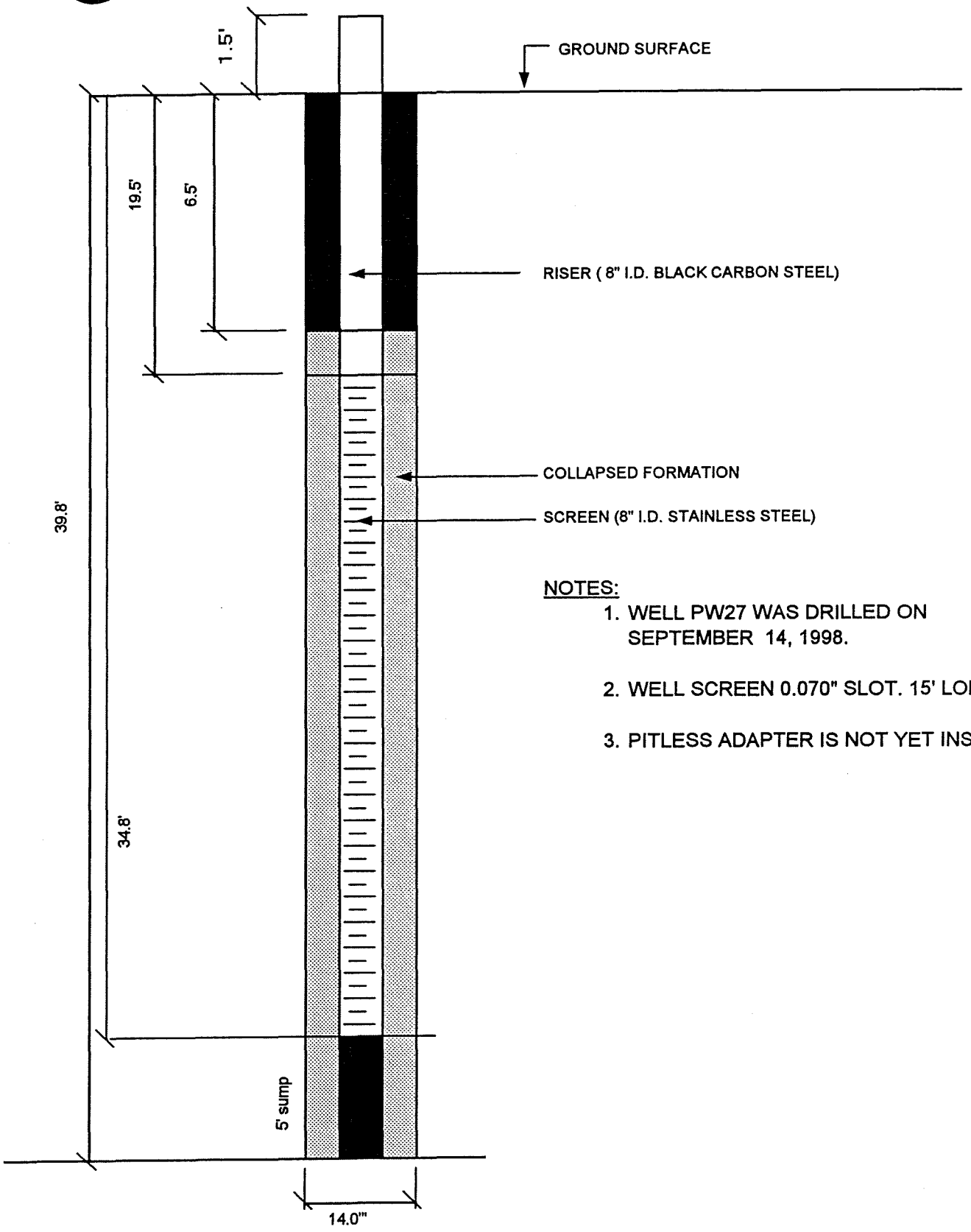
LEAD PROFESSIONAL TJM

TECHNICAL REVIEW

M:\jobs\1242\057\gint\pw26.xls

MONTGOMERY WATSON

WELL CONSTRUCTION DETAIL
EXTRACTION WELL PW27



NOTES:

1. WELL PW27 WAS DRILLED ON SEPTEMBER 14, 1998.
2. WELL SCREEN 0.070" SLOT. 15' LONG
3. PITLESS ADAPTER IS NOT YET INSTALLED.

NOT TO SCALE

LEAD PROFESSIONAL TJM

TECHNICAL REVIEW

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D

WELL DEVELOPMENT

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 6-97

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	County	Well Name
Wauleco	Marathon	PW-17
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number** / **DNR Well Number**
	37	

1. Can this well be purged dry? ☐ Yes ☒ No

2. Well development method:

surged with bailer and bailed	☐	41
surged with bailer and pumped	☐	61
surged with block and bailed	☐	42
surged with block and pumped	☐	62
surged with block, bailed, and pumped	☐	70
compressed air	☐	20
bailed only	☐	10
pumped only	☐	51
pumped slowly	☐	50
other Bailed & Pumped	☒	[illegible]

3. Time spent developing well 60 min.

4. Depth of well (from top of well casing) 4415 ft.

5. Inside diameter of well in.

6. Volume of water in filter pack and well casing 10.4 gal.

7. Volume of water removed from well 150.0 gal.

8. Volume of water added (if any) gal.

9. Source of water added

10. Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing) a.	29.75 ft.	32.80 ft.
Date b.	10/05/1998	10/05/1998
Time c.	08:30 am	09:30 am
12. Sediment in well bottom	0.010 inches	0.0 inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) Muddy	Clear ☒ 20 Turbid ☐ 25 (Describe) Clear

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	mg/l	mg/l
15. COD	mg/l	mg/l

16. Well developed by: Person's Name and Firm
Larry Erdman
Boart Longyear

17. Additional comments on development:
Pumped @ 8 GPM

Facility Address or Owner/Responsible Party Address

Name:

Firm:

Street:

City/State/Zip:

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature:

Print Name: Ron Thalacker

Firm: BOART LONGYEAR

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 6-97

Route To: Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	County	Well Name
Wauleco	Marathon	PW-18
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number** / **DNR Well Number**
	37	

1. Can this well be purged dry? ☐ Yes ☒ No

2. Well development method:

surged with bailer and bailed	☐	41
surged with bailer and pumped	☐	61
surged with block and bailed	☐	42
surged with block and pumped	☐	62
surged with block, bailed, and pumped	☐	70
compressed air	☐	20
bailed only	☐	10
pumped only	☐	51
pumped slowly	☐	50
other Surged w/Air - Jetted Bailed & Pumped	☒	80

3. Time spent developing well 105 min.

4. Depth of well (from top of well casing) 42.8 ft.

5. Inside diameter of well in.

6. Volume of water in filter pack and well casing 9.1 gal.

7. Volume of water removed from well 250.0 gal.

8. Volume of water added (if any) gal.

9. Source of water added

10. Analysis performed on water added? ☐ Yes ☐ No (If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing) a.	29.60 ft.	41.20 ft.
Date b.	10/07/1998	10/07/1998
Time c.	08:00 am	09:45 am
12. Sediment in well bottom	0.010 inches	0.0 inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) Muddy	Clear ☒ 20 Turbid ☐ 25 (Describe) Clear

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	mg/l	mg/l
15. COD	mg/l	mg/l

16. Well developed by: Person's Name and Firm
Larry Erdman
Boart Longyear

17. Additional comments on development:
Pumped @ 8 GPM
Added 1 1/2 Gals. LBA

Facility Address or Owner/Responsible Party Address

Name:

Firm:

Street:

City/State/Zip:

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature:

Print Name: Ron Thalucker

Firm: BOART LONGYEAR

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 6-97

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	County	Well Name
Wauleco	Marathon	PW-19

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well Number
	37		

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method:

surged with bailer and bailed	☐	41
surged with bailer and pumped	☐	61
surged with block and bailed	☐	42
surged with block and pumped	☐	62
surged with block, bailed, and pumped	☐	70
compressed air	☐	20
bailed only	☐	10
pumped only	☐	51
pumped slowly	☐	50
other Air Jet - Surged - Bail - Pumped	☒	

3. Time spent developing well 360 min.

4. Depth of well (from top of well casing) 42.8 ft.

5. Inside diameter of well in.

6. Volume of water in filter pack and well casing 11.5 gal.

7. Volume of water removed from well 80.0 gal.

8. Volume of water added (if any) gal.

9. Source of water added

10. Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

		Before Development	After Development
11. Depth to Water (from top of well casing)	a.	29.80 ft.	29.70 ft.
Date	b.	09/29/1998	09/29/1998
Time	c.	09:00 am	03:00 pm
12. Sediment in well bottom		0.010 inches	0.0 inches
13. Water clarity		Clear ☐ 10 Turbid ☒ 15 (Describe) Cloudy Brown Sandy	Clear ☐ 20 Turbid ☒ 25 (Describe) Cloudy Brown Sandy

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	mg/l	mg/l
15. COD	mg/l	mg/l

16. Well developed by: Person's Name and Firm
Todd Schmalfeldt
Boart Longyear

17. Additional comments on development:
1/2 to Redtrive Lost Bailer
Large Screen Size Lots of Course Sand
Coming in Hard to Get Out Of Sump
Sand Comes in When You Surge
& Jet
Large Amounts

Facility Address or Owner/Responsible Party Address

Name:

Firm:

Street:

City/State/Zip:

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature:

Print Name: Ron Thalacker

Firm: BOART LONGYEAR

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 6-97

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	County	Well Name
Wauleco	Marathon	PW-19A

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well Number
	37		

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method:

surged with bailer and bailed	☐	41
surged with bailer and pumped	☐	61
surged with block and bailed	☐	42
surged with block and pumped	☐	62
surged with block, bailed, and pumped	☐	70
compressed air	☐	20
bailed only	☐	10
pumped only	☐	51
pumped slowly	☐	50
other Bailed/Air Jetted/Bailed/ & Pumped/ Surged	☒	

3. Time spent developing well 150 min.

4. Depth of well (from top of well casing) 42.8 ft.

5. Inside diameter of well in.

6. Volume of water in filter pack and well casing 11.5 gal.

7. Volume of water removed from well 200.0 gal.

8. Volume of water added (if any) gal.

9. Source of water added

10. Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing) a.	29.80 ft.	39.40 ft.
Date b.	10/05/1998	10/05/1998
Time c.	09:30 am	03:00 pm
12. Sediment in well bottom	0.010 inches	0.0 inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) Muddy	Clear ☒ 20 Turbid ☐ 25 (Describe) Clear

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	mg/l	mg/l
15. COD	mg/l	mg/l

16. Well developed by: Person's Name and Firm
Larry Erdman
Boart Longyear

17. Additional comments on development:
Pumped At 8 GPM

Facility Address or Owner/Responsible Party Address

Name:

Firm:

Street:

City/State/Zip:

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature:

Print Name: Ron Thalacker

Firm: BOART LONGYEAR

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 6-97

Route To: Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	County	Well Name
Wauleco	Marathon	PW-20

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well Number
	37		

1. Can this well be purged dry? ☐ Yes ☒ No

2. Well development method:

surged with bailer and bailed	☐	41
surged with bailer and pumped	☐	61
surged with block and bailed	☐	42
surged with block and pumped	☐	62
surged with block, bailed, and pumped	☐	70
compressed air	☐	20
bailed only	☐	10
pumped only	☐	51
pumped slowly	☐	50
other Surged w/Air Jetted/Bailed & Pumped	☒	

3. Time spent developing well: 90 min.

4. Depth of well (from top of well casing): 42.3 ft.

5. Inside diameter of well: in.

6. Volume of water in filter pack and well casing: 10.6 gal.

7. Volume of water removed from well: 250.0 gal.

8. Volume of water added (if any): gal.

9. Source of water added: _____

10. Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing) a.	30.20 ft.	33.90 ft.
Date b.	10/07/1998	10/07/1998
Time c.	06:30 am	08:00 am
12. Sediment in well bottom	0.010 inches	0.0 inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) Muddy	Clear ☒ 20 Turbid ☐ 25 (Describe) Clear

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	mg/l	mg/l
15. COD	mg/l	mg/l

16. Well developed by: Person's Name and Firm
Larry Erdman
Boart Longyear

17. Additional comments on development:
Added 1 1/2 Gals LBA
Pumped at 8 GPM

Facility Address or Owner/Responsible Party Address

Name: _____

Firm: _____

Street: _____

City/State/Zip: _____

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: _____

Print Name: Ron Thalacker

Firm: BOART LONGYEAR

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 6-97

Route To: Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	County	Well Name
Wauleco	Marathon	PW-21

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well Number
	37		

1. Can this well be purged dry? ☐ Yes ☒ No

2. Well development method:

surged with bailer and bailed	☐	41
surged with bailer and pumped	☐	61
surged with block and bailed	☐	42
surged with block and pumped	☐	62
surged with block, bailed, and pumped	☐	70
compressed air	☐	20
bailed only	☐	10
pumped only	☐	51
pumped slowly	☐	50
other Surged w/Air Jetted/Bailed & Pumped	☒	80

3. Time spent developing well 90 min.

4. Depth of well (from top of well casing) 41.3 ft.

5. Inside diameter of well in.

6. Volume of water in filter pack and well casing 11.1 gal.

7. Volume of water removed from well 250.0 gal.

8. Volume of water added (if any) gal.

9. Source of water added

10. Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing) a.	28.86 ft.	35.87 ft.
Date b.	10/06/1998	10/06/1998
Time c.	02:45 pm	04:15 pm
12. Sediment in well bottom	0.010 inches	0.0 inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) Muddy	Clear ☒ 20 Turbid ☐ 25 (Describe) Clear

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	mg/l	mg/l
15. COD	mg/l	mg/l

16. Well developed by: Person's Name and Firm
Larry Erdman
Boart Longyear

17. Additional comments on development:
Pumped at 8 GPM
Added 1 1/2 Gals LBA

Facility Address or Owner/Responsible Party Address

Name:

Firm:

Street:

City/State/Zip:

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature:

Print Name: Ron Thalacker

Firm: BOART LONGYEAR

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

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Route To: Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	County	Well Name
Wauleco	Marathon	PW-22

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well Number
	37		

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method:

surged with bailer and bailed	☐	41
surged with bailer and pumped	☐	61
surged with block and bailed	☐	42
surged with block and pumped	☐	62
surged with block, bailed, and pumped	☐	70
compressed air	☐	20
bailed only	☐	10
pumped only	☐	51
pumped slowly	☐	50
other Air Surged/Jetted/Bailed & Pumped	☒	

3. Time spent developing well 510 min.

4. Depth of well (from top of well casing) 41.1 ft.

5. Inside diameter of well in.

6. Volume of water in filter pack and well casing 8.6 gal.

7. Volume of water removed from well 250.0 gal.

8. Volume of water added (if any) gal.

9. Source of water added

10. Analysis performed on water added? ☐ Yes ☐ No (If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing) a.	31.40 ft.	39.90 ft.
Date b.	10/06/1998	10/06/1998
Time c.	06:15 am	02:45 pm
12. Sediment in well bottom	0.010 inches	0.0 inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) Muddy	Clear ☒ 20 Turbid ☐ 25 (Describe) Clear

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	mg/l	mg/l
15. COD	mg/l	mg/l

16. Well developed by: Person's Name and Firm
Larry Erdman
Boart Longyear

17. Additional comments on development:
Added 1 1/2 Gals LBA

Facility Address or Owner/Responsible Party Address

Name:

Firm:

Street:

City/State/Zip:

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature:

Print Name: Ron Thalacker

Firm: BOART LONGYEAR

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 6-97

Route To: Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	County	Well Name
Wauleco	Marathon	PW-22A

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well Number
	37		

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method:

surged with bailer and bailed	☐	41
surged with bailer and pumped	☐	61
surged with block and bailed	☐	42
surged with block and pumped	☐	62
surged with block, bailed, and pumped	☐	70
compressed air	☐	20
bailed only	☐	10
pumped only	☐	51
pumped slowly	☐	50
other Surged w/Air Jetted/Bailed & Pumped	☒	

3. Time spent developing well 135 min.

4. Depth of well (from top of well casing) 41.1 ft.

5. Inside diameter of well in.

6. Volume of water in filter pack and well casing 8.6 gal.

7. Volume of water removed from well 200.0 gal.

8. Volume of water added (if any) gal.

9. Source of water added

10. Analysis performed on water added? ☐ Yes ☐ No (If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing) a.	31.40 ft.	39.60 ft.
Date b.	10/08/1998	10/08/1998
Time c.	08:15 am	10:30 am
12. Sediment in well bottom	0.010 inches	0.0 inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) Muddy	Clear ☒ 20 Turbid ☐ 25 (Describe) Clear

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	mg/l	mg/l
15. COD	mg/l	mg/l

16. Well developed by: Person's Name and Firm
Larry Erdman
Boart Longyear

17. Additional comments on development:
Added BMR to Well
Well Pumped @ 3 1/2 GPM

Facility Address or Owner/Responsible Party Address

Name:

Firm:

Street:

City/State/Zip:

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature:

Print Name: Ron Thalacker

Firm: BOART LONGYEAR

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 6-97

Route To: Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	County	Well Name
Wauleco	Marathon	PW-23

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well Number
	37		

1. Can this well be purged dry? ☐ Yes ☒ No

2. Well development method:

surged with bailer and bailed	☐	41
surged with bailer and pumped	☐	61
surged with block and bailed	☐	42
surged with block and pumped	☐	62
surged with block, bailed, and pumped	☐	70
compressed air	☐	20
bailed only	☐	10
pumped only	☐	51
pumped slowly	☐	50
other Surged w/Air Jetted Bailed & Pumped	☒	80

3. Time spent developing well 120 min.

4. Depth of well (from top of well casing) 41.3 ft.

5. Inside diameter of well in.

6. Volume of water in filter pack and well casing 11.3 gal.

7. Volume of water removed from well 250.0 gal.

8. Volume of water added (if any) gal.

9. Source of water added

10. Analysis performed on water added? ☐ Yes ☐ No (If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing) a.	28.35 ft.	28.35 ft.
Date b.	10/07/1998	10/07/1998
Time c.	09:45 am	11:45 am
12. Sediment in well bottom	0.010 inches	0.0 inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) Muddy	Clear ☒ 20 Turbid ☐ 25 (Describe) Clear

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	mg/l	mg/l
15. COD	mg/l	mg/l

16. Well developed by: Person's Name and Firm
Larry Erdman
Boart Longyear

17. Additional comments on development:
Added 1 1/2 Gals LBA

Facility Address or Owner/Responsible Party Address

Name:

Firm:

Street:

City/State/Zip:

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature:

Print Name: Ron Thalacker

Firm: BOART LONGYEAR

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 6-97

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	County	Well Name
Wauleco	Marathon	PW-24

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well Number
	37		

1. Can this well be purged dry? ☐ Yes ☒ No

2. Well development method:

surged with bailer and bailed	☐	41
surged with bailer and pumped	☐	61
surged with block and bailed	☐	42
surged with block and pumped	☐	62
surged with block, bailed, and pumped	☐	70
compressed air	☐	20
bailed only	☐	10
pumped only	☐	51
pumped slowly	☐	50
other Surged w/Air/ Jetted Bailed & Pumped	☒	

3. Time spent developing well 105min.

4. Depth of well (from top of well casing) 41.3ft.

5. Inside diameter of well in.

6. Volume of water in filter pack and well casing 12.4 gal.

7. Volume of water removed from well 250.0 gal.

8. Volume of water added (if any) gal.

9. Source of water added

10. Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

		Before Development	After Development
11. Depth to Water (from top of well casing)	a.	27.40 ft.	30.70 ft.
Date	b.	10/07/1998	10/07/1998
Time	c.	11:45 am	01:30 pm
12. Sediment in well bottom		0.010 inches	0.0 inches
13. Water clarity		Clear ☐ 10 Turbid ☒ 15 (Describe) Muddy	Clear ☒ 20 Turbid ☐ 25 (Describe) Clear

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	mg/l	mg/l
15. COD	mg/l	mg/l

16. Well developed by: Person's Name and Firm
Larry Erdman
Boart Longyear

17. Additional comments on development:
Pumped At 8 GPM
Added 1 1/2 Gals LBA

Facility Address or Owner/Responsible Party Address

Name:

Firm:

Street:

City/State/Zip:

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature:

Print Name: Ron Thalacker

Firm: BOART LONGYEAR

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 6-97

Route To: Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	County	Well Name
Wauleco	Marathon	PW-25

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well Number
	37		

1. Can this well be purged dry? ☐ Yes ☒ No

2. Well development method:

surged with bailer and bailed	☐	41
surged with bailer and pumped	☐	61
surged with block and bailed	☐	42
surged with block and pumped	☐	62
surged with block, bailed, and pumped	☐	70
compressed air	☐	20
bailed only	☐	10
pumped only	☐	51
pumped slowly	☐	50
other Surged w/Air Jetted Bailed & Pumped	☒	

3. Time spent developing well: 90 min.

4. Depth of well (from top of well casing): 41.2 ft.

5. Inside diameter of well: in.

6. Volume of water in filter pack and well casing: 10.8 gal.

7. Volume of water removed from well: 250.0 gal.

8. Volume of water added (if any): gal.

9. Source of water added: _____

10. Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing) a.	29.00 ft.	31.37 ft.
Date b.	10/07/1998	10/07/1998
Time c.	01:30 pm	03:00 pm
12. Sediment in well bottom	0.010 inches	0.0 inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) Muddy	Clear ☒ 20 Turbid ☐ 25 (Describe) Clear

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	mg/l	mg/l
15. COD	mg/l	mg/l

16. Well developed by: Person's Name and Firm
Larry Erdman
Boart Longyear

17. Additional comments on development:
Pumped @ 8 GPM
Added 1 1/2 Gals LBA

Facility Address or Owner/Responsible Party Address

Name: _____

Firm: _____

Street: _____

City/State/Zip: _____

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: _____

Print Name: Ron Thalacker

Firm: BOART LONGYEAR

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

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Route To: Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	County	Well Name
Wauleco	Marathon	PW-26

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well Number
	37		

1. Can this well be purged dry? ☐ Yes ☒ No

2. Well development method:

surged with bailer and bailed	☐	41
surged with bailer and pumped	☐	61
surged with block and bailed	☐	42
surged with block and pumped	☐	62
surged with block, bailed, and pumped	☐	70
compressed air	☐	20
bailed only	☐	10
pumped only	☐	51
pumped slowly	☐	50
other Surged w/Air Jetted Bailed & Pumped	☒	

3. Time spent developing well 120 min.

4. Depth of well (from top of well casing) 42.5 ft.

5. Inside diameter of well in.

6. Volume of water in filter pack and well casing 12.6 gal.

7. Volume of water removed from well 250.0 gal.

8. Volume of water added (if any) gal.

9. Source of water added

10. Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

		Before Development	After Development
11. Depth to Water (from top of well casing)	a.	28.27 ft.	28.27 ft.
Date	b.	10/08/1998	10/08/1998
Time	c.	06:15 am	08:15 am
12. Sediment in well bottom		0.010 inches	0.0 inches
13. Water clarity		Clear ☐ 10 Turbid ☒ 15 (Describe) Muddy	Clear ☒ 20 Turbid ☐ 25 (Describe) Clear

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	mg/l	mg/l
15. COD	mg/l	mg/l

16. Well developed by: Person's Name and Firm
Larry Erdman
Boart Longyear

17. Additional comments on development
Pumped @ 8 GPM
Added 1 1/2 Gals LBA

Facility Address or Owner/Responsible Party Address

Name:

Firm:

Street:

City/State/Zip:

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature:

Print Name: Ron Thalacker

Firm: BOART LONGYEAR

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

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Route To: Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	County	Well Name
Wauleco	Marathon	PW-27

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well Number
	37		

1. Can this well be purged dry? ☐ Yes ☒ No

2. Well development method:

surged with bailer and bailed	☐	41
surged with bailer and pumped	☐	61
surged with block and bailed	☐	42
surged with block and pumped	☐	62
surged with block, bailed, and pumped	☐	70
compressed air	☐	20
bailed only	☐	10
pumped only	☐	51
pumped slowly	☐	50
other Surged w/Air Jetted Bailed & Pumped	☒	

3. Time spent developing well: 90 min.

4. Depth of well (from top of well casing): 41.3 ft.

5. Inside diameter of well: in.

6. Volume of water in filter pack and well casing: 11.5 gal.

7. Volume of water removed from well: 250.0 gal.

8. Volume of water added (if any): gal.

9. Source of water added: _____

10. Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing) a.	28.18 ft.	31.50 ft.
Date b.	10/07/1998	10/07/1998
Time c.	03:00 pm	04:30 pm
12. Sediment in well bottom	0.010 inches	0.0 inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) Muddy	Clear ☒ 20 Turbid ☐ 25 (Describe) Clear

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	mg/l	mg/l
15. COD	mg/l	mg/l

16. Well developed by: Person's Name and Firm
Larry Erdman
Boart Longyear

17. Additional comments on development:
Pumped @ 8 GPM
Added 1 1/2 Gals LBA

Facility Address or Owner/Responsible Party Address

Name: _____

Firm: _____

Street: _____

City/State/Zip: _____

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: _____

Print Name: Ron Thalacker

Firm: BOART LONGYEAR

NOTE: See instructions for more information including a list of county codes and well type codes.

E

PHOTOGRAPHS



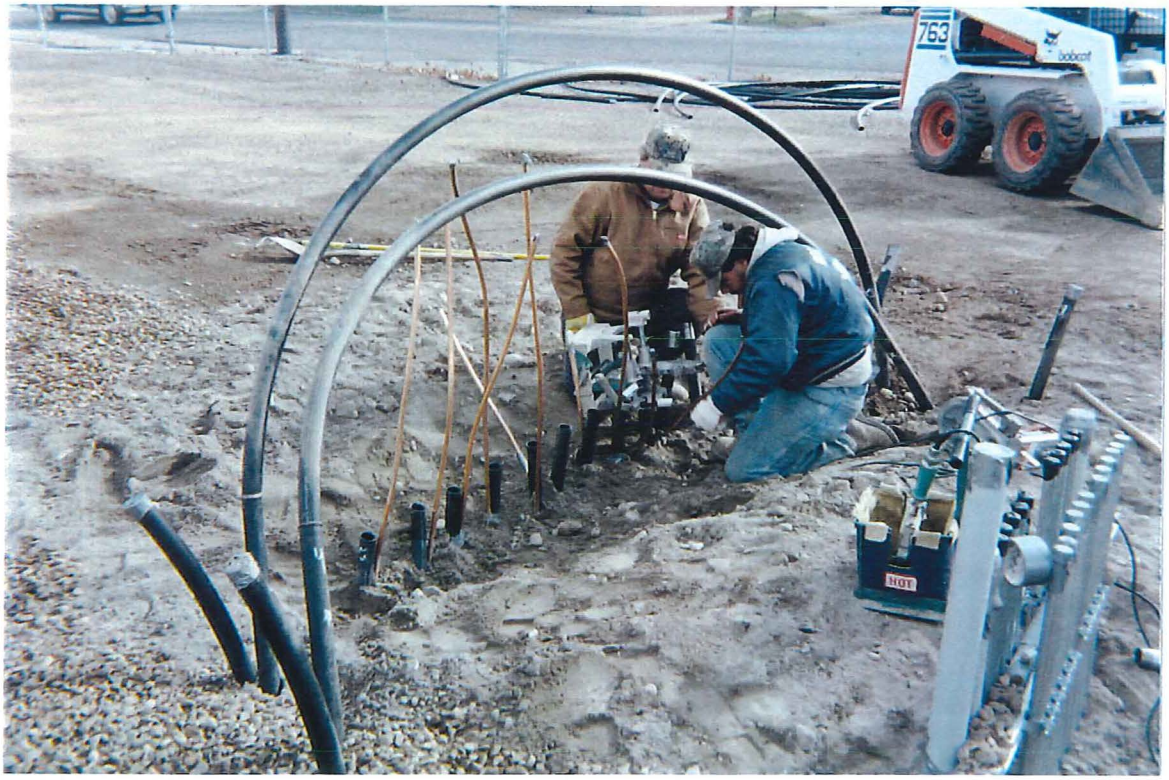
1. HDPE piping and electrical conduit heading toward meter building area.



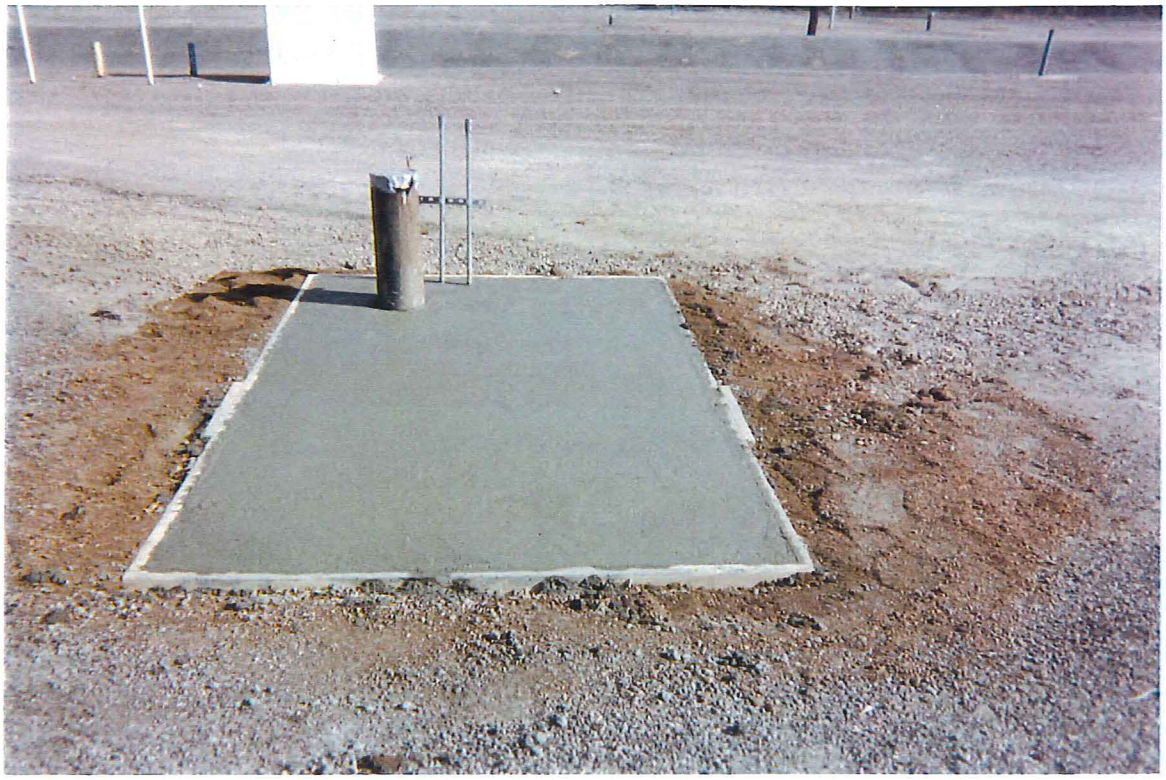
2. Pouring floor of the metering building. Note HDPE risers for water, electrical conduit, and copper air pipes.



3. HDPE pipe connect to pitless adapter welded to well casing. Electrical conduit bends up to end in well enclosure.



4. HDPE pipe and electrical conduit in meter building footprint.



5. Floor slab and apron of extraction well. Note steel well riser, electrical conduit and compressed air pipe behind well casing.



6. New steel well enclosures in place. Trench from fiber optic cable visible to left.

3/26/99

MONTGOMERY WATSON

RECEIVED
MAR 29 1999
WAUSAU DNR

March 26, 1999

Ms. Lisa Gutknecht
Wisconsin Department of Natural Resources
5301 Rib Mountain Drive
Wausau, Wisconsin 54401

Re: February Progress Report
WAULECO, Inc.
Wausau, Wisconsin
Administrative Order No. NCD-91-04

BRRTS# 02-37-000006

Dear Ms. Gutknecht:

On behalf of WAULECO, Montgomery Watson is submitting two copies (enclosed) of the February Progress Report for the WAULECO, Inc. site in Wausau, Wisconsin. The report is submitted in fulfillment of Paragraph 41 of Administrative Order No. NCD-91-04.

If you have any questions or comments regarding this information, please call.

Sincerely,

MONTGOMERY WATSON

Patrick H. Lytle
Associate Engineer

Douglas J. Bach, P.E.
Project Manager

Enclosures: Monthly Report

cc: Wastewater Engineer - WDNR (Wausau, WI) (1)
J. Gehin - Wausau Utilities Director (1)
P. Peshek (3)
R. Brandt (1)

PHL/phl/vlr/DJB
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One Science Court
P.O. Box 5385
Madison, Wisconsin
53705-0385

Tel: 608 231 4747
Fax: 608 231 4777

Serving the World's Environmental Needs

WAULECO INCORPORATED
WAUSAU, WISCONSIN
MONTHLY REPORT
FEBRUARY 1999

SUMMARY OF FEBRUARY 1999 ACTIVITIES

Groundwater Extraction and Treatment System Operation

Treatment system performance data for this reporting period are summarized in Table 1. PCP screening (on-site gas chromatograph) results for the system effluent samples, which represent the discharge water to the municipal sewer, averaged 5.3 ug/L for the month of February, with a maximum single day concentration of 16 ug/L. The result for laboratory samples collected on February 19, 1999 indicated higher PCP concentrations than were measured onsite on either February 18th and 19th. The laboratory result for PCP in the system effluent was 66 ug/L. These results indicate PCP concentrations were below the permit levels of 150 ug/L (monthly average) and 300 ug/L (daily maximum).

Laboratory results for mercury analyses of the FBR influent, FBR effluent, and system effluent samples collected on February 19 are included in Table 1. The mercury concentration in the system effluent samples (discharged to the sanitary sewer) was 0.18 ug/L.

PCP influent concentrations ranged from 7,563 ug/L to 20,564 ug/L during February 1999 (Table 1). PCP influent and effluent concentrations in the FBR are presented graphically both as individual data points and as a 30-day moving average in Figure 1. As shown in Figure 1, the FBR effluent concentrations appeared to plateau in January and February, following an increase in December. The average PCP removal efficiency for the FBR during February was 84% compared to an average of 91% during the previous year. The decrease in PCP removal efficiency is attributable to the increased flow rate through the treatment system due to startup of the new extraction wells. Daily groundwater flow through the treatment system (Table 2) ranged from 34 to 47 gallons per minute (gpm) during February, compared to a typical range between 15 and 25 gpm prior to installation of the new extraction wells. It is expected that as flow rates are stabilized in the targeted 40 to 50 gpm range, treatment efficiency in the FBR will stabilize at a level below 90 percent. Total treatment system efficiency (including carbon polishing units) continues to be greater than 99%.

Treatment System Modifications

Eleven new extraction wells (PW17 through PW27) were gradually brought on-line during the month of December and continued to pump in February. A copy of the system modification construction documentation report is nearing completion, and will be forwarded for WDNR files.

Product Recovery

Product recovery data for the reporting period are presented in Table 3. Historic product recovery (since July 1990) compared to average water level deviation is presented in Figure 2. The effect of the new extraction wells on groundwater levels is shown on Figure 2. Water levels in the vicinity of the site were the lowest recorded since the startup of the extraction system in 1990. The low water levels had the intended effect of increasing product recovery to 5,305 gal during the month of February, the highest product recovery ever recorded. As shown in Table 3 and Figure 3, approximately 85 percent of the product recovered during February came from the new extraction wells, with the most production from PW18.

Groundwater Monitoring

Groundwater elevation and product thickness data for December, January, and February are summarized in Table 4.

PHL/phl/vlr/DJB
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TABLE 1
Above Ground Treatment System Data
Wauleco, Inc.
Wausau, Wisconsin

Parameter	UNIT	DATE	FBR Influent	FBR Effluent	FFR Influent	FFR Effluent	System Effluent
Biological Oxygen Demand	mg/L	2/19/99	16	14			3
Chemical Oxygen Demand	mg/L	2/19/99	64	49			29
Chloride	mg/L	2/19/99	187	185			186
Dissolved Oxygen	mg/L	2/2/99	6.4	2.8	5	3.9	
Dissolved Oxygen	mg/L	2/12/99	6.5	2.3	4.7	3.3	
Dissolved Oxygen	mg/L	2/18/99	7	3.6	5.5	4	
Dissolved Oxygen	mg/L	2/24/99	7.3	4.2	6.8	5.3	
Nitrogen, Ammonia	mg/L	2/2/99	4	3	2	0	
Nitrogen, Ammonia	mg/L	2/12/99	5	3	2	2	
Nitrogen, Ammonia	mg/L	2/18/99	7	6	5	5	
Nitrogen, Ammonia	mg/L	2/24/99	4	3	3	3	
Nitrogen, Nitrate	mg/L	2/2/99	0	0		0	
Nitrogen, Nitrate	mg/L	2/12/99	0	0		0	
Nitrogen, Nitrate	mg/L	2/18/99	0	0		0	
Nitrogen, Nitrate	mg/L	2/24/99	0	0		0	
Nitrogen, Nitrate + Nitrite	mg/L	2/19/99	0.46	0.25			0.13
Nitrogen, Total Kjeldahl	mg/L	2/19/99	4.54	3.96			4.26
Pentachlorophenol-Screen	ug/L	2/1/99					2
Pentachlorophenol-Screen	ug/L	2/2/99	20564	2364		2015	4
Pentachlorophenol-Screen	ug/L	2/3/99					3
Pentachlorophenol-Screen	ug/L	2/4/99					5
Pentachlorophenol-Screen	ug/L	2/5/99	18078	2798		2504	3
Pentachlorophenol-Screen	ug/L	2/6/99					3
Pentachlorophenol-Screen	ug/L	2/7/99					3
Pentachlorophenol-Screen	ug/L	2/8/99					3
Pentachlorophenol-Screen	ug/L	2/9/99	16992	4440		4221	2
Pentachlorophenol-Screen	ug/L	2/10/99					5
Pentachlorophenol-Screen	ug/L	2/11/99					4
Pentachlorophenol-Screen	ug/L	2/12/99	18296	3450		2640	3
Pentachlorophenol-Screen	ug/L	2/13/99					5
Pentachlorophenol-Screen	ug/L	2/14/99					4
Pentachlorophenol-Screen	ug/L	2/15/99	20123	3254		3010	4
Pentachlorophenol-Screen	ug/L	2/16/99					5
Pentachlorophenol-Screen	ug/L	2/17/99					6

TABLE 1
Above Ground Treatment System Data
Wauleco, Inc.
Wausau, Wisconsin

Parameter	UNIT	DATE	FBR Influent	FBR Effluent	FFR Influent	FFR Effluent	System Effluent
Pentachlorophenol-Screen	ug/L	2/18/99	7563	1399		1415	16
Pentachlorophenol-Screen	ug/L	2/19/99					5
Pentachlorophenol-Screen	ug/L	2/20/99					4
Pentachlorophenol-Screen	ug/L	2/21/99					5
Pentachlorophenol-Screen	ug/L	2/22/99					13
Pentachlorophenol-Screen	ug/L	2/23/99					4
Pentachlorophenol-Screen	ug/L	2/24/99	11733	1600		1539	12
Pentachlorophenol-Screen	ug/L	2/25/99					6
Pentachlorophenol-Screen	ug/L	2/26/99					8
Pentachlorophenol-Screen	ug/L	2/27/99					5
Pentachlorophenol-Screen	ug/L	2/28/99					5
pH	S.U.	2/2/99	6.8	6.9		6.9	
pH	S.U.	2/12/99	6.7	6.8		6.9	
pH	S.U.	2/18/99	7	6.7		6.6	
pH	S.U.	2/24/99	6.8	6.9		7	
Phosphorus, Ortho	mg/L	2/19/99	2.08	1.63			1.7
Phosphorus, Phosphate	mg/L	2/2/99	3	2		1	
Phosphorus, Phosphate	mg/L	2/12/99	2	2		1	
Phosphorus, Phosphate	mg/L	2/18/99	2	4		4	
Phosphorus, Phosphate	mg/L	2/24/99	4	4		3	
Solids, Total Suspended	mg/L	2/19/99	4	14			0
Mercury	ug/L	2/19/99	0.84	0.85			0.18
2,3,5,6-Tetrachlorophenol	ug/L	2/19/99	4400	720		740	9.3
2,4,5-Trichlorophenol	ug/L	2/19/99	0	0		0	0
2,4,6-Trichlorophenol	ug/L	2/19/99	0	0		0	0
2,4-Dichlorophenol	ug/L	2/19/99	0	0		0	0
2,4-Dimethylphenol	ug/L	2/19/99	0	0		0	0
2,4-Dinitrophenol	ug/L	2/19/99	0	0		0	0
2,6-Dichlorophenol	ug/L	2/19/99	0	0		410	0
2-Chlorophenol	ug/L	2/19/99	0	0		0	0
2-Methylphenol	ug/L	2/19/99	0	0		850	0
2-Nitrophenol	ug/L	2/19/99	0	0		660	0
3&4-Methylphenol	ug/L	2/19/99	0	0		0	0
4,6-Dinitro-2-Methylphenol	ug/L	2/19/99	0	0		0	0
4-Chloro-3-Methylphenol	ug/L	2/19/99	0	0		0	0
4-Nitrophenol	ug/L	2/19/99	0	0		0	0
Pentachlorophenol	ug/L	2/19/99	12000	6900		6200	66
Phenol	ug/L	2/19/99	0	0		0	0

TABLE 2

Treatment System Flows
Wauleco, Inc.
Wausau, Wisconsin

Date	Influent Groundwater Flow Rate [1] (gpm)	POTW Discharge Flow Rate [1] (gpm)	POTW Totalized Discharge (gal)
2/1/99	38.08	25.45	3,406,850
2/2/99	38.08	36.2	3,458,980
2/3/99	38.87	37.2	3,512,550
2/4/99	41.21	37.53	3,566,596
2/5/99	41.21	37.53	3,620,642
2/6/99	41.21	37.53	3,674,688
2/7/99	41.21	37.5	3,728,734
2/8/99	46.5	43.9	3,792,004
2/9/99	40.56	36.8	3,845,000
2/10/99	40.32	37.11	3,898,432
2/11/99	43.06	38.66	3,954,099
2/12/99	43.06	38.66	4,009,766
2/13/99	39.37	35.71	4,061,182
2/14/99	39.37	35.71	4,112,598
2/15/99	41.38	37.07	4,165,973
2/16/99	41.38	37.07	4,219,348
2/17/99	37.96	31.98	4,265,402
2/18/99	37.96	31.98	4,311,456
2/19/99	37.96	31.98	4,357,510
2/20/99	37.96	36.45	4,410,000
2/21/99	37.96	36.45	4,462,490
2/22/99	41.54	38.32	4,517,674
2/23/99	41.54	36.34	4,570,000
2/24/99	34.5	35.92	4,621,723
2/25/99	34.5	35.92	4,673,446
2/26/99	41.86	35.27	4,724,236
2/27/99	41.86	35.27	4,775,026
2/28/99	41.86	35.27	4,825,816
Average	40.1	36.1	
Total [2]:			1,418,966

Footnotes:

(1) Influent and POTW flow rates are daily averages. These may not be equal due to balancing in the treatment system and calibration of individual flowmeters.

(2) Total is the cumulative POTW discharge during the reporting period.

TABLE 3

Product Removal
(gallons per day)
Wauleco, Inc.
Wausau, Wisconsin

Date	PW04	PW05	PW07	PW09	PW10	PW11	PW12	PW13	PW15	PW16	PW17	PW18	PW19	PW20	PW21	PW22	PW23	PW24	PW25	PW26	PW27	Date Total
02/01/99	1.7	0	0	0	3.4	8.6	0	0	0	0	16	27	1.7	33	5.2	0	0	3.4	26	3.4	0	129
02/02/99	0	0	0	0	1.7	10	0	0	0	0	10	75	0	35	1.7	0	0	1.7	22	0	1.7	160
02/03/99	1.7	1.7	0	0	1.7	10	0	0	0	0	14	75	0	37	1.7	0	0	3.4	24	1.7	1.7	174
02/04/99	0	0	0	0	5.2	15	0	17	0	0	28	85	0	50	6.9	0	0	1.7	15	1.7	6.9	234
02/05/99	0	0	0	0	3.4	17	0	28	0	1.7	12	85	0	50	9	0	1.7	0	17	0	3.4	229
02/06/99	0	0	0	0	3.4	19	0	15	0	0	14	85	0	26	1.7	0	1.7	1.7	19	0	3.4	190
02/07/99	0	0	0	0	3.4	26	0	17	0	0	14	85	0	26	1.7	0	1.7	0	15	0	3.4	194
02/08/99	0	0	0	0	3.4	26	0	19	0	0	12	85	0	50	3.4	0	1.7	0	17	0	5	223
02/09/99	0	0	0	0	5.2	15	0	19	0	0	8.6	100	0	26	1.7	0	1.7	3.4	19	1.7	1.7	203
02/10/99	1.7	0	0	0	1.7	8.6	0	10	0	0	14	100	0	26	1.7	0	1.7	1.7	15	0	0	183
02/11/99	1.7	0	0	0	1.7	8.6	0	10	0	0	12	100	0	35	1.7	0	1.7	1.7	17	1.7	1.7	195
02/12/99	1.7	0	0	0	1.7	8.6	0	12	0	1.7	17	100	0	33	1.7	0	1.7	1.7	19	0	0	200
02/13/99	1.7	0	0	0	1.7	5.2	0	26	0	0	6.9	100	0	50	3.4	0	1.7	0	15	1.7	1.7	215
02/14/99	1.7	0	0	0	1.7	5	0	26	0	0	8.6	50	0	50	3.4	0	1.7	0	17	0	0	165
02/15/99	1.7	0	0	0	1.7	6.9	0	50	0	0	8.6	100	0	50	3.4	0	1.7	0	19	1.7	1.7	247
02/16/99	1.7	0	0	0	1.7	5.2	0	26	0	0	28	100	0	50	1.7	0	1.7	0	15	1.7	0	233
02/17/99	1.7	0	0	0	1.7	5.2	0	26	0	0	15	100	0	50	1.7	0	1.7	1.7	36	0	1.7	243
02/18/99	3.4	0	0	0	1.7	17	0	25	0	0	14	75	0	50	3.4	0	1.7	0	26	1.7	1.7	221
02/19/99	1.7	0	0	0	1.7	17	0	27	0	0	10	50	0	50	3.4	0	1.7	0	26	0	0	189
02/20/99	1.7	0	0	0	1.7	12	0	15	0	1.7	12	50	0	25	5.2	0	1.7	0	24	0	1.7	152
02/21/99	1.7	0	0	0	1.7	5.2	0	17	0	0	19	50	0	26	5.2	0	1.7	1.7	27	0	0	156
02/22/99	1.7	0	0	0	1.7	12	0	19	0	0	19	75	0	50	7	0	1.7	0	24	0	1.7	213
02/23/99	0	0	0	0	1.7	5	0	10	0	0	12	75	0	50	3.4	0	1.7	0	28	0	0	187
02/24/99	1.7	0	0	0	0	6.9	0	6.9	0	0	15	75	0	50	1.7	0	1.7	0	26	0	1.7	187
02/25/99	0	0	0	0	0	10	0	5.2	0	0	17	50	0	50	0	0	5.2	1.7	26	0	5.2	170
02/26/99	1.7	0	0	0	0	6.9	0	3.4	0	0	19	84	0	33	1.7	0	7	0	15	1.7	3.4	177
02/27/99	0	0	0	0	1.7	8.6	0	3.4	0	0	19	50	0	8.6	1.7	0	1.7	1.7	16	1.7	1.7	116
02/28/99	0	0	0	0	1.7	8.6	0	3.4	0	0	21	50	0	10	1.7	0	1.7	1.7	19	0	1.7	120
Well Total	31	1.7	0	0	58	310	0	438	0	5.2	416	2136	1.7	1079	87	0	50	29	588	21	53	5305

TABLE 4

Groundwater Elevation Data
Wauleco, Inc.
Wausau, Wisconsin

Well	December 29 1998		January 27 1999		February 26 1999	
	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)
PW01	0.21	1161.52	-----	Frozen	0.12	1161.16
PW02	0.02	1161.98	-----	Frozen	-----	Frozen
PW03	-----	1162.48	-----	1161.52	-----	1161.43
PW3S	-----	1160.31	-----	1160.29	-----	-----
PW04	0.70	1155.20	2.20	1153.80	3.42	1153.50
PW05	1.10	1155.93	0.50	1155.93	0.66	1154.03
PW06	0.50	1161.24	0.44	1161.30	-----	-----
PW07	-----	1155.70	-----	1155.40	-----	1154.77
PW08	0.30	1160.07	0.27	1160.05	-----	-----
PW9I	-----	1160.98	-----	1160.96	-----	1161.08
PW9O	0.11	1161.43	-----	1160.24	0.12	1160.11
PW10	1.40	1157.76	1.55	1157.66	2.47	1155.73
PW11	0.10	1161.32	0.21	1158.14	0.23	1158.00
PW12	0.30	1161.51	0.30	1161.31	0.46	1161.06
PW13	1.00	1158.70	0.70	1157.30	1.83	1157.47
PW14	0.08	1161.37	0.21	1161.26	-----	-----
PW15	0.65	1160.76	0.04	1160.14	-----	1153.85
PW16	1.60	1157.88	1.00	1158.28	0.36	1158.59
PW17	-----	-----	0.30	1157.84	0.36	1157.76
PW18	-----	-----	0.25	1158.94	0.60	1158.20
PW19	-----	-----	1.05	1158.57	0.46	1159.29
PW20	-----	-----	1.00	1158.92	0.75	1158.87
PW21	-----	-----	0.60	1159.39	-----	1159.91
PW22	-----	-----	-----	1158.80	-----	1158.04
PW23	-----	-----	-----	1159.72	0.75	1158.16
PW24	-----	-----	1.00	1158.43	0.15	1159.10
PW25	-----	-----	2.10	1157.02	0.31	1158.19
PW26	-----	-----	0.10	1158.40	2.41	1156.72
PW27	-----	-----	0.85	1159.31	2.21	1157.18
P01	0.50	1159.98	0.51	1159.65	0.58	1159.44
OW01	-----	1162.44	-----	Frozen	-----	-----
W01A	-----	1162.13	-----	1161.90	-----	-----
W01B	-----	1162.24	-----	1162.00	-----	-----
W02	-----	1161.70	-----	1161.35	-----	-----
W03A	0.58	1159.92	0.52	1159.75	0.53	1159.46
W03B	-----	1160.96	-----	1160.88	-----	1159.83
W04A	0.62	1160.66	0.54	1160.47	0.74	1160.22
W04B	0.30	1160.95	0.38	1160.61	0.53	1161.07
W05	0.63	1159.83	0.61	1159.48	-----	-----
W06R	0.13	1161.02	0.13	1161.66	-----	-----
W07	0.20	1162.12	-----	Frozen	-----	-----
W08	-----	1169.69	-----	1169.10	-----	-----
W09	-----	1161.57	-----	1161.38	-----	-----
W10A	-----	1160.68	-----	1160.74	-----	-----
W10B	-----	1160.73	-----	1160.77	-----	-----
W11	-----	1160.64	-----	1160.73	-----	-----
W12	-----	1160.30	-----	1160.41	-----	-----
W13	-----	1160.79	-----	1160.72	-----	-----

TABLE 4

Groundwater Elevation Data
Wauleco, Inc.
Wausau, Wisconsin

Well	December 29 1998		January 27 1999		February 26 1999	
	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)
W14	-----	1159.34	-----	1159.46	-----	-----
W16	-----	1161.05	-----	1161.03	-----	-----
W17	0.74	1159.88	0.64	1159.77	-----	-----
W18	-----	1160.75	-----	1160.71	-----	-----
W19	0.15	1161.48	0.14	1161.25	-----	-----
W21	-----	1160.55	-----	1160.65	-----	-----
W22	-----	1160.58	-----	1160.37	-----	-----
W23	-----	1160.48	-----	1160.57	-----	-----
W24A	-----	1160.47	-----	1160.57	-----	-----
W25	-----	1162.08	-----	1161.88	-----	-----
W26	-----	1160.74	-----	1160.74	-----	-----
W27	-----	1160.85	-----	Frozen	-----	-----
W28	-----	1160.77	-----	1160.74	-----	-----
W29	-----	1160.74	-----	1160.82	-----	-----
W30	1.24	1159.23	0.99	1159.11	-----	-----
W31	-----	1160.67	-----	1160.68	-----	-----
W32	-----	1160.68	-----	1160.68	-----	-----
W33	-----	1161.16	0.22	1160.47	-----	-----
W34	0.32	1157.26	0.45	1156.86	-----	1157.21
W35	0.69	1159.79	0.56	1159.59	0.68	1159.36
W36	-----	1161.00	-----	1160.60	-----	1160.44
W39	-----	1161.27	0.14	1160.61	-----	-----
W40	-----	1160.34	-----	Frozen	-----	-----
W41	-----	1166.04	-----	1161.05	-----	-----
W42	0.08	1161.44	0.25	1161.06	-----	-----
W44	0.54	1160.15	0.44	1159.93	0.39	1159.84
W45	0.10	1160.51	0.12	1160.19	0.07	1160.08
W46	0.79	1159.65	1.10	1158.92	0.38	1159.48
W47	0.68	1156.41	1.41	1155.02	1.84	1154.52
W48	0.57	1157.51	0.35	1156.31	-----	1156.15
W49	-----	1157.30	0.87	1156.25	0.25	1156.29
W66	-----	1162.08	-----	1161.83	-----	1161.68
W67	-----	1162.02	-----	1161.81	-----	1161.62
W68A	-----	1162.05	-----	1161.30	-----	-----
W68B	-----	1162.01	-----	1161.50	-----	-----
W69	0.95	1160.12	0.86	1159.88	0.87	1159.73
W70B	-----	1161.72	-----	1161.47	-----	-----
River	-----	No Gage	-----	No Gage	-----	No Gage

Notes:

1. wells PW17 through PW27 brought on line during December.
2. ft msl = feet mean sea level

FIGURE 1
FBR INFLUENT/EFFLUENT
PCP CONCENTRATIONS

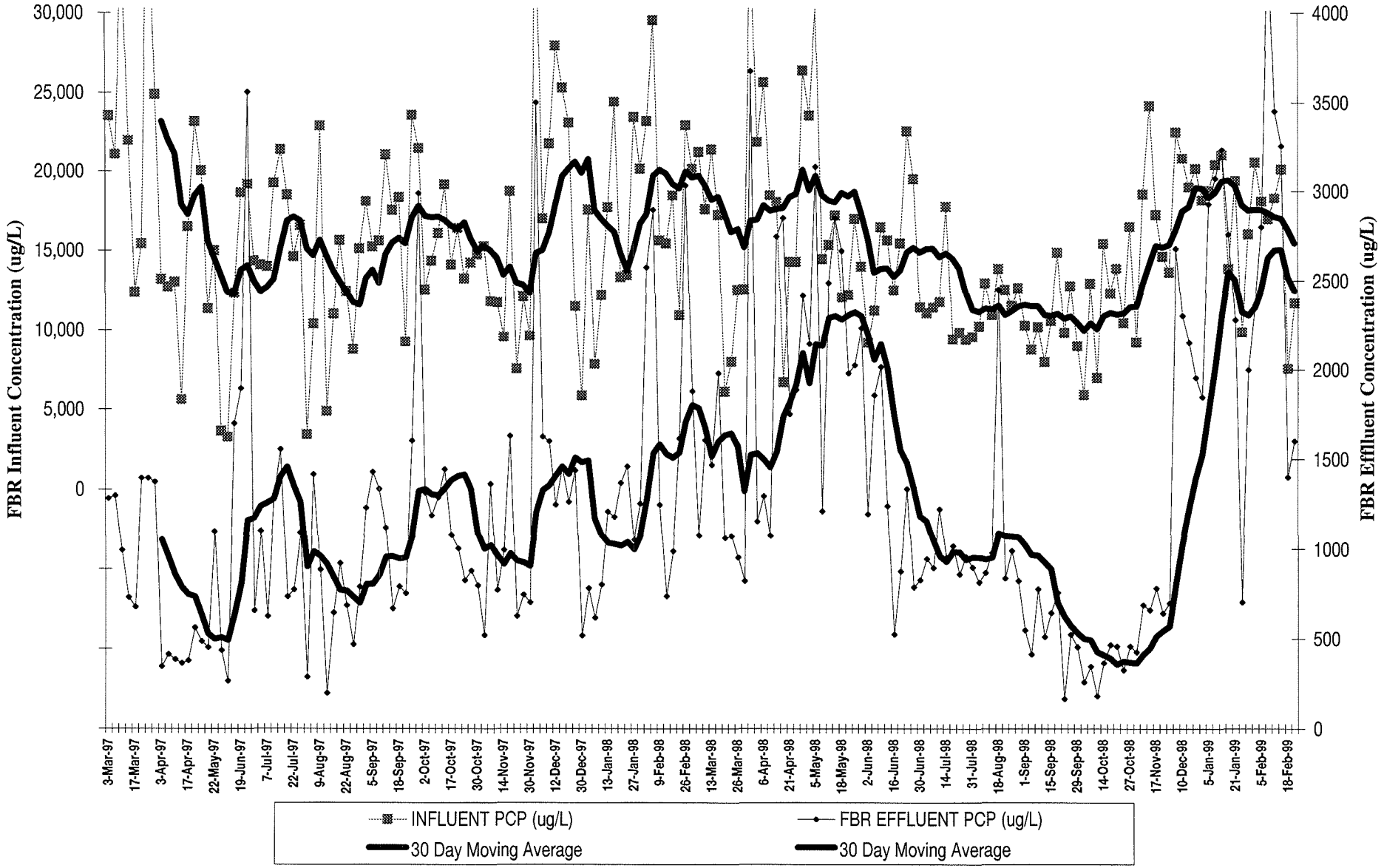
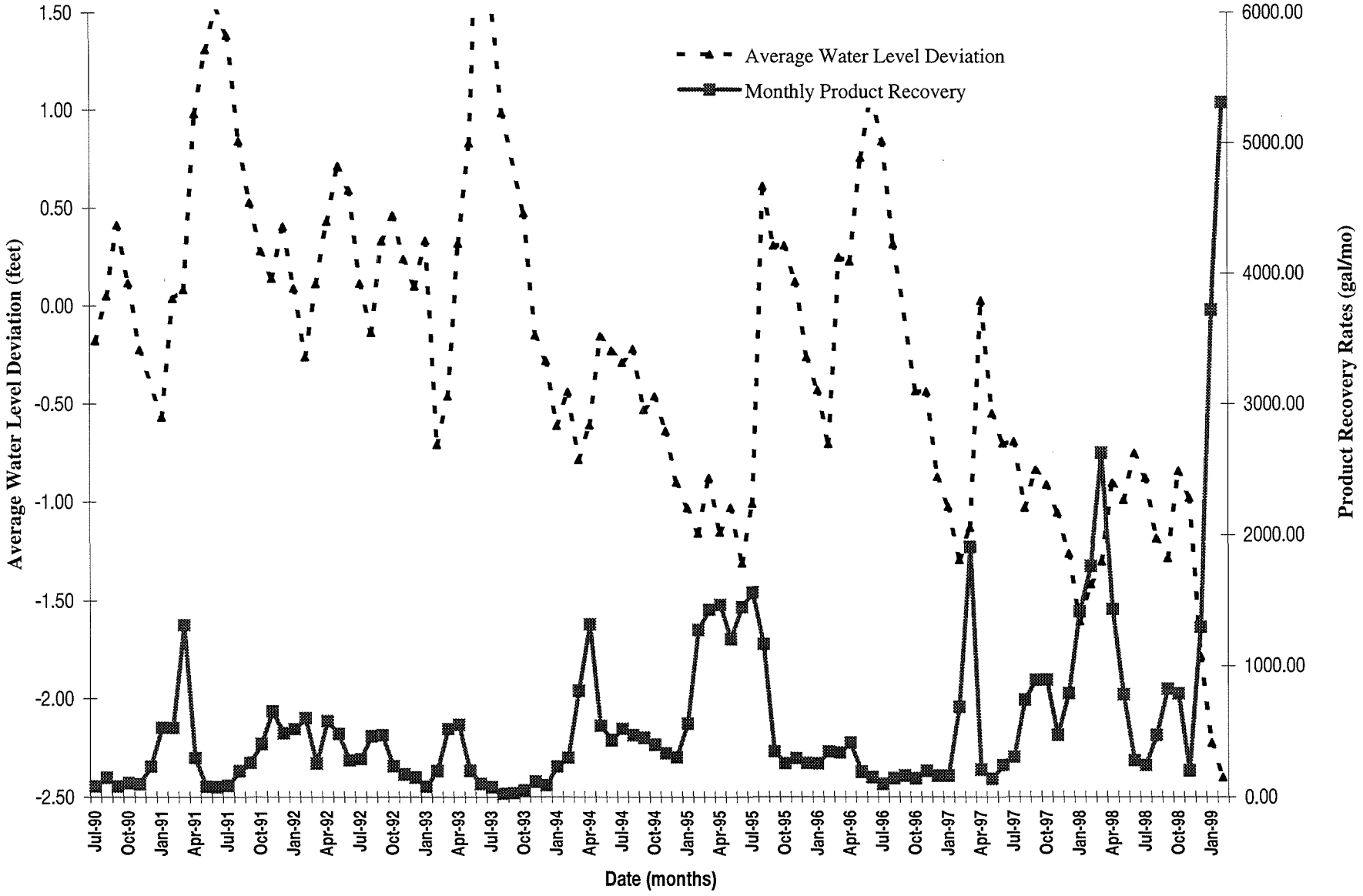


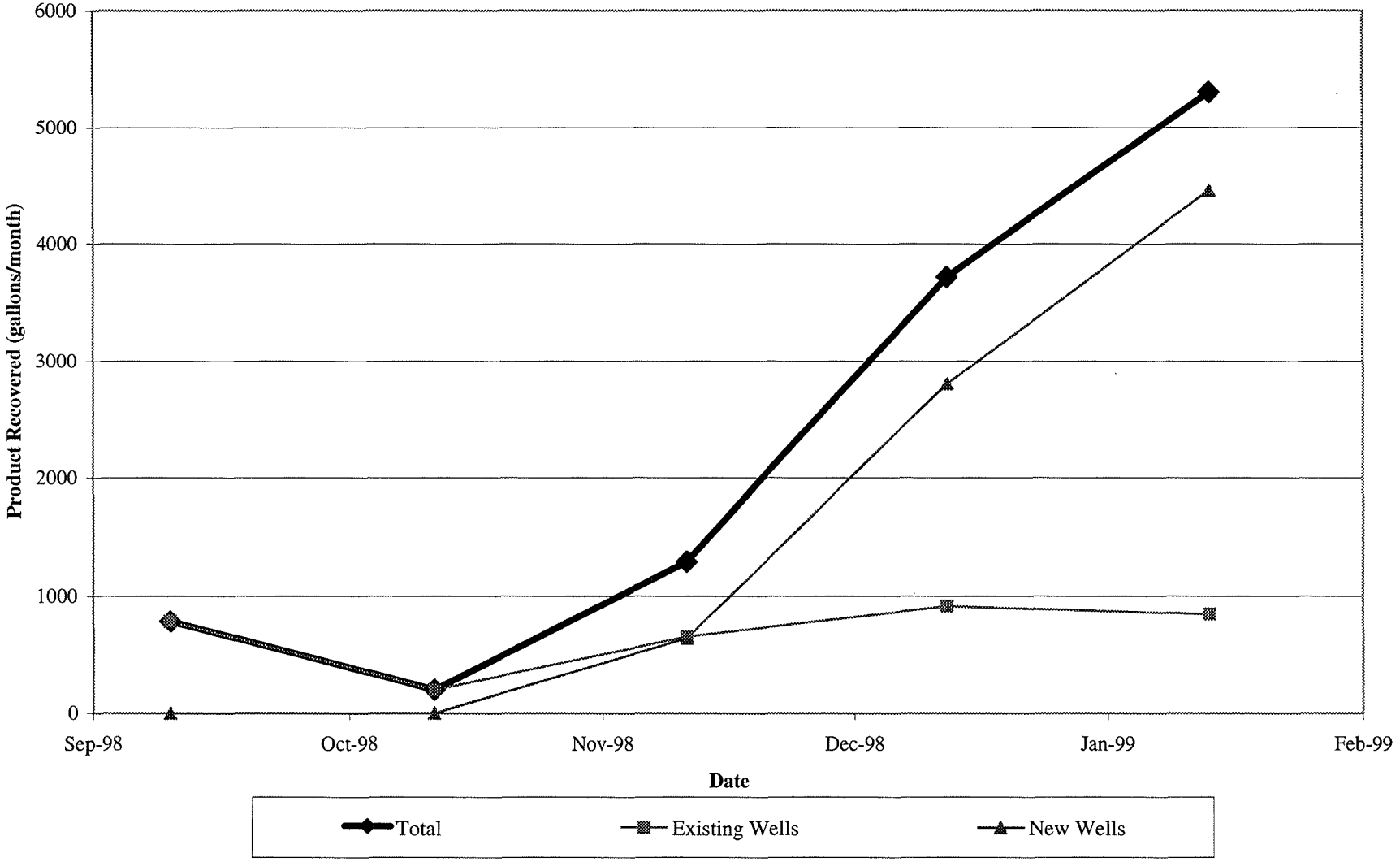
FIGURE 2
Average Water Level Deviation Versus Product Recovery Rates



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3/15/99

FIGURE 3
Product Recovery Comparison



2/24/99

MONTGOMERY WATSON

RECEIVED
FEB 25 1999
WAUSAU DNR

February 24, 1999

Ms. Lisa Gutknecht
Wisconsin Department of Natural Resources
5301 Rib Mountain Drive
Wausau, Wisconsin 54401

Re: January Progress Report
WAULECO, Inc.
Wausau, Wisconsin
Administrative Order No. NCD-91-04

BRRTS# 02-37-000006

Dear Ms. Gutknecht:

On behalf of WAULECO, Montgomery Watson is submitting two copies (enclosed) of the January Progress Report for the WAULECO, Inc. site in Wausau, Wisconsin. The report is submitted in fulfillment of Paragraph 41 of Administrative Order No. NCD-91-04.

If you have any questions or comments regarding this information, please call.

Sincerely,

MONTGOMERY WATSON

Patrick H. Lytle
Associate Engineer

Douglas J. Bach, P.E.
Project Manager

Enclosures: Monthly Report

cc: Wastewater Engineer - WDNR (Wausau, WI) (1)
J. Gehin - Wausau Utilities Director (1)
P. Peshek (3)
R. Brandt (1)

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One Science Court
P.O. Box 5385
Madison, Wisconsin
53705-0385

Tel: 608 231 4747
Fax: 608 231 4777

Serving the World's Environmental Needs

WAULECO INCORPORATED
WAUSAU, WISCONSIN
MONTHLY REPORT
JANUARY 1999

SUMMARY OF JANUARY 1999 ACTIVITIES

Groundwater Extraction and Treatment System Operation

Treatment system performance data for this reporting period are summarized in Table 1. PCP screening (on-site gas chromatograph) results for the system effluent samples, which represent the discharge water to the municipal sewer, averaged 3.5 ug/L for the month of January, with a maximum single day concentration of 7 ug/L. These results indicate PCP concentrations were below the permit levels of 150 ug/L (monthly average) and 300 ug/L (daily maximum). The result for laboratory samples collected on January 12, 1999 confirmed that the effluent PCP concentration was less than 300 ug/L.

Laboratory results for mercury analyses of the FBR influent, FBR effluent, and system effluent samples collected on January 12 are included in Table 1. The mercury concentration in the system effluent samples (discharged to the sanitary sewer) was 0.5 ug/L.

PCP influent concentrations ranged from 9894 ug/L to 21,025 ug/L during January 1999 (Table 1). PCP influent and effluent concentrations in the FBR are presented graphically both as individual data points and as a 30-day moving average in Figure 1. As shown in Figure 1, the FBR effluent concentrations appeared to plateau in January, following an increase in December. The average PCP removal efficiency for the FBR during January was 86% compared to an average of 91% during the previous year. The decrease in PCP removal efficiency is attributable to the increased flow rate through the treatment system due to startup of the new extraction wells. Daily groundwater flow through the treatment system (Table 2) ranged from 33 to 43 gallons per minute (gpm) during January, compared to a typical range between 15 and 25 gpm during previous months. It is expected that as flow rates are stabilized in the targeted 40 to 50 gpm range, treatment efficiency in the FBR will stabilize at a level below 90 percent. Total treatment system efficiency (including carbon polishing units) continues to be greater than 99%.

Treatment System Modifications

Eleven new extraction wells (PW17 through PW27) were gradually brought on-line during the month of December and continued to pump in January. A copy of the system modification construction documentation report is nearing completion, and will be forwarded for WDNR files.

Product Recovery

Product recovery data for the reporting period are presented in Table 3. Historic product recovery (since July 1990) compared to average water level deviation is presented in Figure 2. The effect of the new extraction wells on groundwater levels is shown on Figure 2. Water levels in the extraction area were the lowest recorded since the startup of the extraction system in 1990. The low water levels had the intended effect of increasing product recovery to 3,718 gal during the month of January, the highest product recovery ever recorded. As shown in Table 3,

approximately three-fourths of the 3,718 gallons of product recovered during January came from the new extraction wells, with the most production from PW18.

Groundwater Monitoring

Groundwater elevation and product thickness data for November, December, and January are summarized in Table 4. Results from the winter round of semi-annual groundwater monitoring are shown in Table 5. Seven wells were not sampled due to the presence of product, and another well could not be reached due to snow cover. These results will be discussed further in the next annual groundwater monitoring report, to be submitted in late 1999.

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TABLE 1
Above Ground Treatment System Data
Wauleco, Inc.
Wausau, Wisconsin

Parameter	UNIT	DATE	FBR Influent	FBR Effluent	FFR Influent	FFR Effluent	System Effluent
Biological Oxygen Demand	mg/L	1/12/99	15	6			2
Chemical Oxygen Demand	mg/L	1/12/99	44	46			26
Chloride	mg/L	1/12/99	166	166			164
Dissolved Oxygen	mg/L	1/5/99	8.6	4	5.8	0.3	
		1/12/99	6.5	2.8	5.6	3.6	
		1/19/99	6.5	2.8	5.4	3.4	
		1/26/99	6.8	3	5.9	4.6	
Nitrogen, Ammonia	mg/L	1/5/99	4	<	<	<	
		1/12/99	1	<	<	<	
		1/19/99	1	<	<	<	
		1/26/99	2	3	3	4	
Nitrogen, Nitrate	mg/L	1/5/99	<	<		<	
		1/12/99	<	<		<	
		1/19/99	<	<		<	
		1/26/99	<	<		<	
Nitrogen, Nitrate + Nitrite	mg/L	1/12/99	0.26	0.23			<
Nitrogen, Total Kjeldahl	mg/L	1/12/99	4.8	4.12			3.33
Pentachlorophenol-Screen	ug/L	1/1/99					4
		1/2/99					4
		1/3/99					4
		1/4/99					4
		1/5/99	18761	2926		2900	3
		1/6/99					2
		1/7/99					5
		1/8/99					6
		1/9/99					3
		1/10/99					3
		1/11/99					3
		1/12/99	20421	3072		3019	3
		1/13/99					7
		1/14/99					4
		1/15/99	21025	3233		3157	2
		1/16/99					4
		1/17/99					4

TABLE 1
Above Ground Treatment System Data
Wauleco, Inc.
Wausau, Wisconsin

Parameter	UNIT	DATE	FBR Influent	FBR Effluent	FFR Influent	FFR Effluent	System Effluent
Pentachlorophenol-Screen	ug/L	1/18/99					4
		1/19/99	13857	2757		2263	3
		1/20/99					4
		1/21/99	19387	2282		2020	3
		1/22/99					4
		1/23/99					4
		1/24/99					4
		1/25/99					3
		1/26/99	9894	703		852	1
		1/27/99					3
		1/28/99					4
		1/29/99	16023	1998		1723	1
		1/30/99					2
		1/31/99					2
pH	S.U.	1/5/99	6.7	6.8		6.9	
		1/12/99	7	6.9		7	
		1/19/99	7	6.9		7	
		1/26/99	7.2	6.9		6.8	
Phosphorus, Ortho	mg/L	1/12/99	1.04	0.81			0.92
Phosphorus, Phosphate	mg/L	1/5/99	2	2		2	
		1/12/99	2	2		2	
		1/19/99	2	1		1	
		1/26/99	1	1		1	
Solids, Total Suspended	mg/L	1/12/99	<	12			<
Mercury	ug/L	1/12/99	0.9	0.9			0.5
Phenols							
2,3,5,6-Tetrachlorophenol	ug/L	1/12/99	<	390		330	<
2,4,5-Trichlorophenol	ug/L	1/12/99	<	<		<	<
2,4,6-Trichlorophenol	ug/L	1/12/99	<	<		<	<
2,4-Dichlorophenol	ug/L	1/12/99	<	<		<	<
2,4-Dimethylphenol	ug/L	1/12/99	<	<		<	<
2,4-Dinitrophenol	ug/L	1/12/99	<	<		<	<
2,6-Dichlorophenol	ug/L	1/12/99	<	<		<	<
2-Chlorophenol	ug/L	1/12/99	<	<		<	<
2-Methylphenol	ug/L	1/12/99	<	<		<	<
2-Nitrophenol	ug/L	1/12/99	<	<		<	<
3&4-Methylphenol	ug/L	1/12/99	<	<		<	<
4,6-Dinitro-2-Methylphenol	ug/L	1/12/99	<	<		<	<
4-Chloro-3-Methylphenol	ug/L	1/12/99	<	<		<	<
4-Nitrophenol	ug/L	1/12/99	<	<		<	<
Pentachlorophenol	ug/L	1/12/99	14000	3500		2600	8.4
Phenol	ug/L	1/12/99	<	<		<	<

TABLE 2

Treatment System Flows
Wauleco, Inc.
Wausau, Wisconsin

Date	Influent Groundwater Flow Rate [1] (gpm)	POTW Discharge Flow Rate [1] (gpm)	POTW Totalized Discharge (gal)
1/1/99	37.56	38	1,932,621
1/2/99	37.56	38	1,987,341
1/3/99	37.56	38	2,042,061
1/4/99	36.01	37.6	2,045,833
1/5/99	36.01	37.6	2,099,977
1/6/99	40.72	39.35	2,156,648
1/7/99	40.72	39.4	2,213,319
1/8/99	43.5	35.3	2,264,147
1/9/99	43.46	35.3	2,314,975
1/10/99	43.46	35.3	2,365,803
1/11/99	34.38	34.16	2,415,000
1/12/99	34.38	24.31	2,450,000
1/13/99	37.01	25.92	2,487,323
1/14/99	37.01	25.92	2,524,646
1/15/99	35.67	31.5	2,570,000
1/16/99	35.67	31.5	2,615,354
1/17/99	35.67	31.5	2,660,708
1/18/99	33.47	33.29	2,708,651
1/19/99	33.47	33.29	2,756,594
1/20/99	34.6	35	2,806,989
1/21/99	34.6	35	2,857,384
1/22/99	39.7	33.61	2,905,781
1/23/99	39.7	33.61	2,954,178
1/24/99	39.7	33.61	3,002,575
1/25/99	35.07	33.65	3,051,036
1/26/99	37.66	33.65	3,099,497
1/27/99	41	37.08	3,152,891
1/28/99	41	37.08	3,206,285
1/29/99	40.5	37.94	3,260,925
1/30/99	40.5	37.94	3,315,565
1/31/99	40.5	37.94	3,370,205
Average	38.0	34.6	
Total [2]:			1,437,584

TABLE 3

Product Removal
(gallons per day)
Wauleco, Inc.
Wausau, Wisconsin

Date	PW04	PW05	PW07	PW09	PW10	PW11	PW12	PW13	PW15	PW16	PW17	PW18	PW19	PW20	PW21	PW22	PW23	PW24	PW25	PW26	PW27	Total
1/1/99	1.7	1.7	0	0	0	0	0	19	0	0	1.7	50	1.7	3.4	1.7	0	0	1.7	0	3.4	3.4	90
1/2/99	0	1.7	0	0	1.7	1.7	0	19	0	1.7	6.9	33	0	5.2	0	0	0	0	8.6	5.2	5.2	90
1/3/99	0	1.7	0	0	8.6	0	0	6.9	0	0	5.2	33	0	8.6	0	0	0	0	10	8.6	5.2	88
1/4/99	0	1.7	0	0	1.7	0	0	8.6	0	0	3.4	37	1.7	10	0	0	0	0	10	8.6	5.2	89
1/5/99	0	0	0	0	0	1.7	0	9	0	0	5	33	0	3.4	0	0	0	1.7	10	8.6	5.2	78
1/6/99	1.7	1.7	0	0	1.7	0	0	15	0	1.7	1.7	34	0	5.2	0	0	0	0	5.2	8.6	5.2	82
1/7/99	0	0	0	0	1.7	1.7	0	17	0	0	3.4	34	0	6	0	0	0	0	5.2	10	5.2	85
1/8/99	0	0	0	0	1.7	0	0	19	0	0	3.4	30	0	10	0	0	0	0	14	1.7	1.7	82
1/9/99	0	0	0	0	0	1.7	0	12	0	0	1.7	50	0	12	0	0	0	0	14	1.7	3.4	96
1/10/99	0	1.7	0	0	0	0	0	14	0	0	1.7	50	0	12	0	0	1.7	0	8.6	3.4	3.4	96
1/11/99	0	0	0	0	0	1.7	0	14	0	0	1.7	50	0	8.6	0	0	1.7	0	8.6	3.4	5.2	95
1/12/99	1.7	1.7	0	0	0	1.7	0	12	0	0	1.7	50	0	6.9	1.7	0	0	0	9	5.2	3.4	95
1/13/99	0	0	0	0	0	0	0	24	0	0	0	50	0	19	0	0	0	0	15	1.7	0	110
1/14/99	0	0	0	0	0	0	0	28	0	1.7	0	50	0	17	1.7	0	0	0	17	1.7	0	118
1/15/99	0	0	0	0	0	0	0	17	0	0	0	50	0	19	1.7	0	1.7	1.7	19	0	0	110
1/16/99	1.7	0	0	0	0	3.4	0	24	0	0	0	25	1.7	15	1.7	0	0	0	15	0	0	89
1/17/99	0	0	0	0	1.7	3.4	0	28	0	0	0	28	0	17	1.7	0	0	0	17	5.2	0	102
1/18/99	0	0	0	0	1.7	3.4	0	26	0	1.7	1.7	26	0	19	1.7	0	1.7	1.7	19	5.2	0	109
1/19/99	0	0	0	0	1.7	3.4	0	26	0	1.7	0	26	1.7	26	1.7	0	0	0	15	5.2	0	109
1/20/99	0	0	0	0	1.7	3.4	0	50	0	0	0	50	0	26	1.7	0	0	0	17	3.4	0	154
1/21/99	0	0	0	0	1.7	1.7	0	50	0	0	1.7	50	0	50	17	0	0	6.9	3.4	5.2	0	188
1/22/99	0	0	0	0	1.7	3.4	0	50	0	0	0	75	0	35	19	0	0	6.9	3.4	9	0	203
1/23/99	0	1.7	0	0	0	8.6	0	26	0	0	10	26	0	26	3.4	0	0	5.2	24	3.4	0	134
1/24/99	0	0	1.7	0	1.7	8.6	0	25	0	0	10	24	1.7	26	3.4	0	0	1.7	17	3.4	0	125
1/25/99	0	0	0	0	1.7	10	0	50	0	0	12	26	0	50	5.2	0	0	3.4	15	3.4	0	177
1/26/99	0	0	0	0	3.4	8.6	0	33	0	0	15	50	0	33	0	0	1.7	1.7	19	0	0	165
1/27/99	0	0	0	0	3.4	8.6	0	26	0	0	17	50	0	26	0	0	1.7	1.7	22	0	0	157
1/28/99	0	0	0	0	6.9	12	0	45	0	0	16	50	0	45	3.4	0	0	10	29	1.7	6.9	226
1/29/99	0	0	0	0	9	15	0	10	0	0	6.9	75	0	44	3.4	0	0	5.2	26	3.4	8.6	207
1/30/99	1.7	1.7	0	0	3.4	6.9	0	0	0	0	15	0	0	24	5.2	0	0	1.7	25	3.4	1.7	90
1/31/99	1.7	0	0	0	0	8.6	0	0	0	0	15	0	0	26	3.4	0	0	0	26	0	0	81
Date Total	10	15	1.7	0	57	120	0	703	0	8.6	160	1214	8.6	635	79	0	10	51	450	124	69	3718

TABLE 4

Groundwater Elevation Data
Wauleco, Inc.
Wausau, Wisconsin

Well	November 30 1998		December 29 1998		January 27 1999	
	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)
PW01	0.25	1162.05	0.21	1161.52	-----	Frozen
PW02	0.06	1162.04	0.02	1161.98	-----	Frozen
PW03	-----	1162.51	-----	1162.48	-----	1161.52
PW3S	0.38	1160.43	-----	1160.31	-----	1160.29
PW04	0.20	1161.50	0.70	1155.20	2.20	1153.80
PW05	1.50	1159.43	1.10	1155.93	0.50	1155.93
PW06	0.55	1161.29	0.50	1161.24	0.44	1161.30
PW07	-----	1161.60	-----	1155.70	-----	1155.40
PW08	0.30	1160.17	0.30	1160.07	0.27	1160.05
PW9I	-----	1161.08	-----	1160.98	-----	1160.96
PW9O	0.10	1161.54	0.11	1161.43	-----	1160.24
PW10	3.11	1158.16	1.40	1157.76	1.55	1157.66
PW11	0.10	1161.35	0.10	1161.32	0.21	1158.14
PW12	0.58	1161.61	0.30	1161.51	0.30	1161.31
PW13	0.38	1159.70	1.00	1158.70	0.70	1157.30
PW14	0.05	1161.42	0.08	1161.37	0.21	1161.26
PW15	0.68	1160.81	0.65	1160.76	0.04	1160.14
PW16	0.37	1157.96	1.60	1157.88	1.00	1158.28
PW17	-----	-----	-----	-----	0.30	1157.84
PW18	-----	-----	-----	-----	0.25	1158.94
PW19	-----	-----	-----	-----	1.05	1158.57
PW20	-----	-----	-----	-----	1.00	1158.92
PW21	-----	-----	-----	-----	0.60	1159.39
PW22	-----	-----	-----	-----	-----	1158.80
PW23	-----	-----	-----	-----	-----	1159.72
PW24	-----	-----	-----	-----	1.00	1158.43
PW25	-----	-----	-----	-----	2.10	1157.02
PW26	-----	-----	-----	-----	0.10	1158.40
PW27	-----	-----	-----	-----	0.85	1159.31
P01	1.02	1161.34	0.50	1159.98	0.51	1159.65
OW01	-----	1162.38	-----	1162.44	-----	Frozen
W01A	-----	1162.71	-----	1162.13	-----	1161.90
W01B	-----	1162.64	-----	1162.24	-----	1162.00
W02	-----	1162.08	-----	1161.70	-----	1161.35
W03A	0.10	1161.14	0.58	1159.92	0.52	1159.75
W03B	-----	1161.29	-----	1160.96	-----	1160.88
W04A	0.40	1161.41	0.62	1160.66	0.54	1160.47
W04B	0.10	1161.73	0.30	1160.95	0.38	1160.61
W05	0.65	1161.23	0.63	1159.83	0.61	1159.48
W06R	0.25	1162.14	0.13	1161.02	0.13	1161.66
W07	0.37	1161.97	0.20	1162.12	-----	Frozen
W08	-----	1171.38	-----	1169.69	-----	1169.10
W09	-----	1162.11	-----	1161.57	-----	1161.38
W10A	-----	1160.74	-----	1160.68	-----	1160.74
W10B	-----	1160.84	-----	1160.73	-----	1160.77
W11	-----	1160.55	-----	1160.64	-----	1160.73
W12	-----	1159.55	-----	1160.30	-----	1160.41
W13	-----	1161.05	-----	1160.79	-----	1160.72

TABLE 4

Groundwater Elevation Data
Wauleco, Inc.
Wausau, Wisconsin

Well	November 30 1998		December 29 1998		January 27 1999	
	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)	Oil Thickness (ft)	Water Elevation (ft msl)
W14	-----	1159.40	-----	1159.34	-----	1159.46
W16	-----	1161.28	-----	1161.05	-----	1161.03
W17	-----	1160.78	0.74	1159.88	0.64	1159.77
W18	-----	1160.78	-----	1160.75	-----	1160.71
W19	-----	1162.33	0.15	1161.48	0.14	1161.25
W21	-----	1160.69	-----	1160.55	-----	1160.65
W22	-----	1160.81	-----	1160.58	-----	1160.37
W23	-----	1160.60	-----	1160.48	-----	1160.57
W24A	-----	1160.57	-----	1160.47	-----	1160.57
W25	-----	1162.60	-----	1162.08	-----	1161.88
W26	-----	1160.88	-----	1160.74	-----	1160.74
W27	-----	1161.14	-----	1160.85	-----	Frozen
W28	-----	1160.66	-----	1160.77	-----	1160.74
W29	-----	1160.80	-----	1160.74	-----	1160.82
W30	0.74	1161.00	1.24	1159.23	0.99	1159.11
W31	-----	1160.67	-----	1160.67	-----	1160.68
W32	-----	1160.63	-----	1160.68	-----	1160.68
W33	-----	1161.19	-----	1161.16	0.22	1160.47
W34	0.20	1158.25	0.32	1157.26	0.45	1156.86
W35	1.48	1160.34	0.69	1159.79	0.56	1159.59
W36	-----	1161.89	-----	1161.00	-----	1160.60
W39	-----	1161.32	-----	1161.27	0.14	1160.61
W40	-----	1160.39	-----	1160.34	-----	Frozen
W41	-----	1166.09	-----	1166.04	-----	1161.05
W42	0.10	1161.92	0.08	1161.44	0.25	1161.06
W44	0.55	1161.33	0.54	1160.15	0.44	1159.93
W45	0.05	1161.73	0.10	1160.51	0.12	1160.19
W46	0.51	1161.30	0.79	1159.65	1.10	1158.92
W47	-----	1158.08	0.68	1156.41	1.41	1155.02
W48	0.63	1157.53	0.57	1157.51	0.35	1156.31
W49	0.65	1157.56	-----	1157.30	0.87	1156.25
W66	-----	1162.41	-----	1162.08	-----	1161.83
W67	-----	1162.32	-----	1162.02	-----	1161.81
W68A	-----	1162.45	-----	1162.05	-----	1161.30
W68B	-----	1162.34	-----	1162.01	-----	1161.50
W69	0.68	1161.22	0.95	1160.12	0.86	1159.88
W70B	-----	1162.32	-----	1161.72	-----	1161.47
River	-----	No Gage	-----	No Gage	-----	No Gage

Notes:

1. wells PW17 through PW27 brought on line during December.
2. ft msl = feet mean sea level

Table 5
Groundwater Analytical Results - January 26, 1999
Wauleco, Inc
Wausau, Wisconsin

Parameter	Units	Adm. Code NR 140 ES	Adm. Code NR 140 PAL	W01A 1/26/99	W02 1/27/99	W08 1/26/99	W13 1/26/99	W22 1/26/99	W22 DUP 1/26/99	W25 1/26/99	W26 1/27/99	W36 1/27/99	W41 1/26/99	BLANK 01 1/26/99
Phenol	ug/L	6000	1200	120	<3000	<3.0	<30	93000**	130000**	<150	<3000	60	1500*	<3.0
2-Chlorophenol	ug/L	NS	NS	<60	3700	<3.0	<30	42000	57000	<150	<3000	89	<600	<3.0
2-Nitrophenol	ug/L	NS	NS	150	<3000	<3.0	<30	9100	12000	<150	<3000	<30	760	<3.0
2,4-Dimethylphenol	ug/L	NS	NS	78	<3000	<3.0	<30	<7500	<7500	<150	<3000	<30	820	<3.0
2,4-Dichlorophenol	ug/L	NS	NS	<60	<3000	3.6 (1)	<30	<7500	<7500	<150	<3000	<30	<600	5.3
4-Chloro-3-Methylphenol	ug/L	NS	NS	90	<3000	<3.0	<30	<7500	<7500	<150	<3000	<30	630	<3.0
2,4,6-Trichlorophenol	ug/L	NS	NS	68	<3000	7.7 (1)	<30	<7500	<7500	<150	<3000	<30	690	7.6
2,4-Dinitrophenol	ug/L	NS	NS	190	3200	3.0 (1)	<30	10000	12000	<150	<3000	<30	<600	3.0
4-Nitrophenol	ug/L	NS	NS	140	<3000	<3.0	<30	<7500	<7500	<150	<3000	<30	<600	<3.0
2,3,4,6-Tetrachlorophenol	ug/L	NS	NS	<60	<3000	<3.0	<30	<7500	<7500	<150	<3000	<30	<600	<3.0
4,6-Dinitro-2-Methylphenol	ug/L	NS	NS	<60	<3000	<3.0	<30	<7500	<7500	<150	<3000	<30	<600	3.2
Pentachlorophenol	ug/L	1	0.1	<60	25000**	<3.0	120**	32000**	40000**	290**	18000**	240**	6700**	<3.0
2-Methylphenol	ug/L	NS	NS	120	3100	<3.0	<30	13000	18000	<150	<3000	43	890	3.0
3&4-Methylphenol	ug/L	NS	NS	86	<3000	<3.0	<30	<7500	8700	<150	<3000	33	<600	<3.0
2,6-Dichlorophenol	ug/L	NS	NS	110	<3000	<3.0	<30	10000	14000	<150	<3000	<30	730	<3.0
2,4,5-Trichlorophenol	ug/L	NS	NS	95	<3000	11 (1)	<30	<7500	<7500	<150	<3000	30	<600	10
Chloride	mg/L	250	125	245*	41.0	101	135*	506**	359**	144*	691**	95.1	318**	<0.5
Nitrogen, Ammonia	mg/L	NS	NS	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.15	<0.1
Nitrogen, Nitrate + Nitrite	mg/L	10	2	3.09*	0.410	3.18*	4.97*	<0.14	<0.14	4.50*	<0.14	2.80*	0.350	<0.14
Mercury	ug/L	2	0.2	<0.2	0.600*	<0.2	<0.2	0.400*	1.70*	<0.2	<0.2	23.0**	0.400*	<0.2
pH	-	NS	NS	7.20	6.59	7.60	6.90	6.67	6.55	6.90	6.85	6.90	6.16	8.18
Specific Conductivity	umhos/cm	NS	NS	785	485	315	715	1530	1530	565	1270	430	1130	<10

Notes:

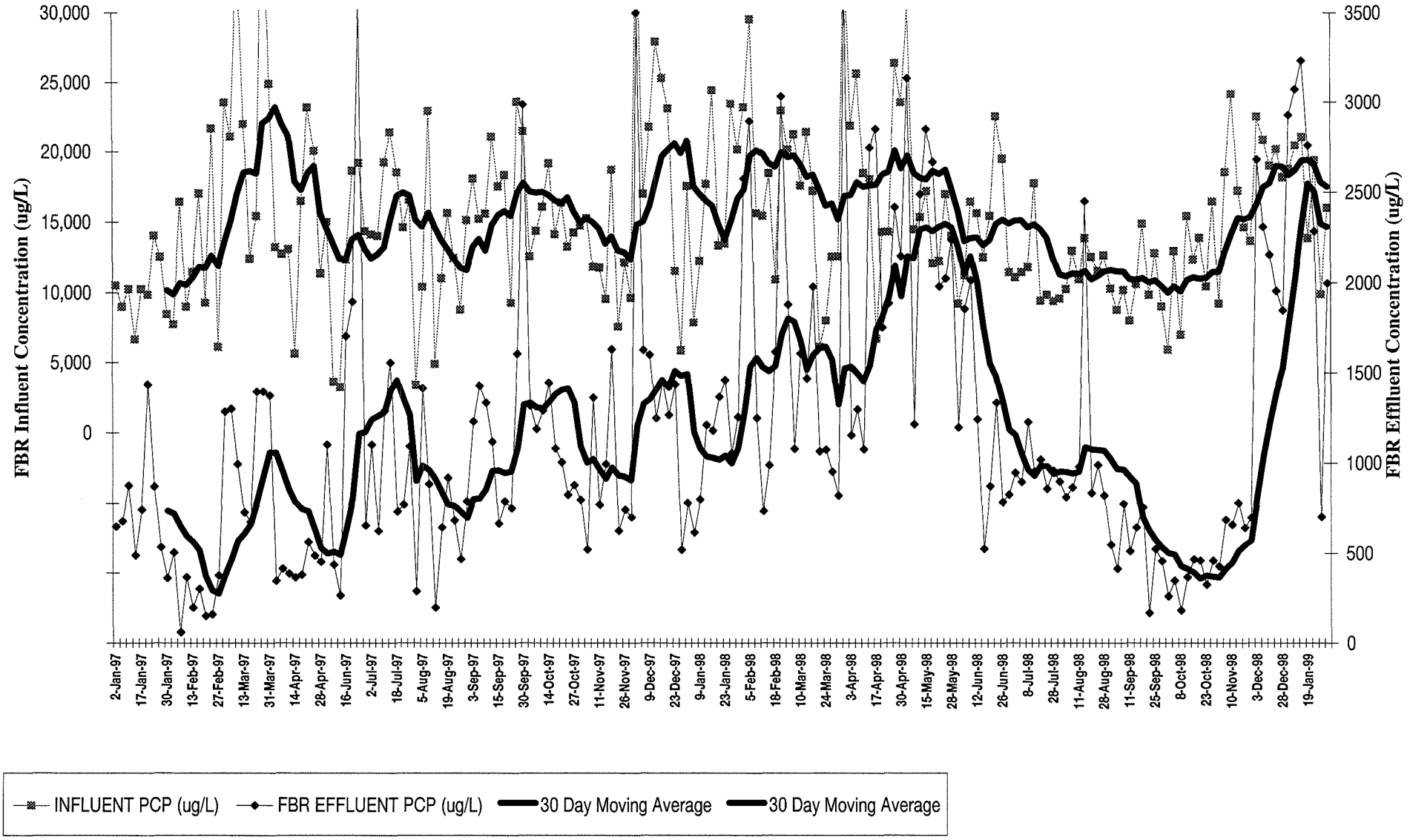
1. The following wells were not sampled due to the presence of product: W03A, W06R, W17, W19, W33, W39, and W69
2. The following well was not sampled due to snow: W40
3. Adm. Code NR 140 = Wisconsin Administrative Code, Chapter NR 140
4. ES = Enforcement Standard
5. PAL = Preventive Action Limit
6. * = concentration exceeds NR 140 PAL
7. ** = concentration exceeds NR 140 ES
8. NS = no standard under NR 140

Footnote:

(1) Analyte detected in Bailer Blank (BLANK 01)

JAH/jah/PHL
M:/main/groups/gopermd/oraproj/wauleco/tables/1999/jan/Wauleco_GW_0199(GW-0199)

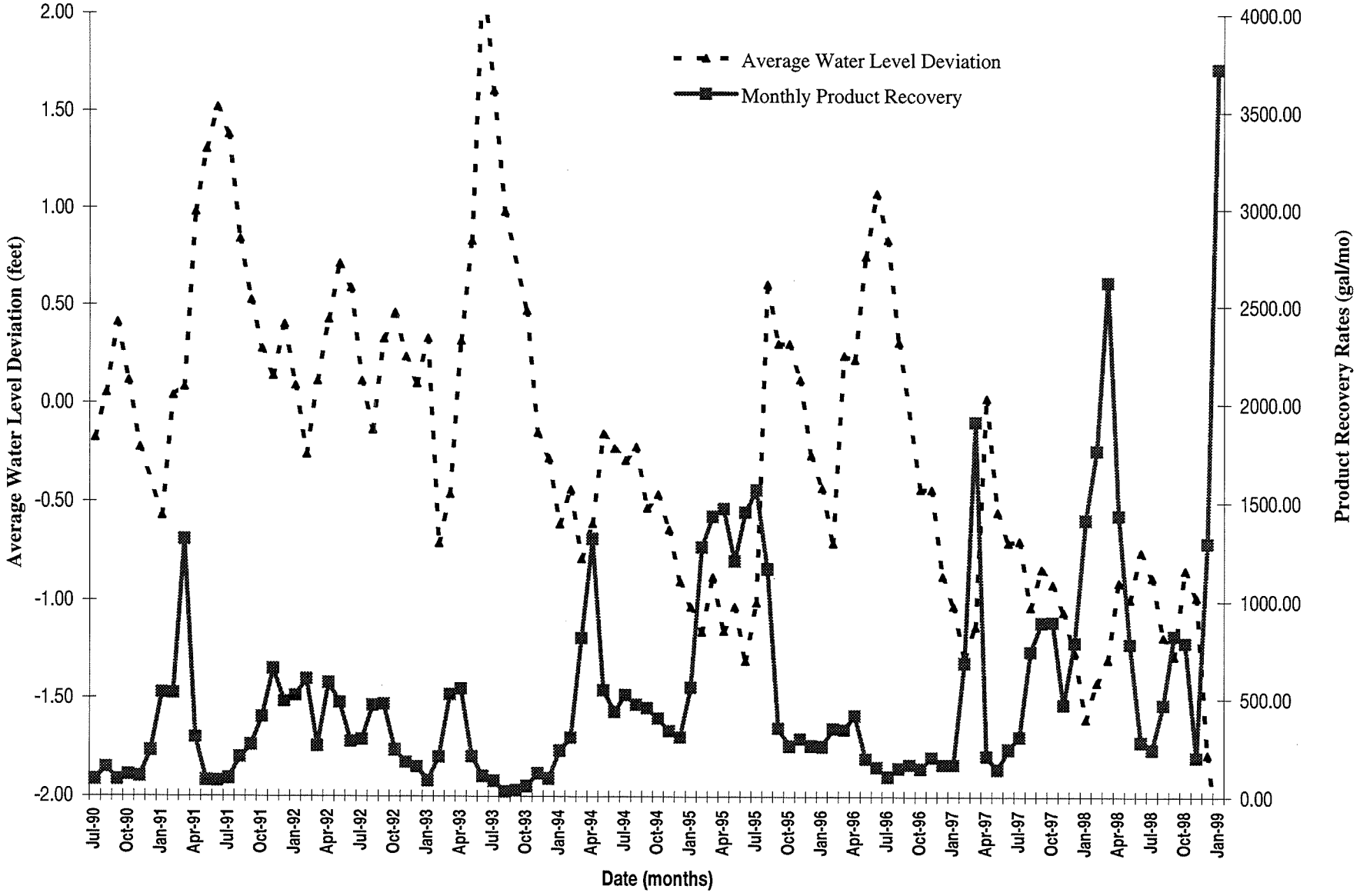
FIGURE 1
FBR INFLUENT/EFFLUENT
PCP CONCENTRATIONS



M:\jobs\Wauleco\onm1999\monthly(FIG1FBRio)

2/17/99

FIGURE 2
Average Water Level Deviation Versus Product Recovery Rates



M:\jobs\Wauleco\onm1999\monthly(FIG2wtlvl)

2/17/99

QUALITY CONTROL

Graphic Standards DLF 12-11-96
Lead Professional

Technical Review JDD 12-20-96
PM Review

Management Review
Other

This document has been developed for a specific application and may not be used without the written approval of Montgomery Watson.

ISLE OF PARK

3M PROPERTY

SNE CORP.

CONNOR PROPERTY

ROSECRANS ST.

THIRD AVE.

FIRST AVE.

W. THOMAS ST.

E. THOMAS ST.

EDWARDS ST.

ADRIAN ST.

MYRON ST.

CLEVELAND AVE.

EMTER ST.

W8 (1172.98)

W9 (1162.38)

3M1

3M2

W28 (1161.30)

W18 (1161.25)

W13 (1161.54)

W2 (1162.94)

(1163.49)

W68A,68B

(1163.55)

(1163.41)

(1163.50) PW12 (1161.52)

(1163.56) PW8 (1163.53)

W1B (1163.90)

W1A (1163.88)

W68 W67

PW3 (1160.56)

PW3B (1161.25)

(1157.86)

W6R W36

(1163.71) (1162.21)

W46

PW15

W49

W17 (1161.34)

(1159.40) PW13

(1156.96) PW10

P1 (1161.54)

PW14

W30 (1160.84) (FROZEN)

W35

PW4 (1156.90)

W3A (1161.54)

(1161.84)

W5

(1161.78)

W44

W48

W7

PW1

(1163.62)

(1163.35)

(1161.91)

W3B (1161.74)

PW9

(1157.88)

W70B

(1158.27)

W45

(91-1161.08)

(1162.13) (90-1162.19)

W25 (1163.94)

OW1 (1163.08)

PW2

(1163.30)

PW16

PW5

PW11

(1159.55)

W22 (1161.61)

W69

(1162.13)

(1157.33) W47 (1157.59)

(1162.55)

W34

(1158.80)

W42

W33

PW7 (1156.70)

(1162.57)

PW6

(1162.24)

W39 (1162.42)

W4A (1162.09)

W4B (1161.93)

W19 (1163.28)

W26 (1161.00)

W29

(1160.96)

W40 (1161.24)

W11 (1160.90)

W41 (1162.66)

W15

W27 (1161.44)

W12 (1160.51)

W16 (1161.76)

W23 (1160.80)

W14 (1159.50)

W24A (1160.64)

W10B (1161.15)

W10A (1161.17)

W21 (1160.59)

1/19/1999

MONTGOMERY WATSON

January 15, 1999

Ms. Lisa Gutknecht
Wisconsin Department of Natural Resources
5301 Rib Mountain Drive
Wausau, Wisconsin 54401

RECEIVED
JAN 19 1999
WAUSAU DNR

Re: Transmittal of 1998 Annual Groundwater Monitoring Report
WAULECO, Inc.
Wausau, Wisconsin

Dear Ms. Gutknecht:

On behalf of WAULECO, Montgomery Watson is submitting two copies of the 1998 Annual Groundwater Monitoring Report for the WAULECO, Inc. site in Wausau, Wisconsin.

If you have any questions or comments, please call me at (608) 231-4747.

Sincerely,

MONTGOMERY WATSON

John D. Dadisman
Environmental Chemist

Douglas J. Bach, P.E.
Project Manager

Enclosures: As Stated

cc: R. Brandt (w/1 encl.)
P. Peshek (w/1 encl.)

JDD/vlr/DJB
M:\jobs\1242\057\04\wp\rpt\94_Gutkinecht.doc
1242057.0416.0101-MD

One Science Court
P.O. Box 5385
Madison, Wisconsin
53705-0385

Tel: 608 231 4747
Fax: 608 231 4777

1998 ANNUAL GROUNDWATER MONITORING REPORT

WAULECO, INC.
WAUSAU FACILITY
WAUSAU, WISCONSIN

January 1999

Prepared For:
Wauleco, Inc.
Stevens Point, Wisconsin

• • •

Prepared By:
Montgomery Watson
Madison, Wisconsin

Project No. 1242057.0416.0101

MONTGOMERY WATSON

MONTGOMERY WATSON

January 15, 1999

Ms. Lisa Gutknecht
Wisconsin Department of Natural Resources
5301 Rib Mountain Drive
Wausau, Wisconsin 54401

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1998 ANNUAL GROUNDWATER MONITORING REPORT

WAULECO, INC.
WAUSAU FACILITY
WAUSAU, WISCONSIN

January 1999

The following individuals were responsible for the preparation of this report: John D. Dadisman, Kenneth J. Quinn, and Douglas J. Bach. The hydrogeologist listed below meets the requirements of NR 500.03(64), Wisconsin Administrative Code.

Prepared by: _____ 1-15-99
John D. Dadisman, Senior Chemist — Date

Approved by: _____ 1/15/99
Kenneth J. Quinn, P.G., Principal Hydrogeologist — Date

_____ 1.15.99
Douglas J. Bach, P.E., Supervising Engineer — Date

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1998 ANNUAL GROUNDWATER MONITORING REPORT

WAULECO, INC. WAUSAU FACILITY

INTRODUCTION

The 1998 Annual Groundwater Monitoring Report presents a summary of the groundwater data collected from the Wauleco, Inc., facility in Wausau, Wisconsin. The focus of this report is on groundwater data collected during the 2nd semi-annual round (winter) for 1997, and the 1st semi-annual round (summer) of 1998. For comparison purposes, this report also includes historic groundwater data collected at the site starting in January 1987.

To support the presentation and interpretation of the groundwater monitoring data, this document contains the following information:

- Water table elevations and groundwater contour maps for December 1997 and June 1998 (Drawings B14 through B17)

- Maps of apparent product thickness for December 1997 and June 1998 (Drawings B18 and B19)

- Chemical isoconcentrations maps based on June 1998 analytical results for:
  - Pentachlorophenol (PCP) (Drawing B20)
  - Benzene (Drawing B21)
  - Xylenes (Drawing B22)
  - Trichloroethylene (Drawing B23)
  - Naphthalene (Drawing B24)
  - Total Petroleum Hydrocarbons (TPH) (Drawing B25)
  - Chloride (Drawing B26)

- Data summary tables containing historical groundwater analytical results for each monitoring well (Appendix A)

- Time trend analysis depicting historical concentrations of PCP, chloride, and total dioxin/furans toxicity equivalents at each well on the monitoring program with four or more rounds of analytical results (Appendix B)

BACKGROUND

Periodic groundwater sampling has occurred at the Wauleco, Wausau facility since at least January 1987. A formal Groundwater Monitoring Plan (GMP) was prepared for the site in January 1992, and with slight modifications, the first sampling round conducted under the GMP occurred during February 1992. Since 1992, a number of changes have occurred to the groundwater extraction and treatment system at the Wauleco property, including:

- Discontinuation of the infiltration gallery.
- Abandonment of monitoring wells W6, W20, W37, and W38.
- Loss of monitoring well W43 during utility work.
- Installation of new monitoring wells W6R, W68A, W68B, W69, and W70B.
- The addition of pumping wells PW9 through PW16.

Further modifications to the GMP have been made to accommodate the changes described above, and to streamline the monitoring effort. Beginning in 1997, groundwater sampling moved from a quarterly basis to a semi-annual basis (Summer and Winter). One special round of sampling for dioxin/furan analysis was completed during the Summer 1998 round. The results of the special sampling round along with historical dioxin/furan data are discussed in this report. The semi-annual monitoring program is summarized in Table 1. The Groundwater Monitoring Report is submitted on an annual basis following completion of the Summer round of sampling and analysis.

Additional treatment system modifications, designed to approximately double the extraction capacity were being completed in the fall of 1998, and therefore are not included in this report. The modifications consist of additional extraction wells, conveyance piping, system controls, polishing treatment, and solids handling capacity. Eleven new extraction wells were installed as part of the modifications bringing the total number of extraction wells to twenty-one.

SAMPLING EVENT SUMMARY

The 1998 Annual Groundwater Monitoring Report provides a presentation and interpretation of data collected at the Wauleco site beginning in 1987 and continuing through June 1998. Sampling activities since 1992 have been conducted in general accordance with the Wauleco Groundwater Monitoring Plan and WDNR conditional approvals. During each sampling event, water levels and product thickness measurements were first recorded, followed by purging of each well to be sampled. Wells included in the 2nd semi-annual round (winter) for 1997, and the 1st semi-annual round (summer) of 1998 are shown on Table 2. Groundwater samples were not collected from wells that contained measurable product. Groundwater samples were submitted as appropriate for laboratory analysis of chloride by Method 325.3, nitrite + nitrate by Method 353.2, ammonia by Method 350.3, volatile organic compounds (VOCs) including naphthalene by Method 8021, phenolics by Method 8040, total petroleum hydrocarbons (TPH) by Method ASTM D-3328-78, and dioxin/furans by Method 1613.

PRESENTATION OF RESULTS

As discussed in previous Wauleco Groundwater Monitoring Reports, changes in groundwater level elevations at the Wauleco site influence dissolved contaminant concentrations and apparent product thickness. Generally, periods of high water levels at the site are followed by observed increases in groundwater contaminant concentrations. During periods of high water levels, groundwater comes into contact with soils above the average water table, which have been contaminated by earlier high water events. High groundwater levels also tend to reduce apparent product thickness and distribution, and reduce product recovery. Generally, as groundwater levels increase, apparent product thickness will decrease, and as water levels decline, apparent product thickness will increase. When water levels are high, the non-aqueous phase product is trapped in the aquifer soil pore spaces, as water levels decline, the product coalesces as free product on the water table.

As shown in Figure 1, average water levels at the site have remained relatively low over the past year when compared to previous years. Average water levels hit a relative low in January 1998, with some increase in the following six months. Drawings B14 and B15 show water table elevations from each well for December 1997 and June 1998 respectively; Drawings B16 and B17 show water table contours for the same periods. The 1,160 ft (MSL) contour lines on Drawings B16 and B17, show the combined cone of depression around the extraction well area. As shown in these Drawings, the area within the combined cone of depression, and the general groundwater elevation conditions in the area were similar during December 1997/June 1998 period, and indicate that the groundwater extraction system continues to prevent additional off-site migration of contaminants.

Apparent product thickness during December 1997 and June 1998 are depicted on Drawings B18 and B19 respectively. Apparent product thickness represents a measurable thickness of product which has moved into a monitoring well, it does not necessarily reflect the actual thickness of free product above the water table. The extend of product appears larger in the June 1998 (Drawing B19) compared to December 1998 (Drawing B18), primarily due to measurable product at well W40 to the southeast, and wells W7, PW1, and PW2 to the west. The difference in the extent of measurable product between December and June is the reverse of what would be expected with the higher water levels observed in June. The reduced extent of product in December 1997 may be attributable to an unscheduled shutdown of the extraction system in late October 1997. The system automatically shut down due to an open recirculation valve. The temporary shutdown allowed water levels to increase immediately adjacent to the extraction wells. This has the temporary effect of reducing free product in the well vicinity. As pumping resumed, a more stable subsurface environment with respect to water levels was established during the following months. The stable water levels in turn enhanced the presence of measurable free product in monitoring wells. While there are small fluctuations along the perimeter area of the measurable free product, the general extent of apparent free product has remained stable since at least 1994.

The relationship between product recovery and groundwater levels at the site is depicted in Figure 2. Product recovery for the twelve month period of October 1997 through September 1998 totaled 11,956 gal compared to 5,761 gal during the same '96-'97 period. The increase in product recovery during the '97-'98 period, reflects the general decrease in water levels from the previous year.

In addition, to product recovery, PCP is also removed through water treatment in the FBR system. During the period of October 1997 through September 1998, a total of 11,134,450 gal of water was treated through the FBR system. The average PCP concentration of the influent water was 15,721 ug/L which translates to 1,460 lb of PCP treated per year or, assuming 5% PCP in the original product formulation, an equivalent of 4,341 gal of product removal.

A summary of the analytical results for each monitoring well location is provided in Appendix A. Time trend graphs for PCP, chloride and dioxin/furans (total toxicity equivalents) are provided in Appendix B. Isoconcentration maps for PCP, benzene, xylenes, trichloroethylene (TCE), naphthalene, total petroleum hydrocarbons (TPH), and chloride concentrations are provided in Drawings B19 through B26.

The June 1998 sampling event represents the sixth round of dioxin/furan analyses in groundwater at the site (Appendix A4). While seventeen chemical isomers of the dioxin/furans are analyzed for, only the 2,3,7,8-tetrachlorodibenzo-p-dioxin (2378-TCDD) has a Chapter NR 140, Wisconsin Administrative Code groundwater quality standard (NR 140). The NR 140 Enforcement Standard for 2378-TCDD is 0.00003 ug/L, compared to the NR 140 enforcement standard of 1 ug/L for PCP, the primary contaminant of concern at this site. The 2378-TCDD isomer has been detected infrequently and sporadically in the six rounds of groundwater samples collected from the site. In the last three dioxin sampling rounds, which included 1995, 1996, and 1998, the 2378-TCDD isomer was detected in 1995 only at well W8 (0.000497 ug/L), it was not detected in 1996, and was detected twice in 1998; well W33 (0.000019 ug/L); and well W36 (0.000007 ug/L). Well W8 is located upgradient (west) of the Wauleco site, and is considered a background monitoring point for groundwater, and wells W33 and W36 are well within the PCP plume.

As previously discussed seventeen chemical isomers of the dioxin/furan group are analyzed for in the groundwater samples. The chemical characteristics of each of the isomers vary widely, as does relative toxicity. Therefore, to present the dioxin/furan data in a format that is more easily understood, toxicity equivalency factors (TEFs) were applied to the six rounds of data, and the results plotted as time trend graphs (Appendix B3). TEFs are a way of "translating" all of the dioxin results into an equivalent concentration of 2378-TCDD. The equivalent concentration of 2378-TCDD is the amount that has the same carcinogenic potential as the dioxin or furan that was detected. Thus, 1000 grams of OCDD are equivalent to 1 gram of 2378-TCDD (OCDD has a TEF of 0.001). Only the dioxin/furans that are chlorinated in the 2, 3, 7, and 8 positions are thought to be carcinogenic under this

scheme, so the total concentrations of dioxin/furan congeners (i.e., pentachlorodibenzofuran) are not used in the calculations. The source for the TEFs is the *Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and Dibenzofurans (CDDs and CDFs) and 1989 Update.* U.S. Environmental Protection Agency, 1989. PB90-145756.

The time trend graphs for the total dioxin/furan TEFs, generally show a moderate to strong decrease in concentrations between 1992 and 1993/94, a moderate increase in 1995, followed by another decrease in 1996, and an increase in 1998. This pattern is an almost inverse relationship to water levels at the site, which is similar to the trends observed for PCP. The groundwater concentrations of the dioxin/furans have generally been decreasing since 1992, and higher concentrations of this class of chemicals has been associated with the areas of higher PCP concentrations. This would indicate that efforts to remediate PCP in groundwater at the site, also addresses the dioxin /furans. The information collected to date regarding dioxin/furan concentrations in groundwater provides a reasonable base for evaluating the effectiveness of removing these constituents with continuing remediation efforts. Continued interim monitoring of the dioxin/furans provides little additional information at this time, when compared to the relatively high cost of analysis, therefore as proposed in the 1996 Groundwater Report, future dioxin/furan analysis will be postponed for an indefinite period of time.

The results for the June 1998 samples are generally consistent with historic groundwater quality for the site. Isoconcentration maps, as depicted in Drawings B20 through B26 and compared to previous monitoring events, indicate relatively minor changes in the apparent area of groundwater influence for each parameter. While minor increases or decreases in groundwater contaminant concentrations occurred at various monitoring well locations, no predominant site-wide trends were observed between the 1997 and 1998 monitoring periods. This is consistent with the relatively stable water levels during the past year. Contaminant concentrations at most locations continue to be lower than those recorded during the 1987 to 1993 period. Following is a summary of changes/trends in specific contaminant concentrations since the June 1996 Annual Report:

- **PCP –** The PCP isoconcentration contour for June 1998 is nearly identical to 1997, with the exception of concentrations below the 300 ug/L level at wells W1A and W36. PCP concentrations within the 300 ug/L isoconcentration contour were generally lower in 1998 than in 1997, while they were slightly higher in wells located to the south (outside the 300 ug/L contour). The increase in concentrations in the more southerly wells has been observed in the past, during periods of lower water levels. PCP concentrations at all wells were within historic levels, with the exception of well W12 located to the southeast of the site (see PCP time trend graphs in Appendix B1.

- **Benzene** - The extent of benzene concentrations above the 1 ug/L contour has remained relatively static for at least the past two years. Concentrations above the 1 ug/L contour were observed primarily to the south and east of the Wauleco site with the exception of well W9, located to the north (see Drawing B21).

- **Total Xylenes** – The total xylenes isoconcentrations contour was extended to the east to include well W10A, where the concentration increased above the 124 ug/L contour.

- **Trichloroethylene** - The areal extent for TCE concentrations above 5 ug/L during the June 1998 sampling is slightly smaller than in previous sampling rounds. The 5 ug/L contour extended through the site in previous sampling rounds primarily due the elevated detection limits within the PCP plume area. TCE was detected at well W10A during the 1998 sampling round, whereas it was reported as not detected (<4 ug/L) in 1997.

- **Naphthalene** – When compared to 1997, the 1998 naphthalene isoconcentration contour generally shifted to the east and includes well W10A.

- **TPH** - The areal extent and concentration of total petroleum hydrocarbon (TPH) concentrations above 1.0 mg/L is nearly identical to the 1996 results (the year before last), in that the 1.0 mg/L contour extends to wells W10A and W26. In 1997, TPH was not detected at these two well locations.

- **Chloride** – As in previous years, chloride concentrations detected in groundwater appear to be influenced by other potential sources, such as road salt use in the area. The chloride isoconcentration contour is left open to the west, upgradient of the site.

SUMMARY AND CONCLUSIONS

The June 1998 sampling event represents the 22nd round of groundwater sampling conducted under the Wauleco Groundwater Monitoring Plan (GMP). The first sampling event conducted under the GMP occurred in February 1992, although, routine groundwater sampling at selected wells had been ongoing since 1987. Based on the amount of data collected at this site, the groundwater sampling frequency was reduced from a quarterly program to a semi-annual program beginning in 1997.

As described in previous groundwater monitoring reports, changes in groundwater elevations at the site influence dissolved contaminant concentrations in groundwater samples, and the apparent product thickness observed in monitoring wells. The average water levels at the site have remained relatively low, yet stable over the past year when compared to previous years. As a result, no predominant site-wide trends were observed between the 1997 and 1998 monitoring period, although there were minor increases or decreases in groundwater

contaminant concentrations occurring at individual monitoring well locations. The results for the June 1998 samples are generally consistent with historic groundwater quality for the site.

Based on the similar response between dioxin/furan and PCP groundwater concentrations to continuing remediation efforts, and the magnitude of the relative difference in groundwater quality standards between these two constituents, future dioxin/furan analysis will be postponed for an indefinite period of time.

The relationship between product recovery and groundwater levels at the site is depicted in Figure 2. Product recovery for the twelve month period of October 1997 through September 1998 totaled 11,956 gal compared to 5,761 gal during the same '96-'97 period. In addition, an estimated 1,460 lb of PCP (equivalent to 4,341 gal of product) was removed in 1998 through the groundwater treatment system.

JDD/vlr/DJB/KJQ
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1242057.0416.0101-MD

TABLE 1

GROUNDWATER MONITORING PROGRAM
WAULECO, INC.
WAUSAU, WISCONSIN

Well Location	Semi-Annual	Annual
W1A	W	S
W2	W	S+
W3A	W	S+
W3B		S+
W6R	W	S
W8	W	S+
W9		S
W10A		S+
W10B		S
W11		S+
W12		S
W13	W	S
W14		S
W16		S+
W17	W	S
W18		S
W19	W	S
W21		S
W22	W	S
W25	W	S+
W26	W	S+
W27		S
W28		S+
W29		S+
W32		S
W33	W	S+
W36	W	S+
W39	W	S
W40	W	S
W41	W	S
W69	W	S

Notes:

W = Designates well locations to be sampled during the winter sampling round and analyzed for: phenolic compounds, chloride, nitrite + nitrate, ammonia, field pH, and field specific conductance.

S = Designates well locations to be sampled during the summer sampling round and analyzed for: choride, naphthalene, phenolic compounds, total petroleum hydrocarbons, volatile organic compounds, nitrite + nitrate, ammonia, field pH, and field specific conductance.

S+ = Designates well locations to be sampled during the summer sampling round and analyzed for: the parameters described above under "A" plus dioxin/furans during the summer of 1998.

JDD/jdd/DJB/KJQ
J:/wauleco/qrtly/jun95/tabl1and2.xls

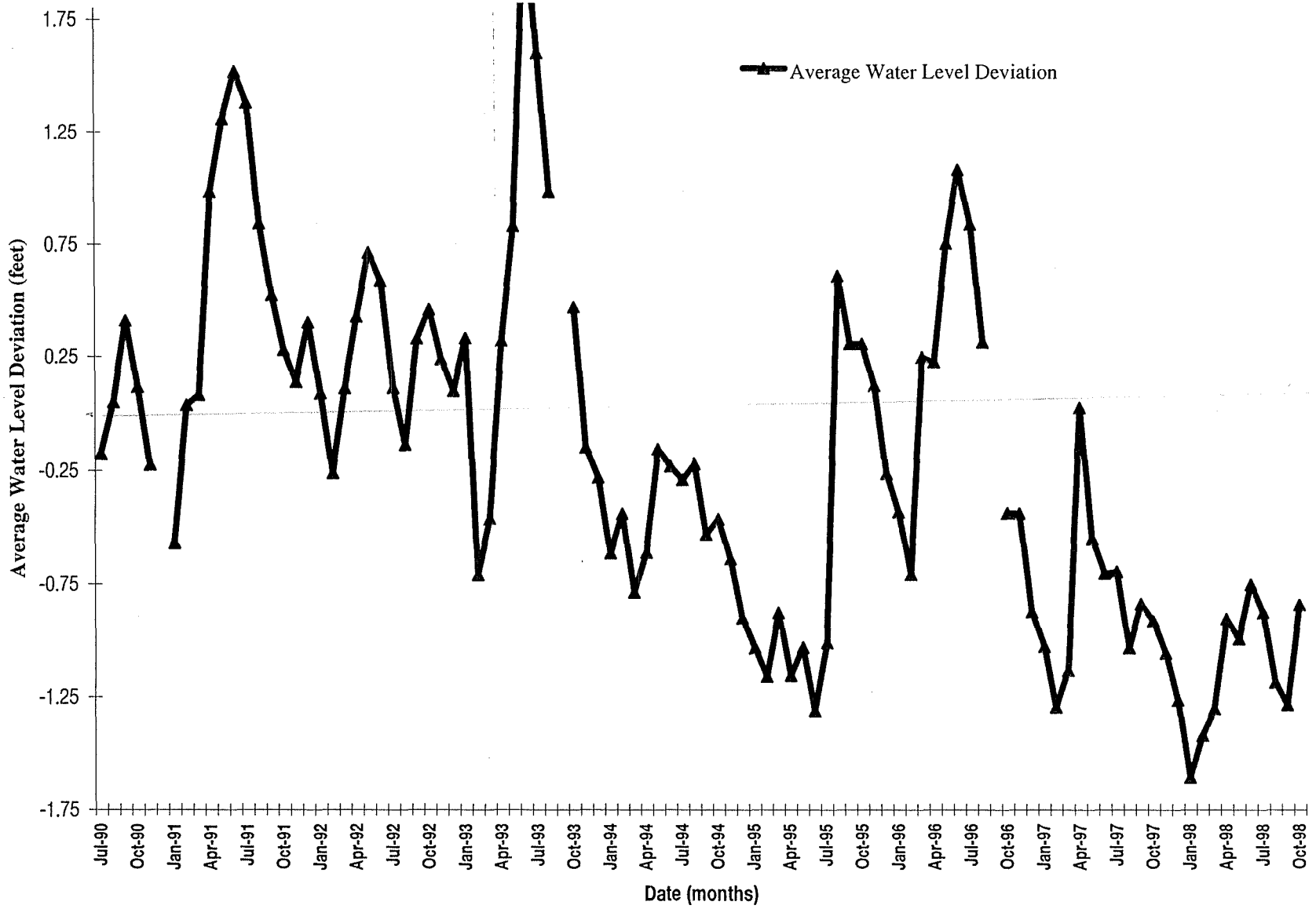
TABLE 2

SUMMARY OF GROUNDWATER SAMPLING LOCATIONS
WAULECO, INC.
WAUSAU, WISCONSIN

Well Location	January 1998	June 1998
W1A	X	X
W2	X	X+
W3A	X	Product
W3B		X+
W6R	Product	Product
W8	X	X+
W9		X
W10A		X+
W10B		X
W11		X+
W12		X
W13	X	X
W14		X
W16		X+
W17	Product	Product
W18		X
W19	X	X
W21		X
W22	X	X
W25	X	X+
W26	X	X+
W27		X
W28		X+
W29		X+
W32		X
W33	X	X+
W36	X	X+
W39	X	X+
W40	Product	Product
W41	X	X
W69	Product	Product

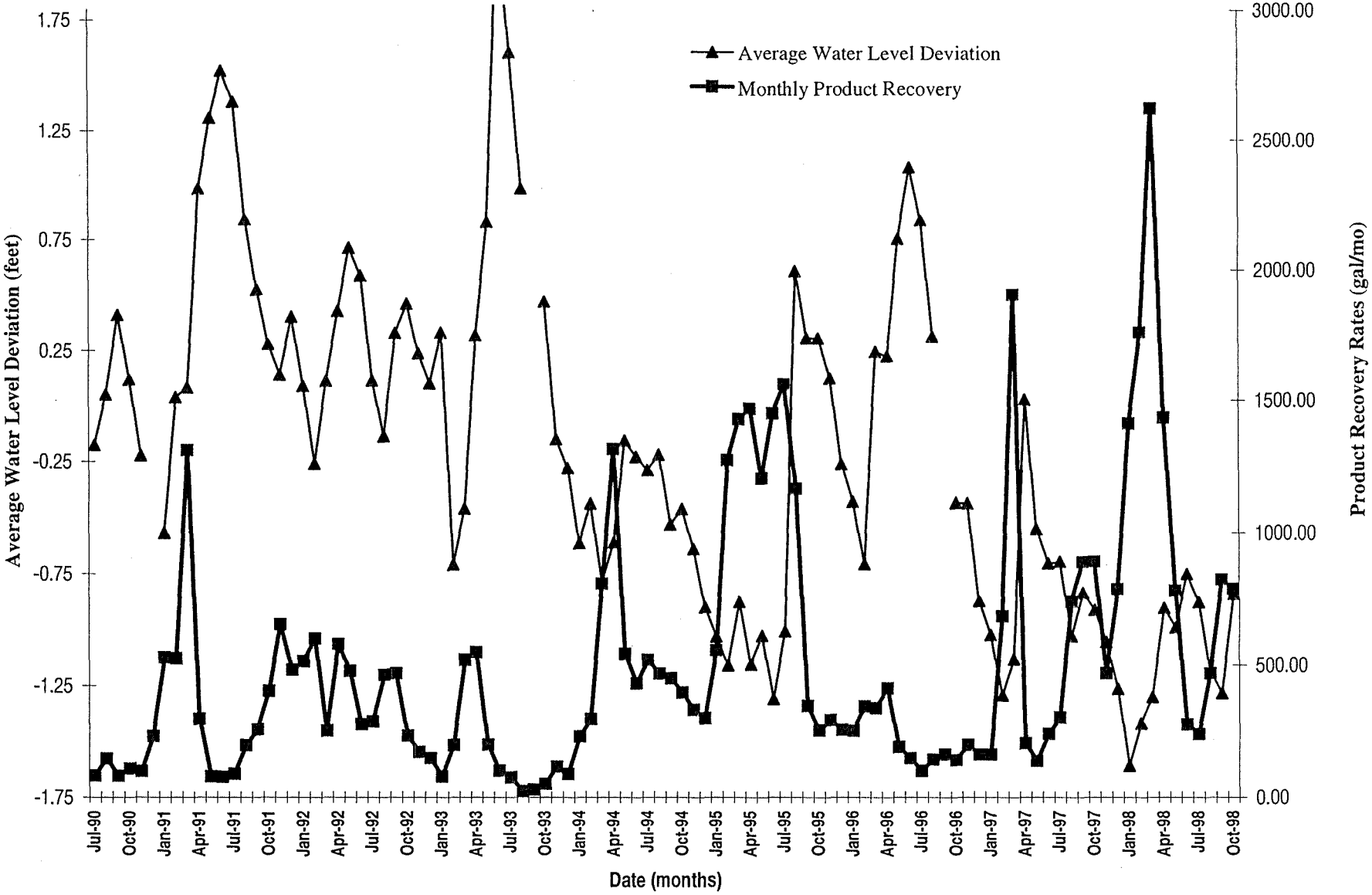
Notes:
January 1998 (Winter Sampling Round) samples collected on January 2, 1998.
June 1998 (Summer Sampling Round) samples collected on June 23, 24, 25, 1998.

FIGURE 1
Average Water Level Deviation



J:\WAULECO\ONM97\APR\monthly.xls
12/2/98

FIGURE 2
Average Water Level Deviation Versus Product Recovery Rates

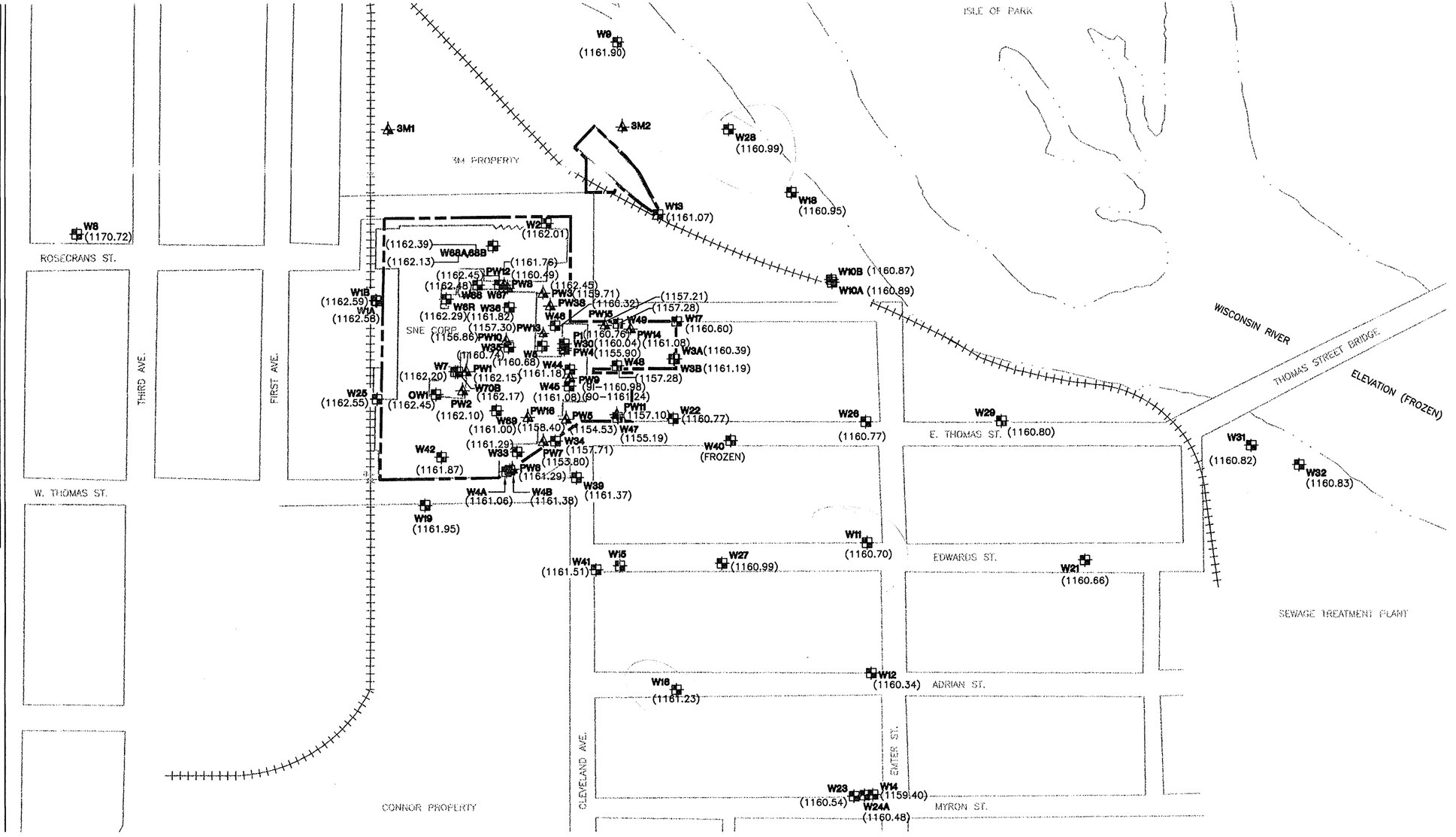


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12/2/98

A

ANALYTICAL RESULTS

A1 Indicators
A2 Phenolics
A3 Volatiles
A4 Dioxin/Furans



LEGEND

- W7 (1162.20) — MONITORING WELL LOCATION, NUMBER, AND WATER TABLE ELEVATION
- PW5 (1154.53) — EXTRACTION WELL LOCATION, NUMBER, AND WATER TABLE ELEVATION
- (I) — INACCESSIBLE
- APPROXIMATE PROPERTY LINE

NOTES

1. BASE MAP DEVELOPED FROM DRAWING A107250-1 OF THE SEPTEMBER 1992 SEMI-ANNUAL GROUNDWATER MONITORING REPORT BY KEYSTONE ENVIRONMENTAL.
2. WATER TABLE ELEVATIONS OBTAINED BY MONTGOMERY WATSON ON DECEMBER 30, 1997.

north

0 200 400

SCALE IN FEET

QUALITY CONTROL		
Graphic Standards	DJF	1-13-99
Lead Professional	JDD	1-13-99
Technical Review	JDD	1-13-99
PM Review		
Management Review		
Other		

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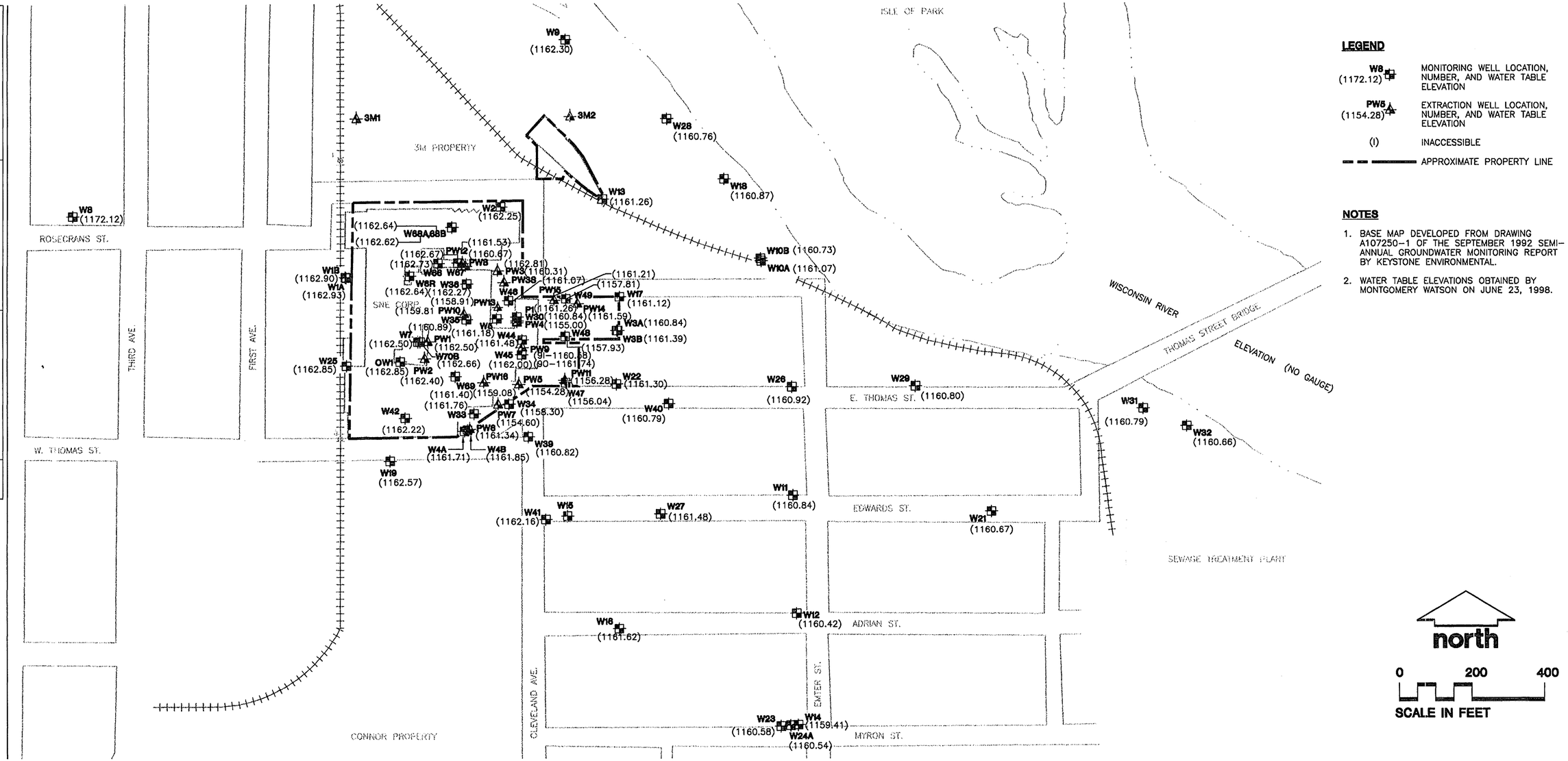
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Drawn By LCL
Approved By
Date 1-13-99
Reference 1242057.(4160101-B1
Revisions

WATER TABLE ELEVATIONS (DECEMBER 30, 1997)

ANNUAL GROUNDWATER MONITORING REPORT
WAULECO INC.
PART OF SECTION 35, T29N, R8E
WAUSAU, WISCONSIN

Drawing Number
1242057
04160101 B14

MONTGOMERY WATSON



LEGEND

W8 (1172.12)	MONITORING WELL LOCATION, NUMBER, AND WATER TABLE ELEVATION
PW5 (1154.28)	EXTRACTION WELL LOCATION, NUMBER, AND WATER TABLE ELEVATION
(I)	INACCESSIBLE
— — —	APPROXIMATE PROPERTY LINE

NOTES

1. BASE MAP DEVELOPED FROM DRAWING A107250-1 OF THE SEPTEMBER 1992 SEMI-ANNUAL GROUNDWATER MONITORING REPORT BY KEYSTONE ENVIRONMENTAL.
2. WATER TABLE ELEVATIONS OBTAINED BY MONTGOMERY WATSON ON JUNE 23, 1998.

north

0 200 400

SCALE IN FEET

QUALITY CONTROL

Graphic Standards	DLF	1-13-99	Management Review
Lead Professional	JDD	1-13-99	Other

Technical Review	JDD	1-13-99	
PM Review			

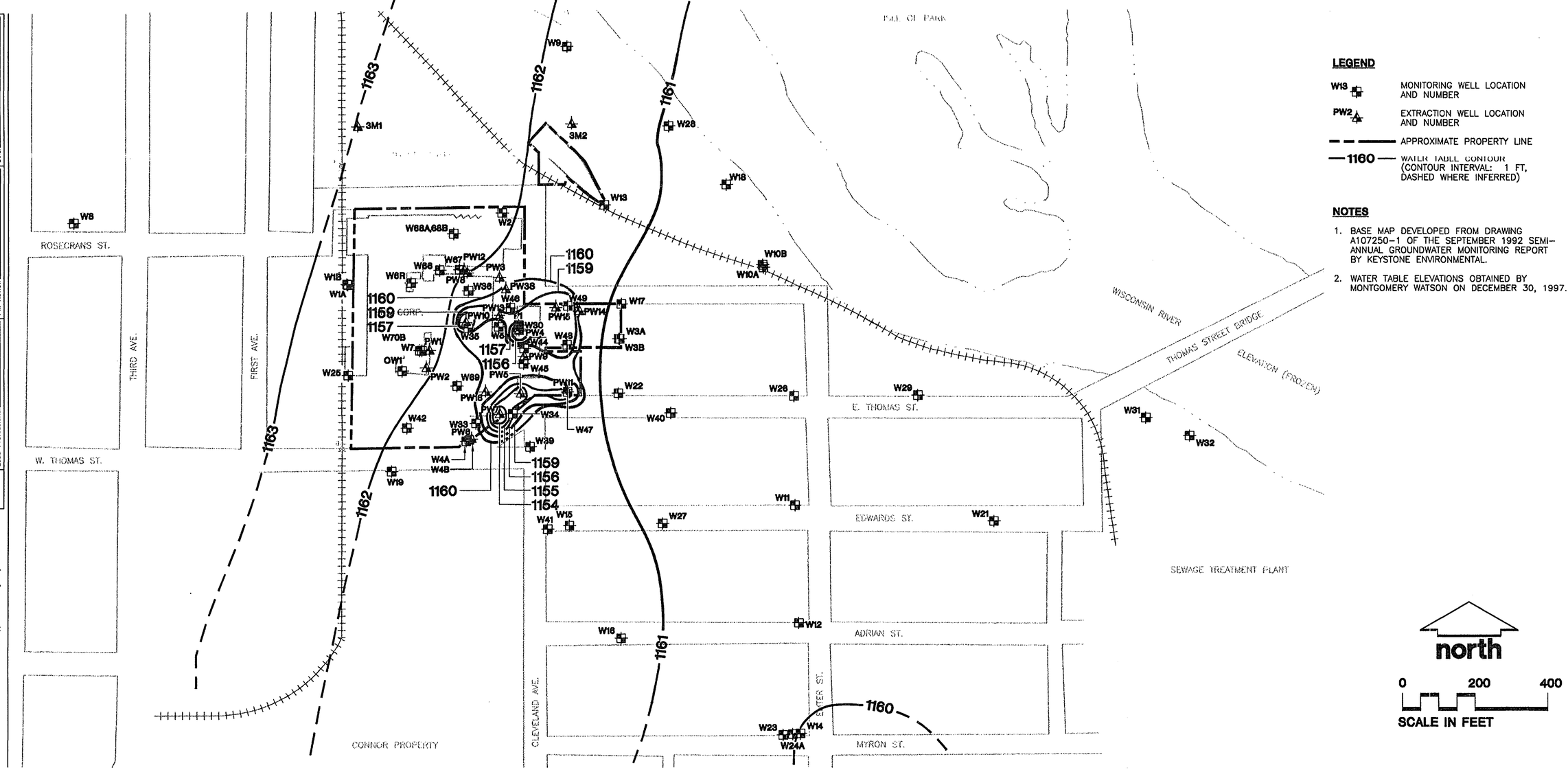
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Drawn By LCL
Approved By
Date 1-13-99
Reference 1242057.04160101-B2
Revisions

WATER TABLE ELEVATIONS (JUNE 23, 1998)
ANNUAL GROUNDWATER MONITORING REPORT
WAULECO INC.
PART OF SECTION 35, T29N, R8E
WAUSAU, WISCONSIN

Drawing Number
1242057
04160101 B15

MONTGOMERY WATSON



LEGEND

- W13 — MONITORING WELL LOCATION AND NUMBER
- PW2 — EXTRACTION WELL LOCATION AND NUMBER
- APPROXIMATE PROPERTY LINE
- 1160 — WATER TABLE CONTOUR (CONTOUR INTERVAL: 1 FT, DASHED WHERE INFERRED)

NOTES

1. BASE MAP DEVELOPED FROM DRAWING A107250-1 OF THE SEPTEMBER 1992 SEMI-ANNUAL GROUNDWATER MONITORING REPORT BY KEYSTONE ENVIRONMENTAL.
2. WATER TABLE ELEVATIONS OBTAINED BY MONTGOMERY WATSON ON DECEMBER 30, 1997.

north

0 200 400

SCALE IN FEET

QUALITY CONTROL			
Graphic Standards	DJF	1-13-99	Technical Review
Lead Professional	JDD	1-13-99	PM Review

Management Review
Other

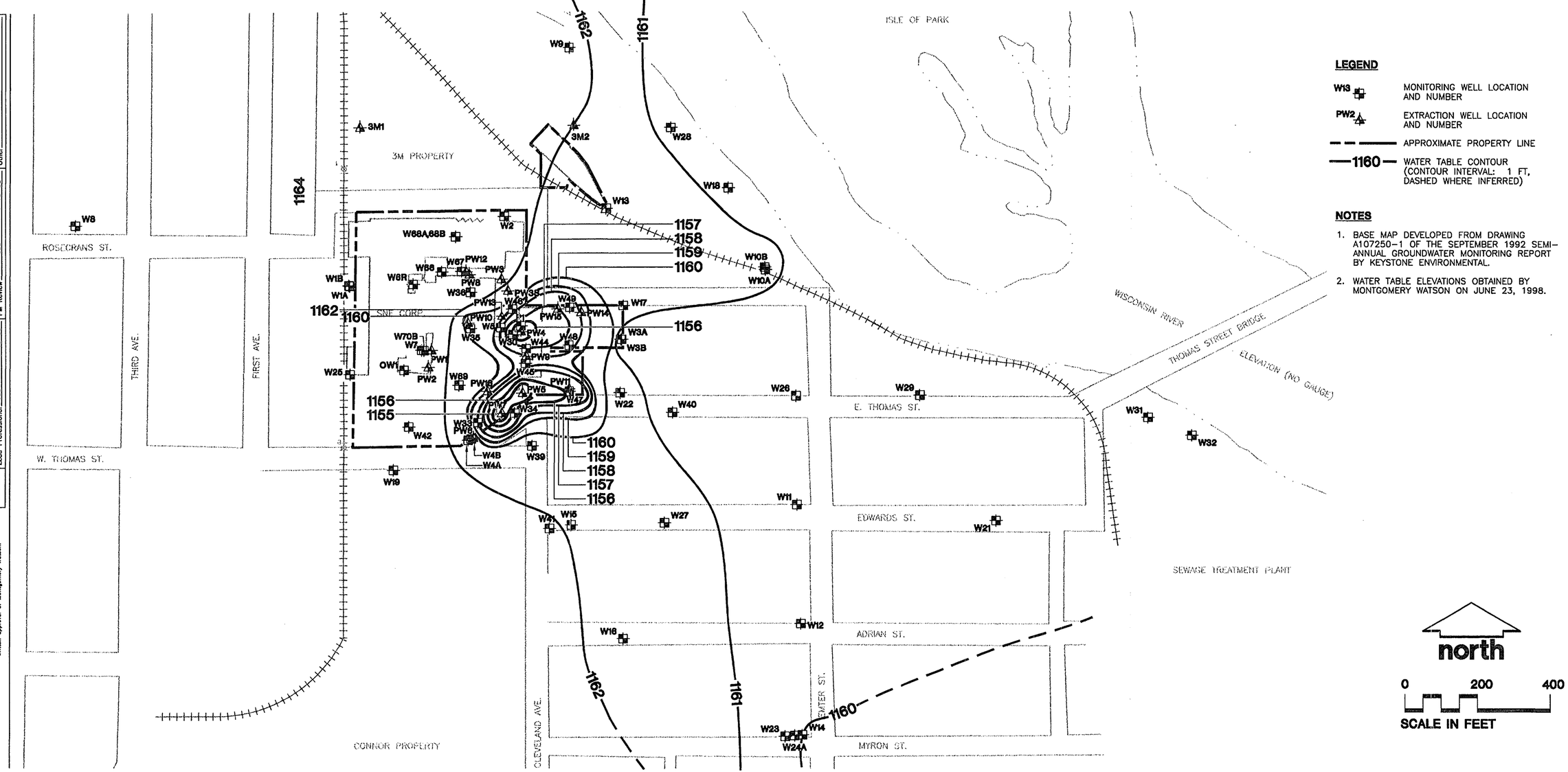
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Revisions

WATER TABLE MAP (DECEMBER 30, 1997)
ANNUAL GROUNDWATER MONITORING REPORT
WAULECO INC.
PART OF SECTION 35, T29N, R8E
WAUSAU, WISCONSIN

Drawing Number
1242057
04160101 B16

MONTGOMERY WATSON



QUALITY CONTROL

Graphic Standards	DLF	1-13-99	
Lead Professional	JDD	1-13-99	
Technical Review	JDD	1-13-99	
PM Review			
Management Review			
Other			

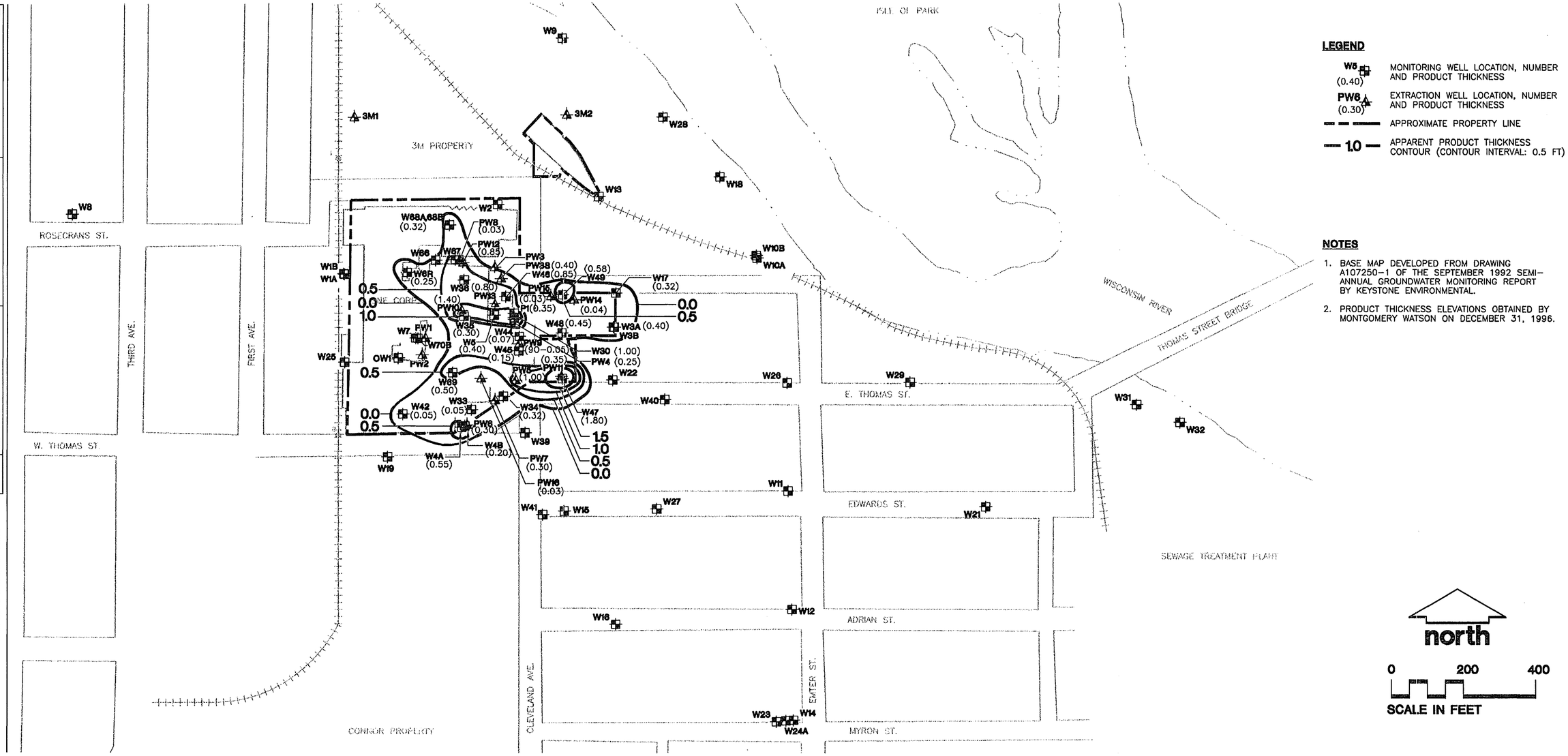
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Date 1-15-99
Reference 12420S7.04160101-B4
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WATER TABLE (JUNE 23, 1998)
ANNUAL GROUNDWATER MONITORING REPORT
WAULECO INC.
PART OF SECTION 35, T29N, R8E
WAUSAU, WISCONSIN

Drawing Number
12420S7
04160101 B17

MONTGOMERY WATSON



LEGEND

- W5 (0.40) — MONITORING WELL LOCATION, NUMBER AND PRODUCT THICKNESS
- PW6 (0.30) — EXTRACTION WELL LOCATION, NUMBER AND PRODUCT THICKNESS
- APPROXIMATE PROPERTY LINE
- 1.0 — APPARENT PRODUCT THICKNESS CONTOUR (CONTOUR INTERVAL: 0.5 FT)

NOTES

1. BASE MAP DEVELOPED FROM DRAWING A107250-1 OF THE SEPTEMBER 1992 SEMI-ANNUAL GROUNDWATER MONITORING REPORT BY KEYSTONE ENVIRONMENTAL.
2. PRODUCT THICKNESS ELEVATIONS OBTAINED BY MONTGOMERY WATSON ON DECEMBER 31, 1996.

north

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SCALE IN FEET

QUALITY CONTROL				
Graphic Standards	DLF	1-13-99	Technical Review	JDD	1-13-99	Management Review	
Lead Professional	JDD	1-13-99	PM Review			Other	

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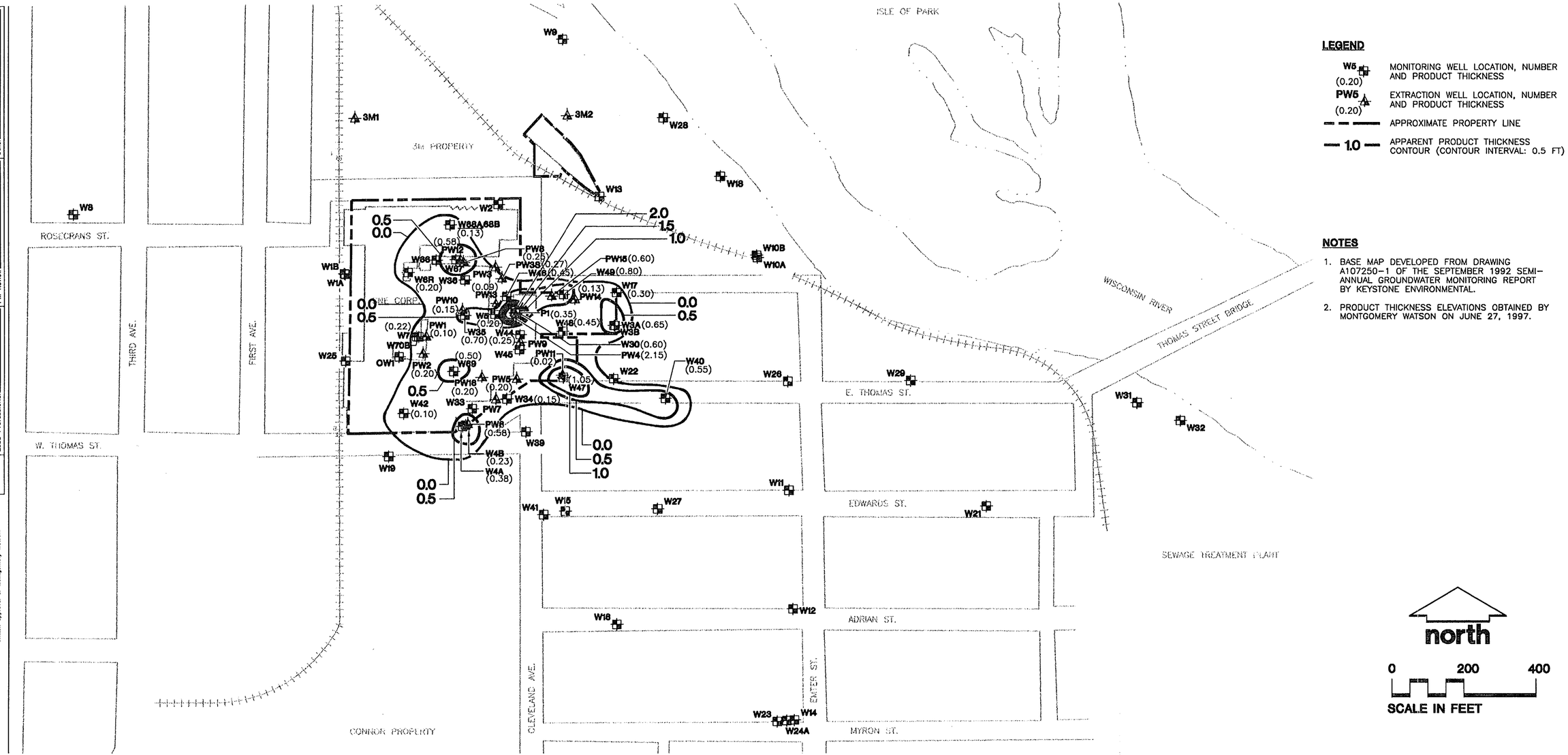
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Approved By | Date 1-13-99
Reference 1242057.04160101-B5
Revisions

PRODUCT THICKNESS MAP (DECEMBER 30, 1997)

ANNUAL GROUNDWATER MONITORING REPORT
WAULECO INC.
PART OF SECTION 35, T29N, R8E
WAUSAU, WISCONSIN

Drawing Number
1242057
04160101 **B18**

MONTGOMERY WATSON



LEGEND

- W5 (0.20) — MONITORING WELL LOCATION, NUMBER AND PRODUCT THICKNESS
- PW5 (0.20) — EXTRACTION WELL LOCATION, NUMBER AND PRODUCT THICKNESS
- APPROXIMATE PROPERTY LINE
- 1.0 — APPARENT PRODUCT THICKNESS CONTOUR (CONTOUR INTERVAL: 0.5 FT)

NOTES

1. BASE MAP DEVELOPED FROM DRAWING A107250-1 OF THE SEPTEMBER 1992 SEMI-ANNUAL GROUNDWATER MONITORING REPORT BY KEYSTONE ENVIRONMENTAL.
2. PRODUCT THICKNESS ELEVATIONS OBTAINED BY MONTGOMERY WATSON ON JUNE 27, 1997.

north

0 200 400

SCALE IN FEET

QUALITY CONTROL		
Graphic Standards	DLF	1-13-99
Lead Professional	JDD	1-13-99
Technical Review	JDD	1-13-99
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Management Review		
Other		

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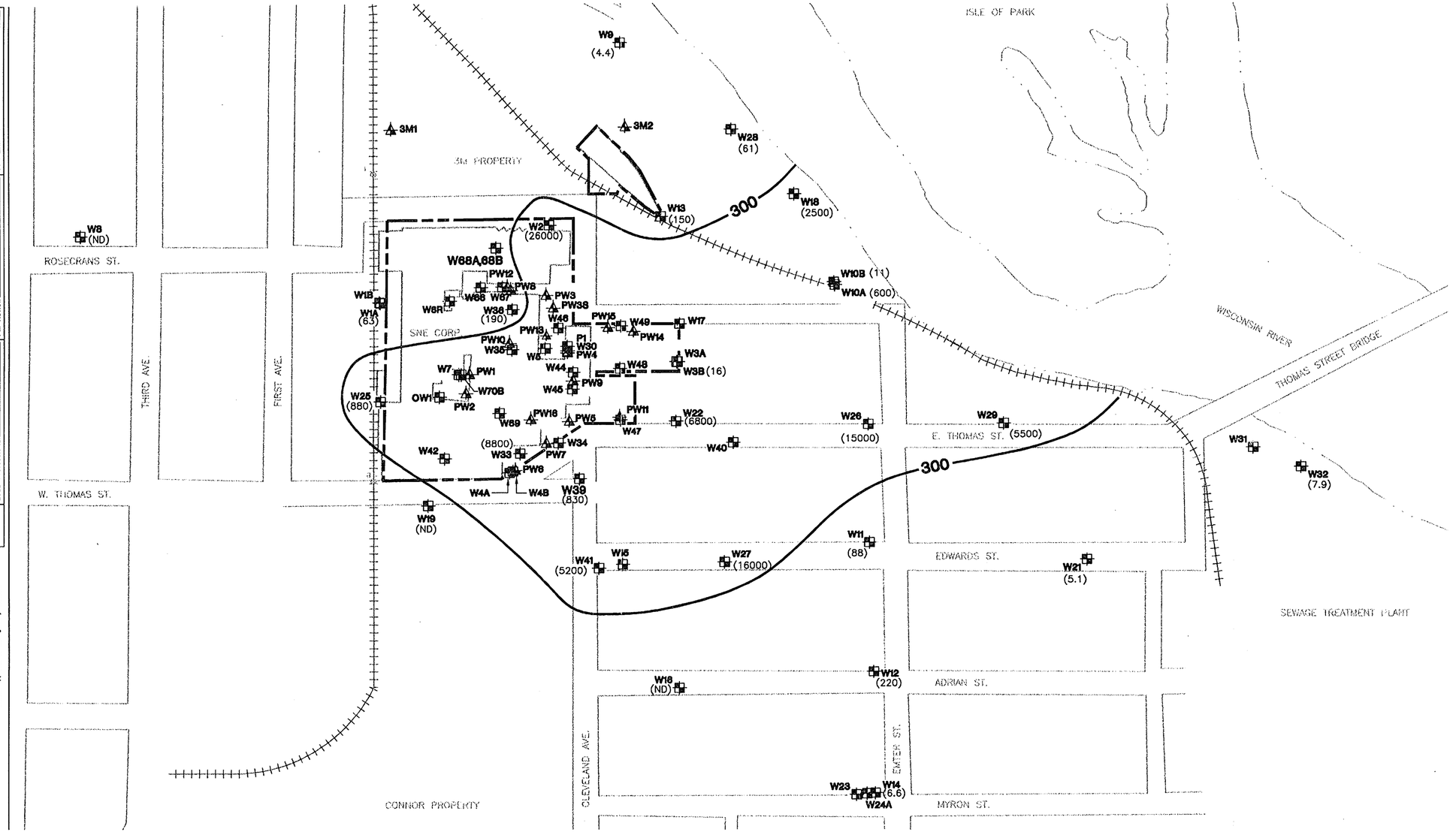
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Drawn By LCL
Approved By
Date 1-13-99
Reference 1242057.04160101-B6
Revisions

PRODUCT THICKNESS MAP (JUNE 23, 1998)

ANNUAL GROUNDWATER MONITORING REPORT
WAULECO INC.
PART OF SECTION 35, T29N, R8E
WAUSAU, WISCONSIN

Drawing Number
1242057
04160101 **B19**

MONTGOMERY WATSON



LEGEND

- W8 (ND) — MONITORING WELL LOCATION, NUMBER AND PCP CONCENTRATION (mg/L)
- PW5 — EXTRACTION WELL LOCATION AND NUMBER
- APPROXIMATE PROPERTY LINE
- —300— PCP ISOCONCENTRATION CONTOUR (ug/L)

NOTES

1. BASE MAP DEVELOPED FROM DRAWING A107250-1 OF THE SEPTEMBER 1992 SEMI-ANNUAL GROUNDWATER MONITORING REPORT BY KEYSTONE ENVIRONMENTAL.
2. GROUNDWATER SAMPLES OBTAINED BY MONTGOMERY WATSON IN JUNE 1998.
3. CONCENTRATIONS OBTAINED FROM LABORATORY DATA BY COMMONWEALTH TECHNOLOGY, INC.

north

0 200 400

SCALE IN FEET

QUALITY CONTROL				
Graphic Standards	DLF	1-13-99	Technical Review	JDD 1-13-99
Lead Professional	JDD	1-13-99	PM Review	
			Management Review	
			Other	

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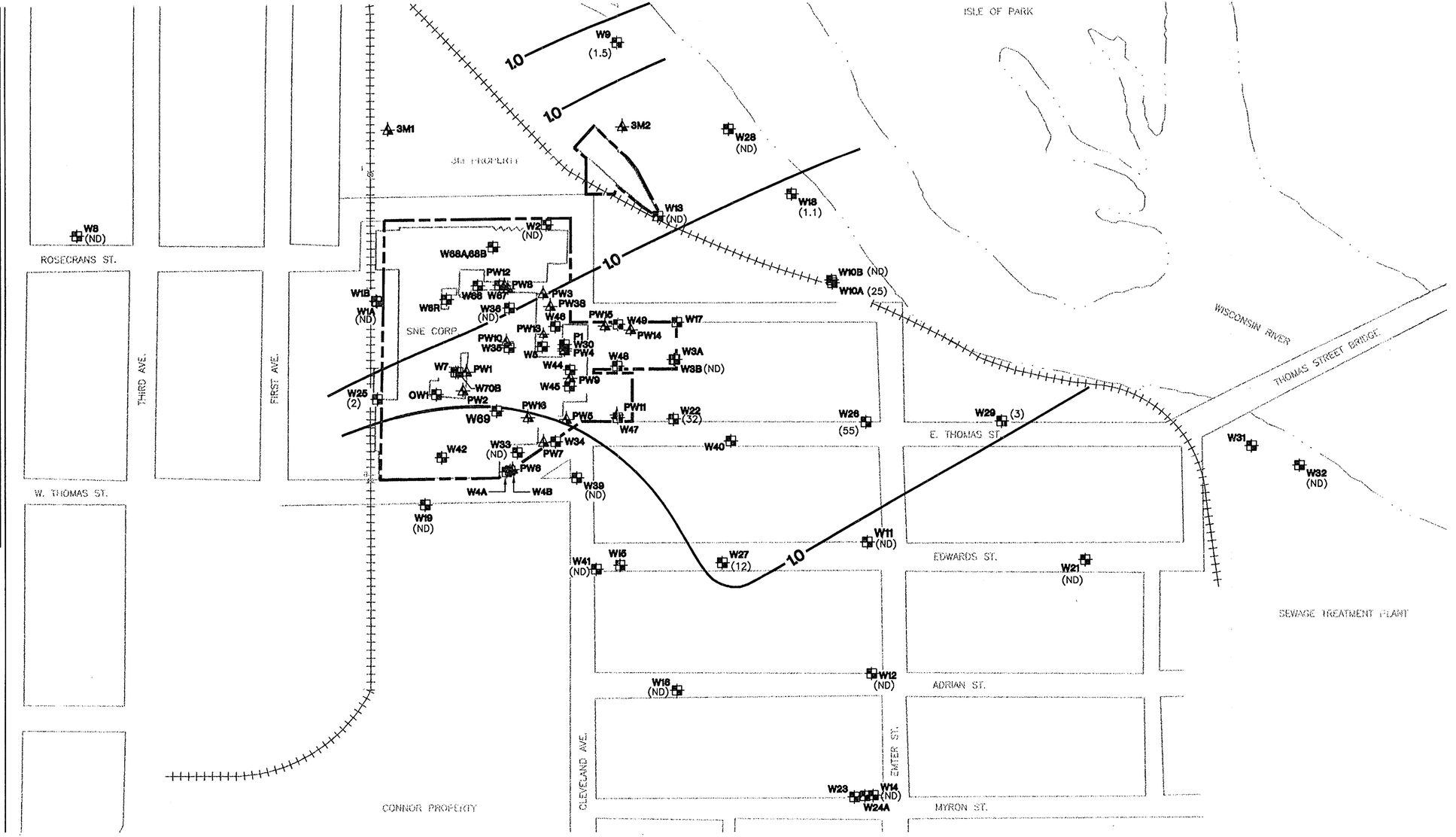
Developed By JDD
Drawn By LCL
Approved By
Date 1-13-99
Reference 1242057.04160101-B7
Revisions

PCP ISOCONCENTRATION MAP (JUNE 1998)

ANNUAL GROUNDWATER MONITORING REPORT
WAULECO INC.
PART OF SECTION 35, T29N, R8E
WAUSAU, WISCONSIN

Drawing Number
1242057
04160101 B20

MONTGOMERY WATSON



LEGEND

- W9 (1.5) — MONITORING WELL LOCATION, NUMBER AND BENZENE CONCENTRATION (ug/L)
- PW5 — EXTRACTION WELL LOCATION AND NUMBER
- APPROXIMATE PROPERTY LINE
- 1.0 — BENZENE ISOCONCENTRATION CONTOUR (1.0 ug/L)

NOTES

1. BASE MAP DEVELOPED FROM DRAWING A107250-1 OF THE SEPTEMBER 1992 SEMI-ANNUAL GROUNDWATER MONITORING REPORT BY KEYSTONE ENVIRONMENTAL.
2. GROUNDWATER SAMPLES OBTAINED BY MONTGOMERY WATSON IN JUNE 1998.
3. CONCENTRATIONS OBTAINED FROM LABORATORY DATA BY COMMONWEALTH TECHNOLOGY, INC.

north

0 200 400

SCALE IN FEET

BENZENE ISOCONCENTRATION MAP (JUNE 1998)

ANNUAL GROUNDWATER MONITORING REPORT
WAULECO INC.
PART OF SECTION 35, T29N, R8E
WAUSAU, WISCONSIN

Developed By JDD Drawn By LCL
Approved By [signature] Date 1-15-99
Reference 1242057.04160101-B8
Revisions

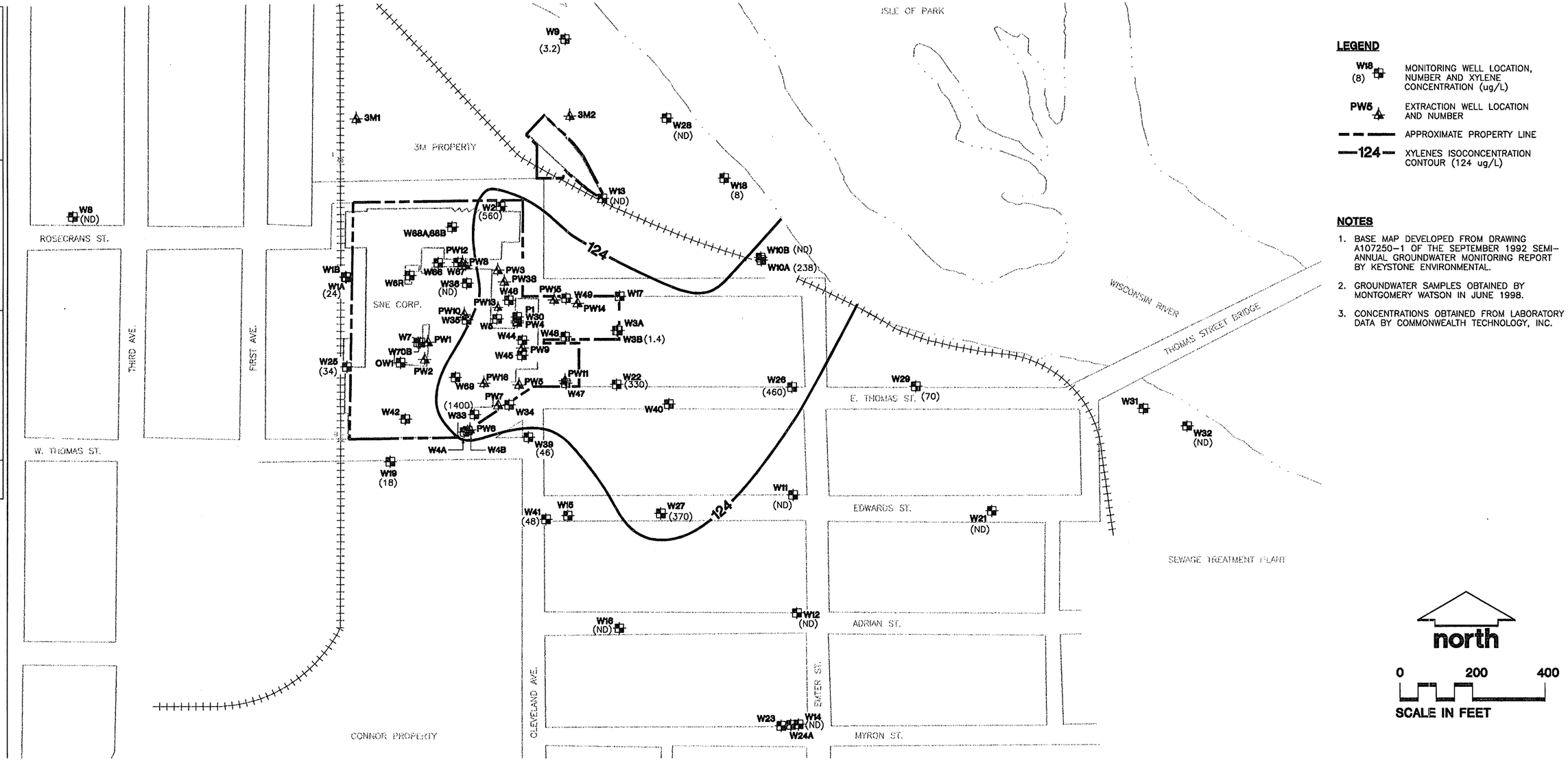
Drawing Number
1242057
04160101 B21

MONTGOMERY WATSON

QUALITY CONTROL			
Graphic Standards	DLF	1-13-99	Management Review
Lead Professional	JDD	1-13-99	Other

Technical Review	JDD	1-13-99	
PM Review			

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LEGEND

- W18 (8) — MONITORING WELL LOCATION, NUMBER AND XYLENE CONCENTRATION (ug/L)
- PW5 — EXTRACTION WELL LOCATION AND NUMBER
- APPROXIMATE PROPERTY LINE
- 124 — XYLENES ISOCONCENTRATION CONTOUR (124 ug/L)

NOTES

1. BASE MAP DEVELOPED FROM DRAWING A107250-1 OF THE SEPTEMBER 1992 SEMI-ANNUAL GROUNDWATER MONITORING REPORT BY KEYSTONE ENVIRONMENTAL.
2. GROUNDWATER SAMPLES OBTAINED BY MONTGOMERY WATSON IN JUNE 1998.
3. CONCENTRATIONS OBTAINED FROM LABORATORY DATA BY COMMONWEALTH TECHNOLOGY, INC.

north

0 200 400

SCALE IN FEET

QUALITY CONTROL

	Graphic Standards	DJF	1-13-99	Technical Review		Management Review
	Lead Professional	JDD	1-13-99	PM Review	JDD	1-13-99 Other

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Developed By JDD Drawn By LCL

Approved By [signature] Date 1-13-99

Reference 1242057.04160101-B9

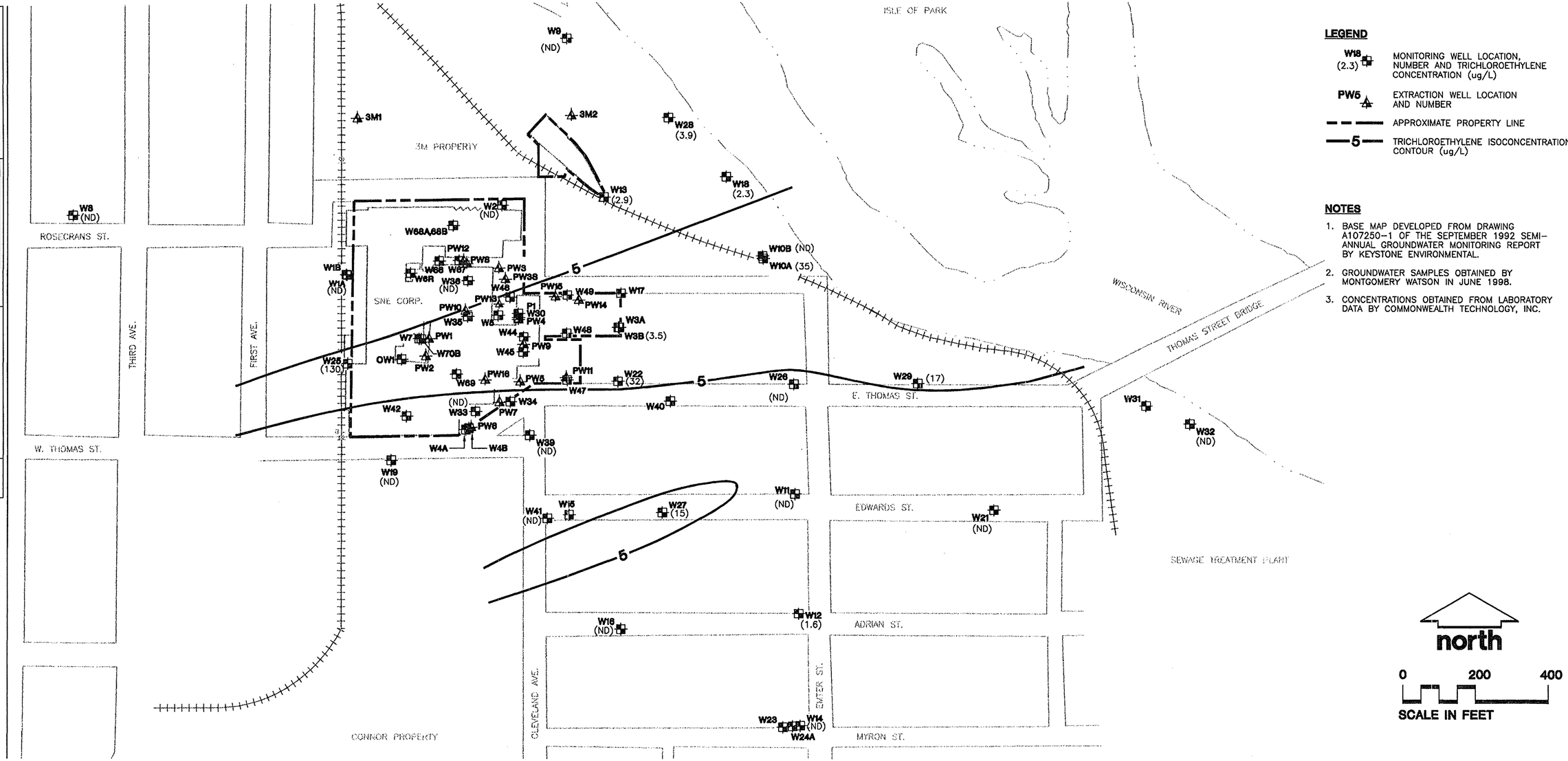
Revisions

XYLENES ISOCONCENTRATION MAP (JUNE 1998)

ANNUAL GROUNDWATER MONITORING REPORT
WAULECO INC.
PART OF SECTION 35, T29N, R8E
WAUSAU, WISCONSIN

Drawing Number
1242057
04160101 B22

MONTGOMERY WATSON



LEGEND

- W18 (2.3) — MONITORING WELL LOCATION, NUMBER AND TRICHLOROETHYLENE CONCENTRATION (ug/L)
- PW5 — EXTRACTION WELL LOCATION AND NUMBER
- APPROXIMATE PROPERTY LINE
- 5 — TRICHLOROETHYLENE ISOCONCENTRATION CONTOUR (ug/L)

NOTES

1. BASE MAP DEVELOPED FROM DRAWING A107250-1 OF THE SEPTEMBER 1992 SEMI-ANNUAL GROUNDWATER MONITORING REPORT BY KEYSTONE ENVIRONMENTAL.
2. GROUNDWATER SAMPLES OBTAINED BY MONTGOMERY WATSON IN JUNE 1998.
3. CONCENTRATIONS OBTAINED FROM LABORATORY DATA BY COMMONWEALTH TECHNOLOGY, INC.

north

0 200 400

SCALE IN FEET

QUALITY CONTROL

	Graphic Standards	DLF	1-13-99
	Lead Professional	JDD	1-13-99

	Technical Review	JDD	1-13-99
	PM Review		

	Management Review		
	Other		

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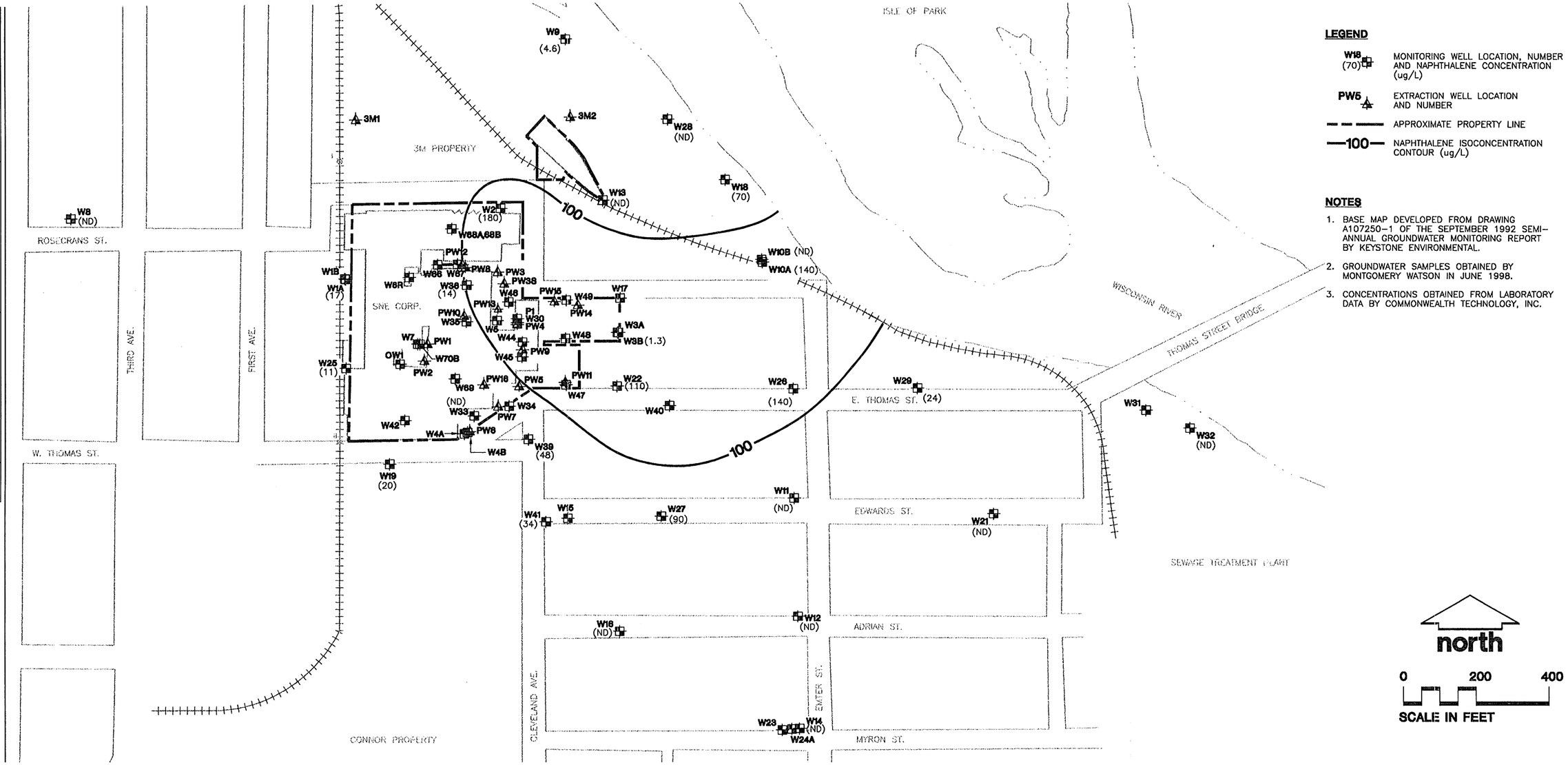
Developed By JDD
Drawn By LCL
Approved By
Date 1-15-99
Reference 1242057.04160101-B10
Revisions

TRICHLOROETHYLENE ISOCONCENTRATION MAP (JUNE 1998)

ANNUAL GROUNDWATER MONITORING REPORT
WAULECO INC.
PART OF SECTION 35, T29N, R8E
WAUSAU, WISCONSIN

Drawing Number
1242057
04160101 B23

MONTGOMERY WATSON



LEGEND

- W18 (70) — MONITORING WELL LOCATION, NUMBER AND NAPHTHALENE CONCENTRATION (ug/L)
- PW5 — EXTRACTION WELL LOCATION AND NUMBER
- APPROXIMATE PROPERTY LINE
- —100— NAPHTHALENE ISOCONCENTRATION CONTOUR (ug/L)

NOTES

1. BASE MAP DEVELOPED FROM DRAWING A107250-1 OF THE SEPTEMBER 1992 SEMI-ANNUAL GROUNDWATER MONITORING REPORT BY KEYSTONE ENVIRONMENTAL.
2. GROUNDWATER SAMPLES OBTAINED BY MONTGOMERY WATSON IN JUNE 1998.
3. CONCENTRATIONS OBTAINED FROM LABORATORY DATA BY COMMONWEALTH TECHNOLOGY, INC.

north

0 200 400

SCALE IN FEET

QUALITY CONTROL

	Graphic Standards	DLF	1-13-99
	Lead Professional	JDD	1-13-99
	Technical Review	JDD	1-13-99
	PM Review		
	Management Review		
	Other:		

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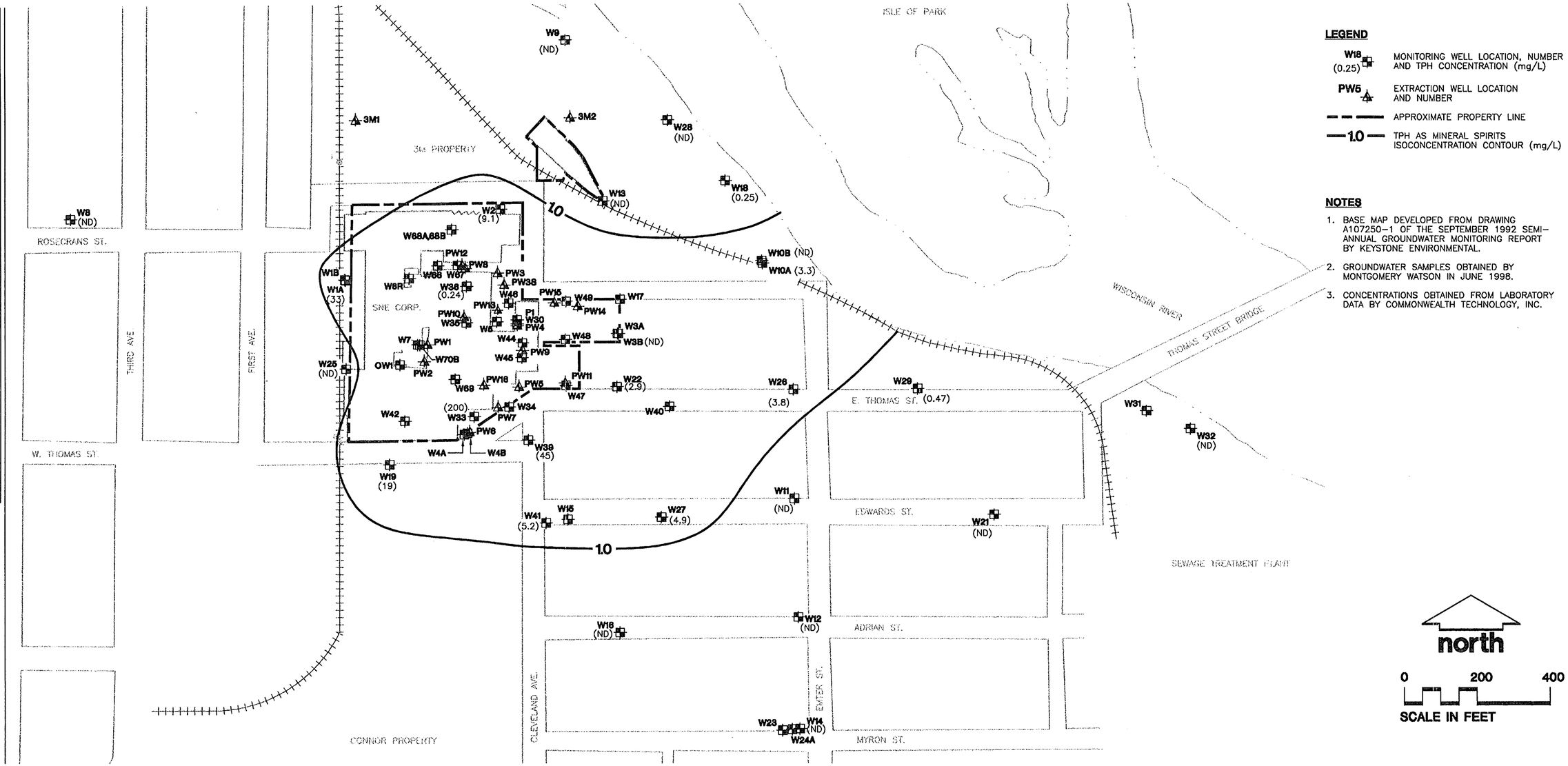
Developed By JDD
Drawn By LCL
Approved By
Date 1-13-99
Reference (1242057.04160101-B11
Revisions

NAPHTHALENE ISOCONCENTRATION MAP (JUNE 1998)

ANNUAL GROUNDWATER MONITORING REPORT
WAULECO INC.
PART OF SECTION 35, T29N, R8E
WAUSAU, WISCONSIN

Drawing Number
1242057
04160101 B24

MONTGOMERY WATSON



LEGEND

- W18 (0.25) — MONITORING WELL LOCATION, NUMBER AND TPH CONCENTRATION (mg/L)
- PW5 — EXTRACTION WELL LOCATION AND NUMBER
- APPROXIMATE PROPERTY LINE
- 1.0 — TPH AS MINERAL SPIRITS ISOCONCENTRATION CONTOUR (mg/L)

NOTES

1. BASE MAP DEVELOPED FROM DRAWING A107250-1 OF THE SEPTEMBER 1992 SEMI-ANNUAL GROUNDWATER MONITORING REPORT BY KEYSTONE ENVIRONMENTAL.
2. GROUNDWATER SAMPLES OBTAINED BY MONTGOMERY WATSON IN JUNE 1998.
3. CONCENTRATIONS OBTAINED FROM LABORATORY DATA BY COMMONWEALTH TECHNOLOGY, INC.

north

0 200 400

SCALE IN FEET

QUALITY CONTROL			Management Review
Graphic Standards	DLF	1-13-99	Technical Review JDD 1-13-99
Lead Professional	JDD	1-13-99	PM Review Other

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Developed By JDD Drawn By LCL

Approved By Date 1-13-99

Reference 1242057.04160101-B12

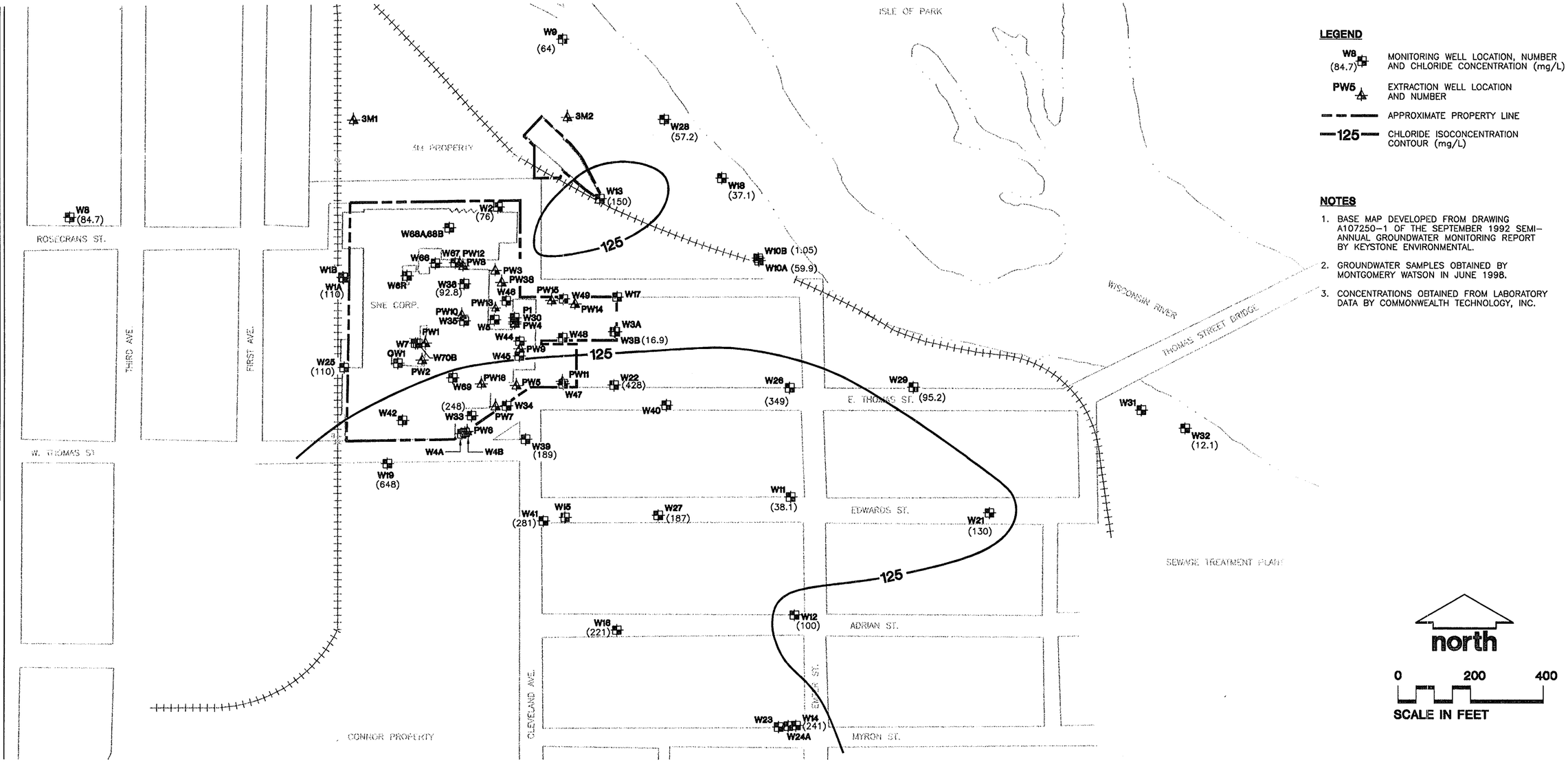
Revisions

TPH ISOCONCENTRATION MAP (JUNE 1998)

ANNUAL GROUNDWATER MONITORING REPORT
WAULECO INC.
PART OF SECTION 35, T29N, R8E
WAUSAU, WISCONSIN

Drawing Number
1242057
04160101 B25

MONTGOMERY WATSON



LEGEND

- W8 (84.7) — MONITORING WELL LOCATION, NUMBER AND CHLORIDE CONCENTRATION (mg/L)
- PW5 — EXTRACTION WELL LOCATION AND NUMBER
- APPROXIMATE PROPERTY LINE
- 125 — CHLORIDE ISOCONCENTRATION CONTOUR (mg/L)

NOTES

1. BASE MAP DEVELOPED FROM DRAWING A107250-1 OF THE SEPTEMBER 1992 SEMI-ANNUAL GROUNDWATER MONITORING REPORT BY KEYSTONE ENVIRONMENTAL.
2. GROUNDWATER SAMPLES OBTAINED BY MONTGOMERY WATSON IN JUNE 1998.
3. CONCENTRATIONS OBTAINED FROM LABORATORY DATA BY COMMONWEALTH TECHNOLOGY, INC.

north

0 200 400

SCALE IN FEET

QUALITY CONTROL

Graphic Standards	DLF	1-13-99	Technical Review JDD 1-13-99
Lead Professional	JDD	1-13-99	PM Review JDD 1-13-99
			Management Review
			Other

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Developed By JDD Drawn By LCL

Approved By [signature] Date 1-13-99

Reference 1242057.04160101-B13

Revisions

CHLORIDE ISOCONCENTRATION MAP (JUNE 1998)

ANNUAL GROUNDWATER MONITORING REPORT
WAULECO INC.
PART OF SECTION 35, T29N, R8E
WAUSAU, WISCONSIN

Drawing Number
1242057
04160101 B26

MONTGOMERY WATSON

A1

Indicators

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W01A

Parameter	Units	2/19/92	6/14/92	9/17/92	12/18/92	3/23/93	6/28/93	12/28/93	4/25/94	6/21/94	10/4/94	1/5/95	3/10/95
#2 Fuel Oil	mg/L												
#6 Fuel Oil	mg/L												
Chloride	mg/L				62.5	83	77	92	117	96	93	103	115
Gasoline	mg/L												
Kerosene	mg/L												
Mineral Spirits	mg/L												
Nitrogen, Ammonia	mg/L			<1	<1	0.24	0.11	<0.2	0.27	0.15	0.24	0.37	0.23
Nitrogen, Nitrate	mg/L				2.58								
Nitrogen, Nitrate + Nitrite	mg/L					2.22	2.18	2.86	1.36	1.62	2.3	1.69	2.2
Phosphorus, Phosphate	mg/L												
TRPH	ug/L	<630	<500	<500	11000	2500	2800	<1000		6000			
Sodium	ug/L				33000	36600							
Mercury	ug/L												

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W01A

Parameter	Units	7/5/95	9/13/95	12/18/95	3/21/96	7/10/96	9/25/96	1/21/97	7/11/97	1/2/98	6/23/98
#2 Fuel Oil	mg/L	<0.25				<0.25					
#6 Fuel Oil	mg/L					<1					
Chloride	mg/L	136	80	147	134	75	97	118	89.4	161	110
Gasoline	mg/L	<0.25				<0.25					
Kerosene	mg/L	<0.25				<0.25					
Mineral Spirits	mg/L	0.38				0.95			49		33
Nitrogen, Ammonia	mg/L	0.17	0.36	0.2	0.4	0.16	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrogen, Nitrate	mg/L										
Nitrogen, Nitrate + Nitrite	mg/L	2.77	1.61	2.61	2.7	2.22	2.26	2.14	2.14	2.03	2.1
Phosphorus, Phosphate	mg/L										
TRPH	ug/L										
Sodium	ug/L										
Mercury	ug/L										<0.2

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W02

Parameter	Units	1/8/87	6/4/87	9/3/87	12/3/87	3/2/88	4/7/88	8/10/88	11/15/88	1/26/89	4/27/89	7/27/89	10/26/89
#2 Fuel Oil	mg/L												
#6 Fuel Oil	mg/L												
Carbon, Total Organic	mg/L												
Chloride	mg/L												
Gasoline	mg/L												
Kerosene	mg/L												
Mineral Spirits	mg/L												
Nitrogen, Ammonia	mg/L												
Nitrogen, Nitrate	mg/L												
Nitrogen, Nitrate + Nitrite	mg/L												
Oil and Grease	mg/L	<5	<5	<5	<6		<6						<6
Phosphorus, Phosphate	mg/L												
Solids, Total Dissolved	mg/L												
Solids, Total Suspended	mg/L												
Sulfate	mg/L									<10			
TRPH	ug/L												
Arsenic	ug/L	<10	<10	<10			<10	<10	<10		<10	<10	<10
Arsenic, Total	ug/L												
Barium	ug/L	<200	<200	<200			<200	<200	<200		<200	<200	<200
Barium, Total	ug/L												
Chromium	ug/L	<10	<10	<10			<10	<10	<10		<10	<10	<10
Chromium, Total	ug/L												
Iron	ug/L	<100											
Sodium	ug/L												
Mercury	ug/L												

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W02

Parameter	Units	1/25/90	5/3/90	9/20/90	12/11/90	1/30/91	5/1/91	10/8/91	2/20/92	6/14/92	9/17/92	12/18/92	3/24/93	4/25/94
#2 Fuel Oil	mg/L													
#6 Fuel Oil	mg/L													
Carbon, Total Organic	mg/L													
Chloride	mg/L											182	239	151
Gasoline	mg/L													
Kerosene	mg/L													
Mineral Spirits	mg/L													
Nitrogen, Ammonia	mg/L										<1		0.17	0.17
Nitrogen, Nitrate	mg/L							<0.02	<0.02			0.093		
Nitrogen, Nitrate + Nitrite	mg/L												0.55	0.18
Oil and Grease	mg/L		<6		<6									
Phosphorus, Phosphate	mg/L													
Solids, Total Dissolved	mg/L													
Solids, Total Suspended	mg/L													
Sulfate	mg/L													
TRPH	ug/L									<500	<500	35000	3500	
Arsenic	ug/L	<10	<10	<10	<10	<10	<10	<10						
Arsenic, Total	ug/L													
Barium	ug/L	<200	<200	<200	<200	<200	<200	<200						
Barium, Total	ug/L													
Chromium	ug/L	<10	<10	<10	<10	<10	<10	<10						
Chromium, Total	ug/L													
Iron	ug/L													
Sodium	ug/L											68300	88600	
Mercury	ug/L													

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W02

Parameter	Units	6/22/94	10/4/94	1/5/95	3/10/95	7/6/95	9/13/95	12/18/95	3/21/96	7/10/96	1/21/97	7/11/97	1/2/98	6/25/98
#2 Fuel Oil	mg/L					<0.25				<0.25				
#6 Fuel Oil	mg/L									<1				
Carbon, Total Organic	mg/L													
Chloride	mg/L	146	117	120	117	113	114	97	89	58	93	54.5	54.8	76
Gasoline	mg/L					<0.25				<0.25				
Kerosene	mg/L					<0.25				<0.25				
Mineral Spirits	mg/L					8.8				4.2		<0.45		9.1
Nitrogen, Ammonia	mg/L	<0.1	0.16	<0.1	0.13	0.41	0.13	0.14	0.13	0.13	<0.1	<0.1	<0.1	<0.1
Nitrogen, Nitrate	mg/L													
Nitrogen, Nitrate + Nitrite	mg/L	1.46	0.13	1.11	1.34	0.79	0.66	0.69	0.74	1.2	1.13	0.17	0.54	1.12
Oil and Grease	mg/L													
Phosphorus, Phosphate	mg/L													
Solids, Total Dissolved	mg/L													
Solids, Total Suspended	mg/L													
Sulfate	mg/L													
TRPH	ug/L	5500												
Arsenic	ug/L													
Arsenic, Total	ug/L													
Barium	ug/L													
Barium, Total	ug/L													
Chromium	ug/L													
Chromium, Total	ug/L													
Iron	ug/L													
Sodium	ug/L													
Mercury	ug/L													0.4

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W03A

Parameter	Units	2/25/92	6/17/92	9/17/92	12/18/92	3/24/93	6/30/93	12/28/93	4/25/94	6/22/94	10/4/94	1/5/95	3/9/95
#2 Fuel Oil	mg/L												
#6 Fuel Oil	mg/L												
Chloride	mg/L				105	114	100	110	88	70	62	64	77
Gasoline	mg/L												
Kerosene	mg/L												
Mineral Spirits	mg/L												
Nitrogen, Ammonia	mg/L				<1	0.36	0.33	<0.2	0.19	0.31	0.12	<0.1	0.19
Nitrogen, Nitrate	mg/L	<0.02	<0.02	<0.02	0.182								
Nitrogen, Nitrate + Nitrite	mg/L					0.22	8.73	0.67	<0.02	0.33	0.11	0.05	0.05
Phosphorus, Phosphate	mg/L												
TRPH	ug/L		<500		114000	37000	49000	200000		220000			
Arsenic	ug/L		<1	<1									
Sodium	ug/L				42600	42500							

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W03A

Parameter	Units	7/6/95	9/13/95	12/18/95	3/21/96	7/10/96	9/25/96	1/21/97
#2 Fuel Oil	mg/L	<13				<25		
#6 Fuel Oil	mg/L					<100		
Chloride	mg/L	64	104	111	86	90	101	64
Gasoline	mg/L	<13				<25		
Kerosene	mg/L	<13				<25		
Mineral Spirits	mg/L	190				310		
Nitrogen, Ammonia	mg/L	0.76	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrogen, Nitrate	mg/L							
Nitrogen, Nitrate + Nitrite	mg/L	0.1	<0.5	0.95	0.5	1	0.34	1.07
Phosphorus, Phosphate	mg/L							
TRPH	ug/L							
Arsenic	ug/L							
Sodium	ug/L							

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W03B

Parameter	Units	6/17/91	2/22/92	9/17/92	12/18/92	3/23/93	6/29/93	12/28/93	6/22/94	7/6/95	7/10/96	7/11/97	6/24/98
#2 Fuel Oil	mg/L									<0.25	<0.25		
#6 Fuel Oil	mg/L										<1		
Chloride	mg/L				13.4	14	18	14	15	14	14	14	16.9
Gasoline	mg/L									<0.25	<0.25		
Kerosene	mg/L									<0.25	<0.25		
Mineral Spirits	mg/L									<0.25	<0.25	<0.26	<0.25
Nitrogen, Ammonia	mg/L			<1	<1	<0.1	0.33	<0.2	<0.1	0.2	<0.1	<0.1	<0.1
Nitrogen, Nitrate	mg/L				3.58								
Nitrogen, Nitrate + Nitrite	mg/L					3.75	3.47	3.88	4.23	3.66	3.96	3.93	3.48
Phosphorus, Phosphate	mg/L												
TRPH	ug/L				3000	<500	<1000	<1000	<1000				
Arsenic	ug/L	<1											
Sodium	ug/L			<5000	5970	4900							
Mercury	ug/L												<0.2

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W06		
Parameter	Units	2/20/92	9/17/92
Chloride	mg/L		
Nitrogen, Ammonia	mg/L		
Nitrogen, Nitrate	mg/L		
Phosphorus, Phosphate	mg/L		
TRPH	ug/L		<500
Sodium	ug/L		

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W06R

Parameter	Units	12/28/93	10/4/94	12/18/95	7/10/96
#2 Fuel Oil	mg/L				<13
#6 Fuel Oil	mg/L				<50
Chloride	mg/L	178	167	171	142
Gasoline	mg/L				<13
Kerosene	mg/L				<13
Mineral Spirits	mg/L				55
Nitrogen, Ammonia	mg/L	0.7	0.11	0.25	0.21
Nitrogen, Nitrate + Nitrite	mg/L	0.67	0.22	1.34	1.06
TRPH	ug/L	48000			

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W08

Parameter	Units	1/8/87	6/4/87	9/3/87	12/3/87	3/3/88	4/7/88	8/10/88	11/15/88	1/26/89	4/27/89	7/27/89	10/26/89
#2 Fuel Oil	mg/L												
#6 Fuel Oil	mg/L												
Alkalinity, Bicarbonate	mg/L												
Carbon, Total Organic	mg/L												
Chloride	mg/L												
Gasoline	mg/L												
Kerosene	mg/L												
Mineral Spirits	mg/L												
Nitrogen, Ammonia	mg/L												
Nitrogen, Nitrate	mg/L	<0.02											
Nitrogen, Nitrate + Nitrite	mg/L												
Oil and Grease	mg/L	<5	<5		<6	<6		<6		<6		<6	<6
Phosphorus, Phosphate	mg/L												
Sulfate	mg/L		<10							<10			
TRPH	ug/L												
Arsenic	ug/L	<10	<10	<10			<10	<10	<10		<10	<10	<10
Barium	ug/L	<200	<200	<200			<200	<200	<200		<200	<200	<200
Barium, Total	ug/L												
Calcium	ug/L												
Chromium	ug/L	<10	<10	<10			<10	<10	<10		<10	<10	<10
Chromium, Total	ug/L												
Iron	ug/L												
Magnesium	ug/L												
Potassium	ug/L												
Sodium	ug/L												
Mercury	ug/L												

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W08

Parameter	Units	1/25/90	5/3/90	9/20/90	12/11/90	1/29/91	5/1/91	10/8/91	10/29/91	12/22/91	2/20/92	6/14/92	9/17/92	12/19/92
#2 Fuel Oil	mg/L													
#6 Fuel Oil	mg/L													
Alkalinity, Bicarbonate	mg/L													
Carbon, Total Organic	mg/L													
Chloride	mg/L											73	58	59.8
Gasoline	mg/L													
Kerosene	mg/L													
Mineral Spirits	mg/L													
Nitrogen, Ammonia	mg/L													<1
Nitrogen, Nitrate	mg/L											2.66	2.98	2.38
Nitrogen, Nitrate + Nitrite	mg/L													
Oil and Grease	mg/L	<6	<6	<5	<6	<6	<6	<6						
Phosphorus, Phosphate	mg/L												1.53	
Sulfate	mg/L													
TRPH	ug/L													2000
Arsenic	ug/L	<10	<10	<10	<10	<10	<10	<10						
Barium	ug/L	<200	<200	<200	<200	<200	<200	<200	<200	<200				
Barium, Total	ug/L													
Calcium	ug/L													
Chromium	ug/L		<10	<10	<10	<10	<10	<10						
Chromium, Total	ug/L													
Iron	ug/L													
Magnesium	ug/L													
Potassium	ug/L								<5000					
Sodium	ug/L													16000
Mercury	ug/L													

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W08

Parameter	Units	3/23/93	6/28/93	12/27/93	4/25/94	6/21/94	10/4/94	1/5/95	3/9/95	7/6/95	9/13/95	12/18/95	3/20/96	7/8/96
#2 Fuel Oil	mg/L									<0.25				<0.25
#6 Fuel Oil	mg/L													<1
Alkalinity, Bicarbonate	mg/L													
Carbon, Total Organic	mg/L													
Chloride	mg/L	60	66	62	74	72	56	60	82	76	73	61	59	71
Gasoline	mg/L									<0.25				<0.25
Kerosene	mg/L									<0.25				<0.25
Mineral Spirits	mg/L									<0.25				<0.25
Nitrogen, Ammonia	mg/L	0.2	0.18	<0.2	0.1	<0.1	<0.1	<0.1	<0.1	0.13	<0.1	<0.1	0.12	<0.1
Nitrogen, Nitrate	mg/L													
Nitrogen, Nitrate + Nitrite	mg/L	5.06	1.85	2.58	2.72	2.41	0.44	2.44	2.52	2.53	2.18	1.8	3.22	2.18
Oil and Grease	mg/L													
Phosphorus, Phosphate	mg/L													
Sulfate	mg/L													
TRPH	ug/L	<500	<1000	<1000		<1000								
Arsenic	ug/L													
Barium	ug/L													
Barium, Total	ug/L													
Calcium	ug/L													
Chromium	ug/L													
Chromium, Total	ug/L													
Iron	ug/L													
Magnesium	ug/L													
Potassium	ug/L													
Sodium	ug/L	15300												
Mercury	ug/L													

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W08

Parameter	Units	9/25/96	1/21/97	7/11/97	1/2/98	6/23/98
#2 Fuel Oil	mg/L					
#6 Fuel Oil	mg/L					
Alkalinity, Bicarbonate	mg/L					
Carbon, Total Organic	mg/L					
Chloride	mg/L	46	70	75.6	74.4	84.7
Gasoline	mg/L					
Kerosene	mg/L					
Mineral Spirits	mg/L			<0.25		<0.25
Nitrogen, Ammonia	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrogen, Nitrate	mg/L					
Nitrogen, Nitrate + Nitrite	mg/L	2.02	2.85	3.62	3	3.04
Oil and Grease	mg/L					
Phosphorus, Phosphate	mg/L					
Sulfate	mg/L					
TRPH	ug/L					
Arsenic	ug/L					
Barium	ug/L					
Barium, Total	ug/L					
Calcium	ug/L					
Chromium	ug/L					
Chromium, Total	ug/L					
Iron	ug/L					
Magnesium	ug/L					
Potassium	ug/L					
Sodium	ug/L					
Mercury	ug/L					

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W09

Parameter	Units	6/4/87	9/3/87	12/3/87	3/2/88	4/7/88	8/10/88	11/15/88	1/26/89	4/27/89	7/27/89	10/26/89	1/25/90
#2 Fuel Oil	mg/L												
#6 Fuel Oil	mg/L												
Alkalinity, Bicarbonate	mg/L												
Alkalinity, Total	mg/L												
Carbon, Total Organic	mg/L												
Chloride	mg/L												
Gasoline	mg/L												
Kerosene	mg/L												
Mineral Spirits	mg/L												
Nitrogen, Ammonia	mg/L												
Nitrogen, Nitrate	mg/L			<0.02									
Nitrogen, Nitrate + Nitrite	mg/L												
Oil and Grease	mg/L			<6		<5		<6			<6	<5	<6
Phosphorus, Phosphate	mg/L												
Solids, Total Dissolved	mg/L												
Solids, Total Suspended	mg/L												
Sulfate	mg/L	<10	<10					<10	<10				
TRPH	ug/L												
Arsenic	ug/L	<10	<10			<10	<10	<10		<10	<10	<10	<10
Barium	ug/L	<200	<200			<200	<200	<200		<200	<200	<200	<200
Calcium	ug/L												
Chromium	ug/L	<10	<10			<10	<10	<10		<10	<10	<10	<10
Iron	ug/L												
Magnesium	ug/L												
Potassium	ug/L												
Sodium	ug/L												
Mercury	ug/L												

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W09

Parameter	Units	5/3/90	9/20/90	12/11/90	1/29/91	5/1/91	10/8/91	10/29/91	12/22/91	6/18/92	12/17/92	6/28/93	12/28/93	6/22/94
#2 Fuel Oil	mg/L													
#6 Fuel Oil	mg/L													
Alkalinity, Bicarbonate	mg/L													
Alkalinity, Total	mg/L													
Carbon, Total Organic	mg/L													
Chloride	mg/L										39.3	40	135	67
Gasoline	mg/L													
Kerosene	mg/L													
Mineral Spirits	mg/L													
Nitrogen, Ammonia	mg/L										<1	0.27	0.83	0.58
Nitrogen, Nitrate	mg/L									<0.02	0.063			
Nitrogen, Nitrate + Nitrite	mg/L											0.5	0.08	0.23
Oil and Grease	mg/L	<6	<5	<6	<6	<6	<6							
Phosphorus, Phosphate	mg/L													
Solids, Total Dissolved	mg/L													
Solids, Total Suspended	mg/L													
Sulfate	mg/L													
TRPH	ug/L									<500	3000			<1000
Arsenic	ug/L	<10	<10	<10	<10	<10	<10							
Barium	ug/L	<200	<200	<200	<200		<200		<200					
Calcium	ug/L													
Chromium	ug/L	<10	<10	<10	<10	<10	<10							
Iron	ug/L													
Magnesium	ug/L													
Potassium	ug/L							<5000	<5000					
Sodium	ug/L										76400			
Mercury	ug/L													

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W09

Parameter	Units	7/5/95	7/9/96	7/11/97	6/24/98
#2 Fuel Oil	mg/L	<0.25	<0.25		
#6 Fuel Oil	mg/L		<1		
Alkalinity, Bicarbonate	mg/L				
Alkalinity, Total	mg/L				
Carbon, Total Organic	mg/L				
Chloride	mg/L	204	67	37.1	64
Gasoline	mg/L	<0.25	<0.25		
Kerosene	mg/L	<0.25	<0.25		
Mineral Spirits	mg/L	<0.25	0.29	<0.27	<0.25
Nitrogen, Ammonia	mg/L	0.91	0.4	0.3	0.16
Nitrogen, Nitrate	mg/L				
Nitrogen, Nitrate + Nitrite	mg/L	0.1	<0.02	0.16	<0.14
Oil and Grease	mg/L				
Phosphorus, Phosphate	mg/L				
Solids, Total Dissolved	mg/L				
Solids, Total Suspended	mg/L				
Sulfate	mg/L				
TRPH	ug/L				
Arsenic	ug/L				
Barium	ug/L				
Calcium	ug/L				
Chromium	ug/L				
Iron	ug/L				
Magnesium	ug/L				
Potassium	ug/L				
Sodium	ug/L				
Mercury	ug/L				2.5

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W10A

Parameter	Units	1/8/87	6/4/87	9/3/87	12/3/87	3/3/88	4/7/88	8/10/88	11/15/88	1/26/89	4/27/89	7/27/89	10/26/89
#2 Fuel Oil	mg/L												
#6 Fuel Oil	mg/L												
Carbon, Total Organic	mg/L												
Chloride	mg/L												
Gasoline	mg/L												
Kerosene	mg/L												
Mineral Spirits	mg/L												
Nitrogen, Ammonia	mg/L												
Nitrogen, Nitrate	mg/L	<0.02	<0.02	<0.02		<0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nitrogen, Nitrate + Nitrite	mg/L												
Oil and Grease	mg/L												
Phosphorus, Phosphate	mg/L												
Solids, Total Dissolved	mg/L												
Solids, Total Suspended	mg/L												
Sulfate	mg/L								<10				
TRPH	ug/L												
Arsenic	ug/L	<10	<10	<10			<10	<10	<10		<10	<10	<10
Arsenic, Total	ug/L												
Barium	ug/L	<200	<200	<200			<200	<200	<200		<200	<200	<200
Barium, Total	ug/L												
Chromium	ug/L	<10	<10	<10			<10	<10	<10		<10	<10	<10
Chromium, Total	ug/L												
Iron	ug/L												
Sodium	ug/L												
Mercury	ug/L												

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W10A

Parameter	Units	1/25/90	5/3/90	9/20/90	12/11/90	1/29/91	5/1/91	10/8/91	7/8/92	12/18/92	6/30/93	12/28/93	6/22/94	7/6/95
#2 Fuel Oil	mg/L													<0.25
#6 Fuel Oil	mg/L													
Carbon, Total Organic	mg/L													
Chloride	mg/L									67	53	58	45	49
Gasoline	mg/L													<0.25
Kerosene	mg/L													<0.25
Mineral Spirits	mg/L													2.8
Nitrogen, Ammonia	mg/L								<1	<1	0.16		0.13	0.38
Nitrogen, Nitrate	mg/L	<0.02		<0.02	<0.02	<0.02				0.096				
Nitrogen, Nitrate + Nitrite	mg/L										<0.02	0.02	0.03	<0.02
Oil and Grease	mg/L				<6									
Phosphorus, Phosphate	mg/L													
Solids, Total Dissolved	mg/L													
Solids, Total Suspended	mg/L													
Sulfate	mg/L													
TRPH	ug/L								<500	1000	1200		1400	
Arsenic	ug/L	<10	<10	<10	<10	<10	<10	<10						
Arsenic, Total	ug/L													
Barium	ug/L	<200	<200	<200	<200	<200	<200	<200						
Barium, Total	ug/L													
Chromium	ug/L	<10	<10	<10	<10	<10	<10	<10						
Chromium, Total	ug/L													
Iron	ug/L													
Sodium	ug/L									28000				
Mercury	ug/L													

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W10A			
Parameter	Units	7/9/96	7/11/97	6/24/98
#2 Fuel Oil	mg/L	<0.25		
#6 Fuel Oil	mg/L	<1		
Carbon, Total Organic	mg/L			
Chloride	mg/L	47	32.5	59.9
Gasoline	mg/L	<0.25		
Kerosene	mg/L	<0.25		
Mineral Spirits	mg/L	2.4	<0.26	3.3
Nitrogen, Ammonia	mg/L	<0.1	<0.1	<0.1
Nitrogen, Nitrate	mg/L			
Nitrogen, Nitrate + Nitrite	mg/L	<0.02	<0.14	<0.14
Oil and Grease	mg/L			
Phosphorus, Phosphate	mg/L			
Solids, Total Dissolved	mg/L			
Solids, Total Suspended	mg/L			
Sulfate	mg/L			
TRPH	ug/L			
Arsenic	ug/L			
Arsenic, Total	ug/L			
Barium	ug/L			
Barium, Total	ug/L			
Chromium	ug/L			
Chromium, Total	ug/L			
Iron	ug/L			
Sodium	ug/L			
Mercury	ug/L			0.5

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W10B

Parameter	Units	7/8/92	12/18/92	6/29/93	12/28/93	6/22/94	7/6/95	7/9/96	7/11/97	6/24/98
#2 Fuel Oil	mg/L						<0.25	<0.25		
#6 Fuel Oil	mg/L							<1		
Chloride	mg/L		3.57	3	<2	<2	<2	<2	2.34	1.05
Gasoline	mg/L						<0.25	<0.25		
Kerosene	mg/L						<0.25	<0.25		
Mineral Spirits	mg/L						<0.25	<0.25	<0.27	<0.25
Nitrogen, Ammonia	mg/L	<1	<1	<0.1	<0.2	0.16	0.3	<0.1	<0.1	<0.1
Nitrogen, Nitrate	mg/L		0.427							
Nitrogen, Nitrate + Nitrite	mg/L			0.37	0.36	0.42	0.33	0.43	0.36	0.35
Phosphorus, Phosphate	mg/L									
TRPH	ug/L	<500	600	<1000	<1000	<1000				
Sodium	ug/L		6680							
Mercury	ug/L									<0.2

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W11

Parameter	Units	1/8/87	6/4/87	9/3/87	12/3/87	3/3/88	4/7/88	8/10/88	11/15/88	1/26/89	4/27/89	7/27/89	10/26/89
#2 Fuel Oil	mg/L												
#6 Fuel Oil	mg/L												
Carbon, Total Organic	mg/L												
Chloride	mg/L												
Gasoline	mg/L												
Kerosene	mg/L												
Mineral Spirits	mg/L												
Nitrogen, Ammonia	mg/L												
Nitrogen, Nitrate	mg/L												
Nitrogen, Nitrate + Nitrite	mg/L												
Oil and Grease	mg/L	<5				<6				<6	<6	<6	<6
Phosphorus, Phosphate	mg/L												
Solids, Total Dissolved	mg/L												
Solids, Total Suspended	mg/L												
Sulfate	mg/L		<10						<10	<10			
TRPH	ug/L												
Arsenic	ug/L	<10	<10	<10			<10	<10	<10		<10	<10	<10
Arsenic, Total	ug/L												
Barium	ug/L	<200	<200	<200			<200	<200	<200		<200	<200	<200
Barium, Total	ug/L												
Chromium	ug/L	<10	<10	<10			<10	<10	<10		<10	<10	<10
Chromium, Total	ug/L												
Iron	ug/L	<100											
Sodium	ug/L												
Mercury	ug/L												

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W11

Parameter	Units	1/25/90	5/3/90	9/21/90	12/11/90	12/12/90	1/30/91	5/1/91	10/8/91	6/18/92	12/17/92	6/30/93	12/28/93	6/21/94
#2 Fuel Oil	mg/L													
#6 Fuel Oil	mg/L													
Carbon, Total Organic	mg/L													
Chloride	mg/L										32.2	31	26	20
Gasoline	mg/L													
Kerosene	mg/L													
Mineral Spirits	mg/L													
Nitrogen, Ammonia	mg/L									<1	<1	0.1		<0.1
Nitrogen, Nitrate	mg/L										2.3			
Nitrogen, Nitrate + Nitrite	mg/L											1.78	1.89	0.99
Oil and Grease	mg/L	<6	<6					<6	<5					
Phosphorus, Phosphate	mg/L													
Solids, Total Dissolved	mg/L													
Solids, Total Suspended	mg/L													
Sulfate	mg/L													
TRPH	ug/L									<500	<500			<1000
Arsenic	ug/L	<10	<10	<10		<10	<10	<10	<10					
Arsenic, Total	ug/L													
Barium	ug/L	<200	<200	<200		<200	<200	<200	<200					
Barium, Total	ug/L													
Chromium	ug/L	<10	<10	<10		<10	<10	<10	<10					
Chromium, Total	ug/L													
Iron	ug/L													
Sodium	ug/L										17500			
Mercury	ug/L													

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W11				
Parameter	Units	7/5/95	7/9/96	7/11/97	6/24/98
#2 Fuel Oil	mg/L	<0.25	<0.25		
#6 Fuel Oil	mg/L		<1		
Carbon, Total Organic	mg/L				
Chloride	mg/L	25	47	277	38.1
Gasoline	mg/L	<0.25	<0.25		
Kerosene	mg/L	<0.25	<0.25		
Mineral Spirits	mg/L	<0.25	<0.25	<0.25	<0.25
Nitrogen, Ammonia	mg/L	<0.1	<0.1	<0.1	<0.1
Nitrogen, Nitrate	mg/L				
Nitrogen, Nitrate + Nitrite	mg/L	1.18	0.46	0.52	2.38
Oil and Grease	mg/L				
Phosphorus, Phosphate	mg/L				
Solids, Total Dissolved	mg/L				
Solids, Total Suspended	mg/L				
Sulfate	mg/L				
TRPH	ug/L				
Arsenic	ug/L				
Arsenic, Total	ug/L				
Barium	ug/L				
Barium, Total	ug/L				
Chromium	ug/L				
Chromium, Total	ug/L				
Iron	ug/L				
Sodium	ug/L				
Mercury	ug/L				<0.2

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W12

Parameter	Units	6/18/92	12/17/92	6/29/93	12/28/93	6/21/94	7/6/95	7/8/96	7/11/97	6/23/98
#2 Fuel Oil	mg/L						<0.25	<0.25		
#6 Fuel Oil	mg/L							<1		
Chloride	mg/L		140	126	108	102	105	89	83.6	100
Gasoline	mg/L						<0.25	<0.25		
Kerosene	mg/L						<0.25	<0.25		
Mineral Spirits	mg/L						<0.25	<0.25	<0.26	<0.25
Nitrogen, Ammonia	mg/L	<1	<1	<0.1	0.22	<0.1	0.28	<0.1	<0.1	<0.1
Nitrogen, Nitrate	mg/L		10.3							
Nitrogen, Nitrate + Nitrite	mg/L			11.3	8.14	7.43	6.25	7.7	5.5	3.97
Phosphorus, Phosphate	mg/L									
TRPH	ug/L	<500	<500	<1000	<1000	<1000				
Sodium	ug/L		63000							
Mercury	ug/L									<0.2

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W13

Parameter	Units	6/22/92	12/19/92	6/30/93	12/27/93	4/25/94	6/22/94	10/4/94	3/10/95	7/6/95	9/13/95	3/20/96	7/10/96
#2 Fuel Oil	mg/L									<0.25			<0.25
#6 Fuel Oil	mg/L												<1
Chloride	mg/L		146	80	200	167	152	132	184	163	96	133	83
Gasoline	mg/L									<0.25			<0.25
Kerosene	mg/L									<0.25			<0.25
Mineral Spirits	mg/L									<0.25			<0.25
Nitrogen, Ammonia	mg/L	<1	<1	<0.1	<0.2	<0.1	<0.1	0.2	<0.1	0.3	<0.1	0.1	<0.1
Nitrogen, Nitrate	mg/L		1.48										
Nitrogen, Nitrate + Nitrite	mg/L			1.38	5.01	2.36	2.84	5.59	7.22	6.66	4.59	4.65	4.87
Phosphorus, Phosphate	mg/L												
TRPH	ug/L	<500	<500	<1000	<1000		<1000						
Sodium	ug/L		83300										
Mercury	ug/L												

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W13

Parameter	Units	9/25/96	7/11/97	1/2/98	6/24/98
#2 Fuel Oil	mg/L				
#6 Fuel Oil	mg/L				
Chloride	mg/L	101	75.5	211	150
Gasoline	mg/L				
Kerosene	mg/L				
Mineral Spirits	mg/L		<0.27		<0.25
Nitrogen, Ammonia	mg/L	<0.1	<0.1	<0.1	<0.1
Nitrogen, Nitrate	mg/L				
Nitrogen, Nitrate + Nitrite	mg/L	4.37	<0.14	4.41	3.57
Phosphorus, Phosphate	mg/L				
TRPH	ug/L				
Sodium	ug/L				
Mercury	ug/L				<0.2

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W14

Parameter	Units	1/8/87	6/4/87	9/3/87	12/3/87	3/3/88	4/7/88	8/10/88	11/15/88	1/26/89	4/27/89	7/27/89	10/26/89
#2 Fuel Oil	mg/L												
#6 Fuel Oil	mg/L												
Carbon, Total Organic	mg/L												
Chloride	mg/L												
Gasoline	mg/L												
Kerosene	mg/L												
Mineral Spirits	mg/L												
Nitrogen, Ammonia	mg/L												
Nitrogen, Nitrate	mg/L												
Nitrogen, Nitrate + Nitrite	mg/L												
Oil and Grease	mg/L	<5			<5		<6		<5	<6	<6	<6	<6
Phosphorus, Phosphate	mg/L												
Solids, Total Dissolved	mg/L												
Solids, Total Suspended	mg/L												
Sulfate	mg/L		<10						<10	<10			
TRPH	ug/L												
Arsenic	ug/L	<10	<10	<10			<10	<10	<10		<10	<10	<10
Arsenic, Total	ug/L												
Barium	ug/L		<200	<200			<200	<200	<200		<200	<200	<200
Barium, Total	ug/L												
Chromium	ug/L	<10	<10	<10			<10	<10	<10		<10	<10	<10
Chromium, Total	ug/L												
Iron	ug/L	<100	<100										
Sodium	ug/L												
Mercury	ug/L												

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W14

Parameter	Units	1/25/90	5/3/90	9/21/90	12/11/90	12/12/90	1/30/91	5/1/91
#2 Fuel Oil	mg/L							
#6 Fuel Oil	mg/L							
Carbon, Total Organic	mg/L							
Chloride	mg/L							
Gasoline	mg/L							
Kerosene	mg/L							
Mineral Spirits	mg/L							
Nitrogen, Ammonia	mg/L							
Nitrogen, Nitrate	mg/L							
Nitrogen, Nitrate + Nitrite	mg/L							
Oil and Grease	mg/L	<6	<5	<5		<6	<6	<5
Phosphorus, Phosphate	mg/L							
Solids, Total Dissolved	mg/L							
Solids, Total Suspended	mg/L							
Sulfate	mg/L							
TRPH	ug/L							
Arsenic	ug/L	<10	<10	<10		<10	<10	<10
Arsenic, Total	ug/L							
Barium	ug/L	<200	<200	<200				
Barium, Total	ug/L							
Chromium	ug/L	<10	<10	<10		<10	<10	<10
Chromium, Total	ug/L							
Iron	ug/L							
Sodium	ug/L							
Mercury	ug/L							

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W16

Parameter	Units	1/8/87	6/4/87	9/3/87	12/3/87	3/3/88	4/7/88	8/10/88	11/15/88	1/26/89	4/27/89	7/27/89	10/26/89
#2 Fuel Oil	mg/L												
#6 Fuel Oil	mg/L												
Alkalinity, Bicarbonate	mg/L												
Alkalinity, Total	mg/L												
Carbon, Total Organic	mg/L												
Chloride	mg/L												
Gasoline	mg/L												
Kerosene	mg/L												
Mineral Spirits	mg/L												
Nitrogen, Ammonia	mg/L												
Nitrogen, Nitrate	mg/L												
Nitrogen, Nitrate + Nitrite	mg/L												
Oil and Grease	mg/L	<5			<6		<5			<5	<6	<6	<6
Phosphorus, Phosphate	mg/L												
Solids, Total Dissolved	mg/L												
Solids, Total Suspended	mg/L												
Sulfate	mg/L								<10	<10			
TRPH	ug/L												
Arsenic	ug/L	<10	<10	<10			<10	<10	<10		<10	<10	<10
Arsenic, Total	ug/L												
Barium	ug/L	<200	<200	<200			<200	<200	<200		<200	<200	<200
Barium, Total	ug/L												
Calcium	ug/L												
Chromium	ug/L	<10	<10	<10			<10	<10	<10		<10	<10	<10
Chromium, Total	ug/L												
Iron	ug/L	<100	<100										
Magnesium	ug/L												
Potassium	ug/L												
Sodium	ug/L												
Mercury	ug/L												

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W16

Parameter	Units	1/25/90	5/3/90	9/21/90	12/11/90	12/12/90	1/30/91	5/1/91	10/8/91	10/29/91	12/22/91	6/16/92	12/18/92	6/29/93
#2 Fuel Oil	mg/L													
#6 Fuel Oil	mg/L													
Alkalinity, Bicarbonate	mg/L													
Alkalinity, Total	mg/L													
Carbon, Total Organic	mg/L													
Chloride	mg/L											101	125	126
Gasoline	mg/L													
Kerosene	mg/L													
Mineral Spirits	mg/L													
Nitrogen, Ammonia	mg/L													0.53
Nitrogen, Nitrate	mg/L											5.8	10.4	
Nitrogen, Nitrate + Nitrite	mg/L													7.86
Oil and Grease	mg/L	<6	<6	<5		<5	<6	<6	<6					
Phosphorus, Phosphate	mg/L											4.29		
Solids, Total Dissolved	mg/L													
Solids, Total Suspended	mg/L													
Sulfate	mg/L													
TRPH	ug/L											1600		<1000
Arsenic	ug/L	<10	<10	<10		<10	<10	<10	<10			<1		
Arsenic, Total	ug/L													
Barium	ug/L	<200	<200	<200		<200	<200	<200	<200	<200	<200	<200		
Barium, Total	ug/L													
Calcium	ug/L													
Chromium	ug/L	<10	<10	<10		<10	<10	<10	<10					
Chromium, Total	ug/L													
Iron	ug/L													
Magnesium	ug/L													
Potassium	ug/L													
Sodium	ug/L												58500	
Mercury	ug/L													

Summary of Analytical Data
Waulcco, Inc.
Wausau, Wisconsin

Well ID:	W16

Parameter	Units	12/28/93	6/21/94	7/6/95	7/8/96	7/11/97	6/24/98
#2 Fuel Oil	mg/L			<0.25	<0.25		
#6 Fuel Oil	mg/L				<1		
Alkalinity, Bicarbonate	mg/L						
Alkalinity, Total	mg/L						
Carbon, Total Organic	mg/L						
Chloride	mg/L	155	128	106	28	173	221
Gasoline	mg/L			<0.25	<0.25		
Kerosene	mg/L			<0.25	<0.25		
Mineral Spirits	mg/L			<0.25	<0.25	<0.26	<0.25
Nitrogen, Ammonia	mg/L	<0.2	<0.1	0.17	<0.1	<0.1	<0.1
Nitrogen, Nitrate	mg/L						
Nitrogen, Nitrate + Nitrite	mg/L	11.5	6.27	6.03	0.84	5.44	4.13
Oil and Grease	mg/L						
Phosphorus, Phosphate	mg/L						
Solids, Total Dissolved	mg/L						
Solids, Total Suspended	mg/L						
Sulfate	mg/L						
TRPH	ug/L	<1000	<1000				
Arsenic	ug/L						
Arsenic, Total	ug/L						
Barium	ug/L						
Barium, Total	ug/L						
Calcium	ug/L						
Chromium	ug/L						
Chromium, Total	ug/L						
Iron	ug/L						
Magnesium	ug/L						
Potassium	ug/L						
Sodium	ug/L						
Mercury	ug/L						<0.2

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W18

Parameter	Units	2/25/92	7/8/92	9/17/92	12/17/92	3/23/93	6/29/93	12/28/93	6/22/94	7/5/95	7/9/96	7/11/97	6/24/98
#2 Fuel Oil	mg/L									<0.25	<0.25		
#6 Fuel Oil	mg/L										<1		
Chloride	mg/L				52.7	52	43	69	45	39	28	40.7	37.1
Gasoline	mg/L									<0.25	<0.25		
Kerosene	mg/L									<0.25	<0.25		
Mineral Spirits	mg/L									1.9	0.94	<0.26	0.25
Nitrogen, Ammonia	mg/L		<1	<1	<1	0.14	<0.1	<0.2	<0.1	0.22	<0.1	<0.1	<0.1
Nitrogen, Nitrate	mg/L	<0.02	<0.02	<0.02	0.05								
Nitrogen, Nitrate + Nitrite	mg/L					<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.14	<0.14
Phosphorus, Phosphate	mg/L												
TRPH	ug/L		<500	<500	1000	2100	<1000	1000	<1000				
Sodium	ug/L				22800	21800							
Mercury	ug/L												<0.2

Breakdown of ATG, Inc. Daily Rates - Crab Orchard Remedial Action

Mobilization/Demobilization Union labor for safety training Union labor for physicals - pre and post Union labor for lead screens - pre and post Blast Sheilds for Equipment Equipment Mobilization Office Trailer Hook-Up and Delivery Phone, Utility Hook-ups Mobilization of Personnel Project Manager, Site Superitendent and Buyer's time for ordering equiment and supplies Project Manager and Site Superitendent time for submittals, shop drawings, etc. Decontamination of Equipment Demobilization of Equipment Demobilization of Personell Utility disconnections	Estimated - LS		35,750
Excavate Explosive Soils 1 Water Truck 1 Excavator 1 Loader 2 Screeners 1 Conveyor Belt 4 Union Operators 4 Union Laborers Fuel Misc. pumps, hoses, supplies Level C PPE with some Level D PPE	Daily Rate		7,700
Sub-base Cut/Fill - Load Special Waste 1 Water Truck 1 Excavator 1 Loader 1 Dozer 3 Union Operators 1 Union Laborers Fuel Misc. pumps, hoses, supplies Level D PPE with some Level C PPE	Daily Rate		4,500
Install Earthen Cover 1 Water Truck 1 Dump Truck 1 Loader 1 Dozer 1 Roller/Sheepsfoot 4 Union Operators 1 Union Laborers Fuel Misc. pumps, hoses, supplies Level D PPE	Daily Rate		5,700
ACM Excavation, Screening and Disposal Similar to Excavation and Screeening of explosive soils but includes a trained Asbestos crew and transportation and disposal of asbestos Level C PPE	Estimated - LS		12,000
Construction Oversight Site Superintendent Perdiem Site Truck and fuel Office Trailer Mobile phone Trailer phone Copier and fax Office supplies Drinking water Airfare/travel Port O Lets H & S Supplies PPE	Weekly Cost	$	4,500
Administration, Scheduling, Reporting and Project Management Project Manager - Part Time Contract Manager - Part Time Buyer - Part Time Administrative Assistant - Part Time Word Processor - Part Time Accounting Clerk - Part Time Cost and Schedule Engineer - Part Time Payroll Clerk - Part Time Postage	Weekly Cost	$	2,479

*** All cost information that ATG, Inc. supplied was based on actual costs incurred during 1998 Remedial Activities. ATG was procured by MW as a cost reimbursable subcontractor due to the nature of this project. All daily rates, weekly rates and estimate lump sums will be billed on a cost reimbursable basis. All of the costs listed above include the subcontractors overhead, G&A and fee at 6.5%

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W19

Parameter	Units	6/24/92	12/18/92	6/30/93	12/28/93	4/25/94	6/21/94	10/4/94	3/10/95	7/6/95	9/13/95	3/20/96	7/10/96
#2 Fuel Oil	mg/L									<0.25			<0.25
#6 Fuel Oil	mg/L												<1
Chloride	mg/L		270	87	154	164	53	48	235	238	68	43	140
Gasoline	mg/L									<0.25			<0.25
Kerosene	mg/L									<0.25			<0.25
Mineral Spirits	mg/L									3.9			2.3
Nitrogen, Ammonia	mg/L		<1	<0.1	<0.2	0.11	<0.1	<0.1	0.22	0.4	0.12	0.25	0.15
Nitrogen, Nitrate	mg/L		1.73										
Nitrogen, Nitrate + Nitrite	mg/L			0.25	0.54	0.04	0.07	0.03	<0.02	0.02	0.04	<0.1	0.55
TRPH	ug/L		3000	2100	8200		6600						
Arsenic	ug/L	<1											
Sodium	ug/L		354000										
Mercury	ug/L												

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W19				
Parameter	Units	9/25/96	7/11/97	1/2/98	6/24/98
#2 Fuel Oil	mg/L				
#6 Fuel Oil	mg/L				
Chloride	mg/L	188	221	1220	648
Gasoline	mg/L				
Kerosene	mg/L				
Mineral Spirits	mg/L		4.2		19
Nitrogen, Ammonia	mg/L	<0.1	<0.1	<0.1	<0.1
Nitrogen, Nitrate	mg/L				
Nitrogen, Nitrate + Nitrite	mg/L	1.49	0.76	1.23	1.7
TRPH	ug/L				
Arsenic	ug/L				
Sodium	ug/L				
Mercury	ug/L				2.9

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W20

Parameter	Units	1/8/87	6/4/87	12/3/87	3/3/88	4/7/88	11/15/88	1/26/89	4/27/89	7/27/89	10/26/89	1/25/90	5/3/90
Carbon, Total Organic	mg/L												
Chloride	mg/L												
Nitrogen, Nitrate	mg/L		<0.02								<0.02		
Oil and Grease	mg/L	<5		<6		<6				<6		<6	<6
Solids, Total Dissolved	mg/L												
Solids, Total Suspended	mg/L												
Sulfate	mg/L						<10	<10					
Arsenic	ug/L	<10	<10			<10	<10		<10	<10	<10	<10	<10
Arsenic, Total	ug/L												
Barium	ug/L	<200	<200			<200	<200		<200	<200	<200	<200	<200
Barium, Total	ug/L												
Chromium	ug/L	<10	<10			<10	<10		<10	<10	<10	<10	<10
Chromium, Total	ug/L												
Iron	ug/L	<100											

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W20

Parameter	Units	9/21/90	12/11/90	1/30/91	5/1/91	10/8/91
Carbon, Total Organic	mg/L					
Chloride	mg/L					
Nitrogen, Nitrate	mg/L					
Oil and Grease	mg/L	<5	<6	<6	<6	<6
Solids, Total Dissolved	mg/L					
Solids, Total Suspended	mg/L					
Sulfate	mg/L					
Arsenic	ug/L	<10	<10	<10	<10	<10
Arsenic, Total	ug/L					
Barium	ug/L	<200	<200	<200	<200	<200
Barium, Total	ug/L					
Chromium	ug/L	<10	<10	<10	<10	<10
Chromium, Total	ug/L					
Iron	ug/L					

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W21

Parameter	Units	1/8/87	6/4/87	9/3/87	12/3/87	3/3/88	4/7/88	8/10/88	11/15/88	1/26/89	4/27/89	7/27/89	10/26/89
#2 Fuel Oil	mg/L												
#6 Fuel Oil	mg/L												
Alkalinity, Bicarbonate	mg/L												
Alkalinity, Total	mg/L												
Carbon, Total Organic	mg/L												
Chloride	mg/L												
Gasoline	mg/L												
Kerosene	mg/L												
Mineral Spirits	mg/L												
Nitrogen, Ammonia	mg/L												
Nitrogen, Nitrate	mg/L												
Nitrogen, Nitrate + Nitrite	mg/L												
Oil and Grease	mg/L	<5	<5		<6	<6	<6					<6	<6
Phosphorus, Phosphate	mg/L												
Solids, Total Dissolved	mg/L												
Solids, Total Suspended	mg/L												
Sulfate	mg/L								<10	<10			
TRPH	ug/L												
Arsenic	ug/L	<10	<10	<10			<10	<10	<10		<10	<10	<10
Arsenic, Total	ug/L												
Barium	ug/L	<200	<200	<200			<200	<200	<200		<200	<200	<200
Barium, Total	ug/L												
Calcium	ug/L												
Chromium	ug/L	<10	<10	<10			<10	<10	<10		<10	<10	<10
Chromium, Total	ug/L												
Iron	ug/L												
Magnesium	ug/L												
Potassium	ug/L												
Sodium	ug/L												
Mercury	ug/L												

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W21

Parameter	Units	1/25/90	5/3/90	9/21/90	12/11/90	12/12/90	1/30/91	5/1/91	10/8/91	10/29/91	12/22/91	6/24/92	12/18/92	6/29/93
#2 Fuel Oil	mg/L													
#6 Fuel Oil	mg/L													
Alkalinity, Bicarbonate	mg/L													
Alkalinity, Total	mg/L													
Carbon, Total Organic	mg/L													
Chloride	mg/L											40.4	59	62
Gasoline	mg/L													
Kerosene	mg/L													
Mineral Spirits	mg/L													
Nitrogen, Ammonia	mg/L													<0.1
Nitrogen, Nitrate	mg/L											2.5	2.3	
Nitrogen, Nitrate + Nitrite	mg/L													1.83
Oil and Grease	mg/L	<6	<6	<6		<6	<6	<6	<5					
Phosphorus, Phosphate	mg/L											3.18		
Solids, Total Dissolved	mg/L													
Solids, Total Suspended	mg/L													
Sulfate	mg/L													
TRPH	ug/L													<1000
Arsenic	ug/L	<10	<10	<10		<10	<10	<10	<10			<1		
Arsenic, Total	ug/L													
Barium	ug/L	<200	<200	<200		<200	<200	<200	<200	<200	<200			
Barium, Total	ug/L													
Calcium	ug/L													
Chromium	ug/L	<10	<10	<10		<10	<10	<10	<10					
Chromium, Total	ug/L													
Iron	ug/L													
Magnesium	ug/L													
Potassium	ug/L									<5000	<5000			
Sodium	ug/L												36500	
Mercury	ug/L													

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W21

Parameter	Units	12/28/93	6/22/94	7/6/95	7/8/96	7/11/97	6/23/98
#2 Fuel Oil	mg/L			<0.25	<0.25		
#6 Fuel Oil	mg/L				<1		
Alkalinity, Bicarbonate	mg/L						
Alkalinity, Total	mg/L						
Carbon, Total Organic	mg/L						
Chloride	mg/L	74	43	44	88	79.1	130
Gasoline	mg/L			<0.25	<0.25		
Kerosene	mg/L			<0.25	<0.25		
Mineral Spirits	mg/L			<0.25	<0.25	<0.26	<0.25
Nitrogen, Ammonia	mg/L	<0.2	0.31	0.16	<0.1	<0.1	<0.1
Nitrogen, Nitrate	mg/L						
Nitrogen, Nitrate + Nitrite	mg/L	2.4	1.3	0.78	4.36	2.58	2.93
Oil and Grease	mg/L						
Phosphorus, Phosphate	mg/L						
Solids, Total Dissolved	mg/L						
Solids, Total Suspended	mg/L						
Sulfate	mg/L						
TRPH	ug/L	<1000	<1000				
Arsenic	ug/L						
Arsenic, Total	ug/L						
Barium	ug/L						
Barium, Total	ug/L						
Calcium	ug/L						
Chromium	ug/L						
Chromium, Total	ug/L						
Iron	ug/L						
Magnesium	ug/L						
Potassium	ug/L						
Sodium	ug/L						
Mercury	ug/L						<0.2

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W22

Parameter	Units	2/25/92	6/14/92	9/17/92	12/18/92	3/24/93	6/30/93	12/28/93	4/25/94	6/22/94	10/4/94	1/5/95	3/9/95
#2 Fuel Oil	mg/L												
#6 Fuel Oil	mg/L												
Chloride	mg/L				313	307	25	356	247	180	240	248	196
Gasoline	mg/L												
Kerosene	mg/L												
Mineral Spirits	mg/L												
Nitrogen, Ammonia	mg/L			<1	<1	<0.1	<0.1	0.22	0.24	<0.1	<0.1	<0.1	0.13
Nitrogen, Nitrate	mg/L	<0.02			0.081								
Nitrogen, Nitrate + Nitrite	mg/L					0.02	0.73	0.06	0.13	0.05	0.15	0.27	0.21
Phosphorus, Phosphate	mg/L												
TRPH	ug/L			<500	3000	9900	<1000	2000		<1000			
Sodium	ug/L				131000	124000							
Mercury	ug/L												

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W22

Parameter	Units	7/6/95	9/13/95	12/18/95	3/21/96	7/10/96	9/25/96	1/21/97	7/11/97	1/2/98	6/24/98
#2 Fuel Oil	mg/L	<0.25				<0.25					
#6 Fuel Oil	mg/L					<1					
Chloride	mg/L	167	119	183	138	95	100	118	184	392	428
Gasoline	mg/L	<0.25				<0.25					
Kerosene	mg/L	<0.25				<0.25					
Mineral Spirits	mg/L	2				1.8			2.8		2.9
Nitrogen, Ammonia	mg/L	0.49	<0.1	0.13	0.12	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrogen, Nitrate	mg/L										
Nitrogen, Nitrate + Nitrite	mg/L	0.02	0.22	<0.1	<0.1	0.28	<0.08	0.15	0.2	<0.14	0.16
Phosphorus, Phosphate	mg/L										
TRPH	ug/L										
Sodium	ug/L										
Mercury	ug/L										0.3

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W25

Parameter	Units	2/19/92	7/29/92	9/17/92	12/17/92	3/23/93	6/28/93	12/28/93	4/25/94	6/21/94	10/4/94	3/10/95	7/5/95
#2 Fuel Oil	mg/L												<0.25
Chloride	mg/L				39.3	77	71	136	90	84	89	68	91
Gasoline	mg/L												<0.25
Kerosene	mg/L												<0.25
Mineral Spirits	mg/L												0.85
Nitrogen, Ammonia	mg/L			<1	<1	<0.1	0.2	0.26	0.2	0.17	<0.1	0.23	0.71
Nitrogen, Nitrate	mg/L				6.52								
Nitrogen, Nitrate + Nitrite	mg/L					4.37	4.2	8.07	1.14	2.69	6.02	0.58	2.58
Phosphorus, Phosphate	mg/L												
TRPH	ug/L	<610	<500	<500	<500	<500	<1000	<1000		1600			
Sodium	ug/L				33700	40200							
Mercury	ug/L												

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W25

Parameter	Units	9/13/95	3/21/96	7/11/97	1/2/98	6/23/98
#2 Fuel Oil	mg/L					
Chloride	mg/L	25	54	156	81.2	110
Gasoline	mg/L					
Kerosene	mg/L					
Mineral Spirits	mg/L			<0.26		<0.25
Nitrogen, Ammonia	mg/L	<0.1	0.11	<0.1	<0.1	<0.1
Nitrogen, Nitrate	mg/L					
Nitrogen, Nitrate + Nitrite	mg/L	1.14	4.55	5.5	3.4	2.61
Phosphorus, Phosphate	mg/L					
TRPH	ug/L					
Sodium	ug/L					
Mercury	ug/L					<0.2

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W26

Parameter	Units	2/25/92	6/14/92	9/17/92	12/18/92	3/24/93	6/30/93	12/27/93	4/25/94	6/22/94	10/4/94	3/9/95	7/6/95
#2 Fuel Oil	mg/L												<0.25
#6 Fuel Oil	mg/L												
Chloride	mg/L				139	136	133	155	212	181	178	169	143
Gasoline	mg/L												<0.25
Kerosene	mg/L												<0.25
Mineral Spirits	mg/L												4.4
Nitrogen, Ammonia	mg/L			<1	<1	0.18	0.19	<0.2	0.11	<0.1	<0.1	0.12	0.24
Nitrogen, Nitrate	mg/L				0.337								
Nitrogen, Nitrate + Nitrite	mg/L					0.12	0.12	0.16	<0.02	<0.02	<0.02	0.05	0.04
Phosphorus, Phosphate	mg/L												
TRPH	ug/L		<500		1000	4800	<1000	1000		1200			
Sodium	ug/L				66000	52800							
Mercury	ug/L												

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W26

Parameter	Units	9/13/95	3/21/96	7/9/96	9/25/96	7/11/97	1/2/98	6/24/98
#2 Fuel Oil	mg/L			<0.25				
#6 Fuel Oil	mg/L			<1				
Chloride	mg/L	245	118	488	359	207	287	349
Gasoline	mg/L			<0.25				
Kerosene	mg/L			<0.25				
Mineral Spirits	mg/L			0.9		<0.26		3.8
Nitrogen, Ammonia	mg/L	<0.1	0.16	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrogen, Nitrate	mg/L							
Nitrogen, Nitrate + Nitrite	mg/L	<0.02	<0.04	0.81	<0.08	0.25	<0.14	<0.14
Phosphorus, Phosphate	mg/L							
TRPH	ug/L							
Sodium	ug/L							
Mercury	ug/L							0.2

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W27									
Parameter	Units	6/24/92	12/17/92	6/30/93	12/28/93	6/22/94	7/6/95	7/9/96	7/11/97	6/24/98
#2 Fuel Oil	mg/L						<0.25	<2.5		
#6 Fuel Oil	mg/L							<10		
Chloride	mg/L		140	162	129	116	123	173	214	187
Gasoline	mg/L						<0.25	<2.5		
Kerosene	mg/L						<0.25	<2.5		
Mineral Spirits	mg/L						3.8	6.5	<0.25	4.9
Nitrogen, Ammonia	mg/L		<1	<0.1	0.26	<0.1	0.47	<0.1	<0.1	<0.1
Nitrogen, Nitrate	mg/L		0.324							
Nitrogen, Nitrate + Nitrite	mg/L			2.62	0.39	0.36	1.41	0.16	0.32	0.64
TRPH	ug/L		2000	<1000	1000	<1000				
Arsenic	ug/L	<1								
Sodium	ug/L		58000							
Mercury	ug/L									1

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W28

Parameter	Units	1/8/87	6/4/87	9/3/87	12/3/87	3/3/88	4/7/88	8/10/88	11/15/88	1/26/89	4/27/89	7/27/89	10/26/89
#2 Fuel Oil	mg/L												
#6 Fuel Oil	mg/L												
Carbon, Total Organic	mg/L												
Chloride	mg/L												
Gasoline	mg/L												
Kerosene	mg/L												
Mineral Spirits	mg/L												
Nitrogen, Ammonia	mg/L												
Nitrogen, Nitrate	mg/L	<0.02				<0.02	<0.02			<0.02			
Nitrogen, Nitrate + Nitrite	mg/L												
Oil and Grease	mg/L	<5			<6		<5					<6	<6
Phosphorus, Phosphate	mg/L												
Solids, Total Dissolved	mg/L												
Solids, Total Suspended	mg/L												
Sulfate	mg/L									<10			
TRPH	ug/L												
Arsenic	ug/L	<10	<10	<10			<10	<10	<10		<10	<10	<10
Arsenic, Total	ug/L												
Barium	ug/L	<200	<200	<200			<200	<200	<200		<200	<200	<200
Barium, Total	ug/L												
Chromium	ug/L	<10	<10	<10			<10	<10	<10		<10	<10	<10
Chromium, Total	ug/L												
Iron	ug/L	<100											
Sodium	ug/L												
Mercury	ug/L												

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W28

Parameter	Units	1/25/90	5/3/90	9/20/90	12/11/90	1/29/91	5/1/91	10/8/91	7/8/92	12/17/92	6/29/93	12/28/93	6/22/94	7/5/95
#2 Fuel Oil	mg/L													<0.25
#6 Fuel Oil	mg/L													
Carbon, Total Organic	mg/L													
Chloride	mg/L									98.3	88	158	130	99
Gasoline	mg/L													<0.25
Kerosene	mg/L													<0.25
Mineral Spirits	mg/L													<0.25
Nitrogen, Ammonia	mg/L								<1	<1	0.17			0.14
Nitrogen, Nitrate	mg/L		<0.02	<0.02		<0.02		<0.02		0.051				
Nitrogen, Nitrate + Nitrite	mg/L										<0.02	0.13	0.03	0.25
Oil and Grease	mg/L	<6	<6	<5	<6	<6		<5						
Phosphorus, Phosphate	mg/L													
Solids, Total Dissolved	mg/L													
Solids, Total Suspended	mg/L													
Sulfate	mg/L													
TRPH	ug/L								<500	<500	<1000			
Arsenic	ug/L	<10	<10	<10	<10	<10	<10	<10						
Arsenic, Total	ug/L													
Barium	ug/L	<200	<200	<200	<200	<200	<200	<200						
Barium, Total	ug/L													
Chromium	ug/L	<10	<10	<10	<10	<10	<10	<10						
Chromium, Total	ug/L													
Iron	ug/L													
Sodium	ug/L									49100				
Mercury	ug/L													

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W28			
Parameter	Units	7/9/96	7/11/97	6/24/98
#2 Fuel Oil	mg/L	<0.25		
#6 Fuel Oil	mg/L	<1		
Carbon, Total Organic	mg/L			
Chloride	mg/L	65	75.5	57.2
Gasoline	mg/L	<0.25		
Kerosene	mg/L	<0.25		
Mineral Spirits	mg/L	<0.25	<0.27	<0.25
Nitrogen, Ammonia	mg/L	<0.1	<0.1	<0.1
Nitrogen, Nitrate	mg/L			
Nitrogen, Nitrate + Nitrite	mg/L	0.1	<0.14	0.19
Oil and Grease	mg/L			
Phosphorus, Phosphate	mg/L			
Solids, Total Dissolved	mg/L			
Solids, Total Suspended	mg/L			
Sulfate	mg/L			
TRPH	ug/L			
Arsenic	ug/L			
Arsenic, Total	ug/L			
Barium	ug/L			
Barium, Total	ug/L			
Chromium	ug/L			
Chromium, Total	ug/L			
Iron	ug/L			
Sodium	ug/L			
Mercury	ug/L			<0.2

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W29

Parameter	Units	1/8/87	6/4/87	9/3/87	12/3/87	3/3/88	4/7/88	8/10/88	11/15/88	1/26/89	4/27/89	7/27/89	10/26/89
#2 Fuel Oil	mg/L												
#6 Fuel Oil	mg/L												
Carbon, Total Organic	mg/L												
Chloride	mg/L												
Gasoline	mg/L												
Kerosene	mg/L												
Mineral Spirits	mg/L												
Nitrogen, Ammonia	mg/L												
Nitrogen, Nitrate	mg/L												
Nitrogen, Nitrate + Nitrite	mg/L												
Oil and Grease	mg/L						<5						
Solids, Total Dissolved	mg/L												
Solids, Total Suspended	mg/L												
Sulfate	mg/L									<10			
TRPH	ug/L												
Arsenic	ug/L	<10	<10	<10			<10	<10	<10		<10	<10	<10
Arsenic, Total	ug/L												
Barium	ug/L	<200	<200	<200			<200	<200	<200		<200	<200	<200
Barium, Total	ug/L												
Chromium	ug/L	<10	<10	<10			<10	<10	<10		<10	<10	<10
Chromium, Total	ug/L												
Iron	ug/L												
Sodium	ug/L												
Mercury	ug/L												

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W29

Parameter	Units	1/25/90	5/3/90	9/21/90	12/11/90	1/30/91	5/1/91	6/25/92	12/18/92	6/30/93	12/28/93	6/22/94	7/5/95	7/9/96
#2 Fuel Oil	mg/L												<0.25	<0.25
#6 Fuel Oil	mg/L													<1
Carbon, Total Organic	mg/L													
Chloride	mg/L								25.9	43	24	157	35	60
Gasoline	mg/L													<0.25
Kerosene	mg/L													<0.25
Mineral Spirits	mg/L													0.69
Nitrogen, Ammonia	mg/L								<1	0.15	<0.2		0.97	<0.1
Nitrogen, Nitrate	mg/L								0.231					
Nitrogen, Nitrate + Nitrite	mg/L									0.44	0.1	0.6		0.08
Oil and Grease	mg/L	<6	<6	<5	<6	<6	<6							
Solids, Total Dissolved	mg/L													
Solids, Total Suspended	mg/L													
Sulfate	mg/L													
TRPH	ug/L							<500	<500	<1000	<1000			
Arsenic	ug/L	<10	<10	<10	<10	<10	<10	<1						
Arsenic, Total	ug/L													
Barium	ug/L	<200	<200	<200	<200	<200	<200							
Barium, Total	ug/L													
Chromium	ug/L	<10	<10	<10	<10	<10	<10							
Chromium, Total	ug/L													
Iron	ug/L													
Sodium	ug/L								22100					
Mercury	ug/L													

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W29		
Parameter	Units	7/11/97	6/23/98
#2 Fuel Oil	mg/L		
#6 Fuel Oil	mg/L		
Carbon, Total Organic	mg/L		
Chloride	mg/L	30.4	95.2
Gasoline	mg/L		
Kerosene	mg/L		
Mineral Spirits	mg/L	<0.26	0.47
Nitrogen, Ammonia	mg/L	<0.1	<0.1
Nitrogen, Nitrate	mg/L		
Nitrogen, Nitrate + Nitrite	mg/L	0.15	0.14
Oil and Grease	mg/L		
Solids, Total Dissolved	mg/L		
Solids, Total Suspended	mg/L		
Sulfate	mg/L		
TRPH	ug/L		
Arsenic	ug/L		
Arsenic, Total	ug/L		
Barium	ug/L		
Barium, Total	ug/L		
Chromium	ug/L		
Chromium, Total	ug/L		
Iron	ug/L		
Sodium	ug/L		
Mercury	ug/L		<0.2

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W31

Parameter	Units	1/8/87	6/4/87	9/3/87	12/3/87	3/3/88	4/7/88	8/10/88	11/15/88	1/26/89	4/27/89	7/27/89	10/26/89
Alkalinity, Bicarbonate	mg/L												
Carbon, Total Organic	mg/L												
Chloride	mg/L												
Sulfate	mg/L									<10			
Arsenic	ug/L	<10	<10	<10			<10	<10	<10		<10	<10	<10
Arsenic, Total	ug/L												
Barium	ug/L	<200	<200	<200			<200	<200	<200		<200	<200	<200
Barium, Total	ug/L												
Calcium	ug/L												
Chromium	ug/L	<10	<10	<10			<10	<10	<10		<10	<10	<10
Chromium, Total	ug/L												
Magnesium	ug/L												
Potassium	ug/L												
Sodium	ug/L												

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W31

Parameter	Units	1/25/90	5/3/90	9/21/90	12/11/90	1/30/91	5/1/91	10/8/91	10/29/91	12/22/91
Alkalinity, Bicarbonate	mg/L									
Carbon, Total Organic	mg/L									
Chloride	mg/L									
Sulfate	mg/L			<1	<2	<1		<1	<1	
Arsenic	ug/L	<10	<10	<10	<10	<10	<10	<10		
Arsenic, Total	ug/L									
Barium	ug/L	<200	<200	<200	<200	<200	<200	<200	<200	<200
Barium, Total	ug/L									
Calcium	ug/L									
Chromium	ug/L	<10	<10	<10	<10	<10	<10	<10		
Chromium, Total	ug/L									
Magnesium	ug/L									
Potassium	ug/L								<5000	
Sodium	ug/L									

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W32

Parameter	Units	1/8/87	6/4/87	9/3/87	12/3/87	3/3/88	4/7/88	8/10/88	11/15/88	1/26/89	4/27/89	7/27/89	10/26/89
#2 Fuel Oil	mg/L												
#6 Fuel Oil	mg/L												
Carbon, Total Organic	mg/L												
Chloride	mg/L												
Gasoline	mg/L												
Kerosene	mg/L												
Mineral Spirits	mg/L												
Nitrogen, Ammonia	mg/L												
Nitrogen, Nitrate	mg/L		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nitrogen, Nitrate + Nitrite	mg/L												
Oil and Grease	mg/L	<5	<5	<5	<6		<5	<6	<6	<6	<6	<6	<6
Phosphorus, Phosphate	mg/L												
Solids, Total Dissolved	mg/L												
Solids, Total Suspended	mg/L												
Sulfate	mg/L												
TRPH	ug/L												
Arsenic	ug/L	<10	<10	<10			<10	<10	<10		<10	<10	<10
Arsenic, Total	ug/L												
Barium	ug/L	<200	<200	<200			<200	<200	<200		<200	<200	<200
Barium, Total	ug/L												
Chromium	ug/L	<10	<10	<10			<10	<10	<10		<10	<10	<10
Chromium, Total	ug/L												
Iron	ug/L												
Sodium	ug/L												
Mercury	ug/L												

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W32

Parameter	Units	1/25/90	5/3/90	9/21/90	12/11/90	1/30/91	5/1/91	10/8/91	6/24/92	12/19/92	6/29/93	12/28/93	6/22/94	7/5/95
#2 Fuel Oil	mg/L													<0.25
#6 Fuel Oil	mg/L													
Carbon, Total Organic	mg/L													
Chloride	mg/L									25.9	56	7	11	12
Gasoline	mg/L													<0.25
Kerosene	mg/L													<0.25
Mineral Spirits	mg/L													<0.25
Nitrogen, Ammonia	mg/L									1.96	1.8	1.31	1.21	1.46
Nitrogen, Nitrate	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.052				
Nitrogen, Nitrate + Nitrite	mg/L										0.07	0.08	0.04	0.03
Oil and Grease	mg/L		<6	<5	<6	<6	<6	<5						
Phosphorus, Phosphate	mg/L													
Solids, Total Dissolved	mg/L													
Solids, Total Suspended	mg/L													
Sulfate	mg/L			<1	<1	<1		<1						
TRPH	ug/L								<500	<500	<1000			
Arsenic	ug/L	<10	<10	<10	<10	<10	<10	<10						
Arsenic, Total	ug/L													
Barium	ug/L	<200	<200	<200	<200	<200		<200						
Barium, Total	ug/L													
Chromium	ug/L	<10	<10	<10	<10	<10	<10	<10						
Chromium, Total	ug/L													
Iron	ug/L													
Sodium	ug/L									21800				
Mercury	ug/L													

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W32

Parameter	Units	7/8/96	7/11/97	6/23/98
#2 Fuel Oil	mg/L	<0.25		
#6 Fuel Oil	mg/L	<1		
Carbon, Total Organic	mg/L			
Chloride	mg/L	38	9.4	12.1
Gasoline	mg/L	<0.25		
Kerosene	mg/L	<0.25		
Mineral Spirits	mg/L	<0.25	<0.27	<0.25
Nitrogen, Ammonia	mg/L	1.72	0.9	0.92
Nitrogen, Nitrate	mg/L			
Nitrogen, Nitrate + Nitrite	mg/L	<0.06	0.15	<0.14
Oil and Grease	mg/L			
Phosphorus, Phosphate	mg/L			
Solids, Total Dissolved	mg/L			
Solids, Total Suspended	mg/L			
Sulfate	mg/L			
TRPH	ug/L			
Arsenic	ug/L			
Arsenic, Total	ug/L			
Barium	ug/L			
Barium, Total	ug/L			
Chromium	ug/L			
Chromium, Total	ug/L			
Iron	ug/L			
Sodium	ug/L			
Mercury	ug/L			<0.2

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W33

Parameter	Units	6/30/93	10/4/94	9/13/95	12/18/95	3/21/96	7/9/96	1/21/97	7/11/97	6/24/98
#2 Fuel Oil	mg/L						<13			
#6 Fuel Oil	mg/L						<50			
Chloride	mg/L	71	74	50	94	59	42	125	143	248
Gasoline	mg/L						<13			
Kerosene	mg/L						<13			
Mineral Spirits	mg/L						170		87	200
Nitrogen, Ammonia	mg/L	0.36	<0.1	<0.1	<0.1	0.11	<0.1	<0.1	<0.1	<0.1
Nitrogen, Nitrate + Nitrite	mg/L	7.08	<0.02	<0.02	<0.2	<0.1	0.17	<0.08	0.57	0.39
TRPH	ug/L	670000								
Mercury	ug/L									2.8

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W36

Parameter	Units	2/20/92	8/3/92	9/17/92	9/13/95	7/10/96	7/11/97	1/2/98	6/25/98
#2 Fuel Oil	mg/L					<0.25			
#6 Fuel Oil	mg/L					<1			
Chloride	mg/L				136	120	77	94.2	92.8
Gasoline	mg/L					<0.25			
Kerosene	mg/L					<0.25			
Mineral Spirits	mg/L					1.8	33		2.4
Nitrogen, Ammonia	mg/L			<1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrogen, Nitrate	mg/L	<0.02							
Nitrogen, Nitrate + Nitrite	mg/L				2.31	0.21	1.4	1.33	2.44
Phosphorus, Phosphate	mg/L								
TRPH	ug/L								
Sodium	ug/L								
Mercury	ug/L								11.5

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W37

Parameter	Units	2/20/92	6/24/92	9/17/92	12/18/92	3/24/93
Chloride	mg/L				90.2	84
Nitrogen, Ammonia	mg/L			<1	<1	0.32
Nitrogen, Nitrate	mg/L	<0.02	<0.02		0.105	
Nitrogen, Nitrate + Nitrite	mg/L					1.15
Phosphorus, Phosphate	mg/L					
TRPH	ug/L				6000	45000
Arsenic	ug/L		<1			
Sodium	ug/L				77500	84200

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W38		
Parameter	Units	2/22/92	7/29/92
Chloride	mg/L		
Nitrogen, Nitrate	mg/L	<0.02	<0.02
TRPH	ug/L		

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W39

Parameter	Units	6/17/92	12/18/92	6/21/94	3/10/95	9/13/95	12/18/95	3/20/96	7/9/96	1/21/97	7/11/97	1/2/98	6/24/98
#2 Fuel Oil	mg/L								<13				
#6 Fuel Oil	mg/L								<50				
Chloride	mg/L		195	185	75	62	141	69	170	122	163	207	189
Gasoline	mg/L								<13				
Kerosene	mg/L								<13				
Mineral Spirits	mg/L								95		160		45
Nitrogen, Ammonia	mg/L		<1	<0.1	0.3	0.16	0.45	0.13	0.11	<0.1	<0.1	<0.1	<0.1
Nitrogen, Nitrate	mg/L		0.905										
Nitrogen, Nitrate + Nitrite	mg/L			0.58	0.4	0.1	0.24	<0.1	0.08	1	1.24	0.57	0.6
Phosphorus, Phosphate	mg/L												
TRPH	ug/L	<500	75000	<1000									
Arsenic	ug/L	<1											
Sodium	ug/L		96200										
Mercury	ug/L												2.2

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W41

Parameter	Units	2/25/92	6/16/92	9/17/92	12/19/92	3/24/93	6/30/93	12/28/93	4/25/94	6/21/94	10/4/94	3/10/95	7/6/95
#2 Fuel Oil	mg/L												<0.25
#6 Fuel Oil	mg/L												
Chloride	mg/L				211	122	124	218	115	91	44	191	132
Gasoline	mg/L												<0.25
Kerosene	mg/L												<0.25
Mineral Spirits	mg/L												5.5
Nitrogen, Ammonia	mg/L			<1	<1	0.66	0.12	0.34	0.34	0.22	0.6	0.47	0.85
Nitrogen, Nitrate	mg/L				0.228								
Nitrogen, Nitrate + Nitrite	mg/L					0.34	0.05	1.75	0.04	0.04	0.34	0.53	0.9
Phosphorus, Phosphate	mg/L												
TRPH	ug/L				9000	7100	330000	5600		2800			
Arsenic	ug/L		<1										
Sodium	ug/L				103000	107000							
Mercury	ug/L												

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W41							
Parameter	Units	9/13/95	3/20/96	7/9/96	9/25/96	7/11/97	1/2/98	6/24/98
#2 Fuel Oil	mg/L			<2.5				
#6 Fuel Oil	mg/L			<10				
Chloride	mg/L	100	162	137	164	146	323	281
Gasoline	mg/L			<2.5				
Kerosene	mg/L			<2.5				
Mineral Spirits	mg/L			13		10		5.2
Nitrogen, Ammonia	mg/L	0.57	0.54	0.26	0.2	0.3	0.26	0.22
Nitrogen, Nitrate	mg/L							
Nitrogen, Nitrate + Nitrite	mg/L	0.29	<0.2	<0.02	0.74	3.76	0.75	0.52
Phosphorus, Phosphate	mg/L							
TRPH	ug/L							
Arsenic	ug/L							
Sodium	ug/L							
Mercury	ug/L							0.4

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W66

Parameter	Units	6/30/93
Chloride	mg/L	170
Nitrogen, Ammonia	mg/L	<0.1
Nitrogen, Nitrate + Nitrite	mg/L	0.44
TRPH	ug/L	1400

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W67

Parameter	Units	6/29/93
Chloride	mg/L	146
Nitrogen, Ammonia	mg/L	<0.1
Nitrogen, Nitrate + Nitrite	mg/L	0.7
TRPH	ug/L	<1000

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W69

Parameter	Units	12/29/93	4/25/94
Chloride	mg/L	92	85
Nitrogen, Ammonia	mg/L	0.65	0.29
Nitrogen, Nitrate + Nitrite	mg/L	0.06	<0.02
TRPH	ug/L	46000	

A2

Phenolics

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W01A

Parameter	Units	2/19/92	6/14/92	9/17/92	12/18/92	3/23/93	6/28/93	12/28/93	4/25/94	6/21/94	10/4/94	1/5/95	3/10/95	3/23/95	5/2/95	5/24/95	6/13/95
2,3,4,6-Tetrachlorophenol	ug/L						40	<160	<10	69	<10	28	<10	<10	<10	<10	<10
2,4,5-Trichlorophenol	ug/L						<20	<320	59	160	58	<20	26	<20	<10	14	<10
2,4,6-Trichlorophenol	ug/L	<1	<1.02	34.3	5.18	<60	<10	<160	55	120	65	<10	18	16	50	33	<10
2,4-Dichlorophenol	ug/L	<0.5	<0.51	<0.5	23.3	<2	<10	<160	<10	130	<10	<10	10	<10	<10	<10	<10
2,4-Dimethylphenol	ug/L	5.91	<0.51	67.8	<0.5	<2	<10	190	<10	29	86	<10	44	<10	15	67	<10
2,4-Dinitrophenol	ug/L	5.27	<1.02	<1	6.69	<6	310	<320	67	110	34	<20	12	<20	<20	<20	<20
2,6-Dichlorophenol	ug/L						<10	<160	<10	27	<10	<10	<10	<10	<10	<10	<10
2-Chlorophenol	ug/L	<0.5	24.3	<0.5	<0.5	<2									<10	<10	<10
2-Methylphenol	ug/L						170	<160	<10	64	22	<10	44	<10	<10	<10	<10
2-Nitrophenol	ug/L	<0.5	<0.51	<0.5	<0.5	<2	<10	<160	<10	200	<10	<10	50	16	11	11	<10
3&4-Methylphenol	ug/L						<20	<320	<20	<20	<20	<20	41	<20	<20	<20	<20
4,6-Dinitro-2-Methylphenol	ug/L	<1	<1.02	<1	<1	<10	37	<160	<10	46	<10	<10	<10	<10	<10	<10	<10
4-Chloro-3-Methylphenol	ug/L	<0.5	<0.51	<0.5	1.77	<10	<10	<160	19	59	18	20	12	<10	<10	<10	<10
4-Nitrophenol	ug/L	<1	<1.02	42.1	2.51	<10	430	<320	24	65	<20	<20	21	<20	<20	<20	<20
Dinoseb	ug/L						<10	<160	<10	<10	<10	<10	<10	27	<10	<10	<10
Pentachlorophenol	ug/L	101	168	193	150	219	210	310	20	120	89	50	28	58	11	9.7	5.7
Phenol	ug/L	<0.5	<0.51	<0.5	24.1	<2									<10	<10	<10
Phenol/2-Chlorophenol	ug/L						<20	240	<20	<20	<20	<20	35	<20			
2,3,5,6-Tetrachlorophenol	ug/L	<1	<1.02	<1	<1	<20											

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W01A

Parameter	Units	7/5/95	7/26/95	9/7/95	9/13/95	12/18/95	1/18/96	3/21/96	6/19/96	7/10/96	9/25/96	1/21/97	7/11/97	1/2/98	6/23/98
2,3,4,6-Tetrachlorophenol	ug/L	<25		<10	20	<100	<100	<10	<50	<10	0.77	<7.9	<0.182	50	
2,4,5-Trichlorophenol	ug/L	<10		67	70	<100	<100	86	<50	<10	<0.73	<7.5	130	110	78
2,4,6-Trichlorophenol	ug/L	<10		18	130	<100	<100	53	<50	<10	<0.71	<7.3	110	70	80
2,4-Dichlorophenol	ug/L	<10	12	14	53	<100	<100	12	<50	<10	<0.8	<8.2	310	260	200
2,4-Dimethylphenol	ug/L	<10	13	48	42	<100	<100	16	<50	<10	<1.5	<16	210	100	120
2,4-Dinitrophenol	ug/L	<50		25	89	<200	<200	<20	<100	<20	<0.72	<7.4	<0.269	550	380
2,6-Dichlorophenol	ug/L			<10	24	<100	<100	13	<50	<10	<0.87	<9	690	410	440
2-Chlorophenol	ug/L	<10		<10	<10	<100		<10	<50	<10	<1.2	<12	<0.194	140	200
2-Methylphenol	ug/L	<10		35	26	<100	<100	<10	<50	<10	<0.79	<8.1	360	270	200
2-Nitrophenol	ug/L	<10		12	21	<100	<100	<10	<50	14	<1.5	<16	380	230	320
3&4-Methylphenol	ug/L	<20		26	20	<200	<200	<20	<100	<20	1.7	<18	230	<0.128	88
4,6-Dinitro-2-Methylphenol	ug/L	<50		13	<10	<100	<100	20	<50	<10	<0.75	<7.7	<0.362	170	170
4-Chloro-3-Methylphenol	ug/L	<20		<10	91	<100	<100	48	<50	16	<0.69	<7.1	300	65	160
4-Nitrophenol	ug/L	<50		28	29	<200	<200	24	<100	<20	<0.74	<7.6	170	<0.351	<60
Dinoseb	ug/L	<25		<10	<10	<100	<100	<10	<50	<10	<0.85	<8.8			
Pentachlorophenol	ug/L	<50	11	110	150	180	67	140	130	64	0.68	185	340	80	63
Phenol	ug/L	<10		<10	<10	<100		<10	<50	<10	<1	<11	230	<0.127	130
Phenol/2-Chlorophenol	ug/L						<200								
2,3,5,6-Tetrachlorophenol	ug/L														67

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W02

Parameter	Units	1/8/87	6/4/87	9/3/87	12/3/87	3/2/88	4/7/88	8/10/88	11/15/88	1/26/89	4/27/89	7/27/89	10/26/89	1/25/90	5/3/90	9/20/90	12/11/90
2,3,4,6-Tetrachlorophenol	ug/L																
2,4,5-Trichlorophenol	ug/L																
2,4,6-Trichlorophenol	ug/L																
2,4-Dichlorophenol	ug/L																
2,4-Dimethylphenol	ug/L																
2,4-Dinitrophenol	ug/L																
2,6-Dichlorophenol	ug/L																
2-Chlorophenol	ug/L																
2-Methylphenol	ug/L																
2-Nitrophenol	ug/L																
3&4-Methylphenol	ug/L																
4,6-Dinitro-2-Methylphenol	ug/L																
4-Chloro-3-Methylphenol	ug/L																
4-Nitrophenol	ug/L																
Dinoseb	ug/L																
Pentachlorophenol	ug/L	1220	6520	394	180	1200	10	4200	4700	455	6550	5940	2340	8450	2380	5940	6400
Phenol	ug/L																
Phenol/2-Chlorophenol	ug/L																
2,3,5,6-Tetrachlorophenol	ug/L																

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W02

Parameter	Units	1/30/91	5/1/91	6/18/91	10/8/91	2/20/92	6/14/92	9/17/92	12/18/92	3/24/93	4/25/94	6/22/94	10/4/94	1/5/95	3/10/95	7/6/95	9/13/95
2,3,4,6-Tetrachlorophenol	ug/L										600	1300	1400	1400	<1000	<2500	<1000
2,4,5-Trichlorophenol	ug/L										190	400	<1000	<1000	<2000	<1000	<1000
2,4,6-Trichlorophenol	ug/L					<1	146	<1	<1	<6	490	290	<500	<500	<1000	<1000	<1000
2,4-Dichlorophenol	ug/L					<0.5	<0.526	36.7	<0.5	<2	<10	560	<500	<500	<1000	<1000	<1000
2,4-Dimethylphenol	ug/L					19.8	5.42	1.99	<0.5	<2	89	110	<500	<500	<1000	<1000	<1000
2,4-Dinitrophenol	ug/L					<1	47.2	<1	4.35	<6	95	340	<1000	<1000	<2000	<5000	<2000
2,6-Dichlorophenol	ug/L										110	370	<500	<500	<1000		<1000
2-Chlorophenol	ug/L					<0.5	<0.526	<0.5	<0.5	<2						<1000	<1000
2-Methylphenol	ug/L										300	210	<500	<500	<1000	<1000	<1000
2-Nitrophenol	ug/L					<0.5	<0.526	<0.5	<0.5	<2	68	410	<500	<500	<1000	<1000	<1000
3&4-Methylphenol	ug/L										110	<200	<1000	<1000	<2000	<2000	<2000
4,6-Dinitro-2-Methylphenol	ug/L					<1	<1.05	2.87	<1	<10	75	<100	<500	<500	<1000	<5000	<1000
4-Chloro-3-Methylphenol	ug/L					<0.5	<0.526	<0.5	1.77	<10	130	<100	<500	<500	<1000	<2000	<1000
4-Nitrophenol	ug/L					46.3	39.6	52.6	4.93	<10	110	240	<1000	<1000	<2000	<5000	<2000
Dinoseb	ug/L										40	<100	<500	<500	<1000	<2500	<1000
Pentachlorophenol	ug/L	11400	47000	15100	14800	7550	10900	9590	12700	<10	1500	5000	14000	16000	6900	11000	9200
Phenol	ug/L					<0.5	<0.526	<0.5	45.7	<2						<1000	<1000
Phenol/2-Chlorophenol	ug/L										230	<200	<1000	<1000	<2000		
2,3,5,6-Tetrachlorophenol	ug/L					<1	<1.05	39.4	12.9	<20							

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W02

Parameter	Units	12/18/95	3/21/96	7/10/96	1/21/97	7/11/97	1/2/98	6/25/98
2,3,4,6-Tetrachlorophenol	ug/L	<5000	<1000	<5000	1750	<0.182	<0.182	
2,4,5-Trichlorophenol	ug/L	<5000	<1000	<5000	<75	<0.453	<0.453	<3000
2,4,6-Trichlorophenol	ug/L	<5000	<1000	<5000	<73	<0.469	<0.469	<3000
2,4-Dichlorophenol	ug/L	<5000	<1000	<5000	<82	<0.344	<0.344	<3000
2,4-Dimethylphenol	ug/L	<5000	<1000	<5000	<159	<0.148	<0.148	<3000
2,4-Dinitrophenol	ug/L	<10000	<2000	<10000	<74	<0.269	<0.269	<3000
2,6-Dichlorophenol	ug/L	<5000	<1000	<5000	<90	<0.397	<0.397	<3000
2-Chlorophenol	ug/L	<5000	<1000	<5000	<121	1200	<0.194	<3000
2-Methylphenol	ug/L	<5000	<1000	<5000	<81	<0.252	<0.252	<3000
2-Nitrophenol	ug/L	<5000	<1000	<5000	<159	<0.104	<0.104	<3000
3&4-Methylphenol	ug/L	<10000	<2000	<10000	<178	<0.128	<0.128	<3000
4,6-Dinitro-2-Methylphenol	ug/L	<5000	1100	<5000	<77	<0.362	<0.362	<3000
4-Chloro-3-Methylphenol	ug/L	<5000	<1000	<5000	<71	<0.105	<0.105	<3000
4-Nitrophenol	ug/L	<10000	<2000	<10000	<76	2300	<0.351	<3000
Dinoseb	ug/L	<5000	<1000	<5000	<88			
Pentachlorophenol	ug/L	6700	11000	1400	10900	21000	12000	26000
Phenol	ug/L	<5000	<1000	<5000	<107	<0.127	<0.127	<3000
Phenol/2-Chlorophenol	ug/L							
2,3,5,6-Tetrachlorophenol	ug/L							<3000

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W03A

Parameter	Units	2/25/92	6/17/92	9/17/92	12/18/92	3/24/93	6/30/93	12/28/93	4/25/94	6/22/94	10/4/94	1/5/95	3/9/95	7/6/95	9/13/95	12/18/95	3/21/96
2,3,4,6-Tetrachlorophenol	ug/L						2100	9000	6800	17000	<1000	<1000	<10000	<2500	<10000	<10000	<2000
2,4,5-Trichlorophenol	ug/L						<100	<2300	<2000	11000	<2000	<2000	<20000	<1000	<10000	<10000	<2000
2,4,6-Trichlorophenol	ug/L	<10	334	<1	473	<3000	<50	4800	2700	12000	<1000	<1000	<10000	<1000	<10000	<10000	<2000
2,4-Dichlorophenol	ug/L	<5	<0.51	109	1220	<1000	<50	<1100	<1000	70000	<1000	<1000	<10000	<1000	<10000	<10000	<2000
2,4-Dimethylphenol	ug/L	9.84	<0.51	3.3	<0.5	<1000	<50	17000	5100	27000	<1000	<1000	<10000	<1000	<10000	<10000	<2000
2,4-Dinitrophenol	ug/L	<10	<1.02	<1	<1	<3000	<100	<2300	<2000	13000	<2000	<2000	<20000	<5000	<20000	<20000	<4000
2,6-Dichlorophenol	ug/L						<50	8000	3600	20000	<1000	<1000	<10000		<10000	<10000	<2000
2-Chlorophenol	ug/L	<5	<0.51	<0.5	<0.5	<1000								<1000	<10000	<10000	<2000
2-Methylphenol	ug/L						760	<1100	4800	<1000	<1000	<1000	<10000	<1000	<10000	<10000	<2000
2-Nitrophenol	ug/L	13.5	20.5	<0.5	<0.5	<1000	<50	8800	12000	<1000	6600	<1000	19000	<1000	<10000	<10000	<2000
3&4-Methylphenol	ug/L						<100	7200	4500	<2000	2300	13000	<20000	<2000	<20000	<20000	<4000
4,6-Dinitro-2-Methylphenol	ug/L	11.2	<1.02	5.56	<1	<5000	<50	<1100	1900	6400	<1000	<1000	<10000	<5000	<10000	<10000	<2000
4-Chloro-3-Methylphenol	ug/L	<5	<0.5	<0.5	160	<5000	<50	3000	1400	8100	<1000	<1000	<10000	<2000	<10000	<10000	<2000
4-Nitrophenol	ug/L	<10	<1.02	159	<1	<5000	<100	2600	<2000	24000	5500	<2000	<20000	<5000	<20000	<20000	<4000
Dinoseb	ug/L						<50	<1100	<1000	8600	<1000	<1000	<10000	<2500	<10000	<10000	<2000
Pentachlorophenol	ug/L	19500	20100	14800	19500	39500	24000	57000	37000	51000	26000	36000	26000	23000	20000	17000	12000
Phenol	ug/L	<5	<0.51	<0.5	<0.5	<1000								<1000	<10000	<10000	<2000
Phenol/2-Chlorophenol	ug/L						<100	33000	11000	<2000	18000	<2000	<20000				
2,3,5,6-Tetrachlorophenol	ug/L	<10	<1.02	50.1	<1	<10000											

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W03A

Parameter	Units	7/10/96	9/25/96	1/21/97
2,3,4,6-Tetrachlorophenol	ug/L	<10000	3300	589
2,4,5-Trichlorophenol	ug/L	<10000		<30
2,4,6-Trichlorophenol	ug/L	<10000		<29
2,4-Dichlorophenol	ug/L	<10000		<33
2,4-Dimethylphenol	ug/L	<10000		<64
2,4-Dinitrophenol	ug/L	<20000		<30
2,6-Dichlorophenol	ug/L	<10000		<36
2-Chlorophenol	ug/L	<10000		<48
2-Methylphenol	ug/L	<10000		<32
2-Nitrophenol	ug/L	<10000		<64
3&4-Methylphenol	ug/L	<20000		<71
4,6-Dinitro-2-Methylphenol	ug/L	<10000		<31
4-Chloro-3-Methylphenol	ug/L	<10000		<28
4-Nitrophenol	ug/L	<20000		<31
Dinoseb	ug/L	<10000		<35
Pentachlorophenol	ug/L	8200	16700	4820
Phenol	ug/L	<10000		<43
Phenol/2-Chlorophenol	ug/L			
2,3,5,6-Tetrachlorophenol	ug/L			

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W03B

Parameter	Units	6/17/91	2/22/92	9/17/92	12/18/92	3/23/93	6/29/93	12/28/93	6/22/94	7/6/95	7/10/96	7/11/97	6/24/98
2,3,4,6-Tetrachlorophenol	ug/L						75	<10	11	<25	<10	<0.182	
2,4,5-Trichlorophenol	ug/L						<20	<20	<20	<10	<10	<0.453	<3
2,4,6-Trichlorophenol	ug/L	5.17	<1	1.04	<1	<3	<10	<10	<10	<10	<10	<0.469	<3
2,4-Dichlorophenol	ug/L	<0.51	<0.5	<0.5	<0.5	<1	<10	<10	<10	<10	<10	<0.344	<3
2,4-Dimethylphenol	ug/L	<0.51	<0.5	<0.5	<0.5	<1	<10	<10	<10	<10	<10	<0.148	<3
2,4-Dinitrophenol	ug/L	2.1	<1	<1	<1	<3	<20	<20	<20	<50	<20	<0.269	<3
2,6-Dichlorophenol	ug/L						<10	<10	<10		<10	<0.397	<3
2-Chlorophenol	ug/L	<0.51	1.9	<0.5	1.61	<1				<10	<10	<0.194	<3
2-Methylphenol	ug/L						<10	<10	<10	<10	<10	<0.252	<3
2-Nitrophenol	ug/L	<0.51	<0.5	<0.5	<0.5	<1	<10	<10	<10	<10	<10	<0.104	<3
3&4-Methylphenol	ug/L						<20	<20	<20	<20	<20	<0.128	<3
4,6-Dinitro-2-Methylphenol	ug/L	<1.02	<1	<1	<1	<5	<10	<10	<10	<50	11	<0.362	<3
4-Chloro-3-Methylphenol	ug/L	<0.51	<0.5	<0.5	<0.5	<5	<10	<10	<10	<20	<10	<0.105	<3
4-Nitrophenol	ug/L	<1.02	<1	<1	<1	<5	<20	<20	<20	<50	<20	<0.351	<3
Dinoseb	ug/L						<10	<10	<10	<25	<10		
Pentachlorophenol	ug/L	394	25.4	215	103	17.8	1300	24	180	60	110	71	16
Phenol	ug/L	<0.51	<0.5	<0.5	1.31	<1				<10	<10	<0.127	<3
Phenol/2-Chlorophenol	ug/L						<20	<20	<20				
2,3,5,6-Tetrachlorophenol	ug/L	<1.02	<1	<1	<1	<10							<3

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W06		
Parameter	**Units**	**2/20/92**	**9/17/92**
2,4,6-Trichlorophenol	ug/L	<1	<1
2,4-Dichlorophenol	ug/L	<0.5	1.88
2,4-Dimethylphenol	ug/L	12.7	1.23
2,4-Dinitrophenol	ug/L	<1	<1
2-Chlorophenol	ug/L	<0.5	<0.5
2-Nitrophenol	ug/L	<0.5	<0.5
4,6-Dinitro-2-Methylphenol	ug/L	<1	<1
4-Chloro-3-Methylphenol	ug/L	<0.5	<0.5
4-Nitrophenol	ug/L	<1	1.95
Pentachlorophenol	ug/L	1200	294
Phenol	ug/L	<0.5	<0.5
2,3,5,6-Tetrachlorophenol	ug/L	<1	<1

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W06R

Parameter	Units	12/28/93	10/4/94	12/18/95	7/10/96
2,3,4,6-Tetrachlorophenol	ug/L	<5000	<1000	<1000	<5000
2,4,5-Trichlorophenol	ug/L	<10000	<2000	<1000	<5000
2,4,6-Trichlorophenol	ug/L	<5000	<1000	<1000	<5000
2,4-Dichlorophenol	ug/L	<5000	<1000	<1000	<5000
2,4-Dimethylphenol	ug/L	6400	<1000	12000	<5000
2,4-Dinitrophenol	ug/L	<10000	<2000	<2000	<10000
2,6-Dichlorophenol	ug/L	<5000	<1000	5200	<5000
2-Chlorophenol	ug/L			<1000	<5000
2-Methylphenol	ug/L	<5000	<1000	<1000	<5000
2-Nitrophenol	ug/L	<5000	<1000	32000	<5000
3&4-Methylphenol	ug/L	<10000	<2000	36000	<10000
4,6-Dinitro-2-Methylphenol	ug/L	<5000	<1000	3300	<5000
4-Chloro-3-Methylphenol	ug/L	<5000	<1000	<1000	<5000
4-Nitrophenol	ug/L	<10000	<2000	<2000	<10000
Dinoseb	ug/L	<5000	<1000	<1000	<5000
Pentachlorophenol	ug/L	10000	5400	73000	1200
Phenol	ug/L			<1000	<5000
Phenol/2-Chlorophenol	ug/L	29000	<2000		

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W08

Parameter	Units	1/8/87	6/4/87	9/3/87	12/3/87	3/3/88	4/7/88	8/10/88	11/15/88	1/26/89	4/27/89	7/27/89	10/26/89	1/25/90	5/3/90	9/20/90	12/11/90
2,3,4,6-Tetrachlorophenol	ug/L																
2,4,5-Trichlorophenol	ug/L																
2,4,6-Trichlorophenol	ug/L																
2,4-Dichlorophenol	ug/L																
2,4-Dimethylphenol	ug/L																
2,4-Dinitrophenol	ug/L																
2,6-Dichlorophenol	ug/L																
2-Chlorophenol	ug/L																
2-Methylphenol	ug/L																
2-Nitrophenol	ug/L																
3&4-Methylphenol	ug/L																
4,6-Dinitro-2-Methylphenol	ug/L																
4-Chloro-3-Methylphenol	ug/L																
4-Nitrophenol	ug/L																
Dinoseb	ug/L																
Pentachlorophenol	ug/L	<1	14.8	<1	<1	<1	<1	220	153	3.63	1.18	<1	<1	11.5	4.04	3.3	<1
Phenol	ug/L																
Phenol/2-Chlorophenol	ug/L																
2,3,5,6-Tetrachlorophenol	ug/L																

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID: W08

Parameter	Units	1/29/91	5/1/91	6/17/91	10/8/91	2/20/92	6/14/92	9/17/92	12/19/92	3/23/93	6/28/93	12/27/93	4/25/94	6/21/94	10/4/94	1/5/95	3/9/95
2,3,4,6-Tetrachlorophenol	ug/L										19	<10	<1	10	<50	<10	<10
2,4,5-Trichlorophenol	ug/L										<20	<20	<1	<20	<100	<20	<20
2,4,6-Trichlorophenol	ug/L					1.02	6.69	<1	<1	<6	<10	<10	<1	<10	<50	<10	<10
2,4-Dichlorophenol	ug/L					<0.5	<0.526	<0.5	<0.5	<2	<10	<10	<1	<10	<50	<10	<10
2,4-Dimethylphenol	ug/L					<0.5	3.77	<0.5	<0.5	<2	<10	<10	<10	<10	<50	<10	<10
2,4-Dinitrophenol	ug/L					<1	<1.05	<1	<1	<6	<20	<20	<1	<20	<100	<20	<20
2,6-Dichlorophenol	ug/L										<10	<10	<1	<10	<50	<10	<10
2-Chlorophenol	ug/L					<0.5	<0.526	<0.5	<0.5	<2							
2-Methylphenol	ug/L										<10	<10	<10	<10	<50	<10	<10
2-Nitrophenol	ug/L					<0.5	<0.526	<0.5	<0.5	<2	<10	<10	<1	<10	<50	<10	<10
3&4-Methylphenol	ug/L										<20	<20	<20	<20	<100	<20	<20
4,6-Dinitro-2-Methylphenol	ug/L					<1	<1.05	<1	<1	<10	<10	<10	<1	<10	<50	<10	<10
4-Chloro-3-Methylphenol	ug/L					<0.5	<0.526	<0.5	<0.5	<10	<10	<10	<10	<10	<50	<10	<10
4-Nitrophenol	ug/L					<1	<1.05	<1	<1	<10	<20	<20	<1	<20	<100	<20	<20
Dinoseb	ug/L										<10	<10	<1	<10	<50	<10	<10
Pentachlorophenol	ug/L	3.21	36.7	1.12	4.7	11	55.3	23	4.85	<10	130	12	<1	480	470	98	<10
Phenol	ug/L					3.5	<0.526	<0.5	<0.5	<2							
Phenol/2-Chlorophenol	ug/L										<20	<20	<20	<20	<100	<20	<20
2,3,5,6-Tetrachlorophenol	ug/L					<1	<1.05	<1	<1	<20							

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W08

Parameter	Units	7/6/95	9/13/95	12/18/95	3/20/96	7/8/96	9/25/96	1/21/97	7/11/97	1/2/98	6/23/98
2,3,4,6-Tetrachlorophenol	ug/L	<25	<10	<10	<10	<10	<1.5	<1.4	<0.182	<0.182	
2,4,5-Trichlorophenol	ug/L	<10	<10	<10	<10	<10	<1.5	<1.3	<0.453	<0.453	<3
2,4,6-Trichlorophenol	ug/L	<10	<10	<10	<10	<10	<1.4	<1.2	<0.469	<0.469	<3
2,4-Dichlorophenol	ug/L	<10	<10	<10	<10	<10	<1.6	<1.4	<0.344	<0.344	<3
2,4-Dimethylphenol	ug/L	<10	<10	<10	<10	<10	<3.1	<2.7	<0.148	<0.148	<3
2,4-Dinitrophenol	ug/L	<50	<20	<20	<20	<20	<1.4	<1.3	<0.269	8.4	<3
2,6-Dichlorophenol	ug/L		<10	<10	<10	<10	<1.7	<1.5	<0.397	<0.397	<3
2-Chlorophenol	ug/L	<10	<10	<10	<10	<10	<2.3	<2.1	<0.194	<0.194	<3
2-Methylphenol	ug/L	<10	<10	<10	<10	<10	<1.6	<1.4	<0.252	<0.252	<3
2-Nitrophenol	ug/L	<10	<10	<10	<10	<10	<3.1	<2.7	<0.104	<0.104	<3
3&4-Methylphenol	ug/L	<20	<20	<20	<20	<20	<3.5	<3	<0.128	<0.128	<3
4,6-Dinitro-2-Methylphenol	ug/L	<50	<10	<10	<10	<10	<1.5	<1.3	<0.362	<0.362	<3
4-Chloro-3-Methylphenol	ug/L	<20	<10	<10	<10	<10	<1.4	<1.2	<0.105	<0.105	<3
4-Nitrophenol	ug/L	<50	<20	<20	<20	<20	<1.5	<1.3	5.6	4.3	<3
Dinoseb	ug/L	<25	<10	<10	<10	<10	<1.7	<1.5			
Pentachlorophenol	ug/L	<50	<1	<1	6.4	1.4	<1.4	<1.2	<0.209	<0.209	<3
Phenol	ug/L	<10	<10	<10	<10	<10	<2.1	<1.8	<0.127	<0.127	<3
Phenol/2-Chlorophenol	ug/L										
2,3,5,6-Tetrachlorophenol	ug/L										<3

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W09

Parameter	Units	6/4/87	9/3/87	12/3/87	3/2/88	4/7/88	8/10/88	11/15/88	1/26/89	4/27/89	7/27/89	10/26/89	1/25/90	5/3/90	9/20/90	12/11/90	1/29/91
2,3,4,6-Tetrachlorophenol	ug/L																
2,4,5-Trichlorophenol	ug/L																
2,4,6-Trichlorophenol	ug/L																
2,4-Dichlorophenol	ug/L																
2,4-Dimethylphenol	ug/L																
2,4-Dinitrophenol	ug/L																
2,6-Dichlorophenol	ug/L																
2-Chlorophenol	ug/L																
2-Methylphenol	ug/L																
2-Nitrophenol	ug/L																
3&4-Methylphenol	ug/L																
4,6-Dinitro-2-Methylphenol	ug/L																
4-Chloro-3-Methylphenol	ug/L																
4-Nitrophenol	ug/L																
Dinoseb	ug/L																
Pentachlorophenol	ug/L	2.2	<1	<1	<1	<1	1.05	<1	<1	<1	<1	<1	6.51	<1	2.37	1.53	8.59
Phenol	ug/L																
Phenol/2-Chlorophenol	ug/L																
2,3,5,6-Tetrachlorophenol	ug/L																

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W09

Parameter	Units	5/1/91	6/18/91	10/8/91	6/18/92	12/17/92	6/28/93	12/28/93	6/22/94	7/5/95	7/9/96	7/11/97	6/24/98
2,3,4,6-Tetrachlorophenol	ug/L						<1	<100	<100	<26	<100	<0.182	
2,4,5-Trichlorophenol	ug/L						<1	<200	<200	<10	<100	<0.453	7.7
2,4,6-Trichlorophenol	ug/L				3.79	<1	<1	<100	<100	<10	<100	<0.469	5.6
2,4-Dichlorophenol	ug/L				<0.515	<0.5	<1	<100	<100	<10	<100	<0.344	<3
2,4-Dimethylphenol	ug/L				1.29	<0.5	<10	<100	<100	<10	<100	<0.148	<3
2,4-Dinitrophenol	ug/L				<1.03	<1	<1	<200	<200	<51	<200	<0.269	8.5
2,6-Dichlorophenol	ug/L						<1	<100	<100		<100	<0.397	<3
2-Chlorophenol	ug/L				<0.515	<0.5				<10	<100	<0.194	<3
2-Methylphenol	ug/L						<10	<100	<100	<10.2	<100	<0.252	<3
2-Nitrophenol	ug/L				<0.515	<0.5	<1	<100	<100	<10	<100	<0.104	<3
3&4-Methylphenol	ug/L						<20	<200	<200	<20.4	<200	<0.128	<3
4,6-Dinitro-2-Methylphenol	ug/L				<1.03	<1	<1	<100	<100	<51	<100	<0.362	7.3
4-Chloro-3-Methylphenol	ug/L				<0.515	<0.5	<10	<100	<100	<20	<100	<0.105	3.4
4-Nitrophenol	ug/L				<1.03	1.77	<1	<200	<200	<51	<200	<0.351	5.2
Dinoseb	ug/L						<1	360	<100	<26	<100		
Pentachlorophenol	ug/L	2.07		5.23	21.9	26.7	<1	640	120	<51	57	250	4.4
Phenol	ug/L				2.28	<0.5				<10	<100	<0.127	<3
Phenol/2-Chlorophenol	ug/L						<20	<200	<200				
2,3,5,6-Tetrachlorophenol	ug/L				11	<1							<3

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W10A

Parameter	Units	1/8/87	6/4/87	9/3/87	12/3/87	3/3/88	4/7/88	8/10/88	11/15/88	1/26/89	4/27/89	7/27/89	10/26/89	1/25/90	5/3/90	9/20/90	12/11/90
2,3,4,6-Tetrachlorophenol	ug/L																
2,4,5-Trichlorophenol	ug/L																
2,4,6-Trichlorophenol	ug/L																
2,4-Dichlorophenol	ug/L																
2,4-Dimethylphenol	ug/L																
2,4-Dinitrophenol	ug/L																
2,6-Dichlorophenol	ug/L																
2-Chlorophenol	ug/L																
2-Methylphenol	ug/L																
2-Nitrophenol	ug/L																
3&4-Methylphenol	ug/L																
4,6-Dinitro-2-Methylphenol	ug/L																
4-Chloro-3-Methylphenol	ug/L																
4-Nitrophenol	ug/L																
Dinoseb	ug/L																
Pentachlorophenol	ug/L	10800	3200	7510	4830	13500	12100	11900	8600	11500	8580	15200	10100	12700	8450	8520	9320
Phenol	ug/L																
Phenol/2-Chlorophenol	ug/L																
2,3,5,6-Tetrachlorophenol	ug/L																

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W10A

Parameter	Units	1/29/91	5/1/91	6/19/91	10/8/91	7/8/92	12/18/92	6/30/93	12/28/93	6/22/94	7/6/95	7/9/96	7/11/97	6/24/98
2,3,4,6-Tetrachlorophenol	ug/L							650	1000	1600	960	<5000	1700	
2,4,5-Trichlorophenol	ug/L							220	<200	540	<250	<5000	<0.453	<150
2,4,6-Trichlorophenol	ug/L					108	<1	<100	<100	450	<250	<5000	<0.469	<150
2,4-Dichlorophenol	ug/L					<0.526	<0.5	<100	120	<100	<250	<5000	<0.344	<150
2,4-Dimethylphenol	ug/L					1.67	<0.5	<100	<100	<100	<250	<5000	<0.148	<150
2,4-Dinitrophenol	ug/L					47.4	<1	450	<200	470	<1300	<10000	<0.269	<150
2,6-Dichlorophenol	ug/L							<100	<100	<100		<5000	<0.397	<150
2-Chlorophenol	ug/L					<0.526	<0.5				<250	<5000	<0.194	<150
2-Methylphenol	ug/L							<100	<100	<100	<250	<5000	<0.252	<150
2-Nitrophenol	ug/L					4.82	<0.5	<100	<100	<100	<250	<5000	<0.104	<150
3&4-Methylphenol	ug/L							<200	<200	<200	<500	<10000	<0.128	<150
4,6-Dinitro-2-Methylphenol	ug/L					<1.05	<1	<100	<100	<100	<1300	<5000	<0.362	<150
4-Chloro-3-Methylphenol	ug/L					<0.526	<0.5	<100	<100	<100	<500	<5000	<0.105	<150
4-Nitrophenol	ug/L					3.78	12.3	<200	<200	240	<1300	<10000	<0.351	<150
Dinoseb	ug/L							<100	<100	<100	<630	<5000		
Pentachlorophenol	ug/L	12300	29800	9550	16500	7400	11800	11000	14000	17000	6600	970	24000	600
Phenol	ug/L					0.714	60.4				<250	<5000	800	<150
Phenol/2-Chlorophenol	ug/L							<200	220	<200				
2,3,5,6-Tetrachlorophenol	ug/L					13.1	19.7							<150

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W10B

Parameter	Units	7/8/92	12/18/92	6/29/93	12/28/93	6/22/94	7/6/95	7/9/96	7/11/97	6/24/98
2,3,4,6-Tetrachlorophenol	ug/L			1.8	<10	66	<25	<10	8.5	
2,4,5-Trichlorophenol	ug/L			<1	<20	27	<10	<10	<0.453	<3
2,4,6-Trichlorophenol	ug/L	<1.07	<1	<1	<10	16	<10	<10	<0.469	<3
2,4-Dichlorophenol	ug/L	1.31	<0.5	<1	<10	<10	<10	<10	<0.344	<3
2,4-Dimethylphenol	ug/L	<0.535	<0.5	<10	<10	<10	<10	<10	<0.148	<3
2,4-Dinitrophenol	ug/L	<1.07	<1	<1	<20	<20	<50	<20	<0.269	<3
2,6-Dichlorophenol	ug/L			<1	<10	<10		<10	<0.397	<3
2-Chlorophenol	ug/L	<0.535	<0.5				<10	<10	<0.194	<3
2-Methylphenol	ug/L			<10	<10	<10	<10	<10	<0.252	<3
2-Nitrophenol	ug/L	<0.535	<0.5	<1	<10	<10	<10	<10	<0.104	<3
3&4-Methylphenol	ug/L			<20	<20	<20	<20	<20	<0.128	<3
4,6-Dinitro-2-Methylphenol	ug/L	<1.07	<1	<1	<10	<10	<50	<10	<0.362	<3
4-Chloro-3-Methylphenol	ug/L	<0.535	<0.5	<10	<10	17	<20	<10	<0.105	<3
4-Nitrophenol	ug/L	<1.07	<1	<1	<20	<20	<50	<20	<0.351	<3
Dinoseb	ug/L			<1	<10	<10	<25	<10		
Pentachlorophenol	ug/L	39.2	30.3	8.4	23	33	<50	7.7	76	11
Phenol	ug/L	<0.535	<0.5				<10	<10	<0.127	<3
Phenol/2-Chlorophenol	ug/L			<20	<20	<20				
2,3,5,6-Tetrachlorophenol	ug/L	<1.07	<1							<3

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W11

Parameter	Units	1/8/87	6/4/87	9/3/87	12/3/87	3/3/88	4/7/88	8/10/88	11/15/88	1/26/89	4/27/89	7/27/89	10/26/89	1/25/90	5/3/90	9/21/90	12/12/90
2,3,4,6-Tetrachlorophenol	ug/L																
2,4,5-Trichlorophenol	ug/L																
2,4,6-Trichlorophenol	ug/L																
2,4-Dichlorophenol	ug/L																
2,4-Dimethylphenol	ug/L																
2,4-Dinitrophenol	ug/L																
2,6-Dichlorophenol	ug/L																
2-Chlorophenol	ug/L																
2-Methylphenol	ug/L																
2-Nitrophenol	ug/L																
3&4-Methylphenol	ug/L																
4,6-Dinitro-2-Methylphenol	ug/L																
4-Chloro-3-Methylphenol	ug/L																
4-Nitrophenol	ug/L																
Dinoseb	ug/L																
Pentachlorophenol	ug/L	2050	2410	49.3	163	824	<1	1000	329	321	384	142	1.66	300	736	2940	2690
Phenol	ug/L																
Phenol/2-Chlorophenol	ug/L																
2,3,5,6-Tetrachlorophenol	ug/L																

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID: W11

Parameter	Units	1/30/91	5/1/91	6/19/91	10/8/91	6/18/92	12/17/92	6/30/93	12/28/93	6/21/94	7/5/95	7/9/96	7/11/97	6/24/98
2,3,4,6-Tetrachlorophenol	ug/L							<1	<10	17	<25	<10	<0.182	
2,4,5-Trichlorophenol	ug/L							<1	<20	<20	<10	<10	<0.453	<15
2,4,6-Trichlorophenol	ug/L					<1.02	<1	<1	<10	<10	<10	<10	<0.469	<15
2,4-Dichlorophenol	ug/L					<0.51	<0.5	<1	<10	<10	<10	<10	<0.344	<15
2,4-Dimethylphenol	ug/L					<0.51	<0.5	<10	<10	<10	<10	<10	<0.148	<15
2,4-Dinitrophenol	ug/L					<1.02	<1	<1	<20	<20	<50	<20	<0.269	<15
2,6-Dichlorophenol	ug/L							<1	<10	<10		<10	<0.397	<15
2-Chlorophenol	ug/L					<0.51	<0.5				<10	<10	<0.194	<15
2-Methylphenol	ug/L							<10	<10	<10	<10	<10	<0.252	<15
2-Nitrophenol	ug/L					<0.51	<0.5	<1	<10	<10	<10	<10	<0.104	<15
3&4-Methylphenol	ug/L							<20	<20	<20	<20	<20	<0.128	<15
4,6-Dinitro-2-Methylphenol	ug/L					<1.02	<1	<1	<10	<10	<50	<10	<0.362	<15
4-Chloro-3-Methylphenol	ug/L					<0.51	<0.5	<10	<10	<10	<20	<10	<0.105	<15
4-Nitrophenol	ug/L					<1.02	<1	<1	<20	<20	<50	<20	<0.351	<15
Dinoseb	ug/L							<1	<10	<10	<25	<10		
Pentachlorophenol	ug/L	3080	2410	1420	891	44.4	209	82	70	140	<50	25	8.3	88
Phenol	ug/L					7.16	<0.5				<10	<10	<0.127	<15
Phenol/2-Chlorophenol	ug/L							<20	<20	<20				
2,3,5,6-Tetrachlorophenol	ug/L					<1.02	<1							<15

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W12

Parameter	Units	6/18/92	12/17/92	6/29/93	12/28/93	6/21/94	7/6/95	7/8/96	7/11/97	6/23/98
2,3,4,6-Tetrachlorophenol	ug/L			<1	<1.1	<10	47	<10	<0.182	
2,4,5-Trichlorophenol	ug/L			<1	<1.1	<20	<10	<10	<0.453	<30
2,4,6-Trichlorophenol	ug/L	<1.03	<1	<1	<1.1	<10	<10	<10	<0.469	<30
2,4-Dichlorophenol	ug/L	<0.515	<0.5	<1	<1.1	<10	<10	<10	<0.344	<30
2,4-Dimethylphenol	ug/L	<0.515	<0.5	<10	<11	<10	<10	<10	<0.148	<30
2,4-Dinitrophenol	ug/L	<1.03	<1	<1	<1.1	<20	<50	<20	<0.269	<30
2,6-Dichlorophenol	ug/L			<1	<1.1	<10		<10	<0.397	<30
2-Chlorophenol	ug/L	<0.515	<0.5				<10	<10	<0.194	<30
2-Methylphenol	ug/L			<10	<11	<10	<10	<10	<0.252	<30
2-Nitrophenol	ug/L	<0.515	<0.5	<1	<1.1	14	<10	<10	<0.104	<30
3&4-Methylphenol	ug/L			<20	<22	<20	<20	<20	<0.128	<30
4,6-Dinitro-2-Methylphenol	ug/L	<1.03	<1	<1	<1.1	<10	<50	<10	<0.362	<30
4-Chloro-3-Methylphenol	ug/L	<0.515	<0.5	<10	<11	<10	<20	<10	<0.105	<30
4-Nitrophenol	ug/L	<1.03	<1	<1	<1.1	<20	<50	<20	<0.351	<30
Dinoseb	ug/L			<1	<1.1	<10	<25	<10		
Pentachlorophenol	ug/L	2.83	3.67	<1	<1.1	73	210	1.5	3.5	220
Phenol	ug/L	11.4	<0.5				<10	<10	<0.127	<30
Phenol/2-Chlorophenol	ug/L			<20	<22	<20				
2,3,5,6-Tetrachlorophenol	ug/L	<1.03	<1							<30

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W13

Parameter	Units	6/22/92	12/19/92	6/30/93	12/27/93	4/25/94	6/22/94	10/4/94	3/10/95	7/6/95	9/13/95	3/20/96	7/10/96	9/25/96	7/11/97	1/2/98	6/24/98
2,3,4,6-Tetrachlorophenol	ug/L			<100	120	190	120	12	<100	33	<100	<100	<100	99	<0.182	<0.182	
2,4,5-Trichlorophenol	ug/L			<200	<200	25	<200	<20	<200	<10	<100	<100	<100	<0.73	<0.453	<0.453	<30
2,4,6-Trichlorophenol	ug/L	<1.02	<1	<100	<100	<10	<100	<10	<100	<10	<100	<100	<100	1.4	<0.469	<0.469	<30
2,4-Dichlorophenol	ug/L	<0.51	<0.5	<100	<100	<10	<100	<10	<100	<10	<100	<100	<100	<0.8	<0.344	<0.344	<30
2,4-Dimethylphenol	ug/L	<0.51	<0.5	<100	<100	<10	<100	<10	<100	<10	<100	<100	<100	<1.5	<0.148	<0.148	<30
2,4-Dinitrophenol	ug/L	<1.02	<1	<200	<200	21	<200	<20	<200	<50	<200	<200	<200	<0.72	<0.269	<0.269	<30
2,6-Dichlorophenol	ug/L			<100	<100	<10	<100	<10	<100		<100	<100	<100	<0.87	<0.397	<0.397	<30
2-Chlorophenol	ug/L	<0.51	<0.5							<10	<100	<100	<100	<1.2	<0.194	<0.194	<30
2-Methylphenol	ug/L			<100	<100	<10	<100	<10	<100	<10	<100	<100	<100	<0.79	<0.252	<0.252	<30
2-Nitrophenol	ug/L	<0.51	<0.5	<100	<100	<10	<100	<10	<100	<10	<100	<100	<100	<1.5	<0.104	<0.104	<30
3&4-Methylphenol	ug/L			<200	<200	<20	<200	<20	<200	<20	<200	<200	<200	<1.7	<0.128	<0.128	<30
4,6-Dinitro-2-Methylphenol	ug/L	<1.02	<1	<100	<100	11	<100	<10	<100	<50	<100	<100	<100	<0.75	<0.362	<0.362	<30
4-Chloro-3-Methylphenol	ug/L	<0.51	<0.5	<100	<100	<10	<100	<10	<100	<20	<100	<100	<100	<0.69	<0.105	<0.105	<30
4-Nitrophenol	ug/L	<1.02	<1	<200	<200	<20	<200	<20	<200	<50	<200	<200	<200	<0.74	<0.351	<0.351	<30
Dinoseb	ug/L			<100	<100	<10	<100	<10	<100	<25	<100	<100	<100	<0.85			
Pentachlorophenol	ug/L	636	4550	540	1800	520	1500	220	530	390	110	740	28	754	260	140	150
Phenol	ug/L	4.42	<0.5							<10	<100	<100	<100	<1	<0.127	<0.127	<30
Phenol/2-Chlorophenol	ug/L			<200	<200	<20	<200	<20	<200								
2,3,5,6-Tetrachlorophenol	ug/L	<1.02	<1														<30

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W13
Parameter	**Units**
2,3,4,6-Tetrachlorophenol	ug/L
2,4,5-Trichlorophenol	ug/L
2,4,6-Trichlorophenol	ug/L
2,4-Dichlorophenol	ug/L
2,4-Dimethylphenol	ug/L
2,4-Dinitrophenol	ug/L
2,6-Dichlorophenol	ug/L
2-Chlorophenol	ug/L
2-Methylphenol	ug/L
2-Nitrophenol	ug/L
3&4-Methylphenol	ug/L
4,6-Dinitro-2-Methylphenol	ug/L
4-Chloro-3-Methylphenol	ug/L
4-Nitrophenol	ug/L
Dinoseb	ug/L
Pentachlorophenol	ug/L
Phenol	ug/L
Phenol/2-Chlorophenol	ug/L
2,3,5,6-Tetrachlorophenol	ug/L

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W14

Parameter	Units	1/8/87	6/4/87	9/3/87	12/3/87	3/3/88	4/7/88	8/10/88	11/15/88	1/26/89	4/27/89	7/27/89	10/26/89	1/25/90	5/3/90	9/21/90	12/12/90
2,3,4,6-Tetrachlorophenol	ug/L																
2,4,5-Trichlorophenol	ug/L																
2,4,6-Trichlorophenol	ug/L																
2,4-Dichlorophenol	ug/L																
2,4-Dimethylphenol	ug/L																
2,4-Dinitrophenol	ug/L																
2,6-Dichlorophenol	ug/L																
2-Chlorophenol	ug/L																
2-Methylphenol	ug/L																
2-Nitrophenol	ug/L																
3&4-Methylphenol	ug/L																
4,6-Dinitro-2-Methylphenol	ug/L																
4-Chloro-3-Methylphenol	ug/L																
4-Nitrophenol	ug/L																
Dinoseb	ug/L																
Pentachlorophenol	ug/L	<1	<1	<1	4.74	<1	<1	<1	<1	1.93	<1	<1	<1	<1	<1	1.64	<1
Phenol	ug/L																
Phenol/2-Chlorophenol	ug/L																
2,3,5,6-Tetrachlorophenol	ug/L																

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W14

Parameter	Units	1/30/91	5/1/91	6/18/91	10/8/91	6/24/92	12/18/92	6/29/93	12/28/93	6/21/94	7/6/95	7/8/96	7/11/97	6/23/98
2,3,4,6-Tetrachlorophenol	ug/L							<1	<10	<10	<25	<10	<0.182	
2,4,5-Trichlorophenol	ug/L							<1	<20	<20	<10	<10	<0.453	<3
2,4,6-Trichlorophenol	ug/L					<1.02	<1	<1	<10	<10	<10	<10	<0.469	<3
2,4-Dichlorophenol	ug/L					2.39	<0.5	<1	<10	<10	<10	<10	<0.344	<3
2,4-Dimethylphenol	ug/L					<0.51	<0.5	<10	<10	<10	<10	<10	<0.148	<3
2,4-Dinitrophenol	ug/L					<1.02	<1	<1	<20	<20	<50	<20	<0.269	<3
2,6-Dichlorophenol	ug/L							<1	<10	<10		<10	<0.397	<3
2-Chlorophenol	ug/L					<0.51	<0.5				<10	<10	<0.194	<3
2-Methylphenol	ug/L							<10	<10	<10	<10	<10	<0.252	<3
2-Nitrophenol	ug/L					<0.51	<0.5	<1	<10	<10	<10	<10	<0.104	<3
3&4-Methylphenol	ug/L							<20	<20	<20	<20	<20	<0.128	<3
4,6-Dinitro-2-Methylphenol	ug/L					1.23	<1	<1	<10	<10	<50	<10	<0.362	<3
4-Chloro-3-Methylphenol	ug/L					0.582	<0.5	<10	<10	<10	<20	<10	<0.105	<3
4-Nitrophenol	ug/L					<1.02	<1	<1	<20	<20	<50	<20	5	<3
Dinoseb	ug/L							<1	<10	<10	<25	<10		
Pentachlorophenol	ug/L	1.65	2.79	<1	6.49	<1.02	2.43	<1	11	26	<50	<1	4.7	6.6
Phenol	ug/L					<0.51	<0.5				<10	<10	<0.127	<3
Phenol/2-Chlorophenol	ug/L							<20	<20	<20				
2,3,5,6-Tetrachlorophenol	ug/L					<1.02	<1							<3

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W16

Parameter	Units	1/8/87	6/4/87	9/3/87	12/3/87	3/3/88	4/7/88	8/10/88	11/15/88	1/26/89	4/27/89	7/27/89	10/26/89	1/25/90	5/3/90	9/21/90	12/12/90
2,3,4,6-Tetrachlorophenol	ug/L																
2,4,5-Trichlorophenol	ug/L																
2,4,6-Trichlorophenol	ug/L																
2,4-Dichlorophenol	ug/L																
2,4-Dimethylphenol	ug/L																
2,4-Dinitrophenol	ug/L																
2,6-Dichlorophenol	ug/L																
2-Chlorophenol	ug/L																
2-Methylphenol	ug/L																
2-Nitrophenol	ug/L																
3&4-Methylphenol	ug/L																
4,6-Dinitro-2-Methylphenol	ug/L																
4-Chloro-3-Methylphenol	ug/L																
4-Nitrophenol	ug/L																
Dinoseb	ug/L																
Pentachlorophenol	ug/L	12.4	27.3	<1	<1	13.9	<1	13.7	19.8	2.34	265	2.04	1.49	31	1.66	3.44	1.93
Phenol	ug/L																
Phenol/2-Chlorophenol	ug/L																
2,3,5,6-Tetrachlorophenol	ug/L																

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W16

Parameter	Units	1/30/91	5/1/91	6/19/91	10/8/91	6/16/92	12/18/92	6/29/93	12/28/93	6/21/94	7/6/95	7/8/96	7/11/97	6/24/98
2,3,4,6-Tetrachlorophenol	ug/L							<1	<10	<10	<34	<10	<0.182	
2,4,5-Trichlorophenol	ug/L							<1	<20	<20	<14	<10	<0.453	<3
2,4,6-Trichlorophenol	ug/L					<1.02	<1	<1	<10	<10	<14	<10	<0.469	<3
2,4-Dichlorophenol	ug/L					<0.51	<0.5	<1	<10	<10	<14	<10	<0.344	<3
2,4-Dimethylphenol	ug/L					<0.51	<0.5	<10	<10	<10	<14	<10	<0.148	<3
2,4-Dinitrophenol	ug/L					<1.02	<1	<1	<20	<20	<69	<20	<0.269	<3
2,6-Dichlorophenol	ug/L							<1	<10	<10		<10	<0.397	<3
2-Chlorophenol	ug/L					<0.51	<0.5				<14	<10	<0.194	<3
2-Methylphenol	ug/L							<10	<10	<10	<13.7	<10	<0.252	<3
2-Nitrophenol	ug/L					<0.51	<0.5	<1	<10	<10	<14	<10	<0.104	<3
3&4-Methylphenol	ug/L							<20	<20	<20	<27.4	<20	<0.128	<3
4,6-Dinitro-2-Methylphenol	ug/L					<1.02	<1	<1	<10	<10	<69	<10	<0.362	<3
4-Chloro-3-Methylphenol	ug/L					<0.51	<0.5	<10	<10	<10	<27	<10	<0.105	<3
4-Nitrophenol	ug/L					<1.02	<1	<1	<20	<20	<69	<20	<0.351	<3
Dinoseb	ug/L							<1	<10	<10	<34	<10		
Pentachlorophenol	ug/L	4.53		2.03	5.35	<1.02	4.79	<1	11	43	<69	<1	2.9	<3
Phenol	ug/L					27.6	<0.5				<14	<10	<0.127	<3
Phenol/2-Chlorophenol	ug/L							<20	<20	<20				
2,3,5,6-Tetrachlorophenol	ug/L					<1.02	<1							<3

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W18

Parameter	Units	2/25/92	7/8/92	9/17/92	12/17/92	3/23/93	6/29/93	12/28/93	6/22/94	7/5/95	7/9/96	7/11/97	6/24/98
2,3,4,6-Tetrachlorophenol	ug/L						750	840	1000	<640	<5000	<0.182	
2,4,5-Trichlorophenol	ug/L						<200	52	400	<260	<5000	55	<300
2,4,6-Trichlorophenol	ug/L	146	<1.02	<1	<1	<6	<100	170	400	<260	<5000	<0.469	<300
2,4-Dichlorophenol	ug/L	<5	70.8	29.6	15	<2	<100	<10	220	<260	<5000	<0.344	<300
2,4-Dimethylphenol	ug/L	<5	9.67	<0.5	<0.5	<2	<100	23	<100	<260	<5000	53	<300
2,4-Dinitrophenol	ug/L	<10	85.9	<1	<1	<6	<200	45	350	<1300	<10000	<0.269	<300
2,6-Dichlorophenol	ug/L						<100	16	<100		<5000	<0.397	<300
2-Chlorophenol	ug/L	<5	<0.51	1.68	<0.5	<2				<260	<5000	<0.194	<300
2-Methylphenol	ug/L						<100	14	<100	<255	<5000	<0.252	<300
2-Nitrophenol	ug/L	17.3	3.6	4.25	<0.5	<2	<100	<10	<100	<260	<5000	<0.104	<300
3&4-Methylphenol	ug/L						<200	<20	<200	<510	<10000	<0.128	<300
4,6-Dinitro-2-Methylphenol	ug/L	<10	<1.02	4.39	<1	<10	<100	<10	<100	<1300	<5000	<0.362	<300
4-Chloro-3-Methylphenol	ug/L	<5	24.9	<0.5	<0.5	<10	<100	100	<100	<510	<5000	67	<300
4-Nitrophenol	ug/L	<10	<1.02	102	<1	<10	<200	<20	<200	<1300	<10000	<0.351	<300
Dinoseb	ug/L						<100	<10	<100	<640	<5000		
Pentachlorophenol	ug/L	11800	9380	11600	19500	7470	13000	5600	11000	5100	1100	15000	2500
Phenol	ug/L	<5	27	<0.5	60.7	<2				<260	<5000	320	<300
Phenol/2-Chlorophenol	ug/L						<200	90	<200				
2,3,5,6-Tetrachlorophenol	ug/L	<10	17	47.8	33.8	<20							<300

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W18

Parameter	Units	2/25/92	7/8/92	9/17/92	12/17/92	3/23/93	6/29/93	12/28/93	6/22/94	7/5/95	7/9/96	7/11/97	6/24/98
2,3,4,6-Tetrachlorophenol	ug/L						750	840	1000	<640	<5000	<0.182	
2,4,5-Trichlorophenol	ug/L						<200	52	400	<260	<5000	55	<300
2,4,6-Trichlorophenol	ug/L	146	<1.02	<1	<1	<6	<100	170	400	<260	<5000	<0.469	<300
2,4-Dichlorophenol	ug/L	<5	70.8	29.6	15	<2	<100	<10	220	<260	<5000	<0.344	<300
2,4-Dimethylphenol	ug/L	<5	9.67	<0.5	<0.5	<2	<100	23	<100	<260	<5000	53	<300
2,4-Dinitrophenol	ug/L	<10	85.9	<1	<1	<6	<200	45	350	<1300	<10000	<0.269	<300
2,6-Dichlorophenol	ug/L						<100	16	<100		<5000	<0.397	<300
2-Chlorophenol	ug/L	<5	<0.51	1.68	<0.5	<2				<260	<5000	<0.194	<300
2-Methylphenol	ug/L						<100	14	<100	<255	<5000	<0.252	<300
2-Nitrophenol	ug/L	17.3	3.6	4.25	<0.5	<2	<100	<10	<100	<260	<5000	<0.104	<300
3&4-Methylphenol	ug/L						<200	<20	<200	<510	<10000	<0.128	<300
4,6-Dinitro-2-Methylphenol	ug/L	<10	<1.02	4.39	<1	<10	<100	<10	<100	<1300	<5000	<0.362	<300
4-Chloro-3-Methylphenol	ug/L	<5	24.9	<0.5	<0.5	<10	<100	100	<100	<510	<5000	67	<300
4-Nitrophenol	ug/L	<10	<1.02	102	<1	<10	<200	<20	<200	<1300	<10000	<0.351	<300
Dinoseb	ug/L						<100	<10	<100	<640	<5000		
Pentachlorophenol	ug/L	11800	9380	11600	19500	7470	13000	5600	11000	5100	1100	15000	2500
Phenol	ug/L	<5	27	<0.5	60.7	<2				<260	<5000	320	<300
Phenol/2-Chlorophenol	ug/L						<200	90	<200				
2,3,5,6-Tetrachlorophenol	ug/L	<10	17	47.8	33.8	<20							<300

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W19

Parameter	Units	6/24/92	12/18/92	6/30/93	12/28/93	4/25/94	6/21/94	10/4/94	3/10/95	7/6/95	9/13/95	3/20/96	7/10/96	9/25/96	7/11/97	1/2/98	6/24/98
2,3,4,6-Tetrachlorophenol	ug/L			<100	200	220	250	<100	<500	95	<500	<200	<50	<0.77	<0.182	<0.182	
2,4,5-Trichlorophenol	ug/L			<200	<200	<20	<200	<200	<1000	<10	<500	<200	<50	<0.73	<0.453	<0.453	<300
2,4,6-Trichlorophenol	ug/L	<1.02	<1	<100	<100	460	<100	<100	<500	<10	<500	<200	<50	<0.71	<0.469	<0.469	<300
2,4-Dichlorophenol	ug/L	<0.51	23.2	<100	<100	150	<100	<100	<500	<10	<500	<200	<50	<0.8	26	700	<300
2,4-Dimethylphenol	ug/L	<0.51	<0.5	<100	<100	51	110	<100	<500	<10	<500	<200	<50	<1.5	<0.148	350	<300
2,4-Dinitrophenol	ug/L	21.1	3.86	<200	<200	180	270	<200	<1000	<50	<1000	<400	<100	<0.72	89	900	<300
2,6-Dichlorophenol	ug/L			<100	<100	76	<100	<100	<500		<500	<200	<50	<0.87	39	1100	<300
2-Chlorophenol	ug/L	<0.51	<0.5							<10	<500	<200	68	<1.2	<0.194	2300	<300
2-Methylphenol	ug/L			<100	140	94	240	<100	<500	<10	<500	<200	<50	<0.79	34	1600	390
2-Nitrophenol	ug/L	<0.51	<0.5	<100	<100	160	410	200	<500	<10	<500	<200	<50	<1.5	37	700	330
3&4-Methylphenol	ug/L			<200	<200	69	<200	<200	<1000	<20	<1000	<400	<100	<1.7	<0.128	<0.128	<300
4,6-Dinitro-2-Methylphenol	ug/L	<1.02	<1	<100	<100	40	<100	<100	<500	<50	<500	<200	<50	<0.75	<0.362	500	<300
4-Chloro-3-Methylphenol	ug/L	<0.51	2.94	<100	<100	27	<100	<100	<500	<20	<500	<200	<50	<0.69	27	430	<300
4-Nitrophenol	ug/L	<1.02	<1	<200	<200	34	<200	<200	<1000	<50	<1000	<400	<100	<0.74	41	<0.351	<300
Dinoseb	ug/L			<100	<100	13	<100	<100	<500	<25	<500	<200	<50	<0.85			
Pentachlorophenol	ug/L	3240	4730	2100	3400	660	2900	2200	1200	300	520	410	16	46	63	240	<300
Phenol	ug/L	54.6	63.7							<10	<500	<200	<50	<1	<0.127	<0.127	300
Phenol/2-Chlorophenol	ug/L			<200	300	150	290	380	<1000								
2,3,5,6-Tetrachlorophenol	ug/L	<1.02	11.9														<300

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W19
Parameter	**Units**
2,3,4,6-Tetrachlorophenol	ug/L
2,4,5-Trichlorophenol	ug/L
2,4,6-Trichlorophenol	ug/L
2,4-Dichlorophenol	ug/L
2,4-Dimethylphenol	ug/L
2,4-Dinitrophenol	ug/L
2,6-Dichlorophenol	ug/L
2-Chlorophenol	ug/L
2-Methylphenol	ug/L
2-Nitrophenol	ug/L
3&4-Methylphenol	ug/L
4,6-Dinitro-2-Methylphenol	ug/L
4-Chloro-3-Methylphenol	ug/L
4-Nitrophenol	ug/L
Dinoseb	ug/L
Pentachlorophenol	ug/L
Phenol	ug/L
Phenol/2-Chlorophenol	ug/L
2,3,5,6-Tetrachlorophenol	ug/L

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W21

Parameter	Units	1/8/87	6/4/87	9/3/87	12/3/87	3/3/88	4/7/88	8/10/88	11/15/88	1/26/89	4/27/89	7/27/89	10/26/89	1/25/90	5/3/90	9/21/90	12/12/90
2,3,4,6-Tetrachlorophenol	ug/L																
2,4,5-Trichlorophenol	ug/L																
2,4,6-Trichlorophenol	ug/L																
2,4-Dichlorophenol	ug/L																
2,4-Dimethylphenol	ug/L																
2,4-Dinitrophenol	ug/L																
2,6-Dichlorophenol	ug/L																
2-Chlorophenol	ug/L																
2-Methylphenol	ug/L																
2-Nitrophenol	ug/L																
3&4-Methylphenol	ug/L																
4,6-Dinitro-2-Methylphenol	ug/L																
4-Chloro-3-Methylphenol	ug/L																
4-Nitrophenol	ug/L																
Dinoseb	ug/L																
Pentachlorophenol	ug/L	1.96	<1	<1	<1	<1	<1	5.55	182	2.47	<1	<1	<1	3.86	1.09	8.96	2.36
Phenol	ug/L																
Phenol/2-Chlorophenol	ug/L																
2,3,5,6-Tetrachlorophenol	ug/L																

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W21

Parameter	Units	1/30/91	5/1/91	6/19/91	10/8/91	6/24/92	12/18/92	6/29/93	12/28/93	6/22/94	7/6/95	7/8/96	7/11/97	6/23/98
2,3,4,6-Tetrachlorophenol	ug/L							<1	<10	100	<25	<10	<0.182	
2,4,5-Trichlorophenol	ug/L							<1	<20	56	<10	<10	<0.453	<3
2,4,6-Trichlorophenol	ug/L					<1.02	<1	<1	<10	27	<10	<10	<0.469	<3
2,4-Dichlorophenol	ug/L					<0.51	<0.5	<1	<10	<10	<10	<10	<0.344	<3
2,4-Dimethylphenol	ug/L					<0.51	<0.5	<10	<10	<10	<10	<10	<0.148	<3
2,4-Dinitrophenol	ug/L					<1.02	<1	<1	<20	<20	<50	<20	<0.269	<3
2,6-Dichlorophenol	ug/L							<1	<10	<10		<10	<0.397	<3
2-Chlorophenol	ug/L					<0.51	<0.5				<10	<10	<0.194	<3
2-Methylphenol	ug/L							<10	<10	<10	<10	<10	<0.252	<3
2-Nitrophenol	ug/L					<0.51	<0.5	<1	<10	<10	<10	<10	<0.104	<3
3&4-Methylphenol	ug/L							<20	<20	<20	<20	<20	<0.128	<3
4,6-Dinitro-2-Methylphenol	ug/L					<1.02	<1	<1	<10	<10	<50	<10	<0.362	<3
4-Chloro-3-Methylphenol	ug/L					<0.51	<0.5	<10	<10	<10	<20	<10	<0.105	<3
4-Nitrophenol	ug/L					<1.02	<1	<1	<20	<20	<50	<20	<0.351	<3
Dinoseb	ug/L							<1	<10	<10	<25	<10		
Pentachlorophenol	ug/L	1.84		2.33	4.21	<1.02	26.5	2.8	33	44	<50	<1	3.1	5.1
Phenol	ug/L					<0.51	2.63				<10	<10	<0.127	<3
Phenol/2-Chlorophenol	ug/L							<20	<20	<20				
2,3,5,6-Tetrachlorophenol	ug/L					<1.02	<1							<3

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W22

Parameter	Units	2/25/92	6/14/92	9/17/92	12/18/92	3/24/93	6/30/93	12/28/93	4/25/94	6/22/94	10/4/94	3/9/95	7/6/95	9/13/95	12/18/95	3/21/96	7/10/96
2,3,4,6-Tetrachlorophenol	ug/L						<1	<100	430	2900	190	<1000	<630	<1000	<100	<1000	<1000
2,4,5-Trichlorophenol	ug/L						<1	<200	<20	930	<100	<2000	<250	<1000	<100	<1000	<1000
2,4,6-Trichlorophenol	ug/L	<10	<11.1	<1	1230	<6	<1	<100	<10	1800	<50	<1000	<250	<1000	<100	<1000	<1000
2,4-Dichlorophenol	ug/L	<5	77.9	1.62	<0.5	<2	<1	<100	140	600	<50	<1000	<250	<1000	<100	<1000	<1000
2,4-Dimethylphenol	ug/L	<5	<5.56	<0.5	<0.5	<2	<10	<100	110	<100	<50	<1000	<250	<1000	<100	<1000	<1000
2,4-Dinitrophenol	ug/L	<10	<11.1	<1	<1	<6000	<1	<200	45	200	<100	<2000	<1300	<2000	<200	<2000	<2000
2,6-Dichlorophenol	ug/L						<1	<100	66	310	<50	<1000		<1000	<100	<1000	<1000
2-Chlorophenol	ug/L	<5	<0.556	<0.5	<0.5	<2							<250	<1000	<100	<1000	<1000
2-Methylphenol	ug/L						<10	<100	17	<100	<50	<1000	<250	<1000	<100	<1000	<1000
2-Nitrophenol	ug/L	<5	<5.56	<0.5	70.1	<2	<1	<100	110	210	<50	<1000	<250	<1000	<100	<1000	<1000
3&4-Methylphenol	ug/L						<20	<200	<20	<200	<100	<2000	<500	<2000	<200	<2000	<2000
4,6-Dinitro-2-Methylphenol	ug/L	12	1.7	<1	<1	<10	<1	<100	19	150	<50	<1000	<1300	<1000	<100	<1000	<1000
4-Chloro-3-Methylphenol	ug/L	<5	<5.56	<0.5	<0.5	<10	<10	<100	130	300	<50	<1000	<500	<1000	<100	<1000	<1000
4-Nitrophenol	ug/L	<10	<1.11	1.14	25.8	<10	<1	<200	71	300	<100	<2000	<1300	<2000	<200	<2000	<2000
Dinoseb	ug/L						<1	<100	24	<100	<50	<1000	<630	<1000	<100	<1000	<1000
Pentachlorophenol	ug/L	37300	33500	117	74300	81440	1.4	1500	1100	6100	1400	7300	2600	2000	3200	610	730
Phenol	ug/L	<5	<0.556	<0.5	119	<2							<250	<1000	<100	<1000	<1000
Phenol/2-Chlorophenol	ug/L						<20	460	27	<200	<100	<2000					
2,3,5,6-Tetrachlorophenol	ug/L	<10	73.1	<1	69.9	<20											

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W22

Parameter	Units	9/25/96	1/21/97	7/11/97	1/2/98	6/24/98
2,3,4,6-Tetrachlorophenol	ug/L	1280	1180	3100	<0.182	
2,4,5-Trichlorophenol	ug/L	<7.3		<0.453	<0.453	<1500
2,4,6-Trichlorophenol	ug/L	<7.1		<0.469	<0.469	<1500
2,4-Dichlorophenol	ug/L	<8		<0.344	<0.344	<1500
2,4-Dimethylphenol	ug/L	<15		<0.148	<0.148	<1500
2,4-Dinitrophenol	ug/L	<7.2		<0.269	<0.269	<1500
2,6-Dichlorophenol	ug/L	<8.7		<0.397	<0.397	<1500
2-Chlorophenol	ug/L	<12		500	<0.194	<1500
2-Methylphenol	ug/L	<7.9		<0.252	<0.252	<1500
2-Nitrophenol	ug/L	<15		<0.104	<0.104	<1500
3&4-Methylphenol	ug/L	<17		<0.128	<0.128	<1500
4,6-Dinitro-2-Methylphenol	ug/L	<7.5		<0.362	<0.362	<1500
4-Chloro-3-Methylphenol	ug/L	<6.9		<0.105	<0.105	<1500
4-Nitrophenol	ug/L	<7.4		<0.351	<0.351	<1500
Dinoseb	ug/L	<8.5				
Pentachlorophenol	ug/L	7540	5800	17000	12000	6800
Phenol	ug/L	<10		<0.127	<0.127	<1500
Phenol/2-Chlorophenol	ug/L					
2,3,5,6-Tetrachlorophenol	ug/L					<1500

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID: W25

Parameter	Units	2/19/92	7/29/92	9/17/92	12/17/92	3/23/93	6/28/93	12/28/93	4/25/94	6/21/94	10/4/94	3/10/95	3/23/95	5/2/95	5/24/95	6/13/95	7/5/95
2,3,4,6-Tetrachlorophenol	ug/L						<10	16	140	280	<250	<1000	12	<100	<100	<100	320
2,4,5-Trichlorophenol	ug/L						<20	<1	310	140	<500	<2000	95	<100	<100	<100	<10
2,4,6-Trichlorophenol	ug/L	<1	1.3	10.4	4.04	<6	<10	<1	260	110	<250	<1000	220	<100	<100	<100	<10
2,4-Dichlorophenol	ug/L	7.15	9.9	2.1	10.2	<2	<10	<1	53	110	<250	<1000	120	<100	<100	<100	<10
2,4-Dimethylphenol	ug/L	8	1.87	<0.5	<0.5	<2	<10	<10	52	32	<250	<1000	65	<100	<100	<100	<10
2,4-Dinitrophenol	ug/L	<1	3.09	1.57	<1	<6	<20	<1	190	60	<500	<2000	51	<200	<200	<200	<50
2,6-Dichlorophenol	ug/L						<10	<1	42	32	<250	<1000	<10	<100	<100	<100	
2-Chlorophenol	ug/L	5.85	<0.5	0.547	<0.5	<2								<100	<100	<100	<10
2-Methylphenol	ug/L						12	<10	<10	23	<250	<1000	19	<100	<100	<100	<10
2-Nitrophenol	ug/L	<0.5	<0.5	<0.5	<0.5	<2	53	<1	19	77	<250	<1000	54	<100	<100	<100	<10
3&4-Methylphenol	ug/L						13	<20	23	<20	<500	<2000	29	<200	<200	<200	<20
4,6-Dinitro-2-Methylphenol	ug/L	<1	<1	<1	<1	<10	<10	<1	17	33	<250	<1000	150	180	160	110	<50
4-Chloro-3-Methylphenol	ug/L	<0.5	1.64	<0.5	<0.5	<10	<10	<10	100	41	<250	<1000	10	<100	<100	<100	<20
4-Nitrophenol	ug/L	<1	1.75	1.29	<1	<10	38	<1	28	71	<500	<2000	<20	<200	<200	<200	<50
Dinoseb	ug/L						<10	<1	<10	<10	<250	<1000	<10	<100	<100	<100	<25
Pentachlorophenol	ug/L	3570	71.1	55.4	42.2	99.9	<10	4.3	410	2400	2300	4500	360	1700	1600	1500	560
Phenol	ug/L	<0.5	<0.5	<0.5	<0.5	<2								<100	<100	<100	<10
Phenol/2-Chlorophenol	ug/L						37	<20	<20	34	<500	<2000	170				
2,3,5,6-Tetrachlorophenol	ug/L	<1	10.3	<1	7.02	<20											

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W25

Parameter	Units	7/26/95	9/7/95	9/13/95	1/18/96	3/21/96	7/11/97	1/2/98	6/23/98
2,3,4,6-Tetrachlorophenol	ug/L	<100		<1000	<10	<10	<0.182	<0.182	
2,4,5-Trichlorophenol	ug/L	<100		<1000	<10	<10	<0.453	<0.453	<150
2,4,6-Trichlorophenol	ug/L	<100		<1000	<10	<10	<0.469	<0.469	<150
2,4-Dichlorophenol	ug/L	<100		<1000	<10	<10	150	<0.344	<150
2,4-Dimethylphenol	ug/L	<100		<1000	<10	<10	<0.148	<0.148	<150
2,4-Dinitrophenol	ug/L	<200		<2000	<20	<20	230	<0.269	<150
2,6-Dichlorophenol	ug/L	<100		<1000	<10	<10	170	<0.397	<150
2-Chlorophenol	ug/L	<100		<1000		<10	<0.194	<0.194	<150
2-Methylphenol	ug/L	<100		<1000	<10	<10	140	<0.252	<150
2-Nitrophenol	ug/L	<100		<1000	<10	<10	160	<0.104	<150
3&4-Methylphenol	ug/L	<200		<2000	<20	<20	<0.128	<0.128	<150
4,6-Dinitro-2-Methylphenol	ug/L	160		<1000	<10	<10	<0.362	<0.362	<150
4-Chloro-3-Methylphenol	ug/L	<100		<1000	<10	<10	<0.105	<0.105	<150
4-Nitrophenol	ug/L	<200		<2000	<20	<20	<0.351	<0.351	<150
Dinoseb	ug/L	<100		<1000	<10	<10			
Pentachlorophenol	ug/L	180	2.8	810	10	<1	590	120	880
Phenol	ug/L	<100		<1000		<10	120	<0.127	<150
Phenol/2-Chlorophenol	ug/L				<20				
2,3,5,6-Tetrachlorophenol	ug/L								<150

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W26

Parameter	Units	2/25/92	6/14/92	9/17/92	12/18/92	3/24/93	6/30/93	12/27/93	4/25/94	6/22/94	10/4/94	3/9/95	7/6/95	9/13/95	3/21/96	7/9/96	9/25/96
2,3,4,6-Tetrachlorophenol	ug/L						1600	1600	4800	2900	4100	<1000	7600	<1000	<2000	<5000	2950
2,4,5-Trichlorophenol	ug/L						<200	380	<2000	690	<500	<2000	<10	<1000	<2000	<5000	<7.3
2,4,6-Trichlorophenol	ug/L	<10	<10.5	<1	<1	<3	<100	<100	<1000	1100	<250	<1000	<10	1100	<2000	<5000	87
2,4-Dichlorophenol	ug/L	<5	<5.26	177	<0.5	<1	130	<100	<1000	250	450	<1000	<10	<1000	<2000	<5000	<8
2,4-Dimethylphenol	ug/L	<5	<5.26	<0.5	<0.5	<1	<100	<100	<1000	<100	<250	<1000	<10	<1000	<2000	<5000	<15
2,4-Dinitrophenol	ug/L	<10	<1.05	<1	<1	<3000	450	<200	<2000	480	<500	<2000	<50	<2000	<4000	<10000	<7.2
2,6-Dichlorophenol	ug/L						<100	<100	<1000	270	<250	<1000		<1000	<2000	<5000	<8.7
2-Chlorophenol	ug/L	<5	<0.526	5.74	<0.5	<1							<10	<1000	<2000	<5000	<12
2-Methylphenol	ug/L						<100	<100	<1000	<100	<250	<1000	<10	<1000	<2000	<5000	<7.9
2-Nitrophenol	ug/L	25.7	<5.26	110	71.2	<1	<100	<100	<1000	180	<250	<1000	<10	<1000	<2000	<5000	<15
3&4-Methylphenol	ug/L						<200	<200	<2000	<200	<500	<2000	<20	<2000	<4000	<10000	<17
4,6-Dinitro-2-Methylphenol	ug/L	<10	<1.05	<1	<1	<5	<100	<100	<1000	<100	<250	<1000	<50	2900	<2000	<5000	<7.5
4-Chloro-3-Methylphenol	ug/L	<5	<5.26	<0.5	<0.5	<5	<100	<100	<1000	280	<250	<1000	<20	<1000	<2000	<5000	54
4-Nitrophenol	ug/L	<10	<1.05	139	<1	<5	<200	<200	<2000	230	<500	2900	<50	<2000	<4000	<10000	<7.4
Dinoseb	ug/L						<100	<100	<1000	<100	<250	<1000	<25	<1000	<2000	<5000	<8.5
Pentachlorophenol	ug/L	22300	26100	31700	45100	30400	16000	3500	32000	6400	12000	14000	<5000	4000	8200	1800	17300
Phenol	ug/L	<5	<0.526	<0.5	152	<1							<10	<1000	<2000	<5000	<10
Phenol/2-Chlorophenol	ug/L						<200	<200	<2000	<200	<500	<2000					
2,3,5,6-Tetrachlorophenol	ug/L	<10	69.9	74	40.6	<10											

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W26			
Parameter	Units	7/11/97	1/2/98	6/24/98
2,3,4,6-Tetrachlorophenol	ug/L	5100		
2,4,5-Trichlorophenol	ug/L	<0.453		<1500
2,4,6-Trichlorophenol	ug/L	<0.469		<1500
2,4-Dichlorophenol	ug/L	<0.344		<1500
2,4-Dimethylphenol	ug/L	<0.148		<1500
2,4-Dinitrophenol	ug/L	<0.269		<1500
2,6-Dichlorophenol	ug/L	<0.397		<1500
2-Chlorophenol	ug/L	<0.194		<1500
2-Methylphenol	ug/L	<0.252		<1500
2-Nitrophenol	ug/L	<0.104		<1500
3&4-Methylphenol	ug/L	<0.128		<1500
4,6-Dinitro-2-Methylphenol	ug/L	<0.362		<1500
4-Chloro-3-Methylphenol	ug/L	<0.105		<1500
4-Nitrophenol	ug/L	<0.351		<1500
Dinoseb	ug/L			
Pentachlorophenol	ug/L	47000	14000	15000
Phenol	ug/L	1100		<1500
Phenol/2-Chlorophenol	ug/L			
2,3,5,6-Tetrachlorophenol	ug/L			1600

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W27

Parameter	Units	6/24/92	12/17/92	6/30/93	12/28/93	6/22/94	7/6/95	7/9/96	7/11/97	6/24/98
2,3,4,6-Tetrachlorophenol	ug/L			710	3000	3000	<1300	<10000	<0.182	
2,4,5-Trichlorophenol	ug/L			<200	400	210	<500	<10000	<0.453	<3000
2,4,6-Trichlorophenol	ug/L	<10.5	<1	<100	<100	980	<500	<10000	<0.469	<3000
2,4-Dichlorophenol	ug/L	<5.26	19	<100	320	150	<500	<10000	<0.344	<3000
2,4-Dimethylphenol	ug/L	<5.26	7.9	<100	<100	<100	<500	<10000	<0.148	<3000
2,4-Dinitrophenol	ug/L	<10.5	<1	<200	<200	250	<2500	<20000	<0.269	<3000
2,6-Dichlorophenol	ug/L			<100	<100	<100		<10000	<0.397	<3000
2-Chlorophenol	ug/L	<5.26	<0.5				<500	<10000	<0.194	<3000
2-Methylphenol	ug/L			<100	110	<100	<500	<10000	<0.252	<3000
2-Nitrophenol	ug/L	32.3	<0.5	<100	<100	<100	<500	<10000	<0.104	<3000
3&4-Methylphenol	ug/L			<200	<200	<200	<1000	<20000	<0.128	<3000
4,6-Dinitro-2-Methylphenol	ug/L	<10.5	<1	<100	370	<100	<2500	<10000	<0.362	<3000
4-Chloro-3-Methylphenol	ug/L	15.7	81.2	<100	<100	270	<1000	<10000	<0.105	<3000
4-Nitrophenol	ug/L	<10.5	<1	<200	<200	340	<2500	<20000	<0.351	<3000
Dinoseb	ug/L			<100	<100	<100	<1300	<10000		
Pentachlorophenol	ug/L	16600	21300	10000	30000	33000	7700	3900	25000	16000
Phenol	ug/L	74.4	105				<500	<10000	530	<3000
Phenol/2-Chlorophenol	ug/L			<200	240	<200				
2,3,5,6-Tetrachlorophenol	ug/L	23.5	<1							<3000

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W28

Parameter	Units	1/8/87	6/4/87	9/3/87	12/3/87	3/3/88	4/7/88	8/10/88	11/15/88	1/26/89	4/27/89	7/27/89	10/26/89	1/25/90	5/3/90	9/20/90	12/11/90
2,3,4,6-Tetrachlorophenol	ug/L																
2,4,5-Trichlorophenol	ug/L																
2,4,6-Trichlorophenol	ug/L																
2,4-Dichlorophenol	ug/L																
2,4-Dimethylphenol	ug/L																
2,4-Dinitrophenol	ug/L																
2,6-Dichlorophenol	ug/L																
2-Chlorophenol	ug/L																
2-Methylphenol	ug/L																
2-Nitrophenol	ug/L																
3&4-Methylphenol	ug/L																
4,6-Dinitro-2-Methylphenol	ug/L																
4-Chloro-3-Methylphenol	ug/L																
4-Nitrophenol	ug/L																
Dinoseb	ug/L																
Pentachlorophenol	ug/L	350	887	488	2710	10000	6480	1100	466	1750	3670	57.4	226	301	4460	2260	2120
Phenol	ug/L																
Phenol/2-Chlorophenol	ug/L																
2,3,5,6-Tetrachlorophenol	ug/L																

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W28

Parameter	Units	1/29/91	5/1/91	6/18/91	10/8/91	7/8/92	12/17/92	6/29/93	12/28/93	6/22/94	7/5/95	7/9/96	7/11/97	6/24/98
2,3,4,6-Tetrachlorophenol	ug/L							120	46	53	87	<100	<0.182	
2,4,5-Trichlorophenol	ug/L							<20	<20	<20	<10	<100	<0.453	<6
2,4,6-Trichlorophenol	ug/L					<1.49	2.62	<10	<10	<10	<10	<100	<0.469	<6
2,4-Dichlorophenol	ug/L					<0.746	<0.5	<10	<10	<10	<10	<100	<0.344	<6
2,4-Dimethylphenol	ug/L					<0.746	<0.5	<10	<10	<10	<10	<100	<0.148	<6
2,4-Dinitrophenol	ug/L					<1.49	<1	<20	<20	<20	<50	<200	<0.269	<6
2,6-Dichlorophenol	ug/L							<10	<10	<10		<100	<0.397	<6
2-Chlorophenol	ug/L					<0.746	<0.5				<10	<100	<0.194	<6
2-Methylphenol	ug/L							<10	<10	<10	<10	<100	<0.252	<6
2-Nitrophenol	ug/L					<0.746	<0.5	<10	<10	<10	<10	<100	<0.104	<6
3&4-Methylphenol	ug/L							<20	<20	<20	<20	<200	<0.128	<6
4,6-Dinitro-2-Methylphenol	ug/L					<1.49	<1	<10	<10	<10	<50	<100	<0.362	<6
4-Chloro-3-Methylphenol	ug/L					<0.746	<0.5	<10	<10	<10	<20	<100	<0.105	<6
4-Nitrophenol	ug/L					<1.49	<1	<20	<20	<20	<50	<200	<0.351	<6
Dinoseb	ug/L							<10	<10	<10	<25	<100		
Pentachlorophenol	ug/L	3150	4600	4600	4270	793	6640	2300	800	660	380	83	150	61
Phenol	ug/L					<0.746	3.15				<10	<100	<0.127	<6
Phenol/2-Chlorophenol	ug/L							<20	<20	<20				
2,3,5,6-Tetrachlorophenol	ug/L					<1.49	4.29							<6

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W29

Parameter	Units	1/8/87	6/4/87	9/3/87	12/3/87	3/3/88	4/7/88	8/10/88	11/15/88	1/26/89	4/27/89	7/27/89	10/26/89	1/25/90	5/3/90	9/21/90	12/11/90
2,3,4,6-Tetrachlorophenol	ug/L																
2,4,5-Trichlorophenol	ug/L																
2,4,6-Trichlorophenol	ug/L																
2,4-Dichlorophenol	ug/L																
2,4-Dimethylphenol	ug/L																
2,4-Dinitrophenol	ug/L																
2,6-Dichlorophenol	ug/L																
2-Chlorophenol	ug/L																
2-Methylphenol	ug/L																
2-Nitrophenol	ug/L																
3&4-Methylphenol	ug/L																
4,6-Dinitro-2-Methylphenol	ug/L																
4-Chloro-3-Methylphenol	ug/L																
4-Nitrophenol	ug/L																
Dinoseb	ug/L																
Pentachlorophenol	ug/L	10300	33900	12700	18600	16400	560	1600	12800	19000	16500	12700	8520	4960	37.2	1420	921
Phenol	ug/L																
Phenol/2-Chlorophenol	ug/L																
2,3,5,6-Tetrachlorophenol	ug/L																

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W29

Parameter	Units	1/30/91	5/1/91	6/19/91	6/25/92	12/18/92	6/30/93	12/28/93	6/22/94	7/5/95	7/9/96	7/11/97	6/23/98
2,3,4,6-Tetrachlorophenol	ug/L						<1	81	31	140	<10	<0.182	
2,4,5-Trichlorophenol	ug/L						<1	66	30	<10	93	<0.453	<600
2,4,6-Trichlorophenol	ug/L				<1.02	<1	<1	<10	21	<10	60	<0.469	<600
2,4-Dichlorophenol	ug/L				<0.51	<0.5	<1	<10	<10	<10	24	<0.344	<600
2,4-Dimethylphenol	ug/L				<0.51	<0.5	<10	<10	<10	<10	<10	<0.148	<600
2,4-Dinitrophenol	ug/L				<1.02	<1	<1	<20	<20	<50	73	<0.269	<600
2,6-Dichlorophenol	ug/L						<1	<10	<10		<10	<0.397	<600
2-Chlorophenol	ug/L				<0.51	<0.5				<10	<10	<0.194	<600
2-Methylphenol	ug/L						<10	<10	<10	<10	<10	<0.252	<600
2-Nitrophenol	ug/L				<0.51	<0.5	<1	<10	<10	<10	<10	<0.104	<600
3&4-Methylphenol	ug/L						<20	<20	<20	<20	<20	<0.128	<600
4,6-Dinitro-2-Methylphenol	ug/L				<1.02	<1	<1	<10	<10	<50	450	<0.362	<600
4-Chloro-3-Methylphenol	ug/L				<0.51	<0.5	<10	<10	<10	<20	24	<0.105	<600
4-Nitrophenol	ug/L				<1.02	<1	<1	<20	<20	<50	55	<0.351	<600
Dinoseb	ug/L						<1	<10	<10	<25	<10		
Pentachlorophenol	ug/L	373	419	41	120	1100	65	440	120	210	2300	1500	5500
Phenol	ug/L				0.714	3.31				<10	38	<0.127	<600
Phenol/2-Chlorophenol	ug/L						<20	<20	<20				
2,3,5,6-Tetrachlorophenol	ug/L				<1.02	<1							<600

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W29

Parameter	Units	1/8/87	6/4/87	9/3/87	12/3/87	3/3/88	4/7/88	8/10/88	11/15/88	1/26/89	4/27/89	7/27/89	10/26/89	1/25/90	5/3/90	9/21/90	12/11/90
2,3,4,6-Tetrachlorophenol	ug/L																
2,4,5-Trichlorophenol	ug/L																
2,4,6-Trichlorophenol	ug/L																
2,4-Dichlorophenol	ug/L																
2,4-Dimethylphenol	ug/L																
2,4-Dinitrophenol	ug/L																
2,6-Dichlorophenol	ug/L																
2-Chlorophenol	ug/L																
2-Methylphenol	ug/L																
2-Nitrophenol	ug/L																
3&4-Methylphenol	ug/L																
4,6-Dinitro-2-Methylphenol	ug/L																
4-Chloro-3-Methylphenol	ug/L																
4-Nitrophenol	ug/L																
Dinoseb	ug/L																
Pentachlorophenol	ug/L	10300	33900	12700	18600	16400	560	1600	12800	19000	16500	12700	8520	4960	37.2	1420	921
Phenol	ug/L																
Phenol/2-Chlorophenol	ug/L																
2,3,5,6-Tetrachlorophenol	ug/L																

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W29

Parameter	Units	1/30/91	5/1/91	6/19/91	6/25/92	12/18/92	6/30/93	12/28/93	6/22/94	7/5/95	7/9/96	7/11/97	6/23/98
2,3,4,6-Tetrachlorophenol	ug/L						<1	81	31	140	<10	<0.182	
2,4,5-Trichlorophenol	ug/L						<1	66	30	<10	93	<0.453	<600
2,4,6-Trichlorophenol	ug/L				<1.02	<1	<1	<10	21	<10	60	<0.469	<600
2,4-Dichlorophenol	ug/L				<0.51	<0.5	<1	<10	<10	<10	24	<0.344	<600
2,4-Dimethylphenol	ug/L				<0.51	<0.5	<10	<10	<10	<10	<10	<0.148	<600
2,4-Dinitrophenol	ug/L				<1.02	<1	<1	<20	<20	<50	73	<0.269	<600
2,6-Dichlorophenol	ug/L						<1	<10	<10		<10	<0.397	<600
2-Chlorophenol	ug/L				<0.51	<0.5				<10	<10	<0.194	<600
2-Methylphenol	ug/L						<10	<10	<10	<10	<10	<0.252	<600
2-Nitrophenol	ug/L				<0.51	<0.5	<1	<10	<10	<10	<10	<0.104	<600
3&4-Methylphenol	ug/L						<20	<20	<20	<20	<20	<0.128	<600
4,6-Dinitro-2-Methylphenol	ug/L				<1.02	<1	<1	<10	<10	<50	450	<0.362	<600
4-Chloro-3-Methylphenol	ug/L				<0.51	<0.5	<10	<10	<10	<20	24	<0.105	<600
4-Nitrophenol	ug/L				<1.02	<1	<1	<20	<20	<50	55	<0.351	<600
Dinoseb	ug/L						<1	<10	<10	<25	<10		
Pentachlorophenol	ug/L	373		419	41	120	1100	65	440	120	210	2300	1500	5500
Phenol	ug/L					0.714	3.31				<10	38	<0.127	<600
Phenol/2-Chlorophenol	ug/L						<20	<20	<20					
2,3,5,6-Tetrachlorophenol	ug/L					<1.02	<1							<600

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W32

Parameter	Units	1/8/87	6/4/87	9/3/87	12/3/87	3/3/88	4/7/88	8/10/88	11/15/88	1/26/89	4/27/89	7/27/89	10/26/89	1/25/90	5/3/90	9/21/90	12/11/90
2,3,4,6-Tetrachlorophenol	ug/L																
2,4,5-Trichlorophenol	ug/L																
2,4,6-Trichlorophenol	ug/L																
2,4-Dichlorophenol	ug/L																
2,4-Dimethylphenol	ug/L																
2,4-Dinitrophenol	ug/L																
2,6-Dichlorophenol	ug/L																
2-Chlorophenol	ug/L																
2-Methylphenol	ug/L																
2-Nitrophenol	ug/L																
3&4-Methylphenol	ug/L																
4,6-Dinitro-2-Methylphenol	ug/L																
4-Chloro-3-Methylphenol	ug/L																
4-Nitrophenol	ug/L																
Dinoseb	ug/L																
Pentachlorophenol	ug/L	<1	<1	<1	<1	<1	<1	1.45	<1	<1	<1	<1	<1	1.67	1.14	2.13	<1
Phenol	ug/L																
Phenol/2-Chlorophenol	ug/L																
2,3,5,6-Tetrachlorophenol	ug/L																

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W32

Parameter	Units	1/30/91	5/1/91	6/19/91	10/8/91	6/24/92	12/19/92	6/29/93	12/28/93	6/22/94	7/5/95	7/8/96	7/11/97	6/23/98
2,3,4,6-Tetrachlorophenol	ug/L							<1	<10	<10	<25	<10	<0.182	
2,4,5-Trichlorophenol	ug/L							<1	<20	<20	<10	<10	<0.453	<3
2,4,6-Trichlorophenol	ug/L					<1.02	<1	<1	<10	<10	<10	<10	<0.469	<3
2,4-Dichlorophenol	ug/L					<0.51	<0.5	<1	<10	<10	<10	<10	<0.344	<3
2,4-Dimethylphenol	ug/L					<0.51	<0.5	<10	<10	<10	<10	<10	<0.148	<3
2,4-Dinitrophenol	ug/L					2.05	<1	<1	<20	<20	<50	<20	<0.269	<3
2,6-Dichlorophenol	ug/L							<1	<10	<10		<10	<0.397	<3
2-Chlorophenol	ug/L					<0.51	<0.5				<10	<10	<0.194	<3
2-Methylphenol	ug/L							<10	<10	<10	<10	<10	<0.252	<3
2-Nitrophenol	ug/L					<0.51	<0.5	<1	<10	<10	<10	<10	5.6	<3
3&4-Methylphenol	ug/L							<20	<20	<20	<20	<20	<0.128	<3
4,6-Dinitro-2-Methylphenol	ug/L					<1.02	<1	<1	<10	<10	<50	<10	<0.362	<3
4-Chloro-3-Methylphenol	ug/L					<0.51	<0.5	<10	<10	<10	<20	<10	<0.105	<3
4-Nitrophenol	ug/L					<1.02	<1	<1	<20	<20	<50	<20	<0.351	<3
Dinoseb	ug/L							<1	<10	<10	<25	<10		
Pentachlorophenol	ug/L	8.36		1.33	3.61	2.08	<1	<1	10	15	<50	5.1	7.2	7.9
Phenol	ug/L					0.583	<0.5				<10	<10	<0.127	<3
Phenol/2-Chlorophenol	ug/L							<20	<20	<20				
2,3,5,6-Tetrachlorophenol	ug/L					<1.02	<1							<3

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W33

Parameter	Units	6/30/93	10/4/94	9/13/95	12/18/95	3/21/96	7/9/96	1/21/97	7/11/97	6/24/98
2,3,4,6-Tetrachlorophenol	ug/L	6800	3200	<1000	<1000	<2000	<5000	562	1300	
2,4,5-Trichlorophenol	ug/L	<2000	<2000	<1000	<1000	<2000	<5000	<15	<0.453	<3000
2,4,6-Trichlorophenol	ug/L	<1000	<1000	<1000	<1000	<2000	<5000	<14	<0.469	<3000
2,4-Dichlorophenol	ug/L	<1000	<1000	<1000	<1000	<2000	<5000	<16	1600	<3000
2,4-Dimethylphenol	ug/L	<1000	<1000	6800	2200	<2000	<5000	<31	1100	<3000
2,4-Dinitrophenol	ug/L	<2000	<2000	<2000	<2000	<4000	<10000	<15	<0.269	<3000
2,6-Dichlorophenol	ug/L	<1000	<1000	1200	<1000	<2000	<5000	<18	2300	4600
2-Chlorophenol	ug/L			41000	<1000	2100	<5000	<24	8800	12000
2-Methylphenol	ug/L	2600	<1000	<1000	5800	<2000	<5000	<16	2900	5200
2-Nitrophenol	ug/L	<1000	<1000	<1000	5400	2100	<5000	<31	1900	3900
3&4-Methylphenol	ug/L	<2000	6300	9800	4100	<4000	<10000	<35	1500	<3000
4,6-Dinitro-2-Methylphenol	ug/L	<1000	<1000	2900	1700	<2000	<5000	<15	<0.362	<3000
4-Chloro-3-Methylphenol	ug/L	<1000	<1000	1400	<1000	<2000	<5000	<14	<0.105	<3000
4-Nitrophenol	ug/L	<2000	<2000	<2000	<2000	<4000	<10000	<15	<0.351	<3000
Dinoseb	ug/L	<1000	<1000	<1000	<1000	<2000	<5000	<17		
Pentachlorophenol	ug/L	36000	19000	94000	13000	2300	1400	1690	9200	8800
Phenol	ug/L			<10000	<1000	3200	<5000	<21	2500	45000
Phenol/2-Chlorophenol	ug/L	<2000	<2000							
2,3,5,6-Tetrachlorophenol	ug/L									<3000

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W36

Parameter	Units	2/20/92	8/3/92	9/17/92	9/13/95	7/10/96	7/11/97	1/2/98	6/25/98
2,3,4,6-Tetrachlorophenol	ug/L				<1000	<500	120	57	
2,4,5-Trichlorophenol	ug/L				<1000	<500	94	<0.453	<30
2,4,6-Trichlorophenol	ug/L	<1	<10	<1	<1000	<500	71	<0.469	<30
2,4-Dichlorophenol	ug/L	<0.5	11.3	132	<1000	<500	480	310	<30
2,4-Dimethylphenol	ug/L	22.1	<0.5	29.2	<1000	<500	210	170	<30
2,4-Dinitrophenol	ug/L	<1	<10	15.2	<2000	<1000	660	430	<30
2,6-Dichlorophenol	ug/L				<1000	<500	430	230	<30
2-Chlorophenol	ug/L	<0.5	<5	<0.5	<1000	<500	<0.194	<0.194	93
2-Methylphenol	ug/L				<1000	<500	1400	540	46
2-Nitrophenol	ug/L	<0.5	<5	240	<1000	<500	1200	420	52
3&4-Methylphenol	ug/L				<2000	<1000	440	190	<30
4,6-Dinitro-2-Methylphenol	ug/L	<1	<1	<1	<1000	<500	<0.362	150	<30
4-Chloro-3-Methylphenol	ug/L	<0.5	<0.5	<0.5	<1000	<500	240	160	<30
4-Nitrophenol	ug/L	<1	<1	67	<2000	<1000	110	<0.351	<30
Dinoseb	ug/L				<1000	<500			
Pentachlorophenol	ug/L	7180	14800	8350	1700	1800	1600	480	190
Phenol	ug/L	<0.5	155	<0.5	<1000	<500	1600	<0.127	46
2,3,5,6-Tetrachlorophenol	ug/L	<1	<1	26					<30

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W37

Parameter	Units	2/20/92	6/24/92	9/17/92	12/18/92	3/24/93
2,4,6-Trichlorophenol	ug/L	121	<10.2	<1	<1	<3000
2,4-Dichlorophenol	ug/L	<0.5	158	<0.5	<0.5	<1000
2,4-Dimethylphenol	ug/L	23.2	<5.1	22.4	<0.5	<1000
2,4-Dinitrophenol	ug/L	<1	<10.2	10.1	<1	<3000
2-Chlorophenol	ug/L	<0.5	<5.1	<0.5	<0.5	<1000
2-Nitrophenol	ug/L	<0.5	<5.1	<0.5	<0.5	<1000
4,6-Dinitro-2-Methylphenol	ug/L	<1	<10.2	4.96	<1	<5000
4-Chloro-3-Methylphenol	ug/L	<0.5	<5.1	<0.5	3.49	<5000
4-Nitrophenol	ug/L	<1	<10.2	65.5	19.4	<5000
Pentachlorophenol	ug/L	10600	20300	8570	6260	28768
Phenol	ug/L	<0.5	949	<0.5	401	<1000
2,3,5,6-Tetrachlorophenol	ug/L	<1	129	59.3	<1	<10000

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W38		
Parameter	**Units**	**2/22/92**	**7/29/92**
2,4,6-Trichlorophenol	ug/L	19.1	<100
2,4-Dichlorophenol	ug/L	35.1	104
2,4-Dimethylphenol	ug/L	50.7	<50
2,4-Dinitrophenol	ug/L	<10	<100
2-Chlorophenol	ug/L	<5	<50
2-Nitrophenol	ug/L	<5	<50
4,6-Dinitro-2-Methylphenol	ug/L	<10	<100
4-Chloro-3-Methylphenol	ug/L	<5	<50
4-Nitrophenol	ug/L	15.1	<100
Pentachlorophenol	ug/L	6510	16400
Phenol	ug/L	<5	<50
2,3,5,6-Tetrachlorophenol	ug/L	<10	<100

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W39

Parameter	Units	6/17/92	12/18/92	6/21/94	3/10/95	9/13/95	12/18/95	3/20/96	7/9/96	1/21/97	7/11/97	1/2/98	6/24/98
2,3,4,6-Tetrachlorophenol	ug/L			2900	<1000	<1000	<1000	<1000	<1000	<7.9	<0.182	<0.182	
2,4,5-Trichlorophenol	ug/L			1000	<2000	<1000	<1000	<1000	<1000	<7.5	<0.453	<0.453	<150
2,4,6-Trichlorophenol	ug/L	236	267	3500	<1000	<1000	<1000	<1000	<1000	<7.3	<0.469	310	<150
2,4-Dichlorophenol	ug/L	835	1710	6900	<1000	<1000	<1000	1100	<1000	<8.2	2800	2600	<150
2,4-Dimethylphenol	ug/L	569	<50	2700	1500	1500	<1000	1500	<1000	<16	<0.148	<0.148	<150
2,4-Dinitrophenol	ug/L	<10.3	<100	420	<2000	<2000	<2000	<2000	<2000	<7.4	<0.269	2400	<150
2,6-Dichlorophenol	ug/L			1500	<1000	<1000	<1000	<1000	<1000	<9	3400	710	400
2-Chlorophenol	ug/L	<25.8	<50			<1000	<1000	5000	<1000	<12	<0.194	2400	640
2-Methylphenol	ug/L			<100	3600	3300	2100	2300	<1000	<8.1	3800	3800	510
2-Nitrophenol	ug/L	<25.8	<50	5200	10000	<1000	2800	6700	<1000	<16	3300	2200	320
3&4-Methylphenol	ug/L			8400	3100	<2000	4400	<2000	<2000	<18	<0.128	<0.128	<150
4,6-Dinitro-2-Methylphenol	ug/L	13.3	<100	310	<1000	<1000	<1000	<1000	<1000	<7.7	<0.362	840	<150
4-Chloro-3-Methylphenol	ug/L	33.9	<50	550	<1000	<1000	<1000	<1000	<1000	<7.1	<0.105	1200	<150
4-Nitrophenol	ug/L	171	178	1300	<2000	<2000	<2000	<2000	<2000	<7.6	<0.351	<0.351	<150
Dinoseb	ug/L			<100	<1000	<1000	<1000	<1000	<1000	<8.8			
Pentachlorophenol	ug/L	9290	13900	6900	3700	1200	2400	1900	170	782	2300	1100	830
Phenol	ug/L	<25.8	<50			<1000	<1000	6900	1000	<11	3600	<0.127	2800
Phenol/2-Chlorophenol	ug/L			<200	11000								
2,3,5,6-Tetrachlorophenol	ug/L	360	403										<150

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W41

Parameter	Units	2/25/92	6/16/92	9/17/92	12/19/92	3/24/93	6/30/93	12/28/93	4/25/94	6/21/94	10/4/94	3/10/95	7/6/95	9/13/95	3/20/96	7/9/96	9/25/96
2,3,4,6-Tetrachlorophenol	ug/L						3600	710	1000	930	<500	<1000	480	<1000	<1000	<2500	1130
2,4,5-Trichlorophenol	ug/L						<200	<200	<2000	980	<1000	<2000	<11	<1000	<1000	<2500	<7.3
2,4,6-Trichlorophenol	ug/L	<20	703	<1	<1	<2400	<100	150	<1000	820	<500	<1000	<11	3400	<1000	<2500	<7.1
2,4-Dichlorophenol	ug/L	119	227	<0.5	<0.5	<800	<100	320	<1000	430	<500	<1000	<11	<1000	<1000	<2500	<8
2,4-Dimethylphenol	ug/L	<10	60.9	<0.5	<0.5	<800	<100	260	<1000	110	<500	<1000	<11	<1000	<1000	<2500	<15
2,4-Dinitrophenol	ug/L	<20	170	223	<1	<2400	<200	<200	<2000	1100	<1000	<2000	<53	<2000	<2000	<5000	<7.2
2,6-Dichlorophenol	ug/L						3600	140	<1000	210	<500	<1000		<1000	<1000	<2500	<8.7
2-Chlorophenol	ug/L	<10	<5.1	<0.5	<0.5	<800							<11	<1000	<1000	<2500	<12
2-Methylphenol	ug/L						<100	180	<1000	<100	<500	<1000	<10.65	<1000	<1000	<2500	<7.9
2-Nitrophenol	ug/L	85.9	143	<0.5	<0.5	<800	<100	150	<1000	330	<500	<1000	<11	<1000	<1000	<2500	<15
3&4-Methylphenol	ug/L						<200	<200	<2000	<200	<1000	<2000	<21.3	<2000	<2000	<5000	<17
4,6-Dinitro-2-Methylphenol	ug/L	<20	<51	<1	<1	<4000	<100	<100	<1000	230	<500	<1000	<53	<1000	<1000	<2500	<7.5
4-Chloro-3-Methylphenol	ug/L	68	44.1	<0.5	<0.5	<4000	1600	<100	<1000	250	<500	<1000	<21	<1000	<1000	<2500	<6.9
4-Nitrophenol	ug/L	<20	<51	109	<1	<4000	<200	<200	<2000	500	<1000	<2000	<53	<2000	<2000	<5000	<7.4
Dinoseb	ug/L						<100	<100	<1000	<100	<500	<1000	<27	<1000	<1000	<2500	<8.5
Pentachlorophenol	ug/L	8610	16600	6070	16400	14300	32000	9500	12000	4900	690	3600	3400	9600	7000	10000	13800
Phenol	ug/L	<10	<5.1	<0.5	<0.5	<800							<11	<1000	<1000	<2500	<10
Phenol/2-Chlorophenol	ug/L						3600	280	<2000	<200	<1000	<2000					
2,3,5,6-Tetrachlorophenol	ug/L	<20	441	<1	<1	<8000											

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W41			
Parameter	**Units**	**7/11/97**	**1/2/98**	**6/24/98**
2,3,4,6-Tetrachlorophenol	ug/L	<0.182		
2,4,5-Trichlorophenol	ug/L	<0.453		<600
2,4,6-Trichlorophenol	ug/L	<0.469		<600
2,4-Dichlorophenol	ug/L	<0.344		<600
2,4-Dimethylphenol	ug/L	<0.148		<600
2,4-Dinitrophenol	ug/L	<0.269		<600
2,6-Dichlorophenol	ug/L	<0.397		<600
2-Chlorophenol	ug/L	<0.194		<600
2-Methylphenol	ug/L	<0.252		<600
2-Nitrophenol	ug/L	<0.104		<600
3&4-Methylphenol	ug/L	<0.128		<600
4,6-Dinitro-2-Methylphenol	ug/L	<0.362		<600
4-Chloro-3-Methylphenol	ug/L	<0.105		<600
4-Nitrophenol	ug/L	<0.351		<600
Dinoseb	ug/L			
Pentachlorophenol	ug/L	18000	3700	5200
Phenol	ug/L	<0.127		<600
Phenol/2-Chlorophenol	ug/L			
2,3,5,6-Tetrachlorophenol	ug/L			<600

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W66

Parameter	Units	6/30/93	1/0/00
2,3,4,6-Tetrachlorophenol	ug/L	230	
2,4,5-Trichlorophenol	ug/L	160	
2,4,6-Trichlorophenol	ug/L	<10	
2,4-Dichlorophenol	ug/L	<10	
2,4-Dimethylphenol	ug/L	<10	
2,4-Dinitrophenol	ug/L	150	
2,6-Dichlorophenol	ug/L	<10	
2-Methylphenol	ug/L	58	
2-Nitrophenol	ug/L	<10	
3&4-Methylphenol	ug/L	<20	
4,6-Dinitro-2-Methylphenol	ug/L	<10	
4-Chloro-3-Methylphenol	ug/L	<10	
4-Nitrophenol	ug/L	<20	
Dinoseb	ug/L	<10	
Pentachlorophenol	ug/L	9300	
Phenol/2-Chlorophenol	ug/L	<20	
	ug/L		

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W67

Parameter	Units	6/29/93	1/0/00
2,3,4,6-Tetrachlorophenol	ug/L	40	
2,4,5-Trichlorophenol	ug/L	<20	
2,4,6-Trichlorophenol	ug/L	<10	
2,4-Dichlorophenol	ug/L	<10	
2,4-Dimethylphenol	ug/L	<10	
2,4-Dinitrophenol	ug/L	57	
2,6-Dichlorophenol	ug/L	<10	
2-Methylphenol	ug/L	<10	
2-Nitrophenol	ug/L	<10	
3&4-Methylphenol	ug/L	<20	
4,6-Dinitro-2-Methylphenol	ug/L	<10	
4-Chloro-3-Methylphenol	ug/L	<10	
4-Nitrophenol	ug/L	21	
Dinoseb	ug/L	<10	
Pentachlorophenol	ug/L	5300	
Phenol/2-Chlorophenol	ug/L	<20	
	ug/L		

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W69

Parameter	Units	12/29/93	4/25/94	3/23/95	5/2/95	5/24/95	6/13/95	7/26/95	9/7/95	1/18/96	6/19/96
2,3,4,6-Tetrachlorophenol	ug/L	<500	470	<1000	<10000	<10000	<10000	<100	<100	<10000	<1000
2,4,5-Trichlorophenol	ug/L	<1000	210	<2000	<10000	<10000	<10000	<100	<100	<10000	<1000
2,4,6-Trichlorophenol	ug/L	1100	390	<1000	<10000	<10000	<10000	<100	<100	<10000	<1000
2,4-Dichlorophenol	ug/L	<500	93	<1000	<10000	<10000	<10000	<100	<100	<10000	<1000
2,4-Dimethylphenol	ug/L	<500	100	<1000	<10000	<10000	<10000	<100	130	<10000	<1000
2,4-Dinitrophenol	ug/L	<1000	<20	<2000	<20000	<20000	<20000	<200	<200	<20000	<2000
2,6-Dichlorophenol	ug/L	<500	200	<1000	<10000	<10000	<10000	<100	<100	<10000	<1000
2-Chlorophenol	ug/L				<10000	<10000	<10000	<100	<100		<1000
2-Methylphenol	ug/L	640	<10	1100	13000	<10000	<10000	<100	140	<10000	<1000
2-Nitrophenol	ug/L	<500	170	<1000	<10000	<10000	<10000	<100	150	<10000	<1000
3&4-Methylphenol	ug/L	<1000	48	<2000	<20000	<20000	<20000	<200	<200	<20000	<2000
4,6-Dinitro-2-Methylphenol	ug/L	<500	24	3600	<10000	<10000	<10000	<100	1400	<10000	<1000
4-Chloro-3-Methylphenol	ug/L	500	54	<1000	<10000	<10000	<10000	<100	<100	<10000	<1000
4-Nitrophenol	ug/L	<1000	34	<2000	<20000	<20000	<20000	<200	<200	<20000	<2000
Dinoseb	ug/L	<500	81	<1000	<10000	<10000	<10000	<100	<100	<10000	<1000
Pentachlorophenol	ug/L	43000	1100	17000	36000	22000	8600	510	2700	3800	9400
Phenol	ug/L				<10000	<10000	<10000	<100	<100		1400
Phenol/2-Chlorophenol	ug/L	<1000	250	7000						<20000	

A3

Volatiles

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W01A

Parameter	Units	2/19/92	6/14/92	9/17/92	12/18/92	3/23/93	6/28/93	12/28/93	6/21/94	7/5/95	7/10/96	7/11/97	6/23/98
Chloromethane	ug/L	<10	<10	<100	<10	<2	<2	<2	<2	<2	<2	<0.7	<0.9
Bromomethane	ug/L	<10	<10	<100	<10	<2		<2	<2	<2	<2	<0.3	<0.9
Vinyl chloride	ug/L	<10	<10	<100	<10	<1	<1	<1	<1	<1	<1	<0.3	<0.5
Chloroethane	ug/L	<10	<10	<100	<10	<2	<2	<2	<2	<2	<2	<0.4	<0.8
Methylene chloride	ug/L	<5	<5		14.1	<3	<3	<3	<3	<3	<3	<0.3	<0.5
Acetone	ug/L	<10	<10		11.7								
Carbon disulfide	ug/L	<5	<5	<50	<5								
1,1-Dichloroethene	ug/L	<5	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.4	<0.2
1,1-Dichloroethane	ug/L	<5	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.2
cis-1,2-Dichloroethene	ug/L					<1	<1	<1	<1	<1	<1	<0.2	<0.2
trans-1,2-Dichloroethene	ug/L	<5	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.3
Chloroform	ug/L	<5		<50	<5	5.2	5.2	4.2	1.4	1.2	1.768	<0.2	<0.2
1,2-Dichloroethane	ug/L	<5	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.2
2-Butanone (MEK)	ug/L	<10	<10	<100	<10								
Vinyl acetate	ug/L	<10	<10	<100	<10								
1,1,1-Trichloroethane	ug/L	<5	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.3	<0.3
Carbon tetrachloride	ug/L	<5	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.4
Bromodichloromethane	ug/L	<5	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.2
1,2-Dichloropropane	ug/L	<5	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.1	<0.2
cis-1,3-Dichloropropene	ug/L	<5	<5	<50	<5	<1		<1	<1	<1	<1	<0.3	<0.3
Trichloroethene	ug/L	<5	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.3
Chlorodibromomethane	ug/L	<5	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.3	<0.3
1,1,2-Trichloroethane	ug/L	<5	<5	<50	<5	<1	<1	<1	<1	<1	<1	<1	<0.2
Benzene	ug/L	<5	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.3
trans-1,3-Dichloropropene	ug/L	<5	<5	<50	<5	<1		<1	<1	<1	<1	<0.2	<0.2
Bromoform	ug/L	<5	<5	<50	<5	<1		<1	<1	<1	<1	<0.3	<0.2
4-Methyl-2-Pentanone (MIBK)	ug/L	<10	<10	<100	<10								
2-Hexanone	ug/L	<10	<10	<100	<10								
Tetrachloroethene	ug/L	<5	<5	<50	<5	<1	<1	<1	6.3	<1	<1	<0.3	<0.6
1,1,2,2-Tetrachloroethane	ug/L	<5	<5	<50	<5	<1	<1	<1	<1	1.1	<1	<0.2	<0.2
Toluene	ug/L	<5	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.2
Chlorobenzene	ug/L	<5	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.3	<0.3
Ethylbenzene	ug/L	<5	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.2
Styrene	ug/L	<5	<5	<50	<5	4.4		<1	<1		<1	<0.2	<0.2
Xylenes, Total	ug/L	<5		<50	18.3								
Naphthalene	ug/L	<10	<11	<10	<10	6	38	4.2	19	3.4	1.214	<0.8	17
1,1,1,2-Tetrachloroethane	ug/L					<1		<1	<1		<1	<0.1	<0.3
1,1-Dichloropropene	ug/L					<1		<1	<1		<1	<0.2	<0.3
1,2,3-Trichlorobenzene	ug/L					<1	<1	<1	<1		<1	<0.5	<0.4
1,2,3-Trichloropropane	ug/L					<1		<1	<1		<1	<0.3	<0.2
1,2,4-Trichlorobenzene	ug/L					<1	<1	<1	<1		<1	<0.5	<0.3
1,2,4-Trimethylbenzene	ug/L					140	430	68	320		86.778	300	290
1,2-Dibromo-3-chloropropane	ug/L					<3	<3	<3	<3		<3	<0.3	<0.3
1,2-Dibromoethane	ug/L					<2	<2	<2	<2		<2	<0.2	<0.4

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W01A

Parameter	Units	2/19/92	6/14/92	9/17/92	12/18/92	3/23/93	6/28/93	12/28/93	6/21/94	7/5/95	7/10/96	7/11/97	6/23/98
1,2-Dichlorobenzene	ug/L					<1	<1	<1	<1	<1	<1	<0.3	<0.3
1,3,5-Trimethylbenzene	ug/L					38	110	21	130		11.096	130	140
1,3-Dichlorobenzene	ug/L					<1	<1	<1	<1	<1	<1	<0.7	<0.4
1,3-Dichloropropane	ug/L					<1	<1	<1	<1		<1	<0.3	<0.6
1,4-Dichlorobenzene	ug/L					<1	<1	<1	<1	<1	<1	<0.3	<0.3
2,2-Dichloropropane	ug/L					<1	<1	<1	<1		<1	<0.2	<0.5
2-Chlorotoluene	ug/L					<1	<1	<1	<1		<1	<0.4	<0.3
4-Chlorotoluene	ug/L					<1	<1	<1	<1		<1	<0.3	<0.3
Bromobenzene	ug/L					<1	<1	<1	<1		<1	<0.3	<0.2
Bromochloromethane	ug/L					<1		<1	<1		<1	<0.4	<0.2
Dibromomethane	ug/L					<1		<1	<1		<1	<0.1	<0.2
Dichlorodifluoromethane	ug/L					<2	<2	<2	<2		<2	<0.3	<1.2
Hexachlorobutadiene	ug/L					<1	<1	<1	<1		<1	<0.5	<0.6
Isopropylbenzene	ug/L					26	25	4.2	27		2.957	<0.2	38
Trichlorofluoromethane	ug/L					<1	<1	<1	<1	<1	<1	<0.5	<0.6
m + p-Xylene	ug/L					<2	15	2.8	15	<2	4.909	<0.4	24
n-Butylbenzene	ug/L					34	130	28	140		10.658	160	180
n-Propylbenzene	ug/L					7	25	5.2	23		5.337	<0.3	76
o-Xylene	ug/L					8.9	30	6.3	49	1.7	7.933	<0.2	<0.5
p-Isopropyltoluene	ug/L					<1	39	9.7	50		<1	24	67
sec-Butylbenzene	ug/L					12	24	8.7	32		<1	14	48
tert-Butylbenzene	ug/L					<1	<1	<1	48		<1	<0.3	<0.3
Di-isopropyl ether	ug/L						<1						
Methyl tert-butyl ether	ug/L						<1						
2-Chloroethyl vinyl ether	ug/L									<10			

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W02

Parameter	Units	2/20/92	6/14/92	9/17/92	12/18/92	3/24/93	6/22/94	7/6/95	7/10/96	7/11/97	6/25/98
Chloromethane	ug/L	<10	<10	<100	<10	<2	<2	<40	<20	<0.7	<0.9
Bromomethane	ug/L	<10	<10	<100	<10	<2	<2	<40	<20	<0.3	<0.9
Vinyl chloride	ug/L	<10	<10	<100	<10	<1	<1	<20	<10	<0.3	<0.5
Chloroethane	ug/L	<10	<10	<100	<10	<2	<2	<40	<20	<0.4	<0.8
Methylene chloride	ug/L	<5	<5		10.4	<3	<3	<60	<30	<0.3	<0.5
Acetone	ug/L	<10	<10		16.8						
Carbon disulfide	ug/L	<5	<5	<50	<5						
1,1-Dichloroethene	ug/L	<5	<5	<50	<5	<1	<1	<20	<10	<0.4	<0.2
1,1-Dichloroethane	ug/L	<5	<5	<50	<5	<1	<1	<20	<10	<0.2	<0.2
cis-1,2-Dichloroethene	ug/L					<1	<1	<20	<10	<0.2	<0.2
trans-1,2-Dichloroethene	ug/L	<5	<5	<50	<5	<1	<1	<20	<10	<0.2	<0.3
Chloroform	ug/L	<5		<50	<5	3.2	4.3	<20	<10	<0.2	<0.2
1,2-Dichloroethane	ug/L	<5	<5	<50	<5	<1	<1	<20	<10	<0.2	<0.2
2-Butanone (MEK)	ug/L	<10	<10	<100	<10						
Vinyl acetate	ug/L		<10	<100	<10						
1,1,1-Trichloroethane	ug/L	<5	<5	<50	<5	<1	<1	<20	<10	<0.3	<0.3
Carbon tetrachloride	ug/L	<5	<5	<50	<5	<1	<1	<20	<10	<0.2	<0.4
Bromodichloromethane	ug/L	<5	<5	<50	<5	<1	<1	<20	<10	<0.2	<0.2
1,2-Dichloropropane	ug/L	<5	<5	<50	<5	<1	<1	<20	<10	<0.1	<0.2
cis-1,3-Dichloropropene	ug/L	<5	<5	<50	<5	<1	<1	<20	<10	<0.3	<0.3
Trichloroethene	ug/L			<50	27.6	16	10	<20	<10	<0.2	<0.3
Chlorodibromomethane	ug/L	<5	<5	<50	<5	<1	<1	<20	<10	<0.3	<0.3
1,1,2-Trichloroethane	ug/L	<5	<5	<50	<5	<1	<1	<20	<10	<1	<0.2
Benzene	ug/L	<5	<5	<50	<5	2.8	4	<20	<10	<0.2	<0.3
trans-1,3-Dichloropropene	ug/L	<5	<5	<50	<5	<1	<1	<20	<10	<0.2	<0.2
Bromoform	ug/L	<5	<5	<50	<5	<1	<1	<20	<10	<0.3	<0.2
4-Methyl-2-Pentanone (MIBK)	ug/L	<10	<10	<100	<10						
2-Hexanone	ug/L	<10	<10	<100	<10						
Tetrachloroethene	ug/L	<5	<5	<50	<5	<1	7.6	<20	<10	<0.3	<0.6
1,1,2,2-Tetrachloroethane	ug/L	<5	<5	<50	<5	<1	<1	<20	<10	<0.2	<0.2
Toluene	ug/L			<50	<5	3.5	3.8	<20	<10	<0.2	40
Chlorobenzene	ug/L	<5	<5	<50	<5	<1	<1	<20	<10	<0.3	<0.3
Ethylbenzene	ug/L			<50	25.2	17	18	<20	<10	35	60
Styrene	ug/L	<5	<5	<50	<5	16	<1		<10	<0.2	<0.2
Xylenes, Total	ug/L	<5			292						
Naphthalene	ug/L				74	140	49	73	84.929	180	180
1,1,1,2-Tetrachloroethane	ug/L					<1	<1		<10	<0.1	<0.3
1,1-Dichloropropene	ug/L					<1	<1		<10	<0.2	<0.3
1,2,3-Trichlorobenzene	ug/L					<1	<1		<10	<0.5	<0.4
1,2,3-Trichloropropane	ug/L					<1	<1		<10	<0.3	<0.2
1,2,4-Trichlorobenzene	ug/L					<1	<1		<10	<0.5	<0.3
1,2,4-Trimethylbenzene	ug/L					490	850		623.6	1400	1100
1,2-Dibromo-3-chloropropane	ug/L					<3	<3		<30	<0.3	<0.3
1,2-Dibromoethane	ug/L					<2	<2		<20	<0.2	<0.4

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W02

Parameter	Units	2/20/92	6/14/92	9/17/92	12/18/92	3/24/93	6/22/94	7/6/95	7/10/96	7/11/97	6/25/98
1,2-Dichlorobenzene	ug/L					<1	<1	<20	<10	<0.3	<0.3
1,3,5-Trimethylbenzene	ug/L					120	200		21.291	420	360
1,3-Dichlorobenzene	ug/L					<1	<1	<20	<10	<0.7	<0.4
1,3-Dichloropropane	ug/L					<1	<1		<10	<0.3	<0.6
1,4-Dichlorobenzene	ug/L					<1	<1	<20	<10	<0.3	<0.3
2,2-Dichloropropane	ug/L					<1	<1		<10	<0.2	<0.5
2-Chlorotoluene	ug/L					<1	<1		<10	<0.4	<0.3
4-Chlorotoluene	ug/L					<1	<1		<10	<0.3	<0.3
Bromobenzene	ug/L					<1	<1		<10	<0.3	<0.2
Bromochloromethane	ug/L					<1	<1		<10	<0.4	<0.2
Dibromomethane	ug/L					<1	<1		<10	<0.1	<0.2
Dichlorodifluoromethane	ug/L					<2	<2		<20	<0.3	<1.2
Hexachlorobutadiene	ug/L					<1	<1		<10	<0.5	<0.6
Isopropylbenzene	ug/L					38	35		11.404	60	75
Trichlorofluoromethane	ug/L					<1	<1	<20	<10	<0.5	<0.6
m + p-Xylene	ug/L					83	52	<40	155.203	180	180
n-Butylbenzene	ug/L					85	140		91.59	140	160
n-Propylbenzene	ug/L					43	49		67.52	<0.3	120
o-Xylene	ug/L					170	200	97	217.759	550	380
p-Isopropyltoluene	ug/L					<1	<1		<10	<0.4	65
sec-Butylbenzene	ug/L					36	43		<10	30	65
tert-Butylbenzene	ug/L					<1	<1		<10	<0.3	<0.3
2-Chloroethyl vinyl ether	ug/L							<200			
	ug/L										
	ug/L										

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W03A

Parameter	Units	2/25/92	6/17/92	9/17/92	12/18/92	3/24/93	6/30/93	12/28/93	6/22/94	7/6/95	7/10/96
Chloromethane	ug/L	<10	<100	<100	<10	<200	<20	<20	<2	<2	<200
Bromomethane	ug/L	<10	<100	<100	<10	<200		<20	<2	<2	<200
Vinyl chloride	ug/L	<10	<100	<100	<10	<100	<10	<10	<1	<1	<100
Chloroethane	ug/L	<10	<100	<100	<10	<200	<20	<20	<2	<2	<200
Methylene chloride	ug/L	<5	<50		10.9	<300	<30	<30	<3	<3	<300
Acetone	ug/L		<100		11.6						
Carbon disulfide	ug/L	<5	<50	<50	<5						
1,1-Dichloroethene	ug/L	<5	<50	<50	<5	<100	<10	<10	<1	<1	<100
1,1-Dichloroethane	ug/L	<5	<50	<50	<5	<100	<10	<10	<1	<1	<100
cis-1,2-Dichloroethene	ug/L					<100	<10	<10	<1	<1	<100
trans-1,2-Dichloroethene	ug/L	<5	<50	<50	<5	<100	<10	<10	<1	<1	<100
Chloroform	ug/L		<50	<50	7.27	<100	<10	<10	<1	<1	<100
1,2-Dichloroethane	ug/L	<5	<50	<50	<5	<100	<10	<10	<1	<1	<100
2-Butanone (MEK)	ug/L	<10	<100	<100	<10						
Vinyl acetate	ug/L	<10	<100	<100	<10						
1,1,1-Trichloroethane	ug/L	<5	<50	<50	<5	<100	<10	<10	<1	<1	<100
Carbon tetrachloride	ug/L	<5	<50	<50	<5	<100	<10	<10	<1	<1	<100
Bromodichloromethane	ug/L	<5	<50	<50	<5	<100	<10	<10	<1	<1	<100
1,2-Dichloropropane	ug/L	<5	<50	<50	<5	<100	<10	<10	<1	<1	<100
cis-1,3-Dichloropropene	ug/L	<5	<50	<50	<5	<100		<10	<1	<1	<100
Trichloroethene	ug/L		<50	<50	58.2	<100	18	37	28	34	<100
Chlorodibromomethane	ug/L	<5	<50	<50	<5	<100	<10	<10	<1	<1	<100
1,1,2-Trichloroethane	ug/L	<5	<50	<50	<5	<100	<10	<10	<1	<1	<100
Benzene	ug/L		<50	<50	<5	<100	18	20	<1	<1	<100
trans-1,3-Dichloropropene	ug/L	<5	<50	<50	<5	<100		<10	<1	<1	<100
Bromoform	ug/L	<5	<50	<50	<5	<100		<10	<1	<1	<100
4-Methyl-2-Pentanone (MIBK)	ug/L	<10	<100	<100	<10						
2-Hexanone	ug/L	<10	<100	<100	<10						
Tetrachloroethene	ug/L	<5	<50	<50	<5	<100	<10	31	7.4	8.9	<100
1,1,2,2-Tetrachloroethane	ug/L	<5	<50	<50	<5	<100	<10	<10	<1	3.2	<100
Toluene	ug/L		<50	<50	22.6	<100	22	33	<1	48	<100
Chlorobenzene	ug/L	<5	<50	<50	<5	<100	<10	<10	<1	11	<100
Ethylbenzene	ug/L		<50	<50	76.8	450	38	52	920	88	<100
Styrene	ug/L	<5	<50	<50	<5	1400		<10	<1000		<100
Xylenes, Total	ug/L				920						
Naphthalene	ug/L				498	800	150	200	800	70	177.33
1,1,1,2-Tetrachloroethane	ug/L					<100		<10	<1		<100
1,1-Dichloropropene	ug/L					<100		<10	<1		<100
1,2,3-Trichlorobenzene	ug/L					<100	<10	<10	<1		<100
1,2,3-Trichloropropane	ug/L					<100		<10	<1		<100
1,2,4-Trichlorobenzene	ug/L					<100	<10	<10	<1		<100
1,2,4-Trimethylbenzene	ug/L					32000	2700	3800	5800		1888.51
1,2-Dibromo-3-chloropropane	ug/L					<300	<30	<30	<3		<300
1,2-Dibromoethane	ug/L					<200	<20	<20	<2		<200

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W03A

Parameter	Units	2/25/92	6/17/92	9/17/92	12/18/92	3/24/93	6/30/93	12/28/93	6/22/94	7/6/95	7/10/96
1,2-Dichlorobenzene	ug/L					<100	<10	<10	<1	<1	<100
1,3,5-Trimethylbenzene	ug/L					63000	1000	4900	1400		350.9
1,3-Dichlorobenzene	ug/L					<100	<10	<10	<1	<1	<100
1,3-Dichloropropane	ug/L					<100	<10	<10	<1		<100
1,4-Dichlorobenzene	ug/L					<100	<10	<10	<1	<1	<100
2,2-Dichloropropane	ug/L					<100	<10	<10	<1		<100
2-Chlorotoluene	ug/L					<100	<10	<10	<1		<100
4-Chlorotoluene	ug/L					<100	<10	<10	<1		<100
Bromobenzene	ug/L					<100	<10	<10	<1		<100
Bromochloromethane	ug/L					<100		<10	<1		<100
Dibromomethane	ug/L					<100		<10	<1		<100
Dichlorodifluoromethane	ug/L					<200	<20	<20	<2		<200
Hexachlorobutadiene	ug/L					<100	<10	<10	<1		<100
Isopropylbenzene	ug/L					21000	81	140	1400		149.83
Trichlorofluoromethane	ug/L					<100	<10	<10	<1	<1	<100
m + p-Xylene	ug/L					790	300	390	1200	91	323.65
n-Butylbenzene	ug/L					26000	240	1600	2200		419.38
n-Propylbenzene	ug/L					460	120	210	1600		156.35
o-Xylene	ug/L					3200	410	2800	2100	53	477.66
p-Isopropyltoluene	ug/L					<100	<10	180	<1000		180.06
sec-Butylbenzene	ug/L					1300	56	88	1600		164.08
tert-Butylbenzene	ug/L					<100	<10	170	<1000		<100
Di-isopropyl ether	ug/L						<10				
Methyl tert-butyl ether	ug/L						<10				
2-Chloroethyl vinyl ether	ug/L									<10	

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W03B

Parameter	Units	6/17/91	2/22/92	9/17/92	12/18/92	3/23/93	6/29/93	12/28/93	6/22/94	7/6/95	7/10/96	7/11/97	6/24/98
Chloromethane	ug/L	<100	<10	<100	<10	<2	<20	<2	<2	<2	<2	<0.7	<0.9
Bromomethane	ug/L	<100	<10	<100	<10	<2		<2	<2	<2	<2	<0.3	<0.9
Vinyl chloride	ug/L	<100	<10	<100	<10	<1	<1	<1	<1	<1	<1	<0.3	<0.5
Chloroethane	ug/L	<100	<10	<100	<10	<2	<10	<2	<2	<2	<2	<0.4	<0.8
Methylene chloride	ug/L	<50	<5		<10	<3	<3	<3	<3	<3	<3	<0.3	<0.5
Acetone	ug/L	<100			<10								
Carbon disulfide	ug/L	<50	<5	<50	<5								
1,1-Dichloroethene	ug/L	<50	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.4	<0.2
1,1-Dichloroethane	ug/L	<50	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.2
cis-1,2-Dichloroethene	ug/L					<1	<1	<1	<1	<1	<1	<0.2	<0.2
trans-1,2-Dichloroethene	ug/L	<50	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.3
Chloroform	ug/L	<50	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.2
1,2-Dichloroethane	ug/L	<50	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.2
2-Butanone (MEK)	ug/L	<100	<10	<100	<10								
Vinyl acetate	ug/L	<100	<10	<100	<10								
1,1,1-Trichloroethane	ug/L	<50	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.3	<0.3
Carbon tetrachloride	ug/L	<50	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.4
Bromodichloromethane	ug/L	<50	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.2
1,2-Dichloropropane	ug/L	<50	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.1	<0.2
cis-1,3-Dichloropropene	ug/L	<50	<5	<50	<5	<1		<1	<1	<1	<1	<0.3	<0.3
Trichloroethene	ug/L	<50	<5	<50	<5	<1	8.9	<1	2.2	1.8	4.429	1	3.5
Chlorodibromomethane	ug/L	<50	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.3	<0.3
1,1,2-Trichloroethane	ug/L	<50	<5	<50	<5	<1	<1	<1	<1	<1	<1	<1	<0.2
Benzene	ug/L	<50	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.3
trans-1,3-Dichloropropene	ug/L	<50	<5	<50	<5	<1		<1	<1	<1	<1	<0.2	<0.2
Bromoform	ug/L	<50	<5	<50	<5	<1		<1	<1	<1	<1	<0.3	<0.2
4-Methyl-2-Pentanone (MIBK)	ug/L	<100	<10	<100	<10								
2-Hexanone	ug/L	<100	<10	<100	<10								
Tetrachloroethene	ug/L	<50	<5	<50	<5	<1	<1	<1	<1	1.3	<1	<0.3	<0.6
1,1,2,2-Tetrachloroethane	ug/L	<50	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.2
Toluene	ug/L	<50	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.2
Chlorobenzene	ug/L	<50	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.3	<0.3
Ethylbenzene	ug/L	<50	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.2
Styrene	ug/L	<50	<5	<50	<5	<1		<1	<1		<1	<0.2	<0.2
Xylenes, Total	ug/L	<50	<5	<50	<5								
Naphthalene	ug/L	<10	<10		<10	<1	1.5	<1	<1	<1	1.371	<0.8	1.3
1,1,1,2-Tetrachloroethane	ug/L					<1		<1	<1		<1	<0.1	<0.3
1,1-Dichloropropene	ug/L					<1		<1	<1		<1	<0.2	<0.3
1,2,3-Trichlorobenzene	ug/L					<1	<1	<1	<1		<1	<0.5	<0.4
1,2,3-Trichloropropane	ug/L					<1		<1	<1		<1	<0.3	<0.2
1,2,4-Trichlorobenzene	ug/L					<1	<1	<1	<1		<1	<0.5	<0.3
1,2,4-Trimethylbenzene	ug/L					<1	5	3.8	8.2		4.627	<0.7	5.8
1,2-Dibromo-3-chloropropane	ug/L					<3	<3	<3	<3		<3	<0.3	<0.3
1,2-Dibromoethane	ug/L					<2	<2	<2	<2		<2	<0.2	<0.4

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W03B

Parameter	Units	6/17/91	2/22/92	9/17/92	12/18/92	3/23/93	6/29/93	12/28/93	6/22/94	7/6/95	7/10/96	7/11/97	6/24/98
1,2-Dichlorobenzene	ug/L					<1	<1	<1	<1	<1	<1	<0.3	<0.3
1,3,5-Trimethylbenzene	ug/L					<1	2.4	1.8	3.3		2.399	<0.4	3.2
1,3-Dichlorobenzene	ug/L					<1	<1	<1	<1	<1	<1	<0.7	<0.4
1,3-Dichloropropane	ug/L					<1	<1	<1	<1		<1	<0.3	<0.6
1,4-Dichlorobenzene	ug/L					<1	<1	<1	<1	<1	<1	<0.3	<0.3
2,2-Dichloropropane	ug/L					<1	<1	<1	<1		<1	<0.2	<0.5
2-Chlorotoluene	ug/L					<1	<1	<1	<1		<1	<0.4	<0.3
4-Chlorotoluene	ug/L					<1	<1	<1	<1		<1	<0.3	<0.3
Bromobenzene	ug/L					<1	<1	<1	<1		<1	<0.3	<0.2
Bromochloromethane	ug/L					<1		<1	<1		<1	<0.4	<0.2
Dibromomethane	ug/L					<1		<1	<1		<1	<0.1	<0.2
Dichlorodifluoromethane	ug/L					<2	<40	<2	<2		<2	<0.3	<1.2
Hexachlorobutadiene	ug/L					<1	<1	<1	<1		<1	<0.5	<0.6
Isopropylbenzene	ug/L					<1	<1	<1	<1		<1	<0.2	0.8
Trichlorofluoromethane	ug/L					<1	<1	<1	<1	<1	<1	<0.5	<0.6
m + p-Xylene	ug/L					<2	<2	<2	<2	<2	<2	<0.4	1.4
n-Butylbenzene	ug/L					<1	<1	1.6	3		3.567	<0.6	3.2
n-Propylbenzene	ug/L					<1	<1	<1	<1		1.051	<0.3	1.1
o-Xylene	ug/L					<1	6.4	<1	1.9	<1	2.243	<0.2	<0.5
p-Isopropyltoluene	ug/L					<1	<1	<1	<1		1.62	<0.4	1.4
sec-Butylbenzene	ug/L					<1	1.6	<1	<1		1.117	<0.3	1.1
tert-Butylbenzene	ug/L					<1	<1	<1	<1		<1	<0.3	<0.3
Di-isopropyl ether	ug/L						<1						
Methyl tert-butyl ether	ug/L						<1						
2-Chloroethyl vinyl ether	ug/L									<10			

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W06		
Parameter	Units	**2/20/92**	**9/17/92**
Chloromethane	ug/L	<10	<100
Bromomethane	ug/L	<10	<100
Vinyl chloride	ug/L	<10	<100
Chloroethane	ug/L	<10	<100
Methylene chloride	ug/L	<5	
Acetone	ug/L	<10	
Carbon disulfide	ug/L	<5	<50
1,1-Dichloroethene	ug/L	<5	<50
1,1-Dichloroethane	ug/L	<5	<50
trans-1,2-Dichloroethene	ug/L	<5	<50
Chloroform	ug/L	<5	<50
1,2-Dichloroethane	ug/L	<5	<50
2-Butanone (MEK)	ug/L	<10	<100
Vinyl acetate	ug/L	<10	<100
1,1,1-Trichloroethane	ug/L	<5	<50
Carbon tetrachloride	ug/L	<5	<50
Bromodichloromethane	ug/L	<5	<50
1,2-Dichloropropane	ug/L	<5	<50
cis-1,3-Dichloropropene	ug/L	<5	<50
Trichloroethene	ug/L	<5	<50
Chlorodibromomethane	ug/L	<5	<50
1,1,2-Trichloroethane	ug/L	<5	<50
Benzene	ug/L	<5	<50
trans-1,3-Dichloropropene	ug/L	<5	<50
Bromoform	ug/L	<5	<50
4-Methyl-2-Pentanone (MIBK)	ug/L	<10	<100
2-Hexanone	ug/L	<10	<100
Tetrachloroethene	ug/L	<5	<50
1,1,2,2-Tetrachloroethane	ug/L	<5	<50
Toluene	ug/L	<5	<50
Chlorobenzene	ug/L	<5	<50
Ethylbenzene	ug/L		<50
Styrene	ug/L	<5	<50
Xylenes, Total	ug/L	<5	<50
Naphthalene	ug/L		

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W06R

Parameter	Units	12/28/93	7/10/96
Chloromethane	ug/L	<20	<2
Bromomethane	ug/L	<20	<2
Vinyl chloride	ug/L	<10	<1
Chloroethane	ug/L	<20	<2
Methylene chloride	ug/L	<30	<3
1,1-Dichloroethene	ug/L	<10	<1
1,1-Dichloroethane	ug/L	<10	<1
cis-1,2-Dichloroethene	ug/L	<10	<1
trans-1,2-Dichloroethene	ug/L	<10	<1
Chloroform	ug/L	<10	7.475
1,2-Dichloroethane	ug/L	<10	<1
1,1,1-Trichloroethane	ug/L	<10	<1
Carbon tetrachloride	ug/L	<10	<1
Bromodichloromethane	ug/L	<10	<1
1,2-Dichloropropane	ug/L	<10	<1
cis-1,3-Dichloropropene	ug/L	<10	<1
Trichloroethene	ug/L	<10	11.175
Chlorodibromomethane	ug/L	<10	<1
1,1,2-Trichloroethane	ug/L	<10	<1
Benzene	ug/L	<10	<1
trans-1,3-Dichloropropene	ug/L	<10	<1
Bromoform	ug/L	<10	<1
Tetrachloroethene	ug/L	<10	<100
1,1,2,2-Tetrachloroethane	ug/L	<10	<1
Toluene	ug/L	15	<1
Chlorobenzene	ug/L	<10	<1
Ethylbenzene	ug/L	64	<100
Styrene	ug/L	<10	<100
Naphthalene	ug/L	150	174.17
1,1,1,2-Tetrachloroethane	ug/L	<10	<1
1,1-Dichloropropene	ug/L	<10	<1
1,2,3-Trichlorobenzene	ug/L	<10	<1
1,2,3-Trichloropropane	ug/L	<10	<1
1,2,4-Trichlorobenzene	ug/L	<10	<1
1,2,4-Trimethylbenzene	ug/L	4400	1511.01
1,2-Dibromo-3-chloropropane	ug/L	<30	<3
1,2-Dibromoethane	ug/L	<20	<2
1,2-Dichlorobenzene	ug/L	<10	<1
1,3,5-Trimethylbenzene	ug/L	2900	479.12
1,3-Dichlorobenzene	ug/L	<10	<1
1,3-Dichloropropane	ug/L	<10	<1
1,4-Dichlorobenzene	ug/L	<10	<1
2,2-Dichloropropane	ug/L	<10	<1
2-Chlorotoluene	ug/L	<10	<1

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W06R		
Parameter	Units	**12/28/93**	**7/10/96**
4-Chlorotoluene	ug/L	<10	<1
Bromobenzene	ug/L	<10	<1
Bromochloromethane	ug/L	<10	<1
Dibromomethane	ug/L	<10	<1
Dichlorodifluoromethane	ug/L	<20	<2
Hexachlorobutadiene	ug/L	<10	<1
Isopropylbenzene	ug/L	200	<100
Trichlorofluoromethane	ug/L	<10	<1
m + p-Xylene	ug/L	180	<200
n-Butylbenzene	ug/L	2400	212.83
n-Propylbenzene	ug/L	380	111.85
o-Xylene	ug/L	490	242.66
p-Isopropyltoluene	ug/L	200	122.12
sec-Butylbenzene	ug/L	190	148.44
tert-Butylbenzene	ug/L	260	<100
	ug/L		
	ug/L		
	ug/L		
	ug/L		
	ug/L		
	ug/L		
	ug/L		
	ug/L		
	ug/L		

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W08

Parameter	Units	2/20/92	6/14/92	9/17/92	12/19/92	3/23/93	6/28/93	12/27/93	6/21/94	7/6/95	7/8/96	7/11/97	6/23/98
Chloromethane	ug/L	<10	<10	<100	<10	<2	<2	<2	<2	<2	<2	<0.7	<0.9
Bromomethane	ug/L	<10	<10	<100	<10	<2		<2	<2	<2	<2	<0.3	<0.9
Vinyl chloride	ug/L	<10	<10	<100	<10	<1	<1	<1	<1	<1	<1	<0.3	<0.5
Chloroethane	ug/L	<10	<10	<100	<10	<2	<2	<2	<2	<2	<2	<0.4	<0.8
Methylene chloride	ug/L	<5	<5		<10	<3	<3	<3	<3	<3	<3	<0.3	<0.5
Acetone	ug/L	<10	<10		<10								
Carbon disulfide	ug/L	<5	<5	<50	<5								
1,1-Dichloroethene	ug/L	<5	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.4	<0.2
1,1-Dichloroethane	ug/L	<5	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.2
cis-1,2-Dichloroethene	ug/L					<1	<1	<1	<1	<1	<1	<0.2	<0.2
trans-1,2-Dichloroethene	ug/L	<5	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.3
Chloroform	ug/L			<50	<5	1.8	1.6	<1	1.3	<1	<1	0.9	1.6
1,2-Dichloroethane	ug/L	<5	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.2
2-Butanone (MEK)	ug/L	<10	<10	<100	<10								
Vinyl acetate	ug/L		<10	<100	<10								
1,1,1-Trichloroethane	ug/L	<5	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.3	<0.3
Carbon tetrachloride	ug/L	<5	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.4
Bromodichloromethane	ug/L	<5	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.2
1,2-Dichloropropane	ug/L	<5	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.1	<0.2
cis-1,3-Dichloropropene	ug/L	<5	<5	<50	<5	<1		<1	<1	<1	<1	<0.3	<0.3
Trichloroethene	ug/L	<5	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.3
Chlorodibromomethane	ug/L	<5	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.3	<0.3
1,1,2-Trichloroethane	ug/L	<5	<5	<50	<5	<1	<1	<1	<1	<1	<1	<1	<0.2
Benzene	ug/L	<5	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.3
trans-1,3-Dichloropropene	ug/L	<5	<5	<50	<5	<1		<1	<1	<1	<1	<0.2	<0.2
Bromoform	ug/L	<5	<5	<50	<5	<1		<1	<1	<1	<1	<0.3	<0.2
4-Methyl-2-Pentanone (MIBK)	ug/L		<10	<100	<10								
2-Hexanone	ug/L	<10	<10	<100	<10								
Tetrachloroethene	ug/L	<5	<5	14	<5	<1	<1	<1	<1	<1	<1	<0.3	<0.6
1,1,2,2-Tetrachloroethane	ug/L	<5	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.2
Toluene	ug/L	<5	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.2
Chlorobenzene	ug/L	<5	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.3	<0.3
Ethylbenzene	ug/L	<5	<5	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.2
Styrene	ug/L			<50	<5	<1		<1	<1		<1	<0.2	<0.2
Xylenes, Total	ug/L		<5	<50	<5								
Naphthalene	ug/L	<10	<11	<10	<10	<1	<1	<1	<1	<1	<1	<0.8	<1.1
1,1,1,2-Tetrachloroethane	ug/L					<1		<1	<1		<1	<0.1	<0.3
1,1-Dichloropropene	ug/L					<1		<1	<1		<1	<0.2	<0.3
1,2,3-Trichlorobenzene	ug/L					<1	<1	<1	<1		<1	<0.5	<0.4
1,2,3-Trichloropropane	ug/L					<1		<1	<1		<1	<0.3	<0.2
1,2,4-Trichlorobenzene	ug/L					<1	<1	<1	<1		<1	<0.5	<0.3
1,2,4-Trimethylbenzene	ug/L					<1	<1	<1	<1		<1	<0.7	<0.6
1,2-Dibromo-3-chloropropane	ug/L					<3	<3	<3	<3		<3	<0.3	<0.3
1,2-Dibromoethane	ug/L					<2	<2	<2	<2		<2	<0.2	<0.4

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W08

Parameter	Units	2/20/92	6/14/92	9/17/92	12/19/92	3/23/93	6/28/93	12/27/93	6/21/94	7/6/95	7/8/96	7/11/97	6/23/98
1,2-Dichlorobenzene	ug/L					<1	<1	<1	<1	<1	<1	<0.3	<0.3
1,3,5-Trimethylbenzene	ug/L					<1	<1	<1	<1		<1	<0.4	<0.3
1,3-Dichlorobenzene	ug/L					<1	<1	<1	<1	<1	<1	<0.7	<0.4
1,3-Dichloropropane	ug/L					<1	<1	<1	<1		<1	<0.3	<0.6
1,4-Dichlorobenzene	ug/L					<1	<1	<1	<1	<1	<1	<0.3	<0.3
2,2-Dichloropropane	ug/L					<1	<1	<1	<1		<1	<0.2	<0.5
2-Chlorotoluene	ug/L					<1	<1	<1	<1		<1	<0.4	<0.3
4-Chlorotoluene	ug/L					<1	<1	<1	<1		<1	<0.3	<0.3
Bromobenzene	ug/L					<1	<1	<1	<1		<1	<0.3	<0.2
Bromochloromethane	ug/L					<1		<1	<1		<1	<0.4	<0.2
Dibromomethane	ug/L					<1		<1	<1		<1	<0.1	<0.2
Dichlorodifluoromethane	ug/L					<2	<2	<2	<2		<2	<0.3	<1.2
Hexachlorobutadiene	ug/L					<1	<1	<1	<1		<1	<0.5	<0.6
Isopropylbenzene	ug/L					<1	<1	<1	<1		<1	<0.2	<0.2
Trichlorofluoromethane	ug/L					<1	<1	<1	<1	<1	<1	<0.5	<0.6
m + p-Xylene	ug/L					<2	<2	<2	<2	<2	<2	<0.4	<0.3
n-Butylbenzene	ug/L					<1	<1	<1	<1		<1	<0.6	<0.3
n-Propylbenzene	ug/L					<1	<1	<1	<1		<1	<0.3	<0.2
o-Xylene	ug/L					<1	<1	<1	<1	<1	<1	<0.2	<0.5
p-Isopropyltoluene	ug/L					<1	<1	<1	<1		<1	<0.4	<0.2
sec-Butylbenzene	ug/L					<1	<1	<1	<1		<1	<0.3	<0.2
tert-Butylbenzene	ug/L					<1	<1	<1	<1		<1	<0.3	<0.3
Di-isopropyl ether	ug/L						<1						
Methyl tert-butyl ether	ug/L						<1						
2-Chloroethyl vinyl ether	ug/L									<10			

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W09

Parameter	Units	6/18/92	12/17/92	6/28/93	12/28/93	6/22/94	7/5/95	7/9/96	7/11/97	6/24/98
Chloromethane	ug/L	<100	<10	<2	<2	<2	<2	<2	<0.7	<0.9
Bromomethane	ug/L	<100	<10		<2	<2	<2	<2	<0.3	<0.9
Vinyl chloride	ug/L	<100	<10	<1	<1	<1	<1	<1	<0.3	<0.5
Chloroethane	ug/L	<100	<10	<2	<2	<2	<2	<2	<0.4	<0.8
Methylene chloride	ug/L	<50	<10	<3	<3	<3	<3	<3	<0.3	<0.5
Acetone	ug/L	<100	<10							
Carbon disulfide	ug/L	<50	<5							
1,1-Dichloroethene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.4	<0.2
1,1-Dichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
cis-1,2-Dichloroethene	ug/L			<1	<1	<1	<1	<1	<0.2	<0.2
trans-1,2-Dichloroethene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.3
Chloroform	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
1,2-Dichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
2-Butanone (MEK)	ug/L	<100	<10							
Vinyl acetate	ug/L	<100	<10							
1,1,1-Trichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.3
Carbon tetrachloride	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.4
Bromodichloromethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
1,2-Dichloropropane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.1	<0.2
cis-1,3-Dichloropropene	ug/L	<50	<5		<1	<1	<1	<1	<0.3	<0.3
Trichloroethene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.3
Chlorodibromomethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.3
1,1,2-Trichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<1	<0.2
Benzene	ug/L	<50	<5	<1	2.2	<1	<1	1.652	1.7	1.5
trans-1,3-Dichloropropene	ug/L	<50	<5		<1	<1	<1	<1	<0.2	<0.2
Bromoform	ug/L	<50	<5		<1	<1	<1	<1	<0.3	<0.2
4-Methyl-2-Pentanone (MIBK)	ug/L	<100	<10							
2-Hexanone	ug/L	<100	<10							
Tetrachloroethene	ug/L	<50	<5	<1	<1	<1	1.3	<1	<0.3	<0.6
1,1,2,2-Tetrachloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
Toluene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
Chlorobenzene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.3
Ethylbenzene	ug/L	<50	<5	<1	<1	3.1	<1	3.987	4	0.6
Styrene	ug/L	<50	<5		<1	<1		<1	<0.2	<0.2
Xylenes, Total	ug/L	<50	<5							
Naphthalene	ug/L			<1	<1	2.2	<1	3.067	7.7	4.6
1,1,1,2-Tetrachloroethane	ug/L				<1	<1		<1	<0.1	<0.3
1,1-Dichloropropene	ug/L				<1	<1		<1	<0.2	<0.3
1,2,3-Trichlorobenzene	ug/L			<1	<1	<1		<1	<0.5	<0.4
1,2,3-Trichloropropane	ug/L				<1	<1		<1	0.15	<0.2
1,2,4-Trichlorobenzene	ug/L			<1	<1	<1		<1	<0.5	<0.3
1,2,4-Trimethylbenzene	ug/L			<1	<1	1.3		1.758	3.4	1
1,2-Dibromo-3-chloropropane	ug/L			<3	<3	<3		<3	<0.3	<0.3
1,2-Dibromoethane	ug/L			<2	<2	<2		<2	<0.2	<0.4

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W09

Parameter	Units	6/18/92	12/17/92	6/28/93	12/28/93	6/22/94	7/5/95	7/9/96	7/11/97	6/24/98
1,2-Dichlorobenzene	ug/L			<1	<1	<1	<1	<1	<0.3	<0.3
1,3,5-Trimethylbenzene	ug/L			<1	<1	<1		<1	<0.4	<0.3
1,3-Dichlorobenzene	ug/L			<1	<1	<1	<1	<1	<0.7	<0.4
1,3-Dichloropropane	ug/L			<1	<1	<1		<1	<0.3	<0.6
1,4-Dichlorobenzene	ug/L			<1	<1	<1	<1	<1	<0.3	<0.3
2,2-Dichloropropane	ug/L			<1	<1	<1		<1	<0.2	<0.5
2-Chlorotoluene	ug/L			<1	<1	<1		<1	<0.4	<0.3
4-Chlorotoluene	ug/L			<1	<1	<1		<1	<0.3	<0.3
Bromobenzene	ug/L			<1	<1	<1		<1	<0.3	<0.2
Bromochloromethane	ug/L				<1	<1		<1	<0.4	<0.2
Dibromomethane	ug/L				<1	<1		<1	<0.1	<0.2
Dichlorodifluoromethane	ug/L			<2	<2	<2		<2	<0.3	<1.2
Hexachlorobutadiene	ug/L			<1	<1	<1		<1	<0.5	<0.6
Isopropylbenzene	ug/L			2.5	5.7	5.6		10.883	19	10
Trichlorofluoromethane	ug/L			<1	<1	<1	<1	<1	<0.5	<0.6
m + p-Xylene	ug/L			<2	<2	<2	<2	<2	1.3	1.8
n-Butylbenzene	ug/L			2.9	1.6	1.8		3.751	4.5	3.6
n-Propylbenzene	ug/L			1.7	<1	3.2		7.79	12	4.8
o-Xylene	ug/L			<1	<1	<1	<1	1.054	<0.2	1.4
p-Isopropyltoluene	ug/L			<1	<1	<1		<1	<0.4	1.4
sec-Butylbenzene	ug/L			2	9.4	7.7		8.383	12	9.2
tert-Butylbenzene	ug/L			<1	<1	<1		1.005	<0.3	1.2
Di-isopropyl ether	ug/L			<1						
Methyl tert-butyl ether	ug/L			<1						
2-Chloroethyl vinyl ether	ug/L						<10			

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W10A

Parameter	Units	7/8/92	12/18/92	6/30/93	12/28/93	6/22/94	7/6/95	7/9/96	7/11/97	6/24/98
Chloromethane	ug/L	<100	<10	<2	<2	<2	<20	<20	<0.7	<0.9
Bromomethane	ug/L	<100	<10		<2	<2	<20	<20	<0.3	<0.9
Vinyl chloride	ug/L	<100	<10	<1	<1	<1	<10	<10	<0.3	<0.5
Chloroethane	ug/L	<100	<10	<2	<2	<2	<20	<20	<0.4	<0.8
Methylene chloride	ug/L		<10	<3	<3	<3	<30	<30	<0.3	<0.5
Acetone	ug/L		<10							
Carbon disulfide	ug/L	<50	<5							
1,1-Dichloroethene	ug/L	<50	<5	<1	<1	<1	<10	<10	<0.4	<0.2
1,1-Dichloroethane	ug/L	<50	<5	<1	<1	<1	<10	<10	<0.2	<0.2
cis-1,2-Dichloroethene	ug/L			<1	<1	<1	<10	<10	<0.2	<0.2
trans-1,2-Dichloroethene	ug/L	<50	<5	<1	<1	<1	<10	<10	<0.2	<0.3
Chloroform	ug/L	<50	<5	1.4	<1	1.7	<10	<10	<0.2	<0.2
1,2-Dichloroethane	ug/L	<50	<5	<1	<1	<1	<10	<10	<0.2	<0.2
2-Butanone (MEK)	ug/L	<100	<10							
Vinyl acetate	ug/L	<100	<10							
1,1,1-Trichloroethane	ug/L	<50	<5	<1	<1	<1	<10	<10	<0.3	<0.3
Carbon tetrachloride	ug/L	<50	<5	<1	<1	<1	<10	<10	<0.2	<0.4
Bromodichloromethane	ug/L	<50	<5	<1	<1	<1	41	<10	<0.2	<0.2
1,2-Dichloropropane	ug/L	<50	<5	<1	<1	<1	<10	<10	<0.1	<0.2
cis-1,3-Dichloropropene	ug/L	<50	<5		<1	<1	<10	<10	<0.3	<0.3
Trichloroethene	ug/L	<50	31.5	22	30	25	20	25.604	<0.2	35
Chlorodibromomethane	ug/L	<50	<5	<1	<1	<1	<10	<10	<0.3	<0.3
1,1,2-Trichloroethane	ug/L	<50	<5	<1	<1	<1	<10	<10	<1	<0.2
Benzene	ug/L	<50	<5	3.3	5.2	5	<10	<10	<0.2	25
trans-1,3-Dichloropropene	ug/L	<50	<5		<1	<1	<10	<10	<0.2	<0.2
Bromoform	ug/L	<50	<5		<1	<1	<10	<10	<0.3	<0.2
4-Methyl-2-Pentanone (MIBK)	ug/L	<100	<10							
2-Hexanone	ug/L	<100	<10							
Tetrachloroethene	ug/L	<50	<5	<1	3.6	2.8	<10	<10	<0.3	<0.6
1,1,2,2-Tetrachloroethane	ug/L	<50	<5	<1	<1	<1	11	<10	<0.2	<0.2
Toluene	ug/L	<50	11.3	8.9	12	10	57	<10	<0.2	18
Chlorobenzene	ug/L	<50	<5	<1	<1	<1	<10	<10	<0.3	<0.3
Ethylbenzene	ug/L	<0.006	35.2	20	38	33	40	34.616	<0.2	40
Styrene	ug/L	<50	<5		<1	<1		<10	<0.2	<0.2
Xylenes, Total	ug/L		252							
Naphthalene	ug/L		62.6	70	100	12	110	79.385	66	140
1,1,1,2-Tetrachloroethane	ug/L				<1	<1		<10	<0.1	<0.3
1,1-Dichloropropene	ug/L				<1	<1		<10	<0.2	<0.3
1,2,3-Trichlorobenzene	ug/L			<1	<1	<1		<10	<0.5	<0.4
1,2,3-Trichloropropane	ug/L				<1	<1		<10	<0.3	<0.2
1,2,4-Trichlorobenzene	ug/L			<1	<1	<1		<10	<0.5	<0.3
1,2,4-Trimethylbenzene	ug/L			500	900	700		524.84	440	800
1,2-Dibromo-3-chloropropane	ug/L			<3	<3	<3		<30	<0.3	<0.3
1,2-Dibromoethane	ug/L			<2	<2	<2		<20	<0.2	<0.4

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W10A

Parameter	Units	7/8/92	12/18/92	6/30/93	12/28/93	6/22/94	7/6/95	7/9/96	7/11/97	6/24/98
1,2-Dichlorobenzene	ug/L			<1	<1	<1	<10	<10	<0.3	<0.3
1,3,5-Trimethylbenzene	ug/L			170	140	60		27.746	50	130
1,3-Dichlorobenzene	ug/L			<1	<1	<1	<10	<10	<0.7	<0.4
1,3-Dichloropropane	ug/L			<1	<1	<1		<10	<0.3	<0.6
1,4-Dichlorobenzene	ug/L			<1	<1	<1	<10	<10	<0.3	<0.3
2,2-Dichloropropane	ug/L			<1	<1	<1		<10	<0.2	<0.5
2-Chlorotoluene	ug/L			<1	<1	<1		<10	<0.4	<0.3
4-Chlorotoluene	ug/L			<1	<1	<1		<10	<0.3	<0.3
Bromobenzene	ug/L			<1	<1	<1		<10	<0.3	<0.2
Bromochloromethane	ug/L				<1	<1		<10	<0.4	<0.2
Dibromomethane	ug/L				<1	<1		<10	<0.1	<0.2
Dichlorodifluoromethane	ug/L			<2	<2	<2		<20	<0.3	<1.2
Hexachlorobutadiene	ug/L			<1	<1	<1		<10	<0.5	<0.6
Isopropylbenzene	ug/L			23	41	39		<10	16	50
Trichlorofluoromethane	ug/L			<1	<1	<1	<10	<10	<0.5	<0.6
m + p-Xylene	ug/L			65	61	16	300	92.122	20	68
n-Butylbenzene	ug/L			110	58	85		71.212	32	88
n-Propylbenzene	ug/L			38	57	<1		63.515	34	78
o-Xylene	ug/L			180	200	210	350	172.776	80	170
p-Isopropyltoluene	ug/L			<1	<1	3.4		<10	<0.4	35
sec-Butylbenzene	ug/L			14	24	<1		<10	<0.3	48
tert-Butylbenzene	ug/L			<1	<1	250		<10	<0.3	<0.3
Di-isopropyl ether	ug/L			<1						
Methyl tert-butyl ether	ug/L			<1						
2-Chloroethyl vinyl ether	ug/L						<100			

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W10B

Parameter	Units	7/8/92	12/18/92	6/29/93	12/28/93	6/22/94	7/6/95	7/9/96	7/11/97	6/24/98
Chloromethane	ug/L	<100	<10	<2	<2	<2	<2	<2	<0.7	<0.9
Bromomethane	ug/L	<100	<10		<2	<2	<2	<2	<0.3	<0.9
Vinyl chloride	ug/L	<100	<10	<1	<1	<1	<1	<1	<0.3	<0.5
Chloroethane	ug/L	<100	<10	<2	<2	<2	<2	<2	<0.4	<0.8
Methylene chloride	ug/L		<10	<3	<3	<3	<3	<3	<0.3	<0.5
Acetone	ug/L	<100	<10							
Carbon disulfide	ug/L	<50	<5							
1,1-Dichloroethene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.4	<0.2
1,1-Dichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
cis-1,2-Dichloroethene	ug/L			<1	<1	<1	<1	<1	<0.2	<0.2
trans-1,2-Dichloroethene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.3
Chloroform	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
1,2-Dichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
2-Butanone (MEK)	ug/L	<100	<10							
Vinyl acetate	ug/L	<100	<10							
1,1,1-Trichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.3
Carbon tetrachloride	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.4
Bromodichloromethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
1,2-Dichloropropane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.1	<0.2
cis-1,3-Dichloropropene	ug/L	<50	<5		<1	<1	<1	<1	<0.3	<0.3
Trichloroethene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.3
Chlorodibromomethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.3
1,1,2-Trichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<1	<0.2
Benzene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.3
trans-1,3-Dichloropropene	ug/L	<50	<5		<1	<1	<1	<1	<0.2	<0.2
Bromoform	ug/L	<50	<5		<1	<1	<1	<1	<0.3	<0.2
4-Methyl-2-Pentanone (MIBK)	ug/L	<100	<10							
2-Hexanone	ug/L	<100	<10							
Tetrachloroethene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.6
1,1,2,2-Tetrachloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
Toluene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
Chlorobenzene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.3
Ethylbenzene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
Styrene	ug/L	<50	<5		<1	<1		<1	<0.2	<0.2
Xylenes, Total	ug/L	<50	<5							
Naphthalene	ug/L	<10	<10	<1	<1	<1	<1	<1	<0.8	<1.1
1,1,1,2-Tetrachloroethane	ug/L				<1	<1		<1	<0.1	<0.3
1,1-Dichloropropene	ug/L				<1	<1		<1	<0.2	<0.3
1,2,3-Trichlorobenzene	ug/L			<1	<1	<1		<1	<0.5	<0.4
1,2,3-Trichloropropane	ug/L				<1	<1		<1	<0.3	<0.2
1,2,4-Trichlorobenzene	ug/L			<1	<1	<1		<1	<0.5	<0.3
1,2,4-Trimethylbenzene	ug/L			<1	1.8	<1		1.027	<0.7	<0.6
1,2-Dibromo-3-chloropropane	ug/L			<3	<3	<3		<3	<0.3	<0.3
1,2-Dibromoethane	ug/L			<2	<2	<2		<2	<0.2	<0.4

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W10B

Parameter	Units	7/8/92	12/18/92	6/29/93	12/28/93	6/22/94	7/6/95	7/9/96	7/11/97	6/24/98
1,2-Dichlorobenzene	ug/L			<1	<1	<1	<1	<1	<0.3	<0.3
1,3,5-Trimethylbenzene	ug/L			<1	<1	<1		<1	<0.4	<0.3
1,3-Dichlorobenzene	ug/L			<1	<1	<1	<1	<1	<0.7	<0.4
1,3-Dichloropropane	ug/L			<1	<1	<1		<1	<0.3	<0.6
1,4-Dichlorobenzene	ug/L			<1	<1	<1	<1	<1	<0.3	<0.3
2,2-Dichloropropane	ug/L			<1	<1	<1		<1	<0.2	<0.5
2-Chlorotoluene	ug/L			<1	<1	<1		<1	<0.4	<0.3
4-Chlorotoluene	ug/L			<1	<1	<1		<1	<0.3	<0.3
Bromobenzene	ug/L			<1	<1	<1		<1	<0.3	<0.2
Bromochloromethane	ug/L				<1	<1		<1	<0.4	<0.2
Dibromomethane	ug/L				<1	<1		<1	<0.1	<0.2
Dichlorodifluoromethane	ug/L			<2	<2	<2		<2	<0.3	<1.2
Hexachlorobutadiene	ug/L			<1	<1	<1		<1	<0.5	<0.6
Isopropylbenzene	ug/L			<1	<1	<1		<1	<0.2	<0.2
Trichlorofluoromethane	ug/L			<1	<1	<1	<1	<1	<0.5	<0.6
m + p-Xylene	ug/L			<2	<2	<2	<2	<2	<0.4	<0.3
n-Butylbenzene	ug/L			<1	<1	<1		<1	<0.6	<0.3
n-Propylbenzene	ug/L			<1	<1	<1		<1	<0.3	<0.2
o-Xylene	ug/L			<1	<1	<1	<1	<1	<0.2	<0.5
p-Isopropyltoluene	ug/L			<1	<1	<1		<1	<0.4	<0.2
sec-Butylbenzene	ug/L			<1	<1	<1		<1	<0.3	<0.2
tert-Butylbenzene	ug/L			<1	<1	<1		<1	<0.3	<0.3
Di-isopropyl ether	ug/L			<1						
Methyl tert-butyl ether	ug/L			<1						
2-Chloroethyl vinyl ether	ug/L						<10			

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W11

Parameter	Units	6/18/92	12/17/92	6/30/93	12/28/93	6/21/94	7/5/95	7/9/96	7/11/97	6/24/98
Chloromethane	ug/L	<100	<10	<2	<2	<2	<2	<2	<0.7	<0.9
Bromomethane	ug/L	<100	<10		<2	<2	<2	<2	<0.3	<0.9
Vinyl chloride	ug/L	<100	<10	<1	<1	<1	<1	<1	<0.3	<0.5
Chloroethane	ug/L	<100	<10	<2	<2	<2	<2	<2	<0.4	<0.8
Methylene chloride	ug/L	<50	<10	<3	<3	<3	<3	<3	<0.3	<0.5
Acetone	ug/L	<100	<10							
Carbon disulfide	ug/L	<50	<5							
1,1-Dichloroethene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.4	<0.2
1,1-Dichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
cis-1,2-Dichloroethene	ug/L			<1	<1	<1	<1	<1	<0.2	<0.2
trans-1,2-Dichloroethene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.3
Chloroform	ug/L	<50	<5	<1	<1	17	15	34.729	36	<0.2
1,2-Dichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
2-Butanone (MEK)	ug/L	<100	<10							
Vinyl acetate	ug/L	<100	<10							
1,1,1-Trichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.3
Carbon tetrachloride	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.4
Bromodichloromethane	ug/L	<50	<5	<1	<1	<1	<1	2.141	1.8	<0.2
1,2-Dichloropropane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.1	<0.2
cis-1,3-Dichloropropene	ug/L	<50	<5		<1	<1	<1	<1	<0.3	<0.3
Trichloroethene	ug/L	<50	<5	<1	<1	<1	1.3	<1	<0.2	<0.3
Chlorodibromomethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.3
1,1,2-Trichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<1	<0.2
Benzene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.3
trans-1,3-Dichloropropene	ug/L	<50	<5		<1	<1	<1	<1	<0.2	<0.2
Bromoform	ug/L	<50	<5		<1	<1	<1	<1	<0.3	<0.2
4-Methyl-2-Pentanone (MIBK)	ug/L	<100	<10							
2-Hexanone	ug/L	<100	<10							
Tetrachloroethene	ug/L	<50	<5	<1	<1	<1	1.4	<1	<0.3	<0.6
1,1,2,2-Tetrachloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
Toluene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
Chlorobenzene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.3
Ethylbenzene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
Styrene	ug/L	<50	<5		<1	<1		<1	<0.2	<0.2
Xylenes, Total	ug/L		<5							
Naphthalene	ug/L	<10	<10	<1	<1	<1	<1	<1	<0.8	<1.1
1,1,1,2-Tetrachloroethane	ug/L				<1	<1		<1	<0.1	<0.3
1,1-Dichloropropene	ug/L				<1	<1		<1	<0.2	<0.3
1,2,3-Trichlorobenzene	ug/L			<1	<1	<1		<1	<0.5	<0.4
1,2,3-Trichloropropane	ug/L				<1	<1		<1	<0.3	<0.2
1,2,4-Trichlorobenzene	ug/L			<1	<1	<1		<1	<0.5	<0.3
1,2,4-Trimethylbenzene	ug/L			<1	<1	<1		<1	<0.7	<0.6
1,2-Dibromo-3-chloropropane	ug/L			<3	<3	<3		<3	<0.3	<0.3
1,2-Dibromoethane	ug/L			<2	<2	<2		<2	<0.2	<0.4

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W11									
Parameter	Units	**6/18/92**	**12/17/92**	**6/30/93**	**12/28/93**	**6/21/94**	**7/5/95**	**7/9/96**	**7/11/97**	**6/24/98**
1,2-Dichlorobenzene	ug/L			<1	<1	<1	<1	<1	<0.3	<0.3
1,3,5-Trimethylbenzene	ug/L			<1	<1	<1		<1	<0.4	<0.3
1,3-Dichlorobenzene	ug/L			<1	<1	<1	<1	<1	<0.7	<0.4
1,3-Dichloropropane	ug/L			<1	<1	<1		<1	<0.3	<0.6
1,4-Dichlorobenzene	ug/L			<1	<1	<1	<1	<1	<0.3	<0.3
2,2-Dichloropropane	ug/L			<1	<1	<1		<1	<0.2	<0.5
2-Chlorotoluene	ug/L			<1	<1	<1		<1	<0.4	<0.3
4-Chlorotoluene	ug/L			<1	<1	<1		<1	<0.3	<0.3
Bromobenzene	ug/L			<1	<1	<1		<1	<0.3	<0.2
Bromochloromethane	ug/L				<1	<1		<1	<0.4	<0.2
Dibromomethane	ug/L				<1	<1		<1	<0.1	<0.2
Dichlorodifluoromethane	ug/L			<2	<2	<2		<2	<0.3	<1.2
Hexachlorobutadiene	ug/L			<1	<1	<1		<1	<0.5	<0.6
Isopropylbenzene	ug/L			<1	<1	<1		<1	<0.2	<0.2
Trichlorofluoromethane	ug/L			<1	<1	<1	<1	<1	<0.5	<0.6
m + p-Xylene	ug/L			<2	<2	<2	<2	<2	<0.4	<0.3
n-Butylbenzene	ug/L			<1	<1	<1		<1	<0.6	<0.3
n-Propylbenzene	ug/L			<1	<1	<1		<1	<0.3	<0.2
o-Xylene	ug/L			<1	<1	<1	<1	<1	<0.2	<0.5
p-Isopropyltoluene	ug/L			<1	<1	<1		<1	<0.4	<0.2
sec-Butylbenzene	ug/L			<1	<1	<1		<1	<0.3	<0.2
tert-Butylbenzene	ug/L			<1	<1	<1		<1	<0.3	<0.3
Di-isopropyl ether	ug/L			<1						
Methyl tert-butyl ether	ug/L			<1						
2-Chloroethyl vinyl ether	ug/L						<10			

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W12

Parameter	Units	6/18/92	12/17/92	6/29/93	12/28/93	6/21/94	7/6/95	7/8/96	7/11/97	6/23/98
Chloromethane	ug/L	<100	<10	<2	<2	<2	<2	<2	<0.7	<0.9
Bromomethane	ug/L	<100	<10		<2	<2	<2	<2	<0.3	<0.9
Vinyl chloride	ug/L	<100	<10	<1	<1	<1	<1	<1	<0.3	<0.5
Chloroethane	ug/L	<100	<10	<2	<2	<2	<2	<2	<0.4	<0.8
Methylene chloride	ug/L	<50	<10	<3	<3	<3	<3	<3	<0.3	<0.5
Acetone	ug/L	<100	<10							
Carbon disulfide	ug/L	<50	<5							
1,1-Dichloroethene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.4	<0.2
1,1-Dichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
cis-1,2-Dichloroethene	ug/L			<1	<1	<1	<1	<1	<0.2	<0.2
trans-1,2-Dichloroethene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.3
Chloroform	ug/L	<50	<5	<1	<1	<1	<1	<1	5.2	0.9
1,2-Dichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
2-Butanone (MEK)	ug/L	<100	<10							
Vinyl acetate	ug/L	<100	<10							
1,1,1-Trichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.3
Carbon tetrachloride	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.4
Bromodichloromethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
1,2-Dichloropropane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.1	<0.2
cis-1,3-Dichloropropene	ug/L	<50	<5		<1	<1	<1	<1	<0.3	<0.3
Trichloroethene	ug/L	<50	22.4	7.6	8.1	4.2	5.3	<1	<0.2	1.6
Chlorodibromomethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.3
1,1,2-Trichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<1	<0.2
Benzene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.3
trans-1,3-Dichloropropene	ug/L	<50	<5		<1	<1	<1	<1	<0.2	<0.2
Bromoform	ug/L	<50	<5		<1	<1	<1	<1	<0.3	<0.2
4-Methyl-2-Pentanone (MIBK)	ug/L	<100	<10							
2-Hexanone	ug/L	<100	<10							
Tetrachloroethene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.6
1,1,2,2-Tetrachloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
Toluene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
Chlorobenzene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.3
Ethylbenzene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
Styrene	ug/L	<50	<5		<1	<1		<1	<0.2	<0.2
Xylenes, Total	ug/L	<50	<5							
Naphthalene	ug/L	<10	<10	<1	<1	<1	<1	<1	<0.8	<1.1
1,1,1,2-Tetrachloroethane	ug/L				<1	<1		<1	<0.1	<0.3
1,1-Dichloropropene	ug/L				<1	<1		<1	<0.2	<0.3
1,2,3-Trichlorobenzene	ug/L			<1	<1	<1		<1	<0.5	<0.4
1,2,3-Trichloropropane	ug/L				<1	<1		<1	<0.3	<0.2
1,2,4-Trichlorobenzene	ug/L			<1	<1	<1		<1	<0.5	<0.3
1,2,4-Trimethylbenzene	ug/L			<1	<1	<1		2.136	<0.7	<0.6
1,2-Dibromo-3-chloropropane	ug/L			<3		<3		<3	<0.3	<0.3
1,2-Dibromoethane	ug/L			<2		<2		<2	<0.2	<0.4

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W12

Parameter	Units	6/18/92	12/17/92	6/29/93	12/28/93	6/21/94	7/6/95	7/8/96	7/11/97	6/23/98
1,2-Dichlorobenzene	ug/L			<1	<1	<1	<1	<1	<0.3	<0.3
1,3,5-Trimethylbenzene	ug/L			<1	<1	<1		<1	<0.4	<0.3
1,3-Dichlorobenzene	ug/L			<1	<1	<1	<1	<1	<0.7	<0.4
1,3-Dichloropropane	ug/L			<1	<1	<1		<1	<0.3	<0.6
1,4-Dichlorobenzene	ug/L			<1	<1	<1	<1	<1	<0.3	<0.3
2,2-Dichloropropane	ug/L			<1	<1	<1		<1	<0.2	<0.5
2-Chlorotoluene	ug/L			<1	<1	<1		<1	<0.4	<0.3
4-Chlorotoluene	ug/L			<1	<1	<1		<1	<0.3	<0.3
Bromobenzene	ug/L			<1	<1	<1		<1	<0.3	<0.2
Bromochloromethane	ug/L				<1	<1		<1	<0.4	<0.2
Dibromomethane	ug/L				<1	<1		<1	<0.1	<0.2
Dichlorodifluoromethane	ug/L			<2	<2	<2		<2	<0.3	<1.2
Hexachlorobutadiene	ug/L			<1	<1	<1		<1	<0.5	<0.6
Isopropylbenzene	ug/L			<1	<1	<1		<1	<0.2	<0.2
Trichlorofluoromethane	ug/L			<1	<1	<1	<1	<1	<0.5	<0.6
m + p-Xylene	ug/L			<2	<2	<2	<2	<2	<0.4	<0.3
n-Butylbenzene	ug/L			<1	<1	<1		<1	<0.6	<0.3
n-Propylbenzene	ug/L			<1	<1	<1		<1	<0.3	<0.2
o-Xylene	ug/L			<1	<1	<1	<1	<1	<0.2	<0.5
p-Isopropyltoluene	ug/L			<1	<1	<1		<1	<0.4	<0.2
sec-Butylbenzene	ug/L			<1	<1	<1		<1	<0.3	<0.2
tert-Butylbenzene	ug/L			<1	<1	<1		<1	<0.3	<0.3
Di-isopropyl ether	ug/L			<1						
Methyl tert-butyl ether	ug/L			<1						
2-Chloroethyl vinyl ether	ug/L						<10			

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W13

Parameter	Units	6/22/92	12/19/92	6/30/93	12/27/93	6/22/94	7/6/95	7/10/96	7/11/97	6/24/98
Chloromethane	ug/L	<100	<10	<2	<2	<2	<2	<2	<0.7	<0.9
Bromomethane	ug/L	<100	<10		<2	<2	<2	<2	<0.3	<0.9
Vinyl chloride	ug/L	<100	<10	<1	<1	<1	<1	<1	<0.3	<0.5
Chloroethane	ug/L	<100	<10	<2	<2	<2	<2	<2	<0.4	<0.8
Methylene chloride	ug/L	<50	<10	<3	<3	<3	<3	<3	<0.3	<0.5
Acetone	ug/L	<100	<10							
Carbon disulfide	ug/L	<50	<5							
1,1-Dichloroethene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.4	<0.2
1,1-Dichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
cis-1,2-Dichloroethene	ug/L			<1	<1	<1	<1	<1	<0.2	<0.2
trans-1,2-Dichloroethene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
Chloroform	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.3
1,2-Dichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
2-Butanone (MEK)	ug/L	<100	<10							
Vinyl acetate	ug/L	<100	<10							
1,1,1-Trichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.3
Carbon tetrachloride	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.4
Bromodichloromethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
1,2-Dichloropropane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.1	<0.2
cis-1,3-Dichloropropene	ug/L	<50	<5		<1	<1	<1	<1	<0.3	<0.3
Trichloroethene	ug/L	<50	10.6	2.3	4.9	3.4	4.6	1.98	3.3	2.9
Chlorodibromomethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.3
1,1,2-Trichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<1	<0.2
Benzene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.3
trans-1,3-Dichloropropene	ug/L	<50	<5		<1	<1	<1	<1	<0.2	<0.2
Bromoform	ug/L	<50	<5		<1	<1	<1	<1	<0.3	<0.2
4-Methyl-2-Pentanone (MIBK)	ug/L	<100	<10							
2-Hexanone	ug/L	<100	<10							
Tetrachloroethene	ug/L	<50	<5	<1	1.5	<1	<1	<1	<0.3	1
1,1,2,2-Tetrachloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
Toluene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
Chlorobenzene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.3
Ethylbenzene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
Styrene	ug/L	<50	<5		<1	<1		<1	<0.2	<0.2
Xylenes, Total	ug/L	<50	<5							
Naphthalene	ug/L	<10	<10	1.4	6.6	4.4	1.2	<1	1.2	<1.1
1,1,1,2-Tetrachloroethane	ug/L				<1	<1		<1	<0.1	<0.3
1,1-Dichloropropene	ug/L				<1	<1		<1	<0.2	<0.3
1,2,3-Trichlorobenzene	ug/L			<1	<1	<1		<1	<0.5	<0.4
1,2,3-Trichloropropane	ug/L				<1	<1		<1	<0.3	<0.2
1,2,4-Trichlorobenzene	ug/L			<1	<1	<1		<1	<0.5	<0.3
1,2,4-Trimethylbenzene	ug/L			3.2	<1	1.4		<1	<0.7	<0.6
1,2-Dibromo-3-chloropropane	ug/L			<3	<3	<3		<3	<0.3	<0.3
1,2-Dibromoethane	ug/L			<2	<2	<2		<2	<0.2	<0.4

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W13

Parameter	Units	6/22/92	12/19/92	6/30/93	12/27/93	6/22/94	7/6/95	7/10/96	7/11/97	6/24/98
1,2-Dichlorobenzene	ug/L			<1	<1	<1	<1	<1	<0.3	<0.3
1,3,5-Trimethylbenzene	ug/L			1.8	<1	<1		<1	<0.4	<0.3
1,3-Dichlorobenzene	ug/L			<1	<1	<1	<1	<1	<0.7	<0.4
1,3-Dichloropropane	ug/L			<1	<1	<1		<1	<0.3	<0.6
1,4-Dichlorobenzene	ug/L			<1	<1	<1	<1	<1	<0.3	<0.3
2,2-Dichloropropane	ug/L			<1	<1	<1		<1	<0.2	<0.5
2-Chlorotoluene	ug/L			<1	<1	<1		<1	<0.4	<0.3
4-Chlorotoluene	ug/L			<1	<1	<1		<1	<0.3	<0.3
Bromobenzene	ug/L			<1	<1	<1		<1	<0.3	<0.2
Bromochloromethane	ug/L				<1	<1		<1	<0.4	<0.2
Dibromomethane	ug/L				<1	<1		<1	<0.1	<0.2
Dichlorodifluoromethane	ug/L			<2	<2	<2		<2	<0.3	<1.2
Hexachlorobutadiene	ug/L			<1	<1	<1		<1	<0.5	<0.6
Isopropylbenzene	ug/L			<1	<1	<1		<1	<0.2	<0.2
Trichlorofluoromethane	ug/L			<1	<1	<1	<1	<1	<0.5	<0.6
m + p-Xylene	ug/L			<2	<2	<2	<2	<2	<0.4	<0.3
n-Butylbenzene	ug/L			2.6	<1	<1		<1	<0.6	<0.3
n-Propylbenzene	ug/L			1.7	<1	<1		<1	<0.3	<0.2
o-Xylene	ug/L			<1	<1	<1	<1	<1	<0.2	<0.5
p-Isopropyltoluene	ug/L			<1	<1	<1		<1	<0.4	<0.2
sec-Butylbenzene	ug/L			<1	1.5	<1		<1	<0.3	0.9
tert-Butylbenzene	ug/L			<1	<1	<1		<1	<0.3	<0.3
Di-isopropyl ether	ug/L			<1						
Methyl tert-butyl ether	ug/L			<1						
2-Chloroethyl vinyl ether	ug/L						<10			

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W14

Parameter	Units	6/24/92	12/18/92	6/29/93	12/28/93	6/21/94	7/6/95	7/8/96	7/11/97	6/23/98
Chloromethane	ug/L	<100	<10	<2	<2	<2	<20	<2	<0.7	<0.9
Bromomethane	ug/L	<100	<10		<2	<2	<10	<2	<0.3	<0.9
Vinyl chloride	ug/L	<100	<10	<1	<1	<1	<10	<1	<0.3	<0.5
Chloroethane	ug/L	<100	<10	<2	<2	<2	<20	<2	<0.4	<0.8
Methylene chloride	ug/L	<50	<10	<3	<3	<3	<30	<3	<0.3	<0.5
Acetone	ug/L	<100	13.3							
Carbon disulfide	ug/L	<50	<5							
1,1-Dichloroethene	ug/L	<50	<5	<1	<1	<1	<10	<1	<0.4	<0.2
1,1-Dichloroethane	ug/L	<50	<5	<1	<1	<1	<10	<1	<0.2	<0.2
cis-1,2-Dichloroethene	ug/L			<1	<1	<1	<10	<1	<0.2	<0.2
trans-1,2-Dichloroethene	ug/L	<50	<5	<1	<1	<1	<10	<1	<0.2	<0.3
Chloroform	ug/L	<50	<5	<1	<1	<1	<10	<1	22	22
1,2-Dichloroethane	ug/L	<50	<5	<1	<1	<1	<10	<1	<0.2	<0.2
2-Butanone (MEK)	ug/L	<100	<10							
Vinyl acetate	ug/L	<100	<10							
1,1,1-Trichloroethane	ug/L	<50	<5	<1	<1	<1	<10	<1	<0.3	<0.3
Carbon tetrachloride	ug/L	<50	<5	<1	<1	<1	<10	<1	<0.2	<0.4
Bromodichloromethane	ug/L	<50	<5	<1	<1	<1	30	<1	<0.2	0.3
1,2-Dichloropropane	ug/L	<50	<5	<1	<1	<1	<10	<1	<0.1	<0.2
cis-1,3-Dichloropropene	ug/L	<50	<5		<1	<1	<10	<1	<0.3	<0.3
Trichloroethene	ug/L	<50	<5	<1	<1	<1	41	<1	<0.2	<0.3
Chlorodibromomethane	ug/L	<50	<5	<1	<1	<1	<10	<1	<0.3	<0.3
1,1,2-Trichloroethane	ug/L	<50	<5	<1	<1	<1	<10	<1	<1	<0.2
Benzene	ug/L	<50	<5	<1	<1	<1	<10	<1	<0.2	<0.3
trans-1,3-Dichloropropene	ug/L	<50	<5		<1	<1	<10	<1	<0.2	<0.2
Bromoform	ug/L	<50	<5		<1	<1	<10	<1	<0.3	<0.2
4-Methyl-2-Pentanone (MIBK)	ug/L	<100	<10							
2-Hexanone	ug/L	<100	<10							
Tetrachloroethene	ug/L	<50	<5	2	1.8	1.4	<10	<1	<0.3	0.9
1,1,2,2-Tetrachloroethane	ug/L	<50	<5	<1	<1	<1	<10	<1	<0.2	<0.2
Toluene	ug/L	<50	<5	<1	<1	<1	<10	<1	<0.2	<0.2
Chlorobenzene	ug/L	<50	<5	<1	<1	<1	<10	<1	<0.3	<0.3
Ethylbenzene	ug/L	<50	<5	<1	<1	<1	33	<1	<0.2	<0.2
Styrene	ug/L	<50	<5		<1	<1		<1	<0.2	<0.2
Xylenes, Total	ug/L	<50	<5							
Naphthalene	ug/L			<1	<1	<1	110	<1	<0.8	<1.1
1,1,1,2-Tetrachloroethane	ug/L				<1	<1		<1	<0.1	<0.3
1,1-Dichloropropene	ug/L				<1	<1		<1	<0.2	<0.3
1,2,3-Trichlorobenzene	ug/L			<1	<1	<1		<1	<0.5	<0.4
1,2,3-Trichloropropane	ug/L				<1	<1		<1	<0.3	<0.2
1,2,4-Trichlorobenzene	ug/L			<1	<1	<1		<1	<0.5	<0.3
1,2,4-Trimethylbenzene	ug/L			<1	<1	<1		<1	<0.7	<0.6
1,2-Dibromo-3-chloropropane	ug/L			<3	<3	<3		<3	<0.3	<0.3
1,2-Dibromoethane	ug/L			<2	<2	<2		<2	<0.2	<0.4

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W14

Parameter	Units	6/24/92	12/18/92	6/29/93	12/28/93	6/21/94	7/6/95	7/8/96	7/11/97	6/23/98
1,2-Dichlorobenzene	ug/L			<1	<1	<1	<10	<1	<0.3	<0.3
1,3,5-Trimethylbenzene	ug/L			<1	<1	<1		<1	<0.4	<0.3
1,3-Dichlorobenzene	ug/L			<1	<1	<1	<10	<1	<0.7	<0.4
1,3-Dichloropropane	ug/L			<1	<1	<1		<1	<0.3	<0.6
1,4-Dichlorobenzene	ug/L			<1	<1	<1	<10	<1	<0.3	<0.3
2,2-Dichloropropane	ug/L			<1	<1	<1		<1	<0.2	<0.5
2-Chlorotoluene	ug/L			<1	<1	<1		<1	<0.4	<0.3
4-Chlorotoluene	ug/L			<1	<1	<1		<1	<0.3	<0.3
Bromobenzene	ug/L			<1	<1	<1		<1	<0.3	<0.2
Bromochloromethane	ug/L				<1	<1		<1	<0.4	<0.2
Dibromomethane	ug/L				<1	<1		<1	<0.1	<0.2
Dichlorodifluoromethane	ug/L			<2	<2	<2		<2	<0.3	<1.2
Hexachlorobutadiene	ug/L			<1	<1	<1		<1	<0.5	<0.6
Isopropylbenzene	ug/L			<1	<1	<1		<1	<0.2	<0.2
Trichlorofluoromethane	ug/L			<1	<1	<1	<10	<1	<0.5	<0.6
m + p-Xylene	ug/L			<2	<2	<2	120	<2	<0.4	<0.3
n-Butylbenzene	ug/L			<1	<1	<1		<1	<0.6	<0.3
n-Propylbenzene	ug/L			<1	<1	<1		<1	<0.3	<0.2
o-Xylene	ug/L			<1	<1	<1	200	<1	<0.2	<0.5
p-Isopropyltoluene	ug/L			<1	<1	<1		<1	<0.4	<0.2
sec-Butylbenzene	ug/L			<1	<1	<1		<1	<0.3	<0.2
tert-Butylbenzene	ug/L			<1	<1	<1		<1	<0.3	<0.3
Di-isopropyl ether	ug/L			<1						
Methyl tert-butyl ether	ug/L			<1						
2-Chloroethyl vinyl ether	ug/L						<100			

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W16

Parameter	Units	6/16/92	12/18/92	6/29/93	12/28/93	6/21/94	7/6/95	7/8/96	7/11/97	6/24/98
Chloromethane	ug/L	<100	<10	<2	<2	<2	<2	<2	<0.7	<0.9
Bromomethane	ug/L	<100	<10		<2	<2	<2	<2	<0.3	<0.9
Vinyl chloride	ug/L	<100	<10	<1	<1	<1	<1	<1	<0.3	<0.5
Chloroethane	ug/L	<100	<10	<2	<2	<2	<2	<2	<0.4	<0.8
Methylene chloride	ug/L	<50	<10	<3	<3	<3	<3	<3	<0.3	<0.5
Acetone	ug/L	<100	18.3							
Carbon disulfide	ug/L	<50	<5							
1,1-Dichloroethene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.4	<0.2
1,1-Dichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
cis-1,2-Dichloroethene	ug/L			<1	<1	<1	<1	<1	<0.2	<0.2
trans-1,2-Dichloroethene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.3
Chloroform	ug/L	<50	<5	<1	<1	<1	2.1	48.947	5.2	0.4
1,2-Dichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
2-Butanone (MEK)	ug/L	<100	<10							
Vinyl acetate	ug/L	<100	<10							
1,1,1-Trichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.3
Carbon tetrachloride	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.4
Bromodichloromethane	ug/L	<50	<5	<1	<1	<1	<1	2.957	<0.2	<0.2
1,2-Dichloropropane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.1	<0.2
cis-1,3-Dichloropropene	ug/L	<50	<5		<1	<1	<1	<1	<0.3	<0.3
Trichloroethene	ug/L	<50	<5	1.3	<1	<1	<1	<1	<0.2	<0.3
Chlorodibromomethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.3
1,1,2-Trichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<1	<0.2
Benzene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.3
trans-1,3-Dichloropropene	ug/L	<50	<5		<1	<1	<1	<1	<0.2	<0.2
Bromoform	ug/L	<50	<5		<1	<1	<1	<1	<0.3	<0.2
4-Methyl-2-Pentanone (MIBK)	ug/L	<100	<10							
2-Hexanone	ug/L	<100	<10							
Tetrachloroethene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	1.4
1,1,2,2-Tetrachloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
Toluene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
Chlorobenzene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.3
Ethylbenzene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
Styrene	ug/L	<50	<5		<1	<1		<1	<0.2	<0.2
Xylenes, Total	ug/L	<50	<5							
Naphthalene	ug/L			<1	<1	<1	<1	<1	<0.8	<1.1
1,1,1,2-Tetrachloroethane	ug/L				<1	<1		<1	<0.1	<0.3
1,1-Dichloropropene	ug/L				<1	<1		<1	<0.2	<0.3
1,2,3-Trichlorobenzene	ug/L			<1	<1	<1		<1	<0.5	<0.4
1,2,3-Trichloropropane	ug/L				<1	<1		<1	<0.3	<0.2
1,2,4-Trichlorobenzene	ug/L			<1	<1	<1		<1	<0.5	<0.3
1,2,4-Trimethylbenzene	ug/L			<1	<1	<1		<1	<0.7	<0.6
1,2-Dibromo-3-chloropropane	ug/L			<3	<3	<3		<3	<0.3	<0.3
1,2-Dibromoethane	ug/L			<2	<2	<2		<2	<0.2	<0.4

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W16

Parameter	Units	6/16/92	12/18/92	6/29/93	12/28/93	6/21/94	7/6/95	7/8/96	7/11/97	6/24/98
1,2-Dichlorobenzene	ug/L			<1	<1	<1	<1	<1	<0.3	<0.3
1,3,5-Trimethylbenzene	ug/L			<1	<1	<1		<1	<0.4	<0.3
1,3-Dichlorobenzene	ug/L			<1	<1	<1	<1	<1	<0.7	<0.4
1,3-Dichloropropane	ug/L			<1	<1	<1		<1	<0.3	<0.6
1,4-Dichlorobenzene	ug/L			<1	<1	<1	<1	<1	<0.3	<0.3
2,2-Dichloropropane	ug/L			<1	<1	<1		<1	<0.2	<0.5
2-Chlorotoluene	ug/L			<1	<1	<1		<1	<0.4	<0.3
4-Chlorotoluene	ug/L			<1	<1	<1		<1	<0.3	<0.3
Bromobenzene	ug/L			<1	<1	<1		<1	<0.3	<0.2
Bromochloromethane	ug/L				<1	<1		<1	<0.4	<0.2
Dibromomethane	ug/L				<1	<1		<1	<0.1	<0.2
Dichlorodifluoromethane	ug/L			<2	<2	<2		<2	<0.3	<1.2
Hexachlorobutadiene	ug/L			<1	<1	<1		<1	<0.5	<0.6
Isopropylbenzene	ug/L			<1	<1	<1		<1	<0.2	<0.2
Trichlorofluoromethane	ug/L			<1	<1	<1	<1	<1	<0.5	<0.6
m + p-Xylene	ug/L			<2	<2	<2	<2	<2	<0.4	<0.3
n-Butylbenzene	ug/L			<1	<1	<1		<1	<0.6	<0.3
n-Propylbenzene	ug/L			<1	<1	<1		<1	<0.3	<0.2
o-Xylene	ug/L			<1	<1	<1	<1	<1	<0.2	<0.5
p-Isopropyltoluene	ug/L			<1	<1	<1		<1	<0.4	<0.2
sec-Butylbenzene	ug/L			<1	<1	<1		<1	<0.3	<0.2
tert-Butylbenzene	ug/L			<1	<1	<1		<1	<0.3	<0.3
Di-isopropyl ether	ug/L			<1						
Methyl tert-butyl ether	ug/L			<1						
2-Chloroethyl vinyl ether	ug/L						<10			

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W18

Parameter	Units	2/25/92	7/8/92	9/17/92	12/17/92	3/23/93	6/29/93	12/28/93	6/22/94	7/5/95	7/9/96	7/11/97	6/24/98
Chloromethane	ug/L	<10	<100	<100	<10	<2	<2	<2	<2	<2	<2	<0.7	<0.9
Bromomethane	ug/L	<10	<100	<100	<10	<2		<2	<2	<2	<2	<0.3	<0.9
Vinyl chloride	ug/L	<10	<100	<100	<10	<1	<1	<1	<1	<1	<1	<0.3	<0.5
Chloroethane	ug/L	<10	<100	<100	<10	<2	<2	<2	<2	<2	<2	<0.4	<0.8
Methylene chloride	ug/L	<5			<10	<3	<3	<3	<3	<3	<3	<0.3	<0.5
Acetone	ug/L	<10	<100		25								
Carbon disulfide	ug/L	<5	<50	<50	<5								
1,1-Dichloroethene	ug/L	<5	<50	<50	<5	<1	<1	<1	<1	<1	<1	<0.4	<0.2
1,1-Dichloroethane	ug/L	<5	<50	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.2
cis-1,2-Dichloroethene	ug/L					<1	<1	<1	<1	<1	<1	<0.2	<0.2
trans-1,2-Dichloroethene	ug/L	<5	<50	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.3
Chloroform	ug/L	<5	<50	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.2
1,2-Dichloroethane	ug/L	<5	<50	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.2
2-Butanone (MEK)	ug/L	<10	<100	<100	<10								
Vinyl acetate	ug/L	<10	<100	<100	<10								
1,1,1-Trichloroethane	ug/L	<5	<50	<50	<5	<1	<1	<1	<1	<1	<1	<0.3	<0.3
Carbon tetrachloride	ug/L	<5	<50	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.4
Bromodichloromethane	ug/L	<5	<50	<50	<5	<1	<1	<1	<1	<1	<1	<0.2	<0.2
1,2-Dichloropropane	ug/L	<5	<50	<50	<5	<1	<1	<1	<1	<1	<1	<0.1	<0.2
cis-1,3-Dichloropropene	ug/L	<5	<50	<50	<5	<1		<1	<1	<1	<1	<0.3	<0.3
Trichloroethene	ug/L		<50	<50	<5	6.3	4.3	7.4	4.4	2.8	2.884	<0.2	2.3
Chlorodibromomethane	ug/L	<5	<50	<50	<5	<1	<1	<1	<1	<1	<1	<0.3	<0.3
1,1,2-Trichloroethane	ug/L	<5	<50	<50	<5	<1	<1	<1	<1	<1	<1	<1	<0.2
Benzene	ug/L	<5	<50	<50	<5	2.1	1.7	3.2	2.3	<1	<1	<0.2	1.1
trans-1,3-Dichloropropene	ug/L	<5	<50	<50	<5	<1		<1	<1	<1	<1	<0.2	<0.2
Bromoform	ug/L	<5	<50	<50	<5	<1		<1	<1	<1	<1	<0.3	<0.2
4-Methyl-2-Pentanone (MIBK)	ug/L	<10	<100	<100	<10								
2-Hexanone	ug/L	<10	<100	<100	<10								
Tetrachloroethene	ug/L	<5	<50	<50	<5	<1	<1	2.5	2.2	<1	1.336	<0.3	2
1,1,2,2-Tetrachloroethane	ug/L	<5	<50	<50	<5	<1	<1	<1	<1	1.3	<1	<0.2	<0.2
Toluene	ug/L		<50	<50	6.47	<1	4.1	3.3	1.3	1.2	<1	<0.2	<0.2
Chlorobenzene	ug/L	<5	<50	<50	<5	<1	<1	<1	<1	<1	<1	<0.3	<0.3
Ethylbenzene	ug/L		<50	<50	29.8	21	18	34	20	8.3	8.274	<0.2	1.6
Styrene	ug/L	<5	<50	<50	<5	<1		<1	<1		<1	<0.2	<0.2
Xylenes, Total	ug/L				195								
Naphthalene	ug/L				59.3	100	70	90	18	75	68.079	54	70
1,1,1,2-Tetrachloroethane	ug/L					<1		<1	<1		<1	<0.1	<0.3
1,1-Dichloropropene	ug/L					<1		<1	<1		<1	<0.2	<0.3
1,2,3-Trichlorobenzene	ug/L					<1	<1	<1	<1		<1	<0.5	<0.4
1,2,3-Trichloropropane	ug/L					<1		<1	<1		<1	<0.3	<0.2
1,2,4-Trichlorobenzene	ug/L					<1	<1	<1	<1		<1	<0.5	<0.3
1,2,4-Trimethylbenzene	ug/L					600	330	600	480		204.055	380	50
1,2-Dibromo-3-chloropropane	ug/L					<3	<3	<3	<3		<3	<0.3	<0.3
1,2-Dibromoethane	ug/L					<2	<2	<2	<2		<2	<0.2	<0.4

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W18

Parameter	Units	2/25/92	7/8/92	9/17/92	12/17/92	3/23/93	6/29/93	12/28/93	6/22/94	7/5/95	7/9/96	7/11/97	6/24/98
1,2-Dichlorobenzene	ug/L					<1	<1	<1	<1	<1	<1	<0.3	<0.3
1,3,5-Trimethylbenzene	ug/L					3.4	28	11	10		5.366	<0.4	<0.3
1,3-Dichlorobenzene	ug/L					<1	<1	<1	<1	<1	<1	<0.7	<0.4
1,3-Dichloropropane	ug/L					<1	<1	<1	<1		<1	<0.3	<0.6
1,4-Dichlorobenzene	ug/L					<1	<1	<1	<1	<1	<1	<0.3	<0.3
2,2-Dichloropropane	ug/L					<1	<1	<1	<1		<1	<0.2	<0.5
2-Chlorotoluene	ug/L					<1	<1	<1	<1		<1	<0.4	<0.3
4-Chlorotoluene	ug/L					<1	<1	<1	<1		<1	<0.3	<0.3
Bromobenzene	ug/L					<1	<1	<1	<1		<1	<0.3	<0.2
Bromochloromethane	ug/L					<1		<1	<1		<1	<0.4	<0.2
Dibromomethane	ug/L					<1		<1	<1		<1	<0.1	<0.2
Dichlorodifluoromethane	ug/L					<2	<5	<2	<2		<2	<0.3	<1.2
Hexachlorobutadiene	ug/L					<1	<1	<1	<1		<1	<0.5	<0.6
Isopropylbenzene	ug/L					36	19	33	28		15.054	16	6.6
Trichlorofluoromethane	ug/L					<1	<1	<1	<1	<1	<1	<0.5	<0.6
m + p-Xylene	ug/L					19	34	39	32	12	10.719	<0.4	3.2
n-Butylbenzene	ug/L					100	40	45	41		27.093	22	6.5
n-Propylbenzene	ug/L					33	30	54	40		20.228	26	7.2
o-Xylene	ug/L					160	120	170	16	29	34.527	54	4.8
p-Isopropyltoluene	ug/L					<1	5.7	<1	1.8		<1	<0.4	<0.2
sec-Butylbenzene	ug/L					28	14	21	21		16.118	14	10
tert-Butylbenzene	ug/L					<1	<1	<1	180		<1	<0.3	3.8
Di-isopropyl ether	ug/L						<1						
Methyl tert-butyl ether	ug/L						<1						
2-Chloroethyl vinyl ether	ug/L									<10			

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W19

Parameter	Units	6/24/92	12/18/92	6/30/93	12/28/93	6/21/94	7/6/95	7/10/96	7/11/97	6/24/98
Chloromethane	ug/L	<100	<10	<2	<2	<2	<40	<10	<0.7	<0.9
Bromomethane	ug/L	<100	<10		<2	<2	<40	<10	<0.3	<0.9
Vinyl chloride	ug/L	<100	<10	<1	<1	<1	<20	<5	<0.3	<0.5
Chloroethane	ug/L	<100	<10	<2	<2	<2	<40	<10	<0.4	<0.8
Methylene chloride	ug/L	<50	<10	<3	<3	<3.9	<60	<15	<0.3	<0.5
Acetone	ug/L	<100	18.6							
Carbon disulfide	ug/L	<50	<5							
1,1-Dichloroethene	ug/L	<50	<5	<1	<1	<1	<20	<5	<0.4	<0.2
1,1-Dichloroethane	ug/L	<50	<5	<1	<1	<1	<20	<5	<0.2	<0.2
cis-1,2-Dichloroethene	ug/L			<1	<1	<1	<20	<5	<0.2	<0.2
trans-1,2-Dichloroethene	ug/L	<50	<5	<1	<1	<1	<20	<5	<0.2	<0.3
Chloroform	ug/L	<50	10.6	50	41	55	<20	35.777	<0.2	14
1,2-Dichloroethane	ug/L	<50	<5	<1	<1	<1	<20	<5	<0.2	<0.2
2-Butanone (MEK)	ug/L	<100	21.8							
Vinyl acetate	ug/L	<100	<10							
1,1,1-Trichloroethane	ug/L	<50	<5	<1	<1	<1	<20	<5	<0.3	<0.3
Carbon tetrachloride	ug/L	<50	<5	<1	<1	<1	<20	<5	<0.2	<0.4
Bromodichloromethane	ug/L	<50	<5	1.4	<1	<1	30	<5	<0.2	<0.2
1,2-Dichloropropane	ug/L	<50	<5	<1	<1	<1	<20	<5	<0.1	<0.2
cis-1,3-Dichloropropene	ug/L	<50	<5		<1	<1	<20	<5	<0.3	<0.3
Trichloroethene	ug/L		34.8	8.6	9.4	10	66	<5	<0.2	<0.3
Chlorodibromomethane	ug/L	<50	<5	<1	<1	<1	<20	<5	<0.3	<0.3
1,1,2-Trichloroethane	ug/L	<50	<5	<1	<1	<1	<20	<5	<1	<0.2
Benzene	ug/L	<50	<5	<1	<1	<1	40	<5	<0.2	<0.3
trans-1,3-Dichloropropene	ug/L	<50	<5		<1	<1	<20	<5	<0.2	<0.2
Bromoform	ug/L	<50	<5		<1	<1	<20	<5	<0.3	<0.2
4-Methyl-2-Pentanone (MIBK)	ug/L	<100	<10							
2-Hexanone	ug/L	<100	<10							
Tetrachloroethene	ug/L	<50	<5	<1	<1	<1	<20	<5	<0.3	<0.6
1,1,2,2-Tetrachloroethane	ug/L	<50	<5	<1	<1	<1	<20	<5	<0.2	<0.2
Toluene	ug/L	<50	<5	2	4.3	7.7	110	<5	<0.2	<0.2
Chlorobenzene	ug/L	<50	<5	<1	<1	<1	<20	<5	<0.3	<0.3
Ethylbenzene	ug/L	<50	6.07	4.9	8.5	21	77	<5	<0.2	<0.2
Styrene	ug/L	<50	<5		<1	<1		<5	<0.2	<0.2
Xylenes, Total	ug/L		120							
Naphthalene	ug/L		21.9	28	31	60	140	6.487	<0.8	20
1,1,1,2-Tetrachloroethane	ug/L				<1	<1		<5	<0.1	<0.3
1,1-Dichloropropene	ug/L				<1	<1		<5	<0.2	<0.3
1,2,3-Trichlorobenzene	ug/L			<1	<1	<1		<5	<0.5	<0.4
1,2,3-Trichloropropane	ug/L				<1	<1		<5	<0.3	<0.2
1,2,4-Trichlorobenzene	ug/L			<1	<1	<1		<5	<0.5	<0.3
1,2,4-Trimethylbenzene	ug/L			500	520	1200		72.986	200	150
1,2-Dibromo-3-chloropropane	ug/L			<3	<3	<3		<15	<0.3	<0.3
1,2-Dibromoethane	ug/L			<2	<2	<2		<10	<0.2	<0.4

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W19

Parameter	Units	6/24/92	12/18/92	6/30/93	12/28/93	6/21/94	7/6/95	7/10/96	7/11/97	6/24/98
1,2-Dichlorobenzene	ug/L			<1	<1	<1	<20	<5	<0.3	<0.3
1,3,5-Trimethylbenzene	ug/L			200	200	420		10.411	70	85
1,3-Dichlorobenzene	ug/L			<1	<1	<1	<20	<5	<0.7	<0.4
1,3-Dichloropropane	ug/L			<1	<1	<1		<5	<0.3	<0.6
1,4-Dichlorobenzene	ug/L			<1	<1	<1	<20	<5	<0.3	<0.3
2,2-Dichloropropane	ug/L			<1	<1	<1		<5	<0.2	<0.5
2-Chlorotoluene	ug/L			<1	<1	<1		<5	<0.4	<0.3
4-Chlorotoluene	ug/L			<1	<1	<1		<5	<0.3	<0.3
Bromobenzene	ug/L			<1	<1	<1		<5	<0.3	<0.2
Bromochloromethane	ug/L				<1	<1		<5	<0.4	<0.2
Dibromomethane	ug/L				<1	<1		<5	<0.1	<0.2
Dichlorodifluoromethane	ug/L			<2	<2	<2		<10	<0.3	<1.2
Hexachlorobutadiene	ug/L			<1	<1	<1		<5	<0.5	<0.6
Isopropylbenzene	ug/L			41	22	90		6.095	20	20
Trichlorofluoromethane	ug/L			<1	<1	<1	<20	<5	<0.5	<0.6
m + p-Xylene	ug/L			42	70	140	520	<10	<0.4	18
n-Butylbenzene	ug/L			95	65	210		20.604	<0.6	100
n-Propylbenzene	ug/L			23	38	140		10.627	25	21
o-Xylene	ug/L			90	100	300	560	8.799	<0.2	<0.5
p-Isopropyltoluene	ug/L			<1	22	75		9.425	<0.4	31
sec-Butylbenzene	ug/L			19	17	72		7.249	<0.3	22
tert-Butylbenzene	ug/L			<1	21	90		<5	<0.3	<0.3
Di-isopropyl ether	ug/L			<1						
Methyl tert-butyl ether	ug/L			<1						
2-Chloroethyl vinyl ether	ug/L						<200			

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W21

Parameter	Units	6/24/92	12/18/92	6/29/93	12/28/93	6/22/94	7/6/95	7/8/96	7/11/97	6/23/98
Chloromethane	ug/L	<100	<10	<2	<2	<2	<2	<2	<0.7	<0.9
Bromomethane	ug/L	<100	<10		<2	<2	<2	<2	<0.3	<0.9
Vinyl chloride	ug/L	<100	<10	<1	<1	<1	<1	<1	<0.3	<0.5
Chloroethane	ug/L	<100	<10	<2	<2	<2	<2	<2	<0.4	<0.8
Methylene chloride	ug/L	<50	<10	<3	<3	<3	<3	<3	<0.3	<0.5
Acetone	ug/L	<100	22.3							
Carbon disulfide	ug/L	<50	<5							
1,1-Dichloroethene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.4	<0.2
1,1-Dichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
cis-1,2-Dichloroethene	ug/L			<1	<1	<1	<1	<1	<0.2	<0.2
trans-1,2-Dichloroethene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.3
Chloroform	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
1,2-Dichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
2-Butanone (MEK)	ug/L	<100	<10							
Vinyl acetate	ug/L	<100	<10							
1,1,1-Trichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.3
Carbon tetrachloride	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.4
Bromodichloromethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
1,2-Dichloropropane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.1	<0.2
cis-1,3-Dichloropropene	ug/L	<50	<5		<1	<1	<1	<1	<0.3	<0.3
Trichloroethene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.3
Chlorodibromomethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.3
1,1,2-Trichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<1	<0.2
Benzene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.3
trans-1,3-Dichloropropene	ug/L	<50	<5		<1	<1	<1	<1	<0.2	<0.2
Bromoform	ug/L	<50	<5		<1	<1	<1	<1	<0.3	<0.2
4-Methyl-2-Pentanone (MIBK)	ug/L	<100	<10							
2-Hexanone	ug/L	<100	<10							
Tetrachloroethene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.6
1,1,2,2-Tetrachloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
Toluene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
Chlorobenzene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.3
Ethylbenzene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
Styrene	ug/L	<50	<5		<1	<1		<1	<0.2	<0.2
Xylenes, Total	ug/L	<50	<5							
Naphthalene	ug/L			<1	<1	<1	<1	<1	<0.8	<1.1
1,1,1,2-Tetrachloroethane	ug/L				<1	<1		<1	<0.1	<0.3
1,1-Dichloropropene	ug/L				<1	<1		<1	<0.2	<0.3
1,2,3-Trichlorobenzene	ug/L			<1	<1	<1		<1	<0.5	<0.4
1,2,3-Trichloropropane	ug/L				<1	<1		<1	<0.3	<0.2
1,2,4-Trichlorobenzene	ug/L			<1	<1	<1		<1	<0.5	<0.3
1,2,4-Trimethylbenzene	ug/L			<1	<1	<1		<1	<0.7	<0.6
1,2-Dibromo-3-chloropropane	ug/L			<3	<3	<3		<3	<0.3	<0.3
1,2-Dibromoethane	ug/L			<2	<2	<2		<2	<0.2	<0.4

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W21

Parameter	Units	6/24/92	12/18/92	6/29/93	12/28/93	6/22/94	7/6/95	7/8/96	7/11/97	6/23/98
1,2-Dichlorobenzene	ug/L			<1	<1	<1	<1	<1	<0.3	<0.3
1,3,5-Trimethylbenzene	ug/L			<1	<1	<1		<1	<0.4	<0.3
1,3-Dichlorobenzene	ug/L			<1	<1	<1	<1	<1	<0.7	<0.4
1,3-Dichloropropane	ug/L			<1	<1	<1		<1	<0.3	<0.6
1,4-Dichlorobenzene	ug/L			<1	<1	<1	<1	<1	<0.3	<0.3
2,2-Dichloropropane	ug/L			<1	<1	<1		<1	<0.2	<0.5
2-Chlorotoluene	ug/L			<1	<1	<1		<1	<0.4	<0.3
4-Chlorotoluene	ug/L			<1	<1	<1		<1	<0.3	<0.3
Bromobenzene	ug/L			<1	<1	<1		<1	<0.3	<0.2
Bromochloromethane	ug/L				<1	<1		<1	<0.4	<0.2
Dibromomethane	ug/L				<1	<1		<1	<0.1	<0.2
Dichlorodifluoromethane	ug/L			<2	<2	<2		<2	<0.3	<1.2
Hexachlorobutadiene	ug/L			<1	<1	<1		<1	<0.5	<0.6
Isopropylbenzene	ug/L			<1	<1	<1		<1	<0.2	<0.2
Trichlorofluoromethane	ug/L			<1	<1	<1	<1	<1	<0.5	<0.6
m + p-Xylene	ug/L			<2	<2	<2	<2	<2	<0.4	<0.3
n-Butylbenzene	ug/L			<1	<1	<1		<1	<0.6	<0.3
n-Propylbenzene	ug/L			<1	<1	<1		<1	<0.3	<0.2
o-Xylene	ug/L			<1	<1	<1	<1	<1	<0.2	<0.5
p-Isopropyltoluene	ug/L			<1	<1	<1		<1	<0.4	<0.2
sec-Butylbenzene	ug/L			<1	<1	<1		<1	<0.3	<0.2
tert-Butylbenzene	ug/L			<1	<1	<1		<1	<0.3	<0.3
Di-isopropyl ether	ug/L			<1						
Methyl tert-butyl ether	ug/L			<1						
2-Chloroethyl vinyl ether	ug/L						<10			

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W22

Parameter	Units	2/25/92	6/14/92	9/17/92	12/18/92	3/24/93	6/30/93	12/28/93	6/22/94	7/6/95	7/10/96	7/11/97	6/24/98
Chloromethane	ug/L	<10	<10	<100	<100	<20	<2	<2	<2	<40	<10	<0.7	<0.9
Bromomethane	ug/L	<10	<10	<100	<100	<20		<2	<2	<40	<10	<0.3	<0.9
Vinyl chloride	ug/L	<10	<10	<100	<100	<10	<1	<1	<1	<20	<5	<0.3	<0.5
Chloroethane	ug/L	<10	<10	<100	<100	<20	<2	<2	<2	<40	<10	<0.4	<0.8
Methylene chloride	ug/L	<5	<5		142	<30	<3	<3	<3	<60	<15	<0.3	<0.5
Acetone	ug/L	<10			<100								
Carbon disulfide	ug/L	<5	<5	<50	<50								
1,1-Dichloroethene	ug/L	<5	<5	<50	<50	<10	<1	<1	<1	<20	<5	<0.4	<0.2
1,1-Dichloroethane	ug/L	<5	<5	<50	<50	<10	<1	<1	<1	<20	<5	<0.2	<0.2
cis-1,2-Dichloroethene	ug/L					<10	<1	1.4	<1	<20	<5	<0.2	<0.2
trans-1,2-Dichloroethene	ug/L	<5	<5	<50	<50	<10	<1	<1	<1	<20	<5	<0.2	<0.3
Chloroform	ug/L			<50	<50	<10	<1	2.6	<1	<20	<5	<0.2	<0.2
1,2-Dichloroethane	ug/L	<5	<5	<50	<50	<10	<1	<1	<1	<20	<5	<0.2	<0.2
2-Butanone (MEK)	ug/L	<10	<10	<100	<100								
Vinyl acetate	ug/L	<10	<10	<100	<100								
1,1,1-Trichloroethane	ug/L	<5	<5	<50	<50	<10	<1	<1	<1	<20	<5	<0.3	<0.3
Carbon tetrachloride	ug/L	<5	<5	<50	<50	<10	<1	<1	<1	<20	<5	<0.2	<0.4
Bromodichloromethane	ug/L	<5	<5	<50	<50	<10	<1	<1	<1	<20	<5	<0.2	<0.2
1,2-Dichloropropane	ug/L	<5	<5	<50	<50	<10	<1	<1	<1	<20	<5	<0.1	<0.2
cis-1,3-Dichloropropene	ug/L	<5	<5	<50	<50	<10		<1	<1	<20	<5	<0.3	<0.3
Trichloroethene	ug/L			<50	92	85	<1	71	28	<20	14.754	24	32
Chlorodibromomethane	ug/L	<5	<5	<50	<50	<10	<1	<1	<1	<20	<5	<0.3	<0.3
1,1,2-Trichloroethane	ug/L	<5	<5	<50	<50	<10	<1	<1	<1	<20	<5	<1	<0.2
Benzene	ug/L			<50	<50	42	<1	34	21	<20	6.794	10	32
trans-1,3-Dichloropropene	ug/L	<5	<5	<50	<50	<10		<1	<1	<20	<5	<0.2	<0.2
Bromoform	ug/L	<5	<5	<50	<50	<10		<1	<1	<20	<5	<0.3	<0.2
4-Methyl-2-Pentanone (MIBK)	ug/L	<10	<10	<100	<100								
2-Hexanone	ug/L	<10	<10	<100	<100								
Tetrachloroethene	ug/L	<5	<5	<50	<50	<10	<1	3.9	4	<20	<5	<0.3	<0.6
1,1,2,2-Tetrachloroethane	ug/L	<5	<5	<50	<50	<10	<1	<1	<1	<20	<5	<0.2	<0.2
Toluene	ug/L			<50	114	140	<1	90	55	<20	5.508	<0.2	25
Chlorobenzene	ug/L	<5	<5	<50	<50	<10	<1	<1	<1	<20	<5	<0.3	<0.3
Ethylbenzene	ug/L			<50	86.7	110	<1	77	60	28	10.119	16	50
Styrene	ug/L	<5	<5	<50	<50	<10		<1	<25		<5	<0.2	<0.2
Xylenes, Total	ug/L			<50	871								
Naphthalene	ug/L			<10	108	260	<1	140	110	130	69.863	70	110
1,1,1,2-Tetrachloroethane	ug/L					<10		<1	<1		<5	<0.1	<0.3
1,1-Dichloropropene	ug/L					<10		<1	<1		<5	<0.2	<0.3
1,2,3-Trichlorobenzene	ug/L					<10	<1	<1	<1		<5	<0.5	<0.4
1,2,3-Trichloropropane	ug/L					<10		<1	<1		<5	<0.3	<0.2
1,2,4-Trichlorobenzene	ug/L					<10	<1	<1	<1		<5	<0.5	<0.3
1,2,4-Trimethylbenzene	ug/L					1500	3.8	1500	1000		121.088	360	820
1,2-Dibromo-3-chloropropane	ug/L					<30	<3	<3	<3		<15	<0.3	<0.3
1,2-Dibromoethane	ug/L					<20	<2	<2	<2		<10	<0.2	<0.4

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W22

Parameter	Units	2/25/92	6/14/92	9/17/92	12/18/92	3/24/93	6/30/93	12/28/93	6/22/94	7/6/95	7/10/96	7/11/97	6/24/98
1,2-Dichlorobenzene	ug/L					<10	<1	<1	<1	<20	<5	<0.3	<0.3
1,3,5-Trimethylbenzene	ug/L					310	2.9	360	220		22.769	24	110
1,3-Dichlorobenzene	ug/L					<10	<1	<1	<1	<20	<5	<0.7	<0.4
1,3-Dichloropropane	ug/L					<10	<1	<1	<1		<5	<0.3	<0.6
1,4-Dichlorobenzene	ug/L					<10	<1	<1	<1	<20	<5	<0.3	<0.3
2,2-Dichloropropane	ug/L					<10	<1	<1	<1		<5	<0.2	<0.5
2-Chlorotoluene	ug/L					<10	<1	<1	<1		<5	<0.4	<0.3
4-Chlorotoluene	ug/L					<10	<1	<1	<1		<5	<0.3	<0.3
Bromobenzene	ug/L					<10	<1	<1	<1		<5	<0.3	<0.2
Bromochloromethane	ug/L					<10		<1	<1		<5	<0.4	<0.2
Dibromomethane	ug/L					<10		<1	<1		<5	<0.1	<0.2
Dichlorodifluoromethane	ug/L					<20	<2	<2	<2		<10	<0.3	<1.2
Hexachlorobutadiene	ug/L					<10	<1	<1	<1		<5	<0.5	<0.6
Isopropylbenzene	ug/L					100	3.3	63	50		15.304	14	62
Trichlorofluoromethane	ug/L					<10	<1	<1	<1	<20	<5	<0.5	<0.6
m + p-Xylene	ug/L					700	<2	440	350	110	22.349	20	80
n-Butylbenzene	ug/L					210	2.1	73	100		47.917	32	150
n-Propylbenzene	ug/L					120	1.6	120	120		25.073	28	92
o-Xylene	ug/L					640	2.3	590	400	260	61.002	190	250
p-Isopropyltoluene	ug/L					<10	<1	28	58		12.97	<0.4	45
sec-Butylbenzene	ug/L					43	<1	29	58		18.723	12	55
tert-Butylbenzene	ug/L					<10	<1	<1	350		<5	<0.3	<0.3
Di-isopropyl ether	ug/L						<1						
Methyl tert-butyl ether	ug/L						<1						
2-Chloroethyl vinyl ether	ug/L									<200			

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W25

Parameter	Units	2/19/92	7/29/92	9/17/92	12/17/92	3/23/93	6/28/93	12/28/93	6/21/94	7/5/95	7/11/97	6/23/98
Chloromethane	ug/L	<10	<100	<100	<10	<2	<2	<2	<2	<10	<0.7	<0.9
Bromomethane	ug/L	<10	<100	<100	<10	<2		<2	<2	<2	<0.3	<0.9
Vinyl chloride	ug/L	<10	<100	<100	<10	<1	<1	<1	<1	<1	<0.3	<0.5
Chloroethane	ug/L	<10	<100	<100	<10	<2	<2	<2	<2	<2	<0.4	<0.8
Methylene chloride	ug/L	<5	<50		<10	<3	<3	<3	<3	<3	<0.3	<0.5
Acetone	ug/L	<10	<100		13.1							
Carbon disulfide	ug/L	<5	<50	<50	<5							
1,1-Dichloroethene	ug/L	<5	<50	<50	<5	<1	<1	<1	<1	<1	<0.4	<0.2
1,1-Dichloroethane	ug/L	<5	<50	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
cis-1,2-Dichloroethene	ug/L					44	<1	17	3	<1	8	18
trans-1,2-Dichloroethene	ug/L	<5	<50	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.3
Chloroform	ug/L	<5	<50	<50	<5	2.3	<1	<1	<1	<1	<0.2	<0.2
1,2-Dichloroethane	ug/L	<5	<50	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
2-Butanone (MEK)	ug/L	<10	<100	<100	<10							
Vinyl acetate	ug/L	<10	<100	<100	<10							
1,1,1-Trichloroethane	ug/L	<5	<50	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.3
Carbon tetrachloride	ug/L	<5	<50	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.4
Bromodichloromethane	ug/L	<5	<50	<50	<5	5.4	<1	<1	<1	<1	<0.2	<0.2
1,2-Dichloropropane	ug/L	<5	<50	<50	<5	<1	<1	<1	<1	<1	<0.1	<0.2
cis-1,3-Dichloropropene	ug/L	<5	<50	<50	<5	<1		<1	<1	<1	<0.3	<0.3
Trichloroethene	ug/L		<50	<50	41.3	380	11	130	95	51	48	130
Chlorodibromomethane	ug/L	<5	<50	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.3
1,1,2-Trichloroethane	ug/L	<5	<50	<50	<5	<1	<1	<1	<1	<1	<1	<0.2
Benzene	ug/L	<5	<50	<50	<5	<1	<1	<1	<1	<1	<0.2	2
trans-1,3-Dichloropropene	ug/L	<5	<50	<50	<5	<1		<1	<1	<1	<0.2	<0.2
Bromoform	ug/L	<5	<50	<50	<5	<1		<1	<1	<1	<0.3	<0.2
4-Methyl-2-Pentanone (MIBK)	ug/L	<10	<100	<100	<10							
2-Hexanone	ug/L	<10	<100	<100	<10							
Tetrachloroethene	ug/L	<5	<50	<50	<5	<1	<1	<1	<1	<1	<0.3	3
1,1,2,2-Tetrachloroethane	ug/L	<5	<50	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
Toluene	ug/L	<5	<50	<50	<5	<1	<1	<1	1.1	1.2	<0.2	1.8
Chlorobenzene	ug/L	<5	<50	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.3
Ethylbenzene	ug/L	<5	<50	<50	<5	<1	<1	<1	3.4	2.1	<0.2	2.8
Styrene	ug/L	<5	<50	<50	<5	<1		<1	<1		<0.2	<0.2
Xylenes, Total	ug/L		<50	<50	<5							
Naphthalene	ug/L		<10	<10	<10	3.2	<1	<1	19	30	<0.8	11
1,1,1,2-Tetrachloroethane	ug/L					<1		<1	<1		<0.1	<0.3
1,1-Dichloropropene	ug/L					<1		<1	<1		<0.2	<0.3
1,2,3-Trichlorobenzene	ug/L					<1	<1	<1	<1		<0.5	<0.4
1,2,3-Trichloropropane	ug/L					<1		<1	<1		<0.3	<0.2
1,2,4-Trichlorobenzene	ug/L					<1	<1	<1	<1		<0.5	<0.3
1,2,4-Trimethylbenzene	ug/L					8.8	5.2	5.2	47		7	58
1,2-Dibromo-3-chloropropane	ug/L					<3	<3	<3	<3		<0.3	<0.3
1,2-Dibromoethane	ug/L					<2	<2	<2	<2		<0.2	<0.4

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W25

Parameter	Units	2/19/92	7/29/92	9/17/92	12/17/92	3/23/93	6/28/93	12/28/93	6/21/94	7/5/95	7/11/97	6/23/98
1,2-Dichlorobenzene	ug/L					<1	<1	<1	<1	<1	<0.3	<0.3
1,3,5-Trimethylbenzene	ug/L					2.6	3.7	<1	12		2.8	20
1,3-Dichlorobenzene	ug/L					<1	<1	<1	<1	<1	<0.7	<0.4
1,3-Dichloropropane	ug/L					<1	<1	<1	<1		<0.3	<0.6
1,4-Dichlorobenzene	ug/L					<1	<1	<1	<1	<1	<0.3	<0.3
2,2-Dichloropropane	ug/L					<1	<1	<1	<1		<0.2	<0.5
2-Chlorotoluene	ug/L					<1	<1	<1	<1		<0.4	<0.3
4-Chlorotoluene	ug/L					<1	<1	<1	<1		<0.3	<0.3
Bromobenzene	ug/L					<1	<1	<1	<1		<0.3	<0.2
Bromochloromethane	ug/L					<1		<1	<1		<0.4	<0.2
Dibromomethane	ug/L					<1		<1	<1		<0.1	<0.2
Dichlorodifluoromethane	ug/L					<2	<2	<2	<2		<0.3	<1.2
Hexachlorobutadiene	ug/L					<1	<1	<1	<1		<0.5	<0.6
Isopropylbenzene	ug/L					4.2	6.3	<1	16		<0.2	5.6
Trichlorofluoromethane	ug/L					<1	<1	<1	<1	<1	<0.5	<0.6
m + p-Xylene	ug/L					<2	<2	<2	16	8.4	<0.4	6
n-Butylbenzene	ug/L					6.8	3.8	2	6		<0.6	6.2
n-Propylbenzene	ug/L					<1	2.1	<1	11		<0.3	8.2
o-Xylene	ug/L					3.1	2.4	1.6	100	29	1.6	28
p-Isopropyltoluene	ug/L					<1	<1	<1	<1		<0.4	2.6
sec-Butylbenzene	ug/L					1.9	2.6	<1	9.3		<0.3	6.8
tert-Butylbenzene	ug/L					<1	<1	<1	<1		<0.3	26
Di-isopropyl ether	ug/L						<1					
Methyl tert-butyl ether	ug/L						<1					
2-Chloroethyl vinyl ether	ug/L									<10		

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W26

Parameter	Units	2/25/92	6/14/92	9/17/92	12/18/92	3/24/93	6/30/93	12/27/93	6/22/94	7/6/95	7/9/96	7/11/97	6/24/98
Chloromethane	ug/L	<10	<10	<100	<100	<2	<2	<10	<2	7.9	<2	<0.7	<0.9
Bromomethane	ug/L	<10	<10	<100	<100	<2		<10	<2	<2	<2	<0.3	<0.9
Vinyl chloride	ug/L	<10	<10	<100	<100	<1	<1	<5	<1	<1	<1	<0.3	<0.5
Chloroethane	ug/L	<10	<10	<100	<100	<2	<2	<10	<2	<2	<2	<0.4	<0.8
Methylene chloride	ug/L	<5	<5		103	<3	<3	<15	<3	<3	<3	<0.3	<0.5
Acetone	ug/L	<10		<100	<100								
Carbon disulfide	ug/L	<5	<5	<50	<50								
1,1-Dichloroethene	ug/L	<5	<5	<50	<50	<1	<1	<5	<1	<1	<1	<0.4	<0.2
1,1-Dichloroethane	ug/L	<5	<5	<50	<50	<1	<1	<5	<1	<1	<1	<0.2	<0.2
cis-1,2-Dichloroethene	ug/L					<1	<1	<5	<1	2.2	<1	<0.2	<0.2
trans-1,2-Dichloroethene	ug/L	<5	<5	<50	<50	<1	<1	<5	<1	<1	<1	<0.2	<0.3
Chloroform	ug/L			<50	<50	7.2	4.4	<5	2.6	<1	<1	<0.2	<0.2
1,2-Dichloroethane	ug/L	<5	<5	<50	<50	<1	<1	<5	<1	<1	<1	<0.2	<0.2
2-Butanone (MEK)	ug/L	<10	<10	<100	<100								
Vinyl acetate	ug/L	<10	<10	<100	<100								
1,1,1-Trichloroethane	ug/L	<5	<5	<50	<50	<1	<1	<5	<1	<1	<1	<0.3	<0.3
Carbon tetrachloride	ug/L	<5	<5	<50	<50	<1	<1	<5	<1	<1	<1	<0.2	<0.4
Bromodichloromethane	ug/L	<5	<5	<50	<50	<1	<1	<5	<1	<1	<1	<0.2	<0.2
1,2-Dichloropropane	ug/L	<5	<5	<50	<50	<1	<1	<5	<1	<1	<1	<0.1	<0.2
cis-1,3-Dichloropropene	ug/L	<5	<5	<50	<50	<1		<5	<1	<1	<1	<0.3	<0.3
Trichloroethene	ug/L				63.3	60	35	38	20	26	9.093	15	<0.3
Chlorodibromomethane	ug/L	<5	<5	<50	<50	<1	<1	<5	<1	<1	<1	<0.3	<0.3
1,1,2-Trichloroethane	ug/L	<5	<5	<50	<50	<1	<1	<5	<1	<1	<1	<1	<0.2
Benzene	ug/L			<50	<50	24	18	25	13	34	2.8	<0.2	55
trans-1,3-Dichloropropene	ug/L	<5	<5	<50	<50	<1		<5	<1	<1	<1	<0.2	<0.2
Bromoform	ug/L	<5	<5	<50	<50	<1		<5	<1	<1	<1	<0.3	<0.2
4-Methyl-2-Pentanone (MIBK)	ug/L	<10	<10	<100	<100								
2-Hexanone	ug/L	<10	<10	<100	<100								
Tetrachloroethene	ug/L	<5	<5	<50	<50	<1	<1	<5	1.5	1.4	<1	<0.3	<0.6
1,1,2,2-Tetrachloroethane	ug/L	<5	<5	<50	<50	<1	<1	<5	<1	1.5	<1	<0.2	<0.2
Toluene	ug/L				77.5	85	45	65	42	87	4.083	45	60
Chlorobenzene	ug/L	<5	<5	<50	<50	<1	<1	<5	<1	1.1	<1	<0.3	<0.3
Ethylbenzene	ug/L				<50	49	31	42	27	58	5.121	35	60
Styrene	ug/L	<5	<5	<50	<50	<1		<5	<25		<1	<0.2	<0.2
Xylenes, Total	ug/L				523								
Naphthalene	ug/L				55.2	150	70	75	80	89	18.375	120	140
1,1,1,2-Tetrachloroethane	ug/L					<1		<5	<1		<1	<0.1	<0.3
1,1-Dichloropropene	ug/L					<1		<5	<1		<1	<0.2	<0.3
1,2,3-Trichlorobenzene	ug/L					<1	<1	<5	<1		<1	<0.5	<0.4
1,2,3-Trichloropropane	ug/L					<1		<5	<1		<1	<0.3	<0.2
1,2,4-Trichlorobenzene	ug/L					<1	<1	<5	<1		<1	<0.5	<0.3
1,2,4-Trimethylbenzene	ug/L					960	550	600	500		80.817	1300	900
1,2-Dibromo-3-chloropropane	ug/L					<3	<3	<15	<3		<3	<0.3	<0.3
1,2-Dibromoethane	ug/L					<2	<2	<10	<2		<2	<0.2	<0.4

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W26

Parameter	Units	2/25/92	6/14/92	9/17/92	12/18/92	3/24/93	6/30/93	12/27/93	6/22/94	7/6/95	7/9/96	7/11/97	6/24/98
1,2-Dichlorobenzene	ug/L					<1	<1	<5	<1	<1	<1	<0.3	<0.3
1,3,5-Trimethylbenzene	ug/L					340	160	80	88		6.349	380	300
1,3-Dichlorobenzene	ug/L					<1	<1	<5	<1	<1	<1	<0.7	<0.4
1,3-Dichloropropane	ug/L					<1	<1	<5	<1		<1	<0.3	<0.6
1,4-Dichlorobenzene	ug/L					<1	<1	<5	<1	<1	<1	<0.3	<0.3
2,2-Dichloropropane	ug/L					<1	<1	<5	<1		<1	<0.2	<0.5
2-Chlorotoluene	ug/L					<1	<1	<5	<1		<1	<0.4	<0.3
4-Chlorotoluene	ug/L					<1	<1	<5	<1		<1	<0.3	<0.3
Bromobenzene	ug/L					<1	<1	<5	<1		<5	<0.3	<0.2
Bromochloromethane	ug/L					<1		<5	<1		<1	<0.4	<0.2
Dibromomethane	ug/L					<1		<5	<1		<1	<0.1	<0.2
Dichlorodifluoromethane	ug/L					<2	<2	<10	<2		<2	<0.3	<1.2
Hexachlorobutadiene	ug/L					<1	<1	<5	<1		<1	<0.5	<0.6
Isopropylbenzene	ug/L					58	26	32	22		5	40	60
Trichlorofluoromethane	ug/L					<1	<1	<5	<1	<1	<1	<0.5	<0.6
m + p-Xylene	ug/L					280	190	220	170	49	29.361	200	150
n-Butylbenzene	ug/L					190	65	21	26		8.283	100	120
n-Propylbenzene	ug/L					58	46	55	39		8.482	90	95
o-Xylene	ug/L					460	260	300	220	83	36.296	480	310
p-Isopropyltoluene	ug/L					<1	21	12	<1		4.4	<0.4	55
sec-Butylbenzene	ug/L					27	12	15	13		3.544	30	60
tert-Butylbenzene	ug/L					<1	<1	<5	<25		<1	<0.3	<0.3
Di-isopropyl ether	ug/L						<1						
Methyl tert-butyl ether	ug/L						<1						
2-Chloroethyl vinyl ether	ug/L									<10			

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W27

Parameter	Units	6/24/92	12/17/92	6/30/93	12/28/93	6/22/94	7/6/95	7/9/96	7/11/97	6/24/98
Chloromethane	ug/L	<100	35.1	<10	<2	<2	48	<20	<0.7	<0.9
Bromomethane	ug/L	<100	<10		<2	<2	<20	<20	<0.3	<0.9
Vinyl chloride	ug/L	<100	<10	<1	<1	<1	<10	<10	<0.3	<0.5
Chloroethane	ug/L	<100	<10	<2	<2	<2	<20	<20	<0.4	<0.8
Methylene chloride	ug/L	<50	11	<3	<3	<3	<30	<30	<0.3	<0.5
Acetone	ug/L	<100	20.1							
Carbon disulfide	ug/L	<50	<5							
1,1-Dichloroethene	ug/L	<50	<5	<1	<1	<1	<10	<10	<0.4	<0.2
1,1-Dichloroethane	ug/L	<50	<5	<1	<1	<1	<10	<10	<0.2	<0.2
cis-1,2-Dichloroethene	ug/L			<1	<1	<1	<10	<10	<0.2	<0.2
trans-1,2-Dichloroethene	ug/L	<50	<5	<1	<1	<1	<10	<10	<0.2	<0.3
Chloroform	ug/L	<50	<5	<1	<1	<1	<10	<10	<0.2	<0.2
1,2-Dichloroethane	ug/L	<50	<5	<1	<1	<1	<10	<10	<0.2	<0.2
2-Butanone (MEK)	ug/L	<100	<10							
Vinyl acetate	ug/L	<100	<10							
1,1,1-Trichloroethane	ug/L	<50	<5	<1	<1	<1	<10	<10	<0.3	<0.3
Carbon tetrachloride	ug/L	<50	<5	<1	<1	<1	<10	<10	<0.2	<0.4
Bromodichloromethane	ug/L	<50	<5	<1	<1	<1	31	<10	<0.2	<0.2
1,2-Dichloropropane	ug/L	<50	<5	<1	<1	<1	<10	<10	<0.1	<0.2
cis-1,3-Dichloropropene	ug/L	<50	<5		<1	<1	<10	<10	<0.3	<0.3
Trichloroethene	ug/L	<50	20.8	4.4	17	12	61	<10	4	15
Chlorodibromomethane	ug/L	<50	<5	<1	<1	<1	<10	<10	<0.3	<0.3
1,1,2-Trichloroethane	ug/L	<50	<5	<1	<1	<1	<10	<10	<1	<0.2
Benzene	ug/L	<50	12.9	2.4	11	7.5	39	<10	<0.2	12
trans-1,3-Dichloropropene	ug/L	<50	<5		<1	<1	<10	<10	<0.2	<0.2
Bromoform	ug/L	<50	<5		<1	<1	<10	<10	<0.3	<0.2
4-Methyl-2-Pentanone (MIBK)	ug/L	<100	<10							
2-Hexanone	ug/L	<100	<10							
Tetrachloroethene	ug/L	<50	<5	<1	3.2	2.8	<10	<10	<0.3	<0.6
1,1,2,2-Tetrachloroethane	ug/L	<50	<5	<1	<1	<1	<10	<10	<0.2	<0.2
Toluene	ug/L	<50	63.9	8.9	71	36	100	<10	6	18
Chlorobenzene	ug/L	<50	<5	<1	<1	<1	<10	<10	<0.3	<0.3
Ethylbenzene	ug/L	<50	35.4	4.8	40	32	71	<10	18	28
Styrene	ug/L	<50	<5		<1	<1		<10	<0.2	<0.2
Xylenes, Total	ug/L		620							
Naphthalene	ug/L		89.8	42	120	10	150	50.976	95	90
1,1,1,2-Tetrachloroethane	ug/L				<1	<1		<10	<0.1	<0.3
1,1-Dichloropropene	ug/L				<1	<1		<10	<0.2	<0.3
1,2,3-Trichlorobenzene	ug/L			<1	<1	<1		<10	<0.5	<0.4
1,2,3-Trichloropropane	ug/L				<1	<1		<10	<0.3	<0.2
1,2,4-Trichlorobenzene	ug/L			<1	<1	<1		<10	<0.5	<0.3
1,2,4-Trimethylbenzene	ug/L			190	1100	540		387.89	750	800
1,2-Dibromo-3-chloropropane	ug/L			<3	<3	<3		<30	<0.3	<0.3
1,2-Dibromoethane	ug/L			<2	<2	<2		<20	<0.2	<0.4

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W27

Parameter	Units	6/24/92	12/17/92	6/30/93	12/28/93	6/22/94	7/6/95	7/9/96	7/11/97	6/24/98
1,2-Dichlorobenzene	ug/L			<1	<1	<1	<10	<10	<0.3	<0.3
1,3,5-Trimethylbenzene	ug/L			95	230	130		86.512	240	240
1,3-Dichlorobenzene	ug/L			<1	<1	<1	<10	<10	<0.7	<0.4
1,3-Dichloropropane	ug/L			<1	<1	<1		<10	<0.3	<0.6
1,4-Dichlorobenzene	ug/L			<1	<1	<1	<10	<10	<0.3	<0.3
2,2-Dichloropropane	ug/L			<1	<1	<1		<10	<0.2	<0.5
2-Chlorotoluene	ug/L			<1	<1	<1		<10	<0.4	<0.3
4-Chlorotoluene	ug/L			<1	<1	<1		<10	<0.3	<0.3
Bromobenzene	ug/L			<1	<1	<1		<10	<0.3	<0.2
Bromochloromethane	ug/L				<1	<1		<10	<0.4	<0.2
Dibromomethane	ug/L				<1	<1		<10	<0.1	<0.2
Dichlorodifluoromethane	ug/L			<25	<2	<2		<20	<0.3	<1.2
Hexachlorobutadiene	ug/L			<1	<1	<1		<10	<0.5	<0.6
Isopropylbenzene	ug/L			6.4	36	31		15.65	23	34
Trichlorofluoromethane	ug/L			<1	<1	<1	<10	<10	<0.5	<0.6
m + p-Xylene	ug/L			36	300	240	480	42.639	46	70
n-Butylbenzene	ug/L			34	86	77		64.466	120	120
n-Propylbenzene	ug/L			8.8	63	46		23.708	36	46
o-Xylene	ug/L			200	380	300	510	93.45	260	300
p-Isopropyltoluene	ug/L			<1	17	<1		20.275	30	39
sec-Butylbenzene	ug/L			5.2	17	18		16.829	28	32
tert-Butylbenzene	ug/L			<1	<1	<1		<10	<0.3	<0.3
Di-isopropyl ether	ug/L			<1						
Methyl tert-butyl ether	ug/L			<1						
2-Chloroethyl vinyl ether	ug/L						<100			

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W28

Parameter	Units	7/8/92	12/17/92	6/29/93	12/28/93	6/22/94	7/5/95	7/9/96	7/11/97	6/24/98
Chloromethane	ug/L	<100	<10	<2	<2	<2	<2	<2	<0.7	<0.9
Bromomethane	ug/L	<100	<10		<2	<2	<2	<2	<0.3	<0.9
Vinyl chloride	ug/L	<100	<10	<1	<1	<1	<1	<1	<0.3	<0.5
Chloroethane	ug/L	<100	<10	<2	<2	<2	<2	<2	<0.4	<0.8
Methylene chloride	ug/L		<10	<3	<3	<3	<3	<3	0.4	<0.5
Acetone	ug/L	<100	<10							
Carbon disulfide	ug/L	<50	<5							
1,1-Dichloroethene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.4	<0.2
1,1-Dichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
cis-1,2-Dichloroethene	ug/L			<1	<1	<1	<1	<1	<0.2	<0.2
trans-1,2-Dichloroethene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.3
Chloroform	ug/L	<50	<5	1.4	<1	<1	<1	<1	<0.2	<0.2
1,2-Dichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
2-Butanone (MEK)	ug/L	<100	<10							
Vinyl acetate	ug/L	<100	<10							
1,1,1-Trichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.3
Carbon tetrachloride	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.4
Bromodichloromethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
1,2-Dichloropropane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.1	<0.2
cis-1,3-Dichloropropene	ug/L	<50	<5		<1	<1	<1	<1	<0.3	<0.3
Trichloroethene	ug/L	<50	11.4	7	5.5	4.5	6.5	4.85	4.2	3.9
Chlorodibromomethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.3
1,1,2-Trichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<1	<0.2
Benzene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.3
trans-1,3-Dichloropropene	ug/L	<50	<5		<1	<1	<1	<1	<0.2	<0.2
Bromoform	ug/L	<50	<5		<1	<1	<1	<1	<0.3	<0.2
4-Methyl-2-Pentanone (MIBK)	ug/L	<100	<10							
2-Hexanone	ug/L	<100	<10							
Tetrachloroethene	ug/L	<50	<5	<1	<1	<1	1.3	<1	0.3	1.2
1,1,2,2-Tetrachloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
Toluene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
Chlorobenzene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.3
Ethylbenzene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
Styrene	ug/L	<50	<5		<1	<1		<1	<0.2	<0.2
Xylenes, Total	ug/L	<50	<5							
Naphthalene	ug/L	<10	<10	<1	2.5	4.2	<1	<1	<0.8	<1.1
1,1,1,2-Tetrachloroethane	ug/L				<1	<1		<1	<0.1	<0.3
1,1-Dichloropropene	ug/L				<1	<1		<1	<0.2	<0.3
1,2,3-Trichlorobenzene	ug/L			<1	<1	<1		<1	<0.5	<0.4
1,2,3-Trichloropropane	ug/L				<1	<1		<1	<0.3	<0.2
1,2,4-Trichlorobenzene	ug/L			<1	<1	<1		<1	<0.5	<0.3
1,2,4-Trimethylbenzene	ug/L			<1	7	15		<1	<0.7	<0.6
1,2-Dibromo-3-chloropropane	ug/L			<3	<3	<3		<3	<0.3	<0.3
1,2-Dibromoethane	ug/L			<2	<2	<2		<2	<0.2	<0.4

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W28

Parameter	Units	7/8/92	12/17/92	6/29/93	12/28/93	6/22/94	7/5/95	7/9/96	7/11/97	6/24/98
1,2-Dichlorobenzene	ug/L			<1	<1	<1	<1	<1	<0.3	<0.3
1,3,5-Trimethylbenzene	ug/L			<1	<1	<1		<1	<0.4	<0.3
1,3-Dichlorobenzene	ug/L			<1	<1	<1	<1	<1	<0.7	<0.4
1,3-Dichloropropane	ug/L			<1	<1	<1		<1	<0.3	<0.6
1,4-Dichlorobenzene	ug/L			<1	<1	<1	<1	<1	<0.3	<0.3
2,2-Dichloropropane	ug/L			<1	<1	<1		<1	<0.2	<0.5
2-Chlorotoluene	ug/L			<1	<1	<1		<1	<0.4	<0.3
4-Chlorotoluene	ug/L			<1	<1	<1		<1	<0.3	<0.3
Bromobenzene	ug/L			<1	<1	<1		<1	<0.3	<0.2
Bromochloromethane	ug/L				<1	<1		<1	<0.4	<0.2
Dibromomethane	ug/L				<1	<1		<1	<0.1	<0.2
Dichlorodifluoromethane	ug/L			<2	<2	<2		<2	<0.3	<1.2
Hexachlorobutadiene	ug/L			<1	<1	<1		<1	<0.5	<0.6
Isopropylbenzene	ug/L			<1	<1	<1		<1	<0.2	<0.2
Trichlorofluoromethane	ug/L			<1	<1	<1	<1	<1	<0.5	<0.6
m + p-Xylene	ug/L			<2	<2	<2	<2	<2	<0.4	<0.3
n-Butylbenzene	ug/L			<1	<1	1.6		<1	<0.6	<0.3
n-Propylbenzene	ug/L			<1	<1	<1		<1	<0.3	<0.2
o-Xylene	ug/L			<1	<1	<1	<1	<1	<0.2	<0.5
p-Isopropyltoluene	ug/L			<1	<1	<1		<1	<0.4	<0.2
sec-Butylbenzene	ug/L			<1	<1	<1		<1	<0.3	<0.2
tert-Butylbenzene	ug/L			<1	<1	<1		<1	<0.3	<0.3
Di-isopropyl ether	ug/L			<1						
Methyl tert-butyl ether	ug/L			<1						
2-Chloroethyl vinyl ether	ug/L						<10			

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W29

Parameter	Units	6/25/92	12/18/92	6/30/93	12/28/93	6/22/94	7/5/95	7/9/96	7/11/97	6/23/98
Chloromethane	ug/L	<100	<10	<2	<2	<2	<2	<2	<0.7	<0.9
Bromomethane	ug/L	<100	<10		<2	<2	<2	<2	<0.3	<0.9
Vinyl chloride	ug/L	<100	<10	<1	<1	<1	<1	<1	<0.3	<0.5
Chloroethane	ug/L	<100	<10	<2	<2	<2	<2	<2	<0.4	<0.8
Methylene chloride	ug/L	<50	<10	<3	<3	<3	<3	<3	<0.3	5
Acetone	ug/L	<100	13.6							
Carbon disulfide	ug/L	<50	<5							
1,1-Dichloroethene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.4	<0.2
1,1-Dichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
cis-1,2-Dichloroethene	ug/L			<1	<1	<1	<1	1.375	0.7	1.3
trans-1,2-Dichloroethene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.3
Chloroform	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	31
1,2-Dichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
2-Butanone (MEK)	ug/L	<100	<10							
Vinyl acetate	ug/L	<100	<10							
1,1,1-Trichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.3
Carbon tetrachloride	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.4
Bromodichloromethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	1.5
1,2-Dichloropropane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.1	<0.2
cis-1,3-Dichloropropene	ug/L	<50	<5		<1	<1	<1	<1	<0.3	<0.3
Trichloroethene	ug/L	<50	13.5	3.4	10	3.1	20	34.444	16	17
Chlorodibromomethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.3
1,1,2-Trichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<1	<0.2
Benzene	ug/L	<50	<5	<1	1.5	<1	2.3	2.939	1.3	3
trans-1,3-Dichloropropene	ug/L	<50	<5		<1	<1	<1	<1	<0.2	<0.2
Bromoform	ug/L	<50	<5		<1	<1	<1	<1	<0.3	<0.2
4-Methyl-2-Pentanone (MIBK)	ug/L	<100	<10							
2-Hexanone	ug/L	<100	<10							
Tetrachloroethene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	1.8
1,1,2,2-Tetrachloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
Toluene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	1.8
Chlorobenzene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.3
Ethylbenzene	ug/L	<50	<5	<1	<1	<1	1.2	3.902	0.3	6.3
Styrene	ug/L	<50	<5		<1	<1		<1	<0.2	<0.2
Xylenes, Total	ug/L	<50	<5							
Naphthalene	ug/L	<10	<10	<1	1.6	<1	2.3	16.176	2.6	24
1,1,1,2-Tetrachloroethane	ug/L				<1	<1		<1	<0.1	<0.3
1,1-Dichloropropene	ug/L				<1	<1		<1	<0.2	<0.3
1,2,3-Trichlorobenzene	ug/L			<1	<1	<1		<1	<0.5	<0.4
1,2,3-Trichloropropane	ug/L				<1	<1		<1	<0.3	<0.2
1,2,4-Trichlorobenzene	ug/L			<1	<1	<1		<1	<0.5	<0.3
1,2,4-Trimethylbenzene	ug/L			<1	10	4.8		126.828	29	140
1,2-Dibromo-3-chloropropane	ug/L			<3	<3	<3		<3	<0.3	<0.3
1,2-Dibromoethane	ug/L			<2	<2	<2		<2	<0.2	<0.4

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W29

Parameter	Units	6/25/92	12/18/92	6/30/93	12/28/93	6/22/94	7/5/95	7/9/96	7/11/97	6/23/98
1,2-Dichlorobenzene	ug/L			<1	<1	<1	<1	<1	3.8	<0.3
1,3,5-Trimethylbenzene	ug/L			<1	<1	<1		<1	<0.4	6.2
1,3-Dichlorobenzene	ug/L			<1	<1	<1	<1	<1	<0.7	<0.4
1,3-Dichloropropane	ug/L			<1	<1	<1		<1	<0.3	<0.6
1,4-Dichlorobenzene	ug/L			<1	<1	<1	<1	<1	<0.3	<0.3
2,2-Dichloropropane	ug/L			<1	<1	<1		<1	<0.2	<0.5
2-Chlorotoluene	ug/L			<1	<1	<1		<1	<0.4	<0.3
4-Chlorotoluene	ug/L			<1	<1	<1		<1	<0.3	<0.3
Bromobenzene	ug/L			<1	<1	<1		<1	<0.3	<0.2
Bromochloromethane	ug/L				<1	<1		<1	<0.4	<0.2
Dibromomethane	ug/L				<1	<1		<1	<0.1	<0.2
Dichlorodifluoromethane	ug/L			<2	<2	<2		<2	<0.3	<1.2
Hexachlorobutadiene	ug/L			<1	<1	<1		<1	<0.5	<0.6
Isopropylbenzene	ug/L			<1	1.7	<1		8.724	3.9	8.9
Trichlorofluoromethane	ug/L			<1	<1	<1	<1	<1	<0.5	<0.6
m + p-Xylene	ug/L			<2	<2	<2	<2	6.527	1.1	10
n-Butylbenzene	ug/L			<1	1.4	<1		8.422	<0.6	12
n-Propylbenzene	ug/L			<1	1.7	<1		11.196	3.6	14
o-Xylene	ug/L			<1	3.7	<1	6.5	40.164	8.8	60
p-Isopropyltoluene	ug/L			<1	<1	<1		<1	<0.4	<0.2
sec-Butylbenzene	ug/L			<1	<1	<1		5.862	2.7	7.4
tert-Butylbenzene	ug/L			<1	<1	<1		<1	<0.3	<0.3
Di-isopropyl ether	ug/L			<1						
Methyl tert-butyl ether	ug/L			<1						
2-Chloroethyl vinyl ether	ug/L						<10			

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W32

Parameter	Units	6/24/92	12/19/92	6/29/93	12/28/93	6/22/94	7/5/95	7/8/96	7/11/97	6/23/98
Chloromethane	ug/L	<100	<10	<2	<2	<2	<2	<2	<0.7	<0.9
Bromomethane	ug/L	<100	<10		<2	<2	<2	<2	<0.3	<0.9
Vinyl chloride	ug/L	<100	<10	<1	<1	<1	<1	<1	<0.3	<0.5
Chloroethane	ug/L	<100	<10	<2	<2	<2	<2	<2	<0.4	<0.8
Methylene chloride	ug/L	<50	<10	<3	<3	<3	<3	<3	<0.3	<0.5
Acetone	ug/L	<100	<10							
Carbon disulfide	ug/L	<50	<5							
1,1-Dichloroethene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.4	<0.2
1,1-Dichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
cis-1,2-Dichloroethene	ug/L			<1	<1	<1	<1	<1	<0.2	<0.2
trans-1,2-Dichloroethene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.3
Chloroform	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
1,2-Dichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
2-Butanone (MEK)	ug/L	<100	<10							
Vinyl acetate	ug/L	<100	<10							
1,1,1-Trichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.3
Carbon tetrachloride	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.4
Bromodichloromethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
1,2-Dichloropropane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.1	<0.2
cis-1,3-Dichloropropene	ug/L	<50	<5		<1	<1	<1	<1	<0.3	<0.3
Trichloroethene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.3
Chlorodibromomethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.3
1,1,2-Trichloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<1	<0.2
Benzene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.3
trans-1,3-Dichloropropene	ug/L	<50	<5		<1	<1	<1	<1	<0.2	<0.2
Bromoform	ug/L	<50	<5		<1	<1	<1	<1	<0.3	<0.2
4-Methyl-2-Pentanone (MIBK)	ug/L	<100	<10							
2-Hexanone	ug/L	<100	<10							
Tetrachloroethene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.6
1,1,2,2-Tetrachloroethane	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
Toluene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
Chlorobenzene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.3	<0.3
Ethylbenzene	ug/L	<50	<5	<1	<1	<1	<1	<1	<0.2	<0.2
Styrene	ug/L	<50	<5		<1	<1		<1	<0.2	<0.2
Xylenes, Total	ug/L	<50	<5							
Naphthalene	ug/L			<1	<1	<1	<1	<1	<0.8	<1.1
1,1,1,2-Tetrachloroethane	ug/L				<1	<1		<1	<0.1	<0.3
1,1-Dichloropropene	ug/L				<1	<1		<1	<0.2	<0.3
1,2,3-Trichlorobenzene	ug/L			<1	<1	<1		<1	<0.5	<0.4
1,2,3-Trichloropropane	ug/L				<1	<1		<1	<0.3	<0.2
1,2,4-Trichlorobenzene	ug/L			<1	<1	<1		<1	<0.5	<0.3
1,2,4-Trimethylbenzene	ug/L			<1	<1	<1		<1	<0.7	<0.6
1,2-Dibromo-3-chloropropane	ug/L			<3	<3	<3		<3	<0.3	<0.3
1,2-Dibromoethane	ug/L			<2	<2	<2		<2	<0.2	<0.4

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W32

Parameter	Units	6/24/92	12/19/92	6/29/93	12/28/93	6/22/94	7/5/95	7/8/96	7/11/97	6/23/98
1,2-Dichlorobenzene	ug/L			<1	<1	<1	<1	<1	<0.3	<0.3
1,3,5-Trimethylbenzene	ug/L			<1	<1	<1		<1	<0.4	<0.3
1,3-Dichlorobenzene	ug/L			<1	<1	<1	<1	<1	<0.7	<0.4
1,3-Dichloropropane	ug/L			<1	<1	<1		<1	<0.3	<0.6
1,4-Dichlorobenzene	ug/L			<1	<1	<1	<1	<1	<0.3	<0.3
2,2-Dichloropropane	ug/L			<1	<1	<1		<1	<0.2	<0.5
2-Chlorotoluene	ug/L			<1	<1	<1		<1	<0.4	<0.3
4-Chlorotoluene	ug/L			<1	<1	<1		<1	<0.3	<0.3
Bromobenzene	ug/L			<1	<1	<1		<1	<0.3	<0.2
Bromochloromethane	ug/L				<1	<1		<1	<0.4	<0.2
Dibromomethane	ug/L				<1	<1		<1	<0.1	<0.2
Dichlorodifluoromethane	ug/L			<2	<2	<2		<2	<0.3	<1.2
Hexachlorobutadiene	ug/L			<1	<1	<1		<1	<0.5	<0.6
Isopropylbenzene	ug/L			<1	<1	<1		<1	<0.2	<0.2
Trichlorofluoromethane	ug/L			<1	<1	<1	<1	<1	<0.5	<0.6
m + p-Xylene	ug/L			<2	<2	<2	<2	<2	<0.4	<0.3
n-Butylbenzene	ug/L			<1	<1	<1		<1	<0.6	<0.3
n-Propylbenzene	ug/L			<1	<1	<1		<1	<0.3	<0.2
o-Xylene	ug/L			<1	<1	<1	<1	<1	<0.2	<0.5
p-Isopropyltoluene	ug/L			<1	<1	<1		<1	<0.4	<0.2
sec-Butylbenzene	ug/L			<1	<1	<1		<1	<0.3	<0.2
tert-Butylbenzene	ug/L			<1	<1	<1		<1	<0.3	<0.3
Di-isopropyl ether	ug/L			<1						
Methyl tert-butyl ether	ug/L			<1						
2-Chloroethyl vinyl ether	ug/L						<10			

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W33

Parameter	Units	6/30/93	7/9/96	7/11/97	6/24/98
Chloromethane	ug/L	<40	<2	<0.7	<0.9
Bromomethane	ug/L		<2	<0.3	<0.9
Vinyl chloride	ug/L	<20	<1	<0.3	<0.5
Chloroethane	ug/L	<40	<2	<0.4	<0.8
Methylene chloride	ug/L	<60	<3	<0.3	<0.5
1,1-Dichloroethene	ug/L	<20	<1	<0.4	<0.2
1,1-Dichloroethane	ug/L	<20	<1	<0.2	<0.2
cis-1,2-Dichloroethene	ug/L	<20	<1	<0.2	<0.2
trans-1,2-Dichloroethene	ug/L	<20	<1	<0.2	<0.3
Chloroform	ug/L	<20	44.288	<0.2	<0.2
1,2-Dichloroethane	ug/L	<20	<1	<0.2	<0.2
1,1,1-Trichloroethane	ug/L	<20	<1	<0.3	<0.3
Carbon tetrachloride	ug/L	<20	<1	<0.2	<0.4
Bromodichloromethane	ug/L	<20	<1	<0.2	<0.2
1,2-Dichloropropane	ug/L	<20	<1	<0.1	<0.2
cis-1,3-Dichloropropene	ug/L		<1	<0.3	<0.3
Trichloroethene	ug/L	32	9.112	<0.2	<0.3
Chlorodibromomethane	ug/L	<20	<1	<0.3	<0.3
1,1,2-Trichloroethane	ug/L	<20	<1	<1	<0.2
Benzene	ug/L	56	2.288	<0.2	<0.3
trans-1,3-Dichloropropene	ug/L		<1	<0.2	<0.2
Bromoform	ug/L		<1	<0.3	<0.2
Tetrachloroethene	ug/L	<20	<100	<0.3	<0.6
1,1,2,2-Tetrachloroethane	ug/L	<20	<1	<0.2	<0.2
Toluene	ug/L	240	36.653	<0.2	<0.2
Chlorobenzene	ug/L	<20	<1	<0.3	<0.3
Ethylbenzene	ug/L	100	<100	<0.2	<0.2
Styrene	ug/L		172.61	<0.2	<0.2
Naphthalene	ug/L	190	199.06	<0.8	<1.1
1,1,1,2-Tetrachloroethane	ug/L		<1	<0.1	<0.3
1,1-Dichloropropene	ug/L		<1	<0.2	<0.3
1,2,3-Trichlorobenzene	ug/L	<20	<1	<0.5	<0.4
1,2,3-Trichloropropane	ug/L		<1	<0.3	<0.2
1,2,4-Trichlorobenzene	ug/L	<20	<1	<0.5	<0.3
1,2,4-Trimethylbenzene	ug/L	3700	2318.91	2800	4300
1,2-Dibromo-3-chloropropane	ug/L	<60	<3	<0.3	<0.3
1,2-Dibromoethane	ug/L	<40	<2	<0.2	<0.4
1,2-Dichlorobenzene	ug/L	<20	<1	<0.3	<0.3
1,3,5-Trimethylbenzene	ug/L	880	694.41	1100	2700
1,3-Dichlorobenzene	ug/L	<20	<1	<0.7	<0.4
1,3-Dichloropropane	ug/L	<20	<1	<0.3	<0.6
1,4-Dichlorobenzene	ug/L	<20	<1	<0.3	<0.3
2,2-Dichloropropane	ug/L	<20	<1	<0.2	<0.5
2-Chlorotoluene	ug/L	<20	<1	<0.4	<0.3

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W33

Parameter	Units	6/30/93	7/9/96	7/11/97	6/24/98
4-Chlorotoluene	ug/L	<20	<1	<0.3	<0.3
Bromobenzene	ug/L	<20	<1	<0.3	<0.2
Bromochloromethane	ug/L		<1	<0.4	<0.2
Dibromomethane	ug/L		<1	<0.1	<0.2
Dichlorodifluoromethane	ug/L	<200	<2	<0.3	<1.2
Hexachlorobutadiene	ug/L	<20	<1	<0.5	<0.6
Isopropylbenzene	ug/L	190	223.84	370	<0.2
Trichlorofluoromethane	ug/L	<20	<1	<0.5	<0.6
m + p-Xylene	ug/L	800	318.69	300	1400
n-Butylbenzene	ug/L	380	549.8	640	2200
n-Propylbenzene	ug/L	260	374.99	410	<0.2
o-Xylene	ug/L	920	492.88	<0.2	<0.5
p-Isopropyltoluene	ug/L	<20	224.2	200	1100
sec-Butylbenzene	ug/L	72	240.49	340	900
tert-Butylbenzene	ug/L	<20	856.4	<0.3	<0.3
Di-isopropyl ether	ug/L	<20			
Methyl tert-butyl ether	ug/L	<20			
	ug/L				
	ug/L				
	ug/L				
	ug/L				
	ug/L				
	ug/L				
	ug/L				
	ug/L				

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W36

Parameter	Units	2/20/92	8/3/92	9/17/92	7/10/96	7/11/97	6/25/98
Chloromethane	ug/L	<10	<100	<100	<2	<0.7	<0.9
Bromomethane	ug/L	<10	<100	<100	<2	<0.3	<0.9
Vinyl chloride	ug/L	<10	<100	<100	<1	<0.3	<0.5
Chloroethane	ug/L	<10	<100	<100	<2	<0.4	<0.8
Methylene chloride	ug/L	<5	<50		<3	<0.3	<0.5
Acetone	ug/L	<10	<100	<100			
Carbon disulfide	ug/L	<5	<50	<50			
1,1-Dichloroethene	ug/L	<5	<50	<50	<1	<0.4	<0.2
1,1-Dichloroethane	ug/L	<5	<50	<50	<1	<0.2	<0.2
cis-1,2-Dichloroethene	ug/L				<1	<0.2	<0.2
trans-1,2-Dichloroethene	ug/L	<5	<50	<50	<1	<0.2	<0.3
Chloroform	ug/L	<5	<50	<50	12.508	24	14
1,2-Dichloroethane	ug/L	<5	<50	<50	<1	<0.2	<0.2
2-Butanone (MEK)	ug/L	<10	<100	<100			
Vinyl acetate	ug/L	<10	<100	<100			
1,1,1-Trichloroethane	ug/L	<5	<50	<50	<1	<0.3	<0.3
Carbon tetrachloride	ug/L	<5	<50	<50	<1	<0.2	<0.4
Bromodichloromethane	ug/L	<5	<50	<50	<1	<0.2	<0.2
1,2-Dichloropropane	ug/L	<5	<50	<50	<1	<0.1	<0.2
cis-1,3-Dichloropropene	ug/L	<5	<50	<50	<1	<0.3	<0.3
Trichloroethene	ug/L		<50	<50	4.398	6	<0.3
Chlorodibromomethane	ug/L	<5	<50	<50	<1	<0.3	<0.3
1,1,2-Trichloroethane	ug/L	<5	<50	<50	<1	<1	<0.2
Benzene	ug/L		<50	<50	<1	<0.2	<0.3
trans-1,3-Dichloropropene	ug/L	<5	<50	<50	<1	<0.2	<0.2
Bromoform	ug/L	<5	<50	<50	<1	<0.3	<0.2
4-Methyl-2-Pentanone (MIBK)	ug/L	<10	<100	<100			
2-Hexanone	ug/L	<10	<100	<100			
Tetrachloroethene	ug/L	<5	<50	<50	<1	<0.3	<0.6
1,1,2,2-Tetrachloroethane	ug/L	<5	<50	<50	<1	<0.2	<0.2
Toluene	ug/L		<50	<50	<1	<0.2	<0.2
Chlorobenzene	ug/L	<5	<50	<50	<1	<0.3	<0.3
Ethylbenzene	ug/L		<50	<50	<1	<0.2	<0.2
Styrene	ug/L	<5	<50	<50	<1	<0.2	<0.2
Xylenes, Total	ug/L	<5					
Naphthalene	ug/L			<10	122.42	7	14
1,1,1,2-Tetrachloroethane	ug/L				<1	<0.1	<0.3
1,1-Dichloropropene	ug/L				<1	<0.2	<0.3
1,2,3-Trichlorobenzene	ug/L				<1	<0.5	<0.4
1,2,3-Trichloropropane	ug/L				<1	<0.3	<0.2
1,2,4-Trichlorobenzene	ug/L				<1	<0.5	<0.3
1,2,4-Trimethylbenzene	ug/L				637.52	130	180
1,2-Dibromo-3-chloropropane	ug/L				<3	<0.3	<0.3
1,2-Dibromoethane	ug/L				<2	<0.2	<0.4

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W36						
Parameter	Units	**2/20/92**	**8/3/92**	**9/17/92**	**7/10/96**	**7/11/97**	**6/25/98**
1,2-Dichlorobenzene	ug/L				<1	<0.3	<0.3
1,3,5-Trimethylbenzene	ug/L				122.17	44	77
1,3-Dichlorobenzene	ug/L				<1	<0.7	<0.4
1,3-Dichloropropane	ug/L				<1	<0.3	<0.6
1,4-Dichlorobenzene	ug/L				<1	<0.3	<0.3
2,2-Dichloropropane	ug/L				<1	<0.2	<0.5
2-Chlorotoluene	ug/L				<1	<0.4	<0.3
4-Chlorotoluene	ug/L				<1	<0.3	<0.3
Bromobenzene	ug/L				<1	<0.3	<0.2
Bromochloromethane	ug/L				<1	<0.4	<0.2
Dibromomethane	ug/L				<1	<0.1	<0.2
Dichlorodifluoromethane	ug/L				<2	<0.3	<1.2
Hexachlorobutadiene	ug/L				<1	<0.5	<0.6
Isopropylbenzene	ug/L				36.015	6.5	23
Trichlorofluoromethane	ug/L				<1	<0.5	<0.6
m + p-Xylene	ug/L				<200	4.5	<0.3
n-Butylbenzene	ug/L				137.25	12	56
n-Propylbenzene	ug/L				123.05	12	25
o-Xylene	ug/L				201.57	32	<0.5
p-Isopropyltoluene	ug/L				21.973	<0.4	25
sec-Butylbenzene	ug/L				22.717	7	25
tert-Butylbenzene	ug/L				<1	<0.3	<0.3
	ug/L						
	ug/L						
	ug/L						

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W37

Parameter	Units	2/20/92	6/24/92	9/17/92	12/18/92	3/24/93
Chloromethane	ug/L	<10	<100	<100	<10	<20
Bromomethane	ug/L	<10	<100	<100	<10	<20
Vinyl chloride	ug/L	<10	<100	<100	<10	<10
Chloroethane	ug/L	<10	<100	<100	<10	<20
Methylene chloride	ug/L	<5	<50	<50	<10	<30
Acetone	ug/L	<10	<100	<100	25.9	
Carbon disulfide	ug/L	<5	<50	<50	<5	
1,1-Dichloroethene	ug/L	<5	<50	<50	<5	<10
1,1-Dichloroethane	ug/L	<5	<50	<50	<5	<10
cis-1,2-Dichloroethene	ug/L					<10
trans-1,2-Dichloroethene	ug/L	<5	<50	<50	<5	<10
Chloroform	ug/L	<5	<50	<50	<5	<10
1,2-Dichloroethane	ug/L	<5	<50	<50	<5	<10
2-Butanone (MEK)	ug/L	<10	<100	<100	81.9	
Vinyl acetate	ug/L	<10	<100	<100	<10	
1,1,1-Trichloroethane	ug/L	<5	<50	<50	<5	<10
Carbon tetrachloride	ug/L	<5	<50	<50	<5	<10
Bromodichloromethane	ug/L	<5	<50	<50	<5	<10
1,2-Dichloropropane	ug/L	<5	<50	<50	<5	<10
cis-1,3-Dichloropropene	ug/L	<5	<50	<50	<5	<10
Trichloroethene	ug/L			<50	205	200
Chlorodibromomethane	ug/L	<5	<50	<50	<5	<10
1,1,2-Trichloroethane	ug/L	<5	<50	<50	<5	<10
Benzene	ug/L	<5	<50	<50	<5	<10
trans-1,3-Dichloropropene	ug/L	<5	<50	<50	<5	<10
Bromoform	ug/L	<5	<50	<50	<5	<10
4-Methyl-2-Pentanone (MIBK)	ug/L	<10	<100	<100	<10	
2-Hexanone	ug/L	<10	<100	<100	<10	
Tetrachloroethene	ug/L	<5	<50	<50	<5	<10
1,1,2,2-Tetrachloroethane	ug/L	<5	<50	<50	<5	<10
Toluene	ug/L		<50	<50	19.2	24
Chlorobenzene	ug/L	<5	<50	<50	<5	<10
Ethylbenzene	ug/L			<50	59.2	54
Styrene	ug/L	<5	<50	<50	<5	<10
Xylenes, Total	ug/L			<50	691	
Naphthalene	ug/L				130	110
1,1,1,2-Tetrachloroethane	ug/L					<10
1,1-Dichloropropene	ug/L					<10
1,2,3-Trichlorobenzene	ug/L					<10
1,2,3-Trichloropropane	ug/L					<10
1,2,4-Trichlorobenzene	ug/L					<10
1,2,4-Trimethylbenzene	ug/L					2600
1,2-Dibromo-3-chloropropane	ug/L					<30
1,2-Dibromoethane	ug/L					<20

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W37

Parameter	Units	2/20/92	6/24/92	9/17/92	12/18/92	3/24/93
1,2-Dichlorobenzene	ug/L					<10
1,3,5-Trimethylbenzene	ug/L					1000
1,3-Dichlorobenzene	ug/L					<10
1,3-Dichloropropane	ug/L					<10
1,4-Dichlorobenzene	ug/L					<10
2,2-Dichloropropane	ug/L					<10
2-Chlorotoluene	ug/L					<10
4-Chlorotoluene	ug/L					<10
Bromobenzene	ug/L					<10
Bromochloromethane	ug/L					<10
Dibromomethane	ug/L					<10
Dichlorodifluoromethane	ug/L					<20
Hexachlorobutadiene	ug/L					<10
Isopropylbenzene	ug/L					150
Trichlorofluoromethane	ug/L					<10
m + p-Xylene	ug/L					280
n-Butylbenzene	ug/L					380
n-Propylbenzene	ug/L					220
o-Xylene	ug/L					500
p-Isopropyltoluene	ug/L					<10
sec-Butylbenzene	ug/L					82
tert-Butylbenzene	ug/L					<10
	ug/L					
	ug/L					
	ug/L					

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W38		
Parameter	Units	2/22/92	7/29/92
Chloromethane	ug/L	<10	<100
Bromomethane	ug/L	<10	<100
Vinyl chloride	ug/L	<10	<100
Chloroethane	ug/L	<10	<100
Methylene chloride	ug/L	<5	<50
Acetone	ug/L	<10	<100
Carbon disulfide	ug/L	<5	<50
1,1-Dichloroethene	ug/L	<5	<50
1,1-Dichloroethane	ug/L	<5	<50
trans-1,2-Dichloroethene	ug/L	<5	<50
Chloroform	ug/L	<5	<50
1,2-Dichloroethane	ug/L	<5	<50
2-Butanone (MEK)	ug/L	<10	<100
Vinyl acetate	ug/L	<10	<100
1,1,1-Trichloroethane	ug/L	<5	<50
Carbon tetrachloride	ug/L	<5	<50
Bromodichloromethane	ug/L	<5	<50
1,2-Dichloropropane	ug/L	<5	<50
cis-1,3-Dichloropropene	ug/L	<5	<50
Trichloroethene	ug/L		<50
Chlorodibromomethane	ug/L	<5	<50
1,1,2-Trichloroethane	ug/L	<5	<50
Benzene	ug/L	<5	<50
trans-1,3-Dichloropropene	ug/L	<5	<50
Bromoform	ug/L	<5	<50
4-Methyl-2-Pentanone (MIBK)	ug/L	<10	<100
2-Hexanone	ug/L	<10	<100
Tetrachloroethene	ug/L	<5	<50
1,1,2,2-Tetrachloroethane	ug/L	<5	<50
Toluene	ug/L		<50
Chlorobenzene	ug/L	<5	<50
Ethylbenzene	ug/L		<50
Styrene	ug/L	<5	<50
Xylenes, Total	ug/L		
Naphthalene	ug/L		

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W39

Parameter	Units	6/17/92	12/18/92	6/21/94	7/9/96	7/11/97	6/24/98
Chloromethane	ug/L	<100	<100	<2	<200	<0.7	<0.9
Bromomethane	ug/L	<100	<100	<2	<200	<0.3	<0.9
Vinyl chloride	ug/L	<100	<100	<1	<100	<0.3	<0.5
Chloroethane	ug/L	<100	<100	<2	<200	<0.4	<0.8
Methylene chloride	ug/L	<50	142	<3	<300	<0.3	<0.5
Acetone	ug/L		271				
Carbon disulfide	ug/L	<50	<50				
1,1-Dichloroethene	ug/L	<50	<50	<1	<100	<0.4	<0.2
1,1-Dichloroethane	ug/L	<50	<50	<1	<100	<0.2	<0.2
cis-1,2-Dichloroethene	ug/L			<1	<100	<0.2	<0.2
trans-1,2-Dichloroethene	ug/L	<50	<50	<1	<100	<0.2	<0.3
Chloroform	ug/L	<50	<50	3.5	<100	<0.2	<0.2
1,2-Dichloroethane	ug/L	<50	<50	<1	<100	<0.2	<0.2
2-Butanone (MEK)	ug/L	<100	<100				
Vinyl acetate	ug/L	<100	<100				
1,1,1-Trichloroethane	ug/L	<50	64.6	<1	<100	<0.3	<0.3
Carbon tetrachloride	ug/L	<50	<50	<1	<100	<0.2	<0.4
Bromodichloromethane	ug/L	<50	<50	<1	<100	<0.2	<0.2
1,2-Dichloropropane	ug/L	<50	<50	<1	<100	<0.1	<0.2
cis-1,3-Dichloropropene	ug/L	<50	<50	<1	<100	<0.3	<0.3
Trichloroethene	ug/L	<50	<50	19	<100	<0.2	<0.3
Chlorodibromomethane	ug/L	<50	<50	<1	<100	<0.3	<0.3
1,1,2-Trichloroethane	ug/L	<50	<50	<1	<100	<1	<0.2
Benzene	ug/L	<50	<50	5.3	<100	<0.2	<0.3
trans-1,3-Dichloropropene	ug/L	<50	<50	<1	<100	<0.2	<0.2
Bromoform	ug/L	<50	<50	<1	<100	<0.3	<0.2
4-Methyl-2-Pentanone (MIBK)	ug/L	<100	<100				
2-Hexanone	ug/L	<100	<100				
Tetrachloroethene	ug/L	<50	<50	3	<100	<0.3	<0.6
1,1,2,2-Tetrachloroethane	ug/L	<50	<50	<1	<100	<0.2	<0.2
Toluene	ug/L		154	<1	<100	<0.2	<0.2
Chlorobenzene	ug/L	<50	<50	<1	<100	<0.3	<0.3
Ethylbenzene	ug/L		59.8	75	<100	<0.2	<0.2
Styrene	ug/L	<50	<50	<25	309.43	<0.2	<0.2
Xylenes, Total	ug/L		784				
Naphthalene	ug/L		732	160	121.68	<0.8	48
1,1,1,2-Tetrachloroethane	ug/L			<1	<100	<0.1	<0.3
1,1-Dichloropropene	ug/L			<1	<100	<0.2	<0.3
1,2,3-Trichlorobenzene	ug/L			<1	<100	<0.5	<0.4
1,2,3-Trichloropropane	ug/L			<1	<100	<0.3	<0.2
1,2,4-Trichlorobenzene	ug/L			<1	<100	<0.5	<0.3
1,2,4-Trimethylbenzene	ug/L			2400	606.2	760	440
1,2-Dibromo-3-chloropropane	ug/L			<3	<300	<0.3	<0.3
1,2-Dibromoethane	ug/L			<2	<200	<0.2	<0.4

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W39						
Parameter	**Units**	**6/17/92**	**12/18/92**	**6/21/94**	**7/9/96**	**7/11/97**	**6/24/98**
1,2-Dichlorobenzene	ug/L			<1	<100	<0.3	<0.3
1,3,5-Trimethylbenzene	ug/L			600	328.24	360	200
1,3-Dichlorobenzene	ug/L			<1	<100	<0.7	<0.4
1,3-Dichloropropane	ug/L			<1	<100	<0.3	<0.6
1,4-Dichlorobenzene	ug/L			<1	<100	<0.3	<0.3
2,2-Dichloropropane	ug/L			<1	<100	<0.2	<0.5
2-Chlorotoluene	ug/L			<1	<100	<0.4	<0.3
4-Chlorotoluene	ug/L			<1	<100	<0.3	<0.3
Bromobenzene	ug/L			<1	<100	<0.3	<0.2
Bromochloromethane	ug/L			<1	<100	<0.4	<0.2
Dibromomethane	ug/L			<1	<100	<0.1	<0.2
Dichlorodifluoromethane	ug/L			<2	<200	<0.3	<1.2
Hexachlorobutadiene	ug/L			<1	<100	<0.5	<0.6
Isopropylbenzene	ug/L			180	180.87	160	44
Trichlorofluoromethane	ug/L			<1	<100	<0.5	<0.6
m + p-Xylene	ug/L			450	<200	<0.4	46
n-Butylbenzene	ug/L			320	631.4	180	130
n-Propylbenzene	ug/L			280	<100	120	54
o-Xylene	ug/L			600	<100	<0.2	<0.5
p-Isopropyltoluene	ug/L			<25	<100	<0.4	56
sec-Butylbenzene	ug/L			160	238.33	120	66
tert-Butylbenzene	ug/L			<25	<100	<0.3	<0.3
	ug/L						
	ug/L						
	ug/L						

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W41

Parameter	Units	2/25/92	6/16/92	9/17/92	12/19/92	3/24/93	6/30/93	12/28/93	6/21/94	7/6/95	7/9/96	7/11/97	6/24/98
Chloromethane	ug/L	<100	<100	<100	<10	<2	<200	<2	<2	<40	<20	<0.7	<0.9
Bromomethane	ug/L	<100	<100	<100	<10	<2		<2	<2	<40	<20	<0.3	<0.9
Vinyl chloride	ug/L	<100	<100	<100	<10	<1	<100	<1	<1	<20	<10	<0.3	<0.5
Chloroethane	ug/L	<100	<100	<100	<10	<2	<200	<2	<2	<40	<20	<0.4	<0.8
Methylene chloride	ug/L		<50		<10	<3	<300	<3	<3	<60	<30	<0.3	<0.5
Acetone	ug/L	<100			170								
Carbon disulfide	ug/L	<50	<50	<50	<5								
1,1-Dichloroethene	ug/L	<50	<50	<50	<5	<1	<100	<1	<1	<20	<10	<0.4	<0.2
1,1-Dichloroethane	ug/L	<50	<50	<50	<5	<1	<100	<1	<1	<20	<10	<0.2	<0.2
cis-1,2-Dichloroethene	ug/L					<1	<100	<1	<1	<20	<10	<0.2	<0.2
trans-1,2-Dichloroethene	ug/L	<50	<50	<50	<5	<1	<100	<1	<1	<20	<10	<0.2	<0.3
Chloroform	ug/L	<50	<50	<50	<5	<1	<100	<1	2.8	<20	<10	<0.2	<0.2
1,2-Dichloroethane	ug/L	<50	<50	<50	<5	<1	<100	<1	<1	<20	<10	<0.2	<0.2
2-Butanone (MEK)	ug/L	<100	<100	<100	38.5								
Vinyl acetate	ug/L	<100	<100	<100	<10								
1,1,1-Trichloroethane	ug/L	<50	<50	<50	<5	<1	<100	<1	<1	<20	<10	<0.3	<0.3
Carbon tetrachloride	ug/L	<50	<50	<50	<5	<1	<100	<1	<1	<20	<10	<0.2	<0.4
Bromodichloromethane	ug/L	<50	<50	<50	<5	<1	<100	<1	<1	<20	<10	<0.2	<0.2
1,2-Dichloropropane	ug/L	<50	<50	<50	<5	<1	<100	<1	<1	<20	<10	<0.1	<0.2
cis-1,3-Dichloropropene	ug/L	<50	<50	<50	<5	<1		<1	<1	<20	<10	<0.3	<0.3
Trichloroethene	ug/L	<50	<50	<50	<5	3.8	<100	4	4.4	<20	<10	<0.2	<0.3
Chlorodibromomethane	ug/L	<50	<50	<50	<5	<1	<100	<1	<1	<20	<10	<0.3	<0.3
1,1,2-Trichloroethane	ug/L	<50	<50	<50	<5	<1	<100	<1	<1	<20	<10	<1	<0.2
Benzene	ug/L	<50	<50	<50	<5	<1	<100	<1	<1	<20	<10	<0.2	<0.3
trans-1,3-Dichloropropene	ug/L	<50	<50	<50	<5	<1		<1	<1	<20	<10	<0.2	<0.2
Bromoform	ug/L	<50	<50	<50	<5	<1		<1	<1	<20	<10	<0.3	<0.2
4-Methyl-2-Pentanone (MIBK)	ug/L	<100	<100	<100	<10								
2-Hexanone	ug/L	<100	<100	<100	<10								
Tetrachloroethene	ug/L	<50	<50	<50	<5	1.3	<100	3.8	6.5	<20	<10	<0.3	<0.6
1,1,2,2-Tetrachloroethane	ug/L	<50	<50	<50	<5	<1	<100	<1	<1	<20	<10	<0.2	<0.2
Toluene	ug/L	<50	<50	<50	<5	7.5	<100	3.6	<1	<20	<10	<0.2	<0.2
Chlorobenzene	ug/L	<50	<50	<50	<5	<1	<100	<1	<1	<20	<10	<0.3	<0.3
Ethylbenzene	ug/L	<50	<50	<50	<5	6.3	600	<1	<1	<20	<10	<0.2	<0.2
Styrene	ug/L	<50	<50	<50	<5	5.9		<1	<1		<10	<0.2	<0.2
Xylenes, Total	ug/L				67.3								
Naphthalene	ug/L		<103		52.3	95	630	44	27	52	17.154	<0.8	34
1,1,1,2-Tetrachloroethane	ug/L					<1		<1	<1		<10	<0.1	<0.3
1,1-Dichloropropene	ug/L					<1		<1	<1		<10	<0.2	<0.3
1,2,3-Trichlorobenzene	ug/L					<1	<100	<1	<1		<10	<0.5	<0.4
1,2,3-Trichloropropane	ug/L					<1		<1	<1		<10	<0.3	<0.2
1,2,4-Trichlorobenzene	ug/L					<1	<100	<1	<1		<10	<0.5	<0.3
1,2,4-Trimethylbenzene	ug/L					620	2200	110	20		137.69	160	340
1,2-Dibromo-3-chloropropane	ug/L					<3	<300	<3	<3		<30	<0.3	<0.3
1,2-Dibromoethane	ug/L					<2	<200	<2	<2		<20	<0.2	<0.4

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W41

Parameter	Units	2/25/92	6/16/92	9/17/92	12/19/92	3/24/93	6/30/93	12/28/93	6/21/94	7/6/95	7/9/96	7/11/97	6/24/98
1,2-Dichlorobenzene	ug/L					<1	<100	<1	<1	<20	<10	<0.3	<0.3
1,3,5-Trimethylbenzene	ug/L					230	2400	130	400		85.039	140	190
1,3-Dichlorobenzene	ug/L					<1	<100	<1	<1	<20	<10	<0.7	<0.4
1,3-Dichloropropane	ug/L					<1	<100	<1	<1		<10	<0.3	<0.6
1,4-Dichlorobenzene	ug/L					<1	<100	<1	<1	<20	<10	<0.3	<0.3
2,2-Dichloropropane	ug/L					<1	<100	<1	<1		<10	<0.2	<0.5
2-Chlorotoluene	ug/L					<1	<100	<1	<1		<10	<0.4	<0.3
4-Chlorotoluene	ug/L					<1	<100	<1	<1		<10	<0.3	<0.3
Bromobenzene	ug/L					<1	<100	<1	<1		<10	<0.3	<0.2
Bromochloromethane	ug/L					<1		<1	<1		<10	<0.4	<0.2
Dibromomethane	ug/L					<1		<1	<1		<10	<0.1	<0.2
Dichlorodifluoromethane	ug/L					<2	<200	<2	<2		<20	<0.3	<1.2
Hexachlorobutadiene	ug/L					<1	<100	<1	<1		<10	<0.5	<0.6
Isopropylbenzene	ug/L					57	2000	7.1	14		21.889	<0.2	68
Trichlorofluoromethane	ug/L					<1	<100	<1	<1	<20	<10	<0.5	<0.6
m + p-Xylene	ug/L					60	500	5	5.8	77	<20	<0.4	48
n-Butylbenzene	ug/L					230	4800	120	280		128.897	110	170
n-Propylbenzene	ug/L					36	2400	6.6	<1		25.558	110	54
o-Xylene	ug/L					190	2700	18	160	140	<10	<0.2	<0.5
p-Isopropyltoluene	ug/L					<1	1200	13	<1		56.038	<0.4	40
sec-Butylbenzene	ug/L					58	2900	12	13		21.684	<0.3	60
tert-Butylbenzene	ug/L					<1	<100	<1	<1		<10	<0.3	40
Di-isopropyl ether	ug/L						<100						
Methyl tert-butyl ether	ug/L						<100						
2-Chloroethyl vinyl ether	ug/L									<200			

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W66

Parameter	Units	6/30/93	1/0/00
Chloromethane	ug/L	<10	
Vinyl chloride	ug/L	<5	
Chloroethane	ug/L	<10	
Methylene chloride	ug/L	<15	
1,1-Dichloroethene	ug/L	<5	
1,1-Dichloroethane	ug/L	<5	
cis-1,2-Dichloroethene	ug/L	<5	
trans-1,2-Dichloroethene	ug/L	<5	
Chloroform	ug/L	<5	
1,2-Dichloroethane	ug/L	<5	
1,1,1-Trichloroethane	ug/L	<5	
Carbon tetrachloride	ug/L	<5	
Bromodichloromethane	ug/L	<5	
1,2-Dichloropropane	ug/L	<5	
Trichloroethene	ug/L	<5	
Chlorodibromomethane	ug/L	<5	
1,1,2-Trichloroethane	ug/L	<5	
Benzene	ug/L	<5	
Tetrachloroethene	ug/L	<5	
1,1,2,2-Tetrachloroethane	ug/L	<5	
Toluene	ug/L	220	
Chlorobenzene	ug/L	<5	
Ethylbenzene	ug/L	<5	
Naphthalene	ug/L	80	
1,2,3-Trichlorobenzene	ug/L	<5	
1,2,4-Trichlorobenzene	ug/L	<5	
1,2,4-Trimethylbenzene	ug/L	800	
1,2-Dibromo-3-chloropropane	ug/L	<15	
1,2-Dibromoethane	ug/L	<10	
1,2-Dichlorobenzene	ug/L	<5	
1,3,5-Trimethylbenzene	ug/L	180	
1,3-Dichlorobenzene	ug/L	<5	
1,3-Dichloropropane	ug/L	<5	
1,4-Dichlorobenzene	ug/L	<5	
2,2-Dichloropropane	ug/L	<5	
2-Chlorotoluene	ug/L	<5	
4-Chlorotoluene	ug/L	<5	
Bromobenzene	ug/L	<5	
Dichlorodifluoromethane	ug/L	<10	
Hexachlorobutadiene	ug/L	<5	
Isopropylbenzene	ug/L	32	
Trichlorofluoromethane	ug/L	<5	
m + p-Xylene	ug/L	110	
n-Butylbenzene	ug/L	80	

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W66		
Parameter	Units	**6/30/93**	**1/0/00**
n-Propylbenzene	ug/L	65	
o-Xylene	ug/L	140	
p-Isopropyltoluene	ug/L	<5	
sec-Butylbenzene	ug/L	28	
tert-Butylbenzene	ug/L	<5	
Di-isopropyl ether	ug/L	18	
Methyl tert-butyl ether	ug/L	<5	
	ug/L		
	ug/L		
	ug/L		
	ug/L		
	ug/L		
	ug/L		
	ug/L		

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W67

Parameter	Units	6/29/93	1/0/00
Chloromethane	ug/L	<2	
Vinyl chloride	ug/L	<1	
Chloroethane	ug/L	<2	
Methylene chloride	ug/L	<3	
1,1-Dichloroethene	ug/L	<1	
1,1-Dichloroethane	ug/L	<1	
cis-1,2-Dichloroethene	ug/L	<1	
trans-1,2-Dichloroethene	ug/L	<1	
Chloroform	ug/L	7.4	
1,2-Dichloroethane	ug/L	<1	
1,1,1-Trichloroethane	ug/L	<1	
Carbon tetrachloride	ug/L	<1	
Bromodichloromethane	ug/L	<1	
1,2-Dichloropropane	ug/L	<1	
Trichloroethene	ug/L	23	
Chlorodibromomethane	ug/L	<1	
1,1,2-Trichloroethane	ug/L	<1	
Benzene	ug/L	<1	
Tetrachloroethene	ug/L	<1	
1,1,2,2-Tetrachloroethane	ug/L	<1	
Toluene	ug/L	29	
Chlorobenzene	ug/L	<1	
Ethylbenzene	ug/L	<1	
Naphthalene	ug/L	18	
1,2,3-Trichlorobenzene	ug/L	<1	
1,2,4-Trichlorobenzene	ug/L	<1	
1,2,4-Trimethylbenzene	ug/L	16	
1,2-Dibromo-3-chloropropane	ug/L	<3	
1,2-Dibromoethane	ug/L	<2	
1,2-Dichlorobenzene	ug/L	<1	
1,3,5-Trimethylbenzene	ug/L	8	
1,3-Dichlorobenzene	ug/L	<1	
1,3-Dichloropropane	ug/L	<1	
1,4-Dichlorobenzene	ug/L	<1	
2,2-Dichloropropane	ug/L	<1	
2-Chlorotoluene	ug/L	<1	
4-Chlorotoluene	ug/L	<1	
Bromobenzene	ug/L	<1	
Dichlorodifluoromethane	ug/L	<20	
Hexachlorobutadiene	ug/L	<1	
Isopropylbenzene	ug/L	2.8	
Trichlorofluoromethane	ug/L	<1	
m + p-Xylene	ug/L	<2	
n-Butylbenzene	ug/L	6.5	

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W67		
Parameter	Units	**6/29/93**	**1/0/00**
n-Propylbenzene	ug/L	2.8	
o-Xylene	ug/L	11	
p-Isopropyltoluene	ug/L	1.4	
sec-Butylbenzene	ug/L	7.8	
tert-Butylbenzene	ug/L	<1	
Di-isopropyl ether	ug/L	<1	
Methyl tert-butyl ether	ug/L	<1	
	ug/L		
	ug/L		
	ug/L		
	ug/L		
	ug/L		
	ug/L		
	ug/L		

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W69

Parameter	Units	12/29/93	1/0/00
Chloromethane	ug/L	<40	
Bromomethane	ug/L	<40	
Vinyl chloride	ug/L	<20	
Chloroethane	ug/L	<40	
Methylene chloride	ug/L	<60	
1,1-Dichloroethene	ug/L	<20	
1,1-Dichloroethane	ug/L	<20	
cis-1,2-Dichloroethene	ug/L	<20	
trans-1,2-Dichloroethene	ug/L	<20	
Chloroform	ug/L	<20	
1,2-Dichloroethane	ug/L	<20	
1,1,1-Trichloroethane	ug/L	<20	
Carbon tetrachloride	ug/L	<20	
Bromodichloromethane	ug/L	<20	
1,2-Dichloropropane	ug/L	<20	
cis-1,3-Dichloropropene	ug/L	<20	
Trichloroethene	ug/L	120	
Chlorodibromomethane	ug/L	<20	
1,1,2-Trichloroethane	ug/L	<20	
Benzene	ug/L	<20	
trans-1,3-Dichloropropene	ug/L	<20	
Bromoform	ug/L	<20	
Tetrachloroethene	ug/L	<20	
1,1,2,2-Tetrachloroethane	ug/L	<20	
Toluene	ug/L	38	
Chlorobenzene	ug/L	<20	
Ethylbenzene	ug/L	78	
Styrene	ug/L	<20	
Naphthalene	ug/L	72	
1,1,1,2-Tetrachloroethane	ug/L	<20	
1,1-Dichloropropene	ug/L	<20	
1,2,3-Trichlorobenzene	ug/L	<20	
1,2,3-Trichloropropane	ug/L	<20	
1,2,4-Trichlorobenzene	ug/L	<20	
1,2,4-Trimethylbenzene	ug/L	2500	
1,2-Dibromo-3-chloropropane	ug/L	<60	
1,2-Dibromoethane	ug/L	<40	
1,2-Dichlorobenzene	ug/L	<20	
1,3,5-Trimethylbenzene	ug/L	680	
1,3-Dichlorobenzene	ug/L	<20	
1,3-Dichloropropane	ug/L	<20	
1,4-Dichlorobenzene	ug/L	<20	
2,2-Dichloropropane	ug/L	<20	
2-Chlorotoluene	ug/L	<20	

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W69		
Parameter	Units	**12/29/93**	**1/0/00**
4-Chlorotoluene	ug/L	<20	
Bromobenzene	ug/L	<20	
Bromochloromethane	ug/L	<20	
Dibromomethane	ug/L	<20	
Dichlorodifluoromethane	ug/L	<40	
Hexachlorobutadiene	ug/L	<20	
Isopropylbenzene	ug/L	140	
Trichlorofluoromethane	ug/L	<20	
m + p-Xylene	ug/L	360	
n-Butylbenzene	ug/L	140	
n-Propylbenzene	ug/L	340	
o-Xylene	ug/L	600	
p-Isopropyltoluene	ug/L	60	
sec-Butylbenzene	ug/L	64	
tert-Butylbenzene	ug/L	<20	
	ug/L		
	ug/L		
	ug/L		
	ug/L		
	ug/L		
	ug/L		
	ug/L		
	ug/L		
	ug/L		

A4

Dioxin/Furans

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W02

Parameter	Units	9/18/92	6/22/94	7/6/95	7/10/96	6/25/98
1234678-HpCDD	ng/L	999	510.868	331.141	180	1200
1234678-HpCDF	ng/L	285	184.49	184.245	60	230
123478-HxCDD	ng/L	0.037	<0.471	<1.351	<0.73	0.42
123478-HxCDF	ng/L	17.9	12.921	15.502	5.6	17
1234789-HpCDF	ng/L	18.8	11.676	8.754	3.7	17
123678-HxCDD	ng/L	24.1	19.782	21.325	9.9	35
123678-HxCDF	ng/L	2.45	1.808	245.317	<0.66	<16
12378-PeCDD	ng/L	0.043	<0.606	<0.209	<0.56	<0.094
12378-PeCDF	ng/L	0.671	<0.687	41.677	<0.3	0.88
123789-HxCDD	ng/L	3.49	1.297	<1.579	<0.5	2.9
123789-HxCDF	ng/L	0.262	2.577	2.982	<0.93	0.4
234678-HxCDF	ng/L	6.02	<3.635	9.71	<2.2	2.5
23478-PeCDF	ng/L	1.39	<1.124	<0.357	<0.39	1.5
2378-TCDD	ng/L	0.011	<0.505	<0.24	<0.19	<0.015
2378-TCDF	ng/L	0.103	<0.387	<0.219	<0.12	0.66
OCDD	ng/L	5250	4308.834	4285.786	1400	8400
OCDF	ng/L	1850	1017.302	1273.765	420	1300
Total HpCDD	ng/L	1530	764.43	565.36	270	1800
Total HpCDF	ng/L	1790	1013.53	992.16	290	1100
Total HxCDD	ng/L	68.3	41.39	21.32	19	77
Total HxCDF	ng/L	407.3	250.69	781.96	100	320
Total PeCDD	ng/L	0.306	<0.606	<1.12	<0.56	<0.099
Total PeCDF	ng/L	17.3	9.3	183.44	<6.3	21
Total TCDD	ng/L	0.366	<0.505	<0.24	<0.19	0.043
Total TCDF	ng/L	1.38	<0.689	64.48	<1.6	1.7

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W03A

Parameter	Units	9/18/92	6/30/93	6/22/94	7/6/95	7/10/96
1234678-HpCDD	ng/L	422	2082.462	22602.051	5502.558	3700
1234678-HpCDF	ng/L	108	966.584	10396.106	6652.747	1600
123478-HxCDD	ng/L	0.255	<403.823	17.622	<2.753	<0.42
123478-HxCDF	ng/L	8.53	98.536	1110.846	1077.283	120
1234789-HpCDF	ng/L	7.46	75.208	656.879	329.606	100
123678-HxCDD	ng/L	10.8	141.598	1207.937	467.088	180
123678-HxCDF	ng/L	1.49	14.053	53.782	18195.655	18
12378-PeCDD	ng/L	0.025	0.197	1.354	<1.384	<1.2
12378-PeCDF	ng/L	0.324	2.608	34.666	959.595	5.6
123789-HxCDD	ng/L	1.49	10.861	97.574	33.653	11
123789-HxCDF	ng/L	0.116	15.625	180.593	166.555	7.6
234678-HxCDF	ng/L	2.51	41.895	289.538	249.625	11
23478-PeCDF	ng/L	0.89	12.907	77.122	29.77	11
2378-TCDD	ng/L	<0.005	0.056	0.586	<2.313	<0.3
2378-TCDF	ng/L	0.073	2.568	21.316	<2.77	<1.9
OCDD	ng/L	2460	3366.196	99621.522	39690.459	32000
OCDF	ng/L	664	2102.479	150738.51	26948.508	27000
Total HpCDD	ng/L	653	3651.206	32960.78	7874.67	5100
Total HpCDF	ng/L	597	3657.721	59876	21812.96	7600
Total HxCDD	ng/L	30.5	358.289	3080.5	687.53	360
Total HxCDF	ng/L	165	1508.647	19291.24	35135.42	1800
Total PeCDD	ng/L	0.247	2.032	1.35	5.73	<1.2
Total PeCDF	ng/L	9.86	225.072	856.69	1672.16	100
Total TCDD	ng/L	0.122	0.693	0.59	<2.313	<0.3
Total TCDF	ng/L	1	24.559	80.66	1594.65	8

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W03B

Parameter	Units	9/18/92	6/29/93	6/22/94	7/6/95	7/10/96	6/24/98
1234678-HpCDD	ng/L	85.5	2.451	3.788	15.712	9	45
1234678-HpCDF	ng/L	22	0.677	1.798	4.961	<3.1	13
123478-HxCDD	ng/L	0.024	<0.309	<0.48	<0.131	<0.44	0.027
123478-HxCDF	ng/L	1.34	0.046	<0.455	<0.127	<0.47	0.8
1234789-HpCDF	ng/L	1.27	0.053	<0.475	<0.173	<0.2	1.8
123678-HxCDD	ng/L	2.6	0.112	<0.45	<0.121	<0.44	1.6
123678-HxCDF	ng/L	0.205	0.009	<0.411	4.94	<0.47	<0.95
12378-PeCDD	ng/L	0.017	<0.01	<0.567	<0.158	<0.45	<0.008
12378-PeCDF	ng/L	0.117	<0.029	<0.332	1.463	<0.45	0.054
123789-HxCDD	ng/L	0.497	0.023	<0.429	<0.116	<0.33	0.2
123789-HxCDF	ng/L	0.045	<0.049	<0.495	<0.148	<0.41	<0.018
234678-HxCDF	ng/L	0.216	0.06	<0.465	<0.132	<0.41	0.81
23478-PeCDF	ng/L	0.189	<0.033	<0.317	<0.12	<0.45	<0.12
2378-TCDD	ng/L	<0.003	<0.01	<0.52	<0.16	<0.57	<0.005
2378-TCDF	ng/L	0.028	<0.016	<0.338	<0.117	<0.4	0.035
OCDD	ng/L	618	22.814	35.59	150.323	82	410
OCDF	ng/L	113	2.683	6.883	21.176	22	78
Total HpCDD	ng/L	134	3.827	3.79	23.83	13	67
Total HpCDF	ng/L	116	3.424	7.06	25.63	9.3	60
Total HxCDD	ng/L	9.03	0.298	<0.429	<0.116	<0.93	3.8
Total HxCDF	ng/L	30.1	1.106	<0.411	10.73	<4.1	15
Total PeCDD	ng/L	0.044	0.001	<0.567	<0.158	<0.45	<0.008
Total PeCDF	ng/L	2.7	0.151	<0.317	3.43	<0.45	1
Total TCDD	ng/L	0.03	0.004	<0.52	<0.16	<0.57	0.013
Total TCDF	ng/L	0.224	0.044	<0.722	<0.426	<0.4	0.16

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W08

Parameter	Units	9/18/92	6/28/93	6/21/94	7/6/95	7/8/96	6/23/98
1234678-HpCDD	ng/L	36.1	1.319	<0.265	25.914	<0.75	0.22
1234678-HpCDF	ng/L	8.36	0.381	<0.374	10.055	<0.64	0.052
123478-HxCDD	ng/L	0.044	<0.171	<0.428	<0.123	<0.39	<0.005
123478-HxCDF	ng/L	0.575	0.028	<0.392	<0.112	<0.3	<0.006
1234789-HpCDF	ng/L	0.594	0.027	<0.434	<0.146	<0.64	<0.004
123678-HxCDD	ng/L	1.32	0.066	<0.402	1.062	<0.39	<0.007
123678-HxCDF	ng/L	0.113	0.016	<0.355	10.571	<0.3	<0.006
12378-PeCDD	ng/L	0.006	0.015	<0.45	<0.166	<0.41	<0.007
12378-PeCDF	ng/L	0.057	0.016	<0.277	2.653	<0.22	<0.009
123789-HxCDD	ng/L	0.231	<0.125	<0.382	<0.108	<0.39	<0.005
123789-HxCDF	ng/L	0.008	0.013	<0.427	<0.13	<0.3	<0.006
234678-HxCDF	ng/L	0.123	0.012	<0.401	<0.116	<0.3	<0.005
23478-PeCDF	ng/L	0.092	0.005	<0.264	<0.125	<0.22	<0.008
2378-TCDD	ng/L	<0.002	0.015	<0.433	0.497	<0.22	<0.004
2378-TCDF	ng/L	0.016	0.009	<0.341	<0.103	<0.39	<0.004
OCDD	ng/L	272	12.466	4.249	223.085	2.8	2.3
OCDF	ng/L	42.3	1.328	<0.546	40.119	<0.54	0.29
Total HpCDD	ng/L	56.7	2.067	<0.265	38.97	<0.75	0.34
Total HpCDF	ng/L	46	2.287	<0.374	10.05	<0.64	0.2
Total HxCDD	ng/L	3.87	0.155	<0.382	1.06	<0.39	<0.009
Total HxCDF	ng/L	13.1	0.71	<0.355	29.92	<0.3	<0.03
Total PeCDD	ng/L	0.033	0.016	<0.45	<0.166	<0.41	<0.007
Total PeCDF	ng/L	1.1	0.126	<0.264	8.18	<0.22	<0.009
Total TCDD	ng/L	0.035	0.019	<0.433	0.5	<0.22	<0.004
Total TCDF	ng/L	0.074	0.027	<0.533	<0.428	<0.39	<0.004

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W10A						
Parameter	Units	9/18/92	6/30/93	6/22/94	7/6/95	7/9/96	6/24/98
1234678-HpCDD	ng/L	14.1	6.462	<0.263	4.846	2.5	9.6
1234678-HpCDF	ng/L	3.5	2.324	<0.282	1.756	0.81	2.7
123478-HxCDD	ng/L	0.003	0.007	<0.311	<0.252	<0.42	<0.026
123478-HxCDF	ng/L	0.221	0.122	<0.278	<0.257	<0.39	0.096
1234789-HpCDF	ng/L	0.246	0.169	<0.362	<0.274	<0.22	0.21
123678-HxCDD	ng/L	0.428	0.195	<0.303	<0.232	<0.42	0.2
123678-HxCDF	ng/L	0.048	0.021	<0.225	<0.239	<0.39	<0.38
12378-PeCDD	ng/L	<0.006	0.003	<0.349	<0.302	<0.54	<0.007
12378-PeCDF	ng/L	0.02	0.004	<0.195	<0.226	<0.17	<0.005
123789-HxCDD	ng/L	0.077	0.027	<0.283	<0.222	<0.42	0.032
123789-HxCDF	ng/L	<0.01	0.044	<0.303	<0.3	<0.39	<0.005
234678-HxCDF	ng/L	0.047	0.064	<0.271	<0.267	<0.39	<0.037
23478-PeCDF	ng/L	0.035	0.01	<0.186	<0.219	<0.17	<0.012
2378-TCDD	ng/L	<0.003	0.002	<0.355	<0.244	<0.19	<0.004
2378-TCDF	ng/L	<0.01	0.044	<0.228	<0.245	<0.27	0.006
OCDD	ng/L	189	59.61	12.164	53.873	32	190
OCDF	ng/L	18.7	13.93	<0.715	8.13	12	22
Total HpCDD	ng/L	22.5	10.107	<0.263	7.49	3.9	16
Total HpCDF	ng/L	17.9	13.1	<0.282	8.2	4.4	8.1
Total HxCDD	ng/L	1.23	0.544	<0.283	<0.222	<0.42	0.64
Total HxCDF	ng/L	4.3	2.866	<0.225	<0.239	<0.71	2.3
Total PeCDD	ng/L	0.02	0.003	<0.349	<0.302	<0.54	<0.016
Total PeCDF	ng/L	0.446	0.31	<0.186	<0.219	<0.17	0.099
Total TCDD	ng/L	0.263	0.013	<0.355	<0.244	<0.19	<0.013
Total TCDF	ng/L	0.173	0.146	<0.615	<0.8	<0.27	0.18

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W11

Parameter	Units	9/18/92	6/30/93	6/21/94	7/5/95	7/9/96	6/24/98
1234678-HpCDD	ng/L	10.2	5.738	<0.39	3.408	<0.62	1.9
1234678-HpCDF	ng/L	2.57	1.549	<0.353	1.045	<0.3	0.4
123478-HxCDD	ng/L	0.013	0.006	<0.408	<0.125	<0.55	<0.006
123478-HxCDF	ng/L	0.165	0.095	<0.31	<0.095	<0.38	<0.024
1234789-HpCDF	ng/L	0.148	0.1	<0.452	<0.115	<0.3	0.025
123678-HxCDD	ng/L	0.367	0.253	<0.397	<0.116	<0.55	0.071
123678-HxCDF	ng/L	0.035	0.021	<0.251	1.109	<0.38	<0.008
12378-PeCDD	ng/L	<0.004	0.004	<0.421	<0.113	<0.84	<0.014
12378-PeCDF	ng/L	0.017	0.006	<0.26	<0.096	<0.27	<0.005
123789-HxCDD	ng/L	0.139	0.029	<0.37	<0.111	<0.55	<0.012
123789-HxCDF	ng/L	<0.012	0.039	<0.338	<0.104	<0.38	<0.003
234678-HxCDF	ng/L	0.032	0.044	<0.302	<0.099	<0.38	<0.003
23478-PeCDF	ng/L	0.03	0.016	<0.247	<0.093	<0.27	<0.005
2378-TCDD	ng/L	<0.002	<0.01	<0.404	<0.118	<0.18	<0.005
2378-TCDF	ng/L	0.006	0.005	<0.306	<0.099	<0.5	<0.002
OCDD	ng/L	77.1	49.283	10.325	35.738	<1.2	21
OCDF	ng/L	10.9	4.901	<0.693	3.41	<0.72	1.9
Total HpCDD	ng/L	15.4	8.572	<0.39	5.21	<0.62	2.9
Total HpCDF	ng/L	12	7.891	<0.353	4.02	<0.3	1.7
Total HxCDD	ng/L	1.21	0.655	<0.37	<0.111	<0.55	0.15
Total HxCDF	ng/L	3.24	2.338	<0.251	1.04	<0.38	0.33
Total PeCDD	ng/L	0.035	0.006	<0.421	<0.113	<0.84	<0.014
Total PeCDF	ng/L	0.353	0.388	<0.247	<0.093	<0.27	<0.005
Total TCDD	ng/L	0.043	0.002	<0.404	<0.118	<0.18	<0.005
Total TCDF	ng/L	0.042	0.041	<0.433	<0.395	<0.5	<0.017

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W16

Parameter	Units	9/18/92	6/29/93	6/21/94	7/6/95	7/8/96	6/24/98
1234678-HpCDD	ng/L	14	0.98	<0.382	<0.252	<0.29	1.4
1234678-HpCDF	ng/L	3.2	0.254	<0.292	<0.381	<0.23	0.43
123478-HxCDD	ng/L	0.006	<0.128	<0.353	<0.372	<0.46	<0.012
123478-HxCDF	ng/L	0.183	0.02	<0.29	<0.426	<0.4	<0.018
1234789-HpCDF	ng/L	0.195	0.025	<0.319	<0.45	<0.23	<0.021
123678-HxCDD	ng/L	0.361	0.044	<0.344	<0.343	<0.46	0.04
123678-HxCDF	ng/L	0.031	0.007	<0.236	<0.395	<0.4	<0.02
12378-PeCDD	ng/L	<0.003	0.003	<0.356	<0.357	<0.68	<0.01
12378-PeCDF	ng/L	0.016	0.004	<0.245	<0.237	<0.23	<0.011
123789-HxCDD	ng/L	0.118	<0.097	<0.32	<0.328	<0.46	<0.012
123789-HxCDF	ng/L	<0.006	0.008	<0.317	<0.495	<0.4	<0.005
234678-HxCDF	ng/L	0.081	0.009	<0.283	<0.441	<0.4	<0.005
23478-PeCDF	ng/L	0.026	0.005	<0.233	<0.23	<0.23	<0.01
2378-TCDD	ng/L	<0.002	<0.015	<0.382	<0.328	<0.23	<0.003
2378-TCDF	ng/L	0.008	<0.007	<0.28	<0.253	<0.45	<0.001
OCDD	ng/L	123	8.688	9.754	10.046	<1.5	22
OCDF	ng/L	16.2	1.009	<0.706	<0.548	<0.52	2.8
Total HpCDD	ng/L	21.7	1.473	<0.382	<0.252	<0.29	2.3
Total HpCDF	ng/L	15.9	1.219	<0.292	<0.381	<0.23	1.4
Total HxCDD	ng/L	1.41	0.061	<0.32	<0.328	<0.46	0.11
Total HxCDF	ng/L	3.66	0.365	<0.236	<0.395	<0.4	0.22
Total PeCDD	ng/L	0.027	0.003	<0.356	<0.357	<0.68	<0.01
Total PeCDF	ng/L	0.301	0.037	<0.233	<0.23	<0.23	<0.048
Total TCDD	ng/L	0.047	0.001	<0.382	<0.328	<0.23	<0.003
Total TCDF	ng/L	0.053	<1	0.542	<0.253	<0.45	<0.021

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W25

Parameter	Units	9/18/92	6/28/93	6/21/94	7/5/95	6/23/98
1234678-HpCDD	ng/L	2850	222.258	36.801	3.067	73
1234678-HpCDF	ng/L	776	86.208	14.908	1.507	25
123478-HxCDD	ng/L	1.16	<24.369	<0.311	<0.148	0.041
123478-HxCDF	ng/L	38.4	3.73	<0.264	<0.136	1.1
1234789-HpCDF	ng/L	47.8	5.105	0.664	<0.128	1.3
123678-HxCDD	ng/L	43.7	8.846	<0.303	<0.136	2.2
123678-HxCDF	ng/L	8.1	0.493	0.472	1.59	<2.2
12378-PeCDD	ng/L	0.101	0.013	<0.315	<0.171	<0.012
12378-PeCDF	ng/L	1.49	0.162	<0.231	<0.094	0.026
123789-HxCDD	ng/L	9.06	0.574	<0.282	<0.131	0.22
123789-HxCDF	ng/L	0.452	1.324	<0.288	<0.158	0.03
234678-HxCDF	ng/L	13.3	1.417	<0.257	<0.141	0.24
23478-PeCDF	ng/L	3.46	0.299	<0.219	<0.091	0.073
2378-TCDD	ng/L	0.022	<0.018	<0.342	<0.118	<0.004
2378-TCDF	ng/L	0.277	0.091	<0.245	<0.094	0.013
OCDD	ng/L	14000	1496.469	257.441	20.664	440
OCDF	ng/L	5170	407.868	76.435	4.231	160
Total HpCDD	ng/L	4350	339.489	55.21	4.6	110
Total HpCDF	ng/L	5100	526.05	71.51	5.2	120
Total HxCDD	ng/L	223	22.431	<0.282	<0.131	5.8
Total HxCDF	ng/L	1200	136.281	12.69	2.4	23
Total PeCDD	ng/L	0.84	0.062	<0.315	<0.171	<0.012
Total PeCDF	ng/L	43	16.327	<0.219	<0.091	0.75
Total TCDD	ng/L	0.321	0.04	<0.342	<0.118	<0.006
Total TCDF	ng/L	3.54	2.893	<0.534	<0.353	0.066

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W26

Parameter	Units	9/18/92	6/30/93	6/22/94	7/6/95	7/9/96	6/24/98
1234678-HpCDD	ng/L	6.26	1.241	<0.283	1.565	<0.6	5.2
1234678-HpCDF	ng/L	1.46	0.339	<0.294	<0.132	<0.42	0.45
123478-HxCDD	ng/L	0.007	0.003	<0.37	<0.144	<0.57	<0.012
123478-HxCDF	ng/L	0.092	0.024	<0.315	<0.16	<0.48	0.043
1234789-HpCDF	ng/L	0.095	0.025	<0.342	<0.156	<0.42	<0.045
123678-HxCDD	ng/L	0.25	0.056	<0.347	<0.132	<0.57	0.07
123678-HxCDF	ng/L	0.021	0.007	<0.285	<0.149	<0.48	0.043
12378-PeCDD	ng/L	0.003	0.003	<0.476	<0.162	<0.41	<0.023
12378-PeCDF	ng/L	0.008	0.002	<0.315	<0.135	<0.19	<0.015
123789-HxCDD	ng/L	0.05	0.005	<0.33	<0.127	<0.57	<0.02
123789-HxCDF	ng/L	0.002	0.014	<0.343	<0.186	<0.48	<0.014
234678-HxCDF	ng/L	0.022	0.014	<0.323	<0.166	<0.48	<0.013
23478-PeCDF	ng/L	0.017	0.005	<0.301	<0.131	<0.19	<0.014
2378-TCDD	ng/L	<0.007	<0.008	<0.452	<0.168	<0.22	<0.007
2378-TCDF	ng/L	<0.017	0.051	<0.339	<0.143	<0.48	<0.002
OCDD	ng/L	49.2	12.301	<0.658	15.758	<1.3	120
OCDF	ng/L	6.76	1.591	<0.607	2.163	<0.92	2.6
Total HpCDD	ng/L	9.83	2.008	<0.283	2.37	<0.6	10
Total HpCDF	ng/L	7.29	2.024	<0.294	1.76	<0.42	1.9
Total HxCDD	ng/L	0.673	0.144	<0.33	<0.127	<0.57	0.27
Total HxCDF	ng/L	2.18	0.638	<0.285	<0.149	<0.48	0.59
Total PeCDD	ng/L	0.021	0.003	<0.476	<0.162	<0.41	<0.023
Total PeCDF	ng/L	0.165	0.111	<0.301	<0.131	<0.19	0.037
Total TCDD	ng/L	0.724	0.001	<0.452	<0.168	<0.22	<0.007
Total TCDF	ng/L	0.132	0.057	<0.723	<0.446	<0.48	0.25

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W28

Parameter	Units	9/18/92	6/29/93	6/22/94	7/5/95	7/9/96	6/24/98
1234678-HpCDD	ng/L	10.1	0.942	<0.438	0.836	<0.37	1.1
1234678-HpCDF	ng/L	2.85	0.245	<0.381	<0.09	<0.31	0.27
123478-HxCDD	ng/L	0.008	<0.105	<0.472	<0.165	<0.53	<0.005
123478-HxCDF	ng/L	0.135	0.017	<0.368	<0.101	<0.45	<0.014
1234789-HpCDF	ng/L	0.194	0.025	<0.488	<0.106	<0.31	<0.025
123678-HxCDD	ng/L	0.279	0.04	<0.46	<0.152	<0.53	0.036
123678-HxCDF	ng/L	0.021	0.006	<0.299	<0.093	<0.45	<0.018
12378-PeCDD	ng/L	<0.003	0.004	<0.479	<0.139	<0.68	<0.007
12378-PeCDF	ng/L	0.013	0.003	<0.318	<0.095	<0.27	<0.004
123789-HxCDD	ng/L	0.062	<0.082	<0.429	<0.146	<0.53	<0.005
123789-HxCDF	ng/L	<0.007	0.011	<0.403	<0.117	<0.45	<0.003
234678-HxCDF	ng/L	0.03	0.01	<0.359	<0.104	<0.45	<0.006
23478-PeCDF	ng/L	0.023	<0.009	<0.302	<0.092	<0.27	<0.004
2378-TCDD	ng/L	<0.001	<0.01	<0.46	<0.091	<0.22	<0.004
2378-TCDF	ng/L	<0.007	0.056	<0.353	<0.072	<0.53	<0.001
OCDD	ng/L	79.9	15.634	5.466	8.622	<0.95	12
OCDF	ng/L	24.4	0.99	<0.954	1.335	<0.82	1.2
Total HpCDD	ng/L	15.2	1.54	<0.438	0.84	<0.37	1.8
Total HpCDF	ng/L	14.4	1.327	<0.381	<0.09	<0.31	0.87
Total HxCDD	ng/L	0.948	0.103	<0.429	<0.146	<0.53	0.11
Total HxCDF	ng/L	2.86	0.397	<0.299	<0.093	<0.45	0.18
Total PeCDD	ng/L	0.019	0.005	<0.479	<0.139	<0.68	<0.007
Total PeCDF	ng/L	0.237	0.049	<0.302	<0.092	<0.27	<0.042
Total TCDD	ng/L	0.066	0.001	<0.46	<0.091	<0.22	<0.004
Total TCDF	ng/L	0.039	0.068	<0.608	<0.375	<0.53	<0.016

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W29

Parameter	Units	9/18/92	6/30/93	7/5/95	7/9/96	6/23/98
1234678-HpCDD	ng/L	7.45	0.618	0.678	<0.5	0.71
1234678-HpCDF	ng/L	1.58	0.158	<0.102	<0.45	0.17
123478-HxCDD	ng/L	0.01	0.004	<0.091	<0.48	<0.004
123478-HxCDF	ng/L	0.095	0.013	<0.098	<0.32	<0.018
1234789-HpCDF	ng/L	0.118	<1.333	<0.117	<0.45	<0.022
123678-HxCDD	ng/L	0.247	0.032	<0.085	<0.48	0.025
123678-HxCDF	ng/L	0.016	0.005	<0.093	<0.32	<0.019
12378-PeCDD	ng/L	<0.002	<0.005	<0.11	<0.53	<0.009
12378-PeCDF	ng/L	0.009	0.002	<0.398	<0.2	<0.009
123789-HxCDD	ng/L	0.036	0.01	<0.081	<0.48	<0.009
123789-HxCDF	ng/L	0.01	0.015	<0.108	<0.32	<0.009
234678-HxCDF	ng/L	0.027	<0.006	<0.102	<0.32	<0.007
23478-PeCDF	ng/L	0.015	<0.014	<0.096	<0.2	<0.008
2378-TCDD	ng/L	<0.001	<0.009	<0.117	<0.24	<0.004
2378-TCDF	ng/L	<0.005	0.009	<0.077	<0.34	<0.001
OCDD	ng/L	52.8	7.613	6.783	<1.5	7
OCDF	ng/L	7.32	0.497	<0.147	<0.76	1
Total HpCDD	ng/L	11.4	1.05	0.68	<0.5	1.1
Total HpCDF	ng/L	8.05	0.828	<0.102	<0.45	0.6
Total HxCDD	ng/L	0.673	0.1	<0.081	<0.48	0.059
Total HxCDF	ng/L	2.04	0.27	<0.093	<0.32	0.1
Total PeCDD	ng/L	0.019	0.001	<0.11	<0.53	<0.009
Total PeCDF	ng/L	0.092	0.051	<0.398	<0.2	<0.021
Total TCDD	ng/L	0.043	0.002	<0.117	<0.24	0.01
Total TCDF	ng/L	0.032	0.019	<0.395	<0.34	0.13

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W33

Parameter	Units	6/30/93	7/9/96	6/24/98
1234678-HpCDD	ng/L	2489.212	1500	4100
1234678-HpCDF	ng/L	1098.028	650	1100
123478-HxCDD	ng/L	<1344.341	<1.6	1.9
123478-HxCDF	ng/L	175.962	49	81
1234789-HpCDF	ng/L	114.601	37	60
123678-HxCDD	ng/L	283.526	97	190
123678-HxCDF	ng/L	27.605	<8.8	13
12378-PeCDD	ng/L	0.573	<0.87	0.36
12378-PeCDF	ng/L	8.906	4.9	9.6
123789-HxCDD	ng/L	44.527	10	23
123789-HxCDF	ng/L	27.478	<5.9	1.4
234678-HxCDF	ng/L	62.15	5.8	13
23478-PeCDF	ng/L	40.396	8.5	21
2378-TCDD	ng/L	<0.139	<0.14	0.019
2378-TCDF	ng/L	11.603	<2.6	5.1
OCDD	ng/L	3795.085	13000	12000
OCDF	ng/L	2493.375	8600	3800
Total HpCDD	ng/L	4372.31	2100	5900
Total HpCDF	ng/L	4712.778	2800	5100
Total HxCDD	ng/L	915.659	230	480
Total HxCDF	ng/L	2325.545	920	1500
Total PeCDD	ng/L	4.972	<0.87	1.5
Total PeCDF	ng/L	573.111	96	220
Total TCDD	ng/L	0.302	<0.14	0.25
Total TCDF	ng/L	65.51	11	30

Summary of Analytical Data
Wauleco, Inc.
Wausau, Wisconsin

Well ID:	W36

Parameter	Units	9/18/92	7/10/96	6/25/98
1234678-HpCDD	ng/L	3320	650	1700
1234678-HpCDF	ng/L	634	150	380
123478-HxCDD	ng/L	1.43	<1.3	0.68
123478-HxCDF	ng/L	41.4	13	21
1234789-HpCDF	ng/L	39.8	7.8	24
123678-HxCDD	ng/L	61.2	38	74
123678-HxCDF	ng/L	7.05	<1.3	55
12378-PeCDD	ng/L	0.168	<0.47	0.11
12378-PeCDF	ng/L	3.86	<1.6	2.1
123789-HxCDD	ng/L	9.02	<1.5	5.8
123789-HxCDF	ng/L	0.763	<3.3	0.97
234678-HxCDF	ng/L	7.73	<4.5	6.2
23478-PeCDF	ng/L	6.18	<1.6	4.6
2378-TCDD	ng/L	0.011	<0.15	0.007
2378-TCDF	ng/L	1.07	<0.57	0.98
OCDD	ng/L	14700	5500	8500
OCDF	ng/L	2480	1200	2500
Total HpCDD	ng/L	4990	970	2400
Total HpCDF	ng/L	4070	690	2000
Total HxCDD	ng/L	162	75	150
Total HxCDF	ng/L	1030	250	490
Total PeCDD	ng/L	1.4	<0.47	0.48
Total PeCDF	ng/L	79.8	15	43
Total TCDD	ng/L	0.353	<0.15	0.1
Total TCDF	ng/L	7.46	<2.2	3.3

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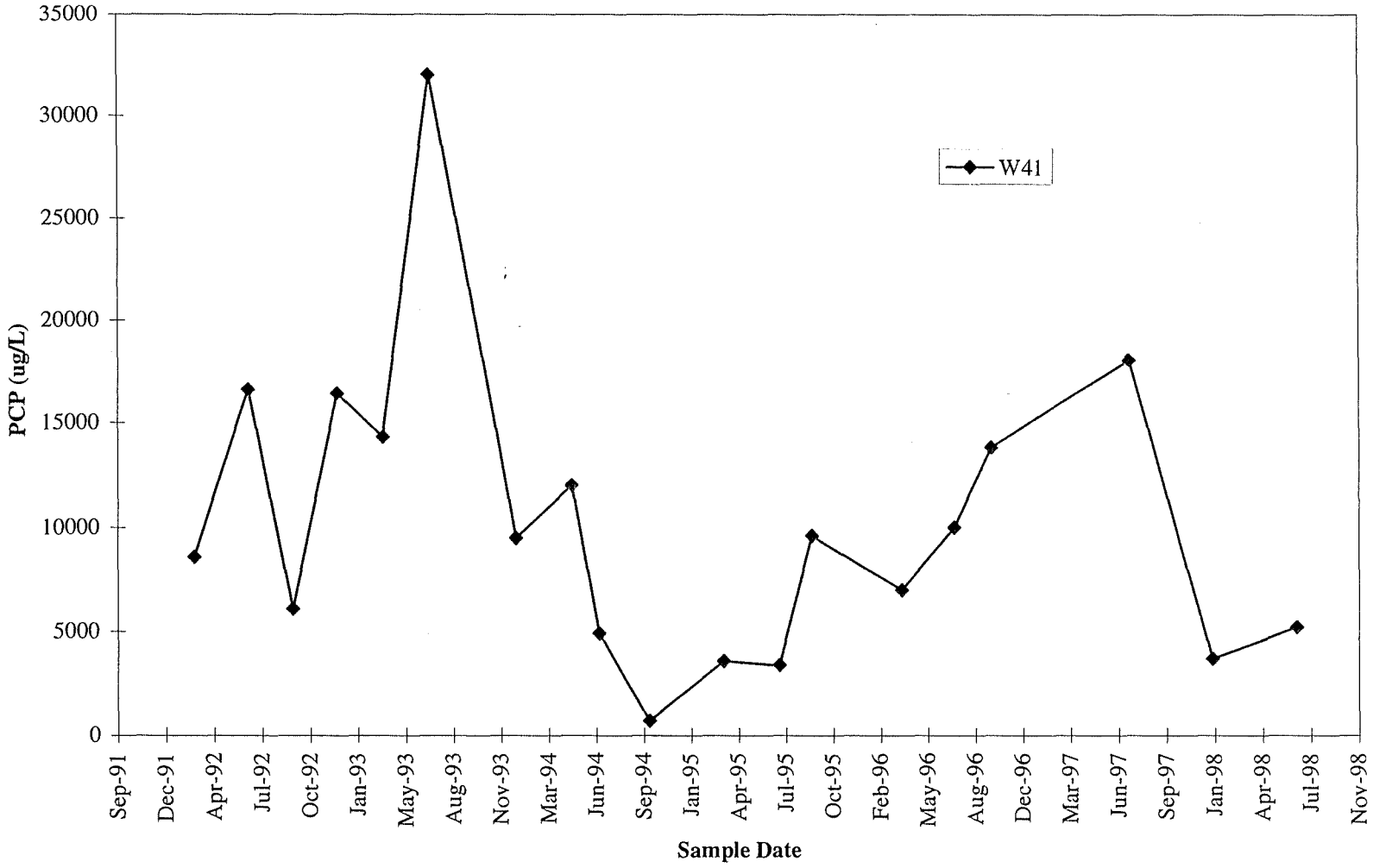
TIME TREND GRAPHICS

B1 PCP Time Trends
B2 Chloride Time Trends
B3 Dioxin/Furan Toxicity Equivalent Time Trends

B1

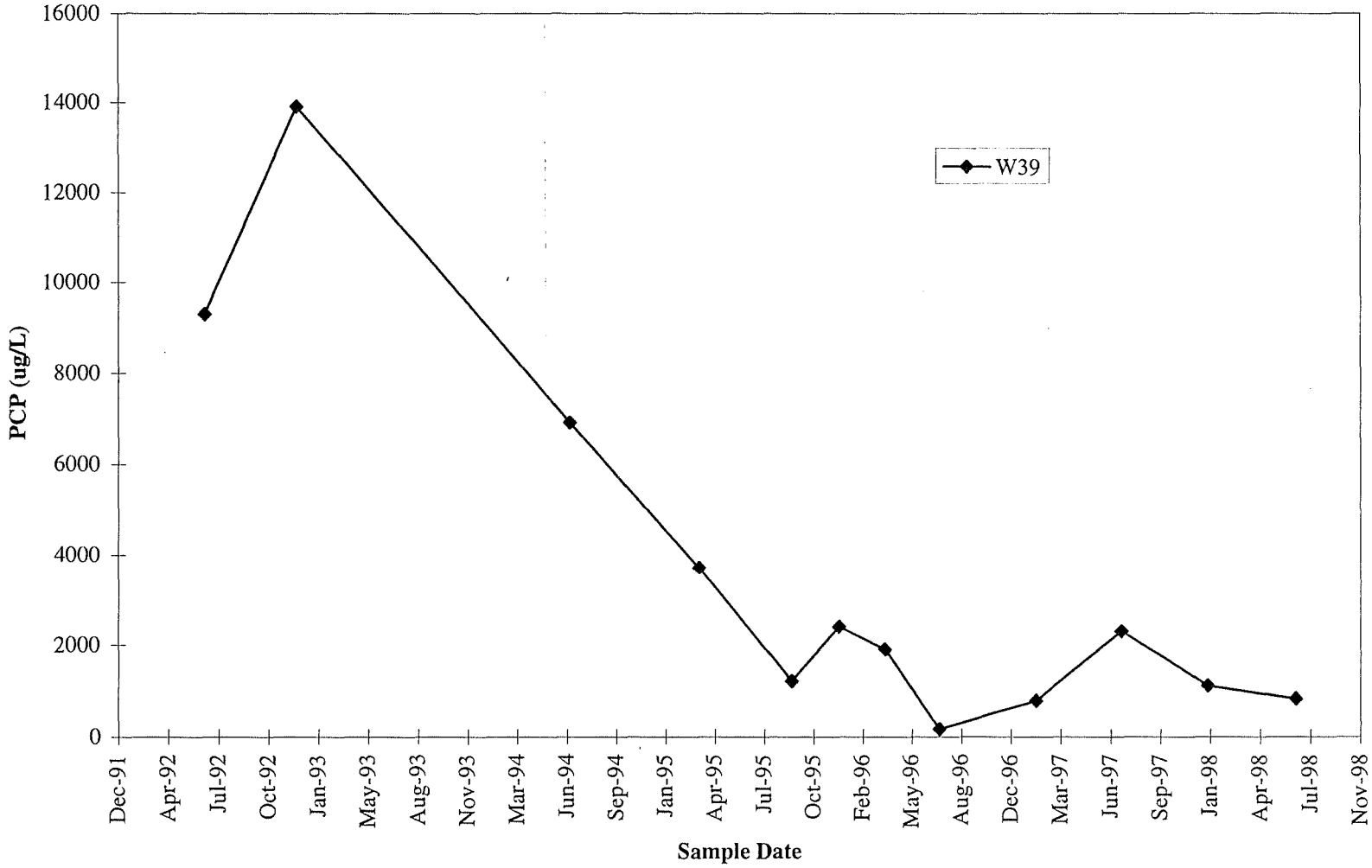
PCP Time Trends

Pentachlorophenol Concentrations
Quarterly Groundwater Monitoring



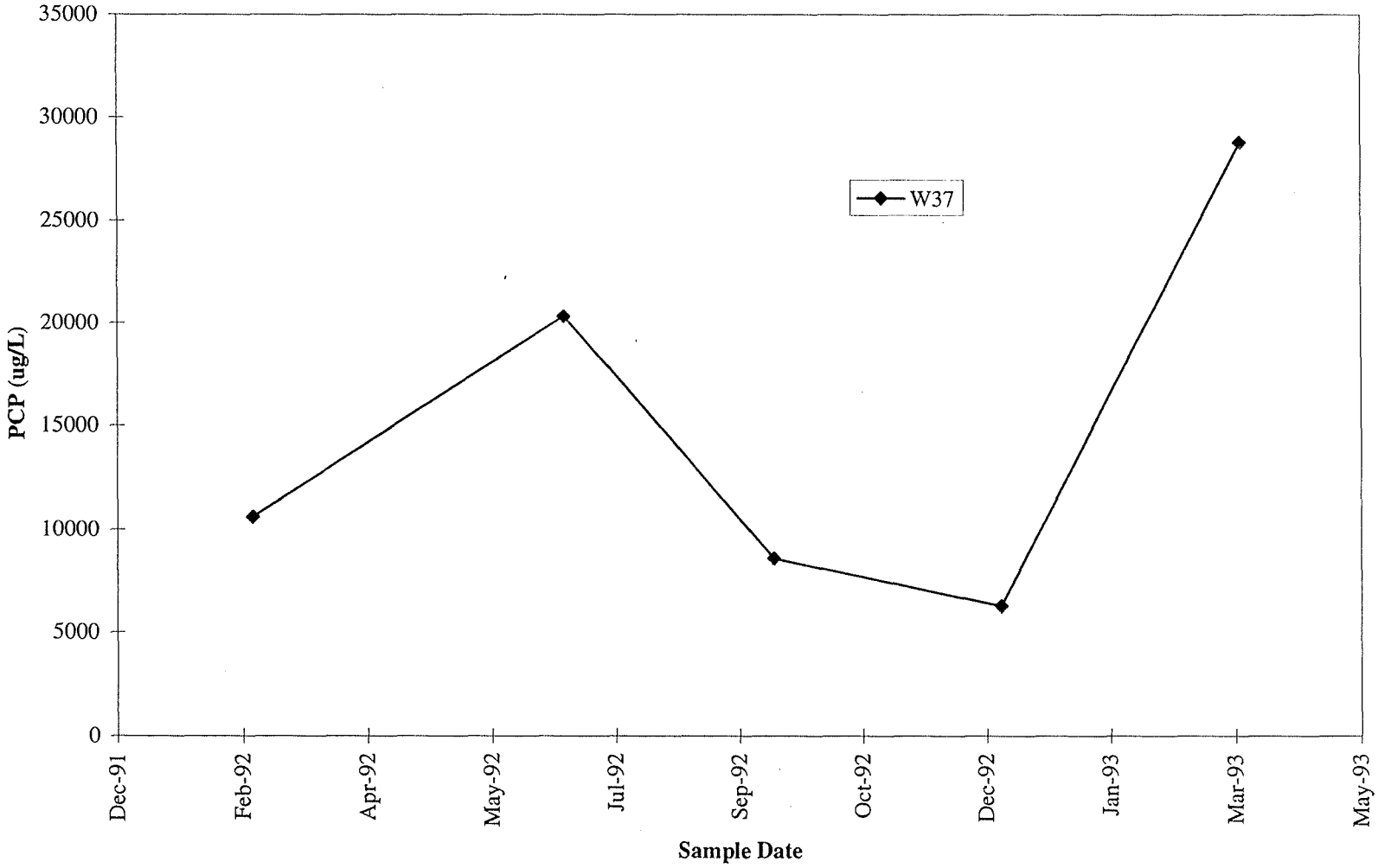
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Pentachlorophenol Concentrations
Quarterly Groundwater Monitoring



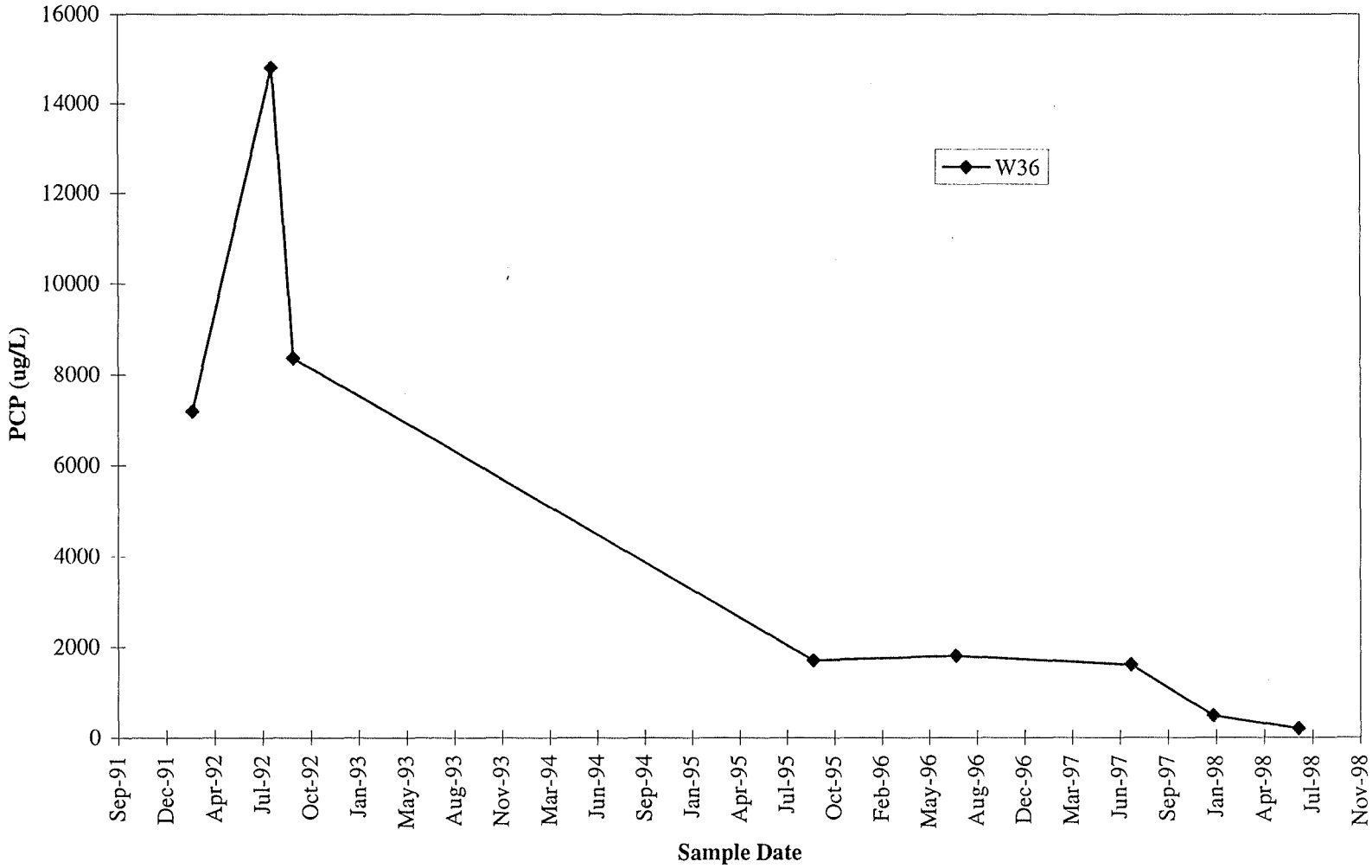
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Pentachlorophenol Concentrations
Quarterly Groundwater Monitoring



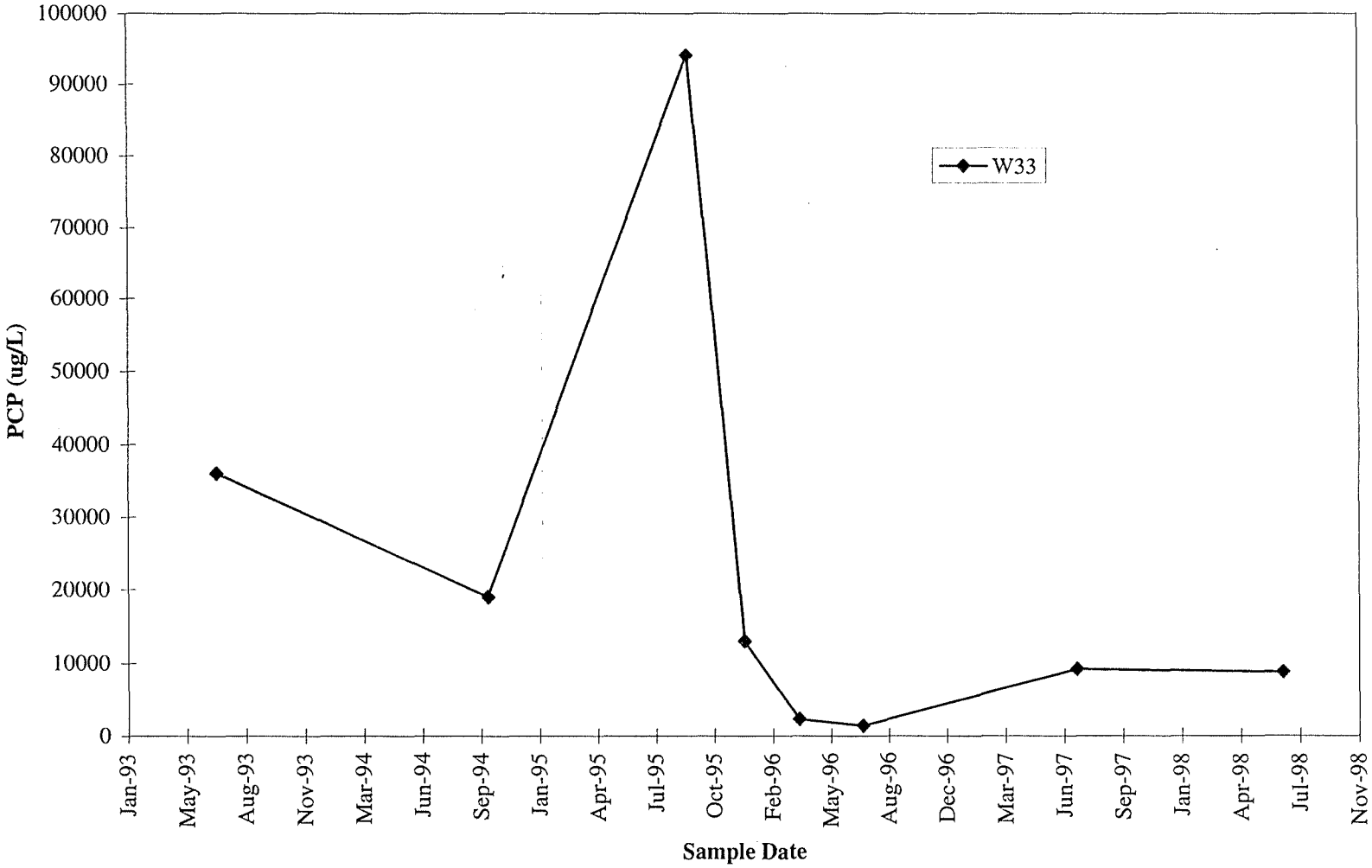
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8/24/95

Pentachlorophenol Concentrations
Quarterly Groundwater Monitoring



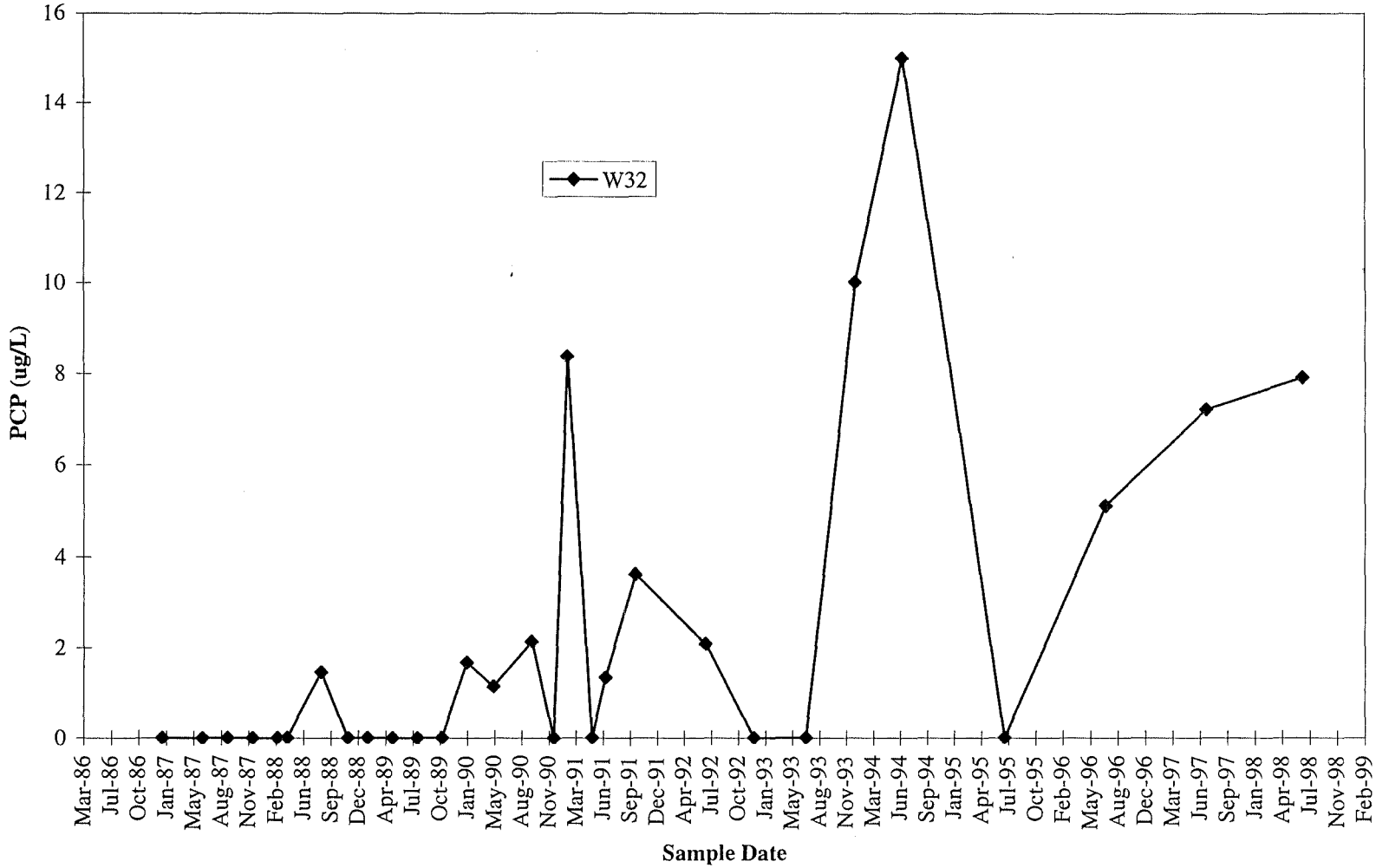
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Pentachlorophenol Concentrations
Quarterly Groundwater Monitoring



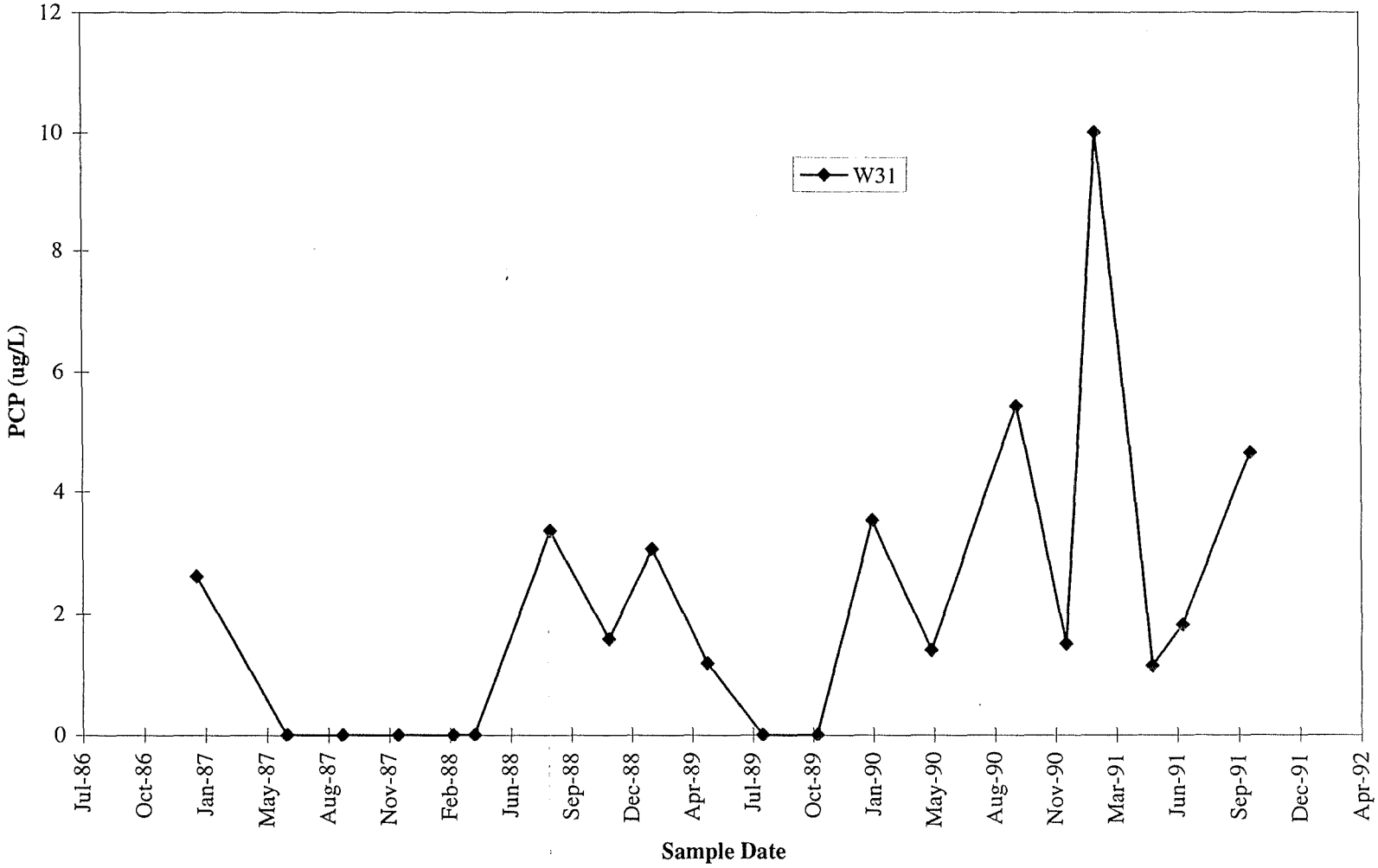
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Pentachlorophenol Concentrations
Quarterly Groundwater Monitoring



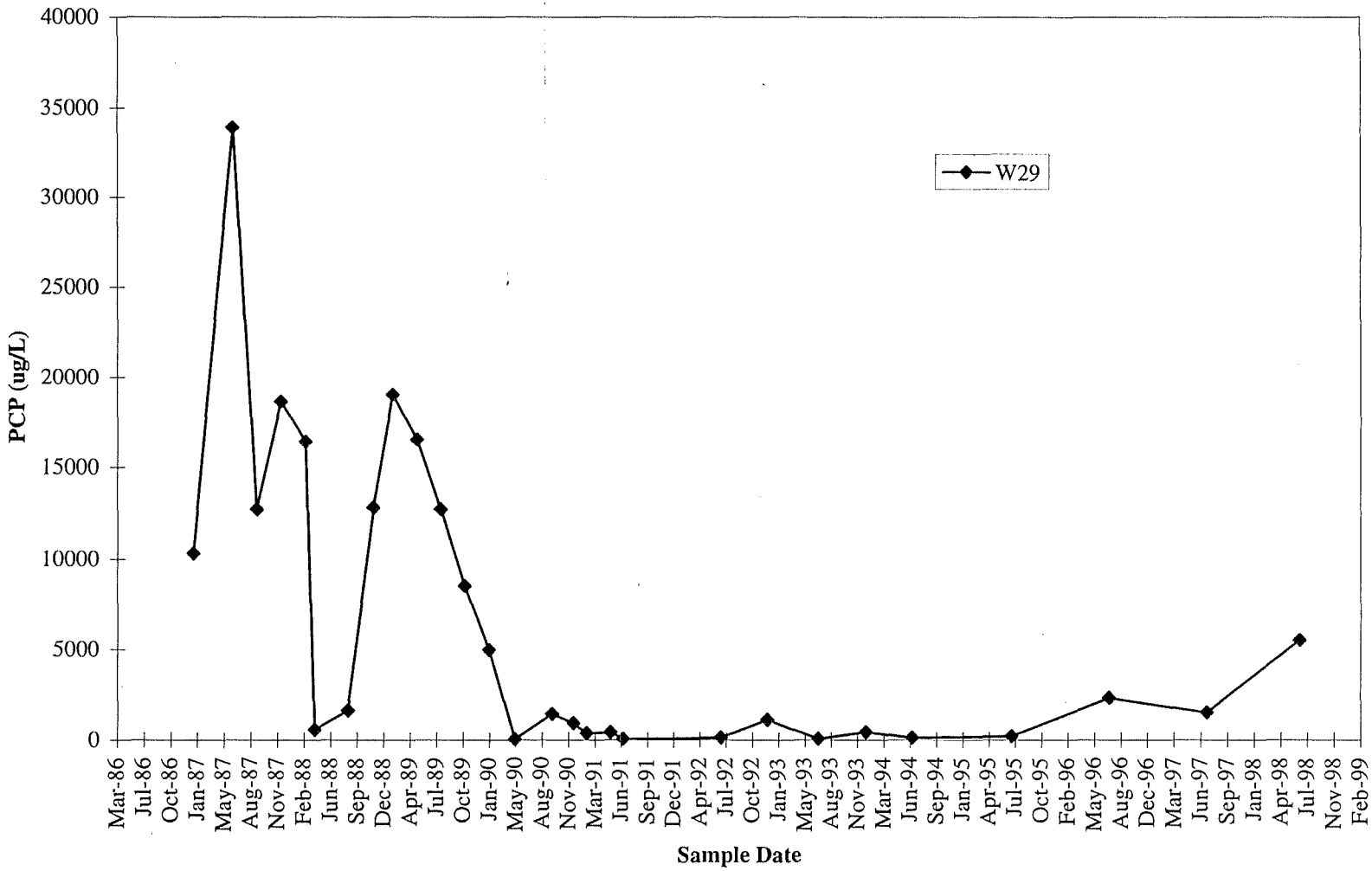
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Pentachlorophenol Concentrations
Quarterly Groundwater Monitoring



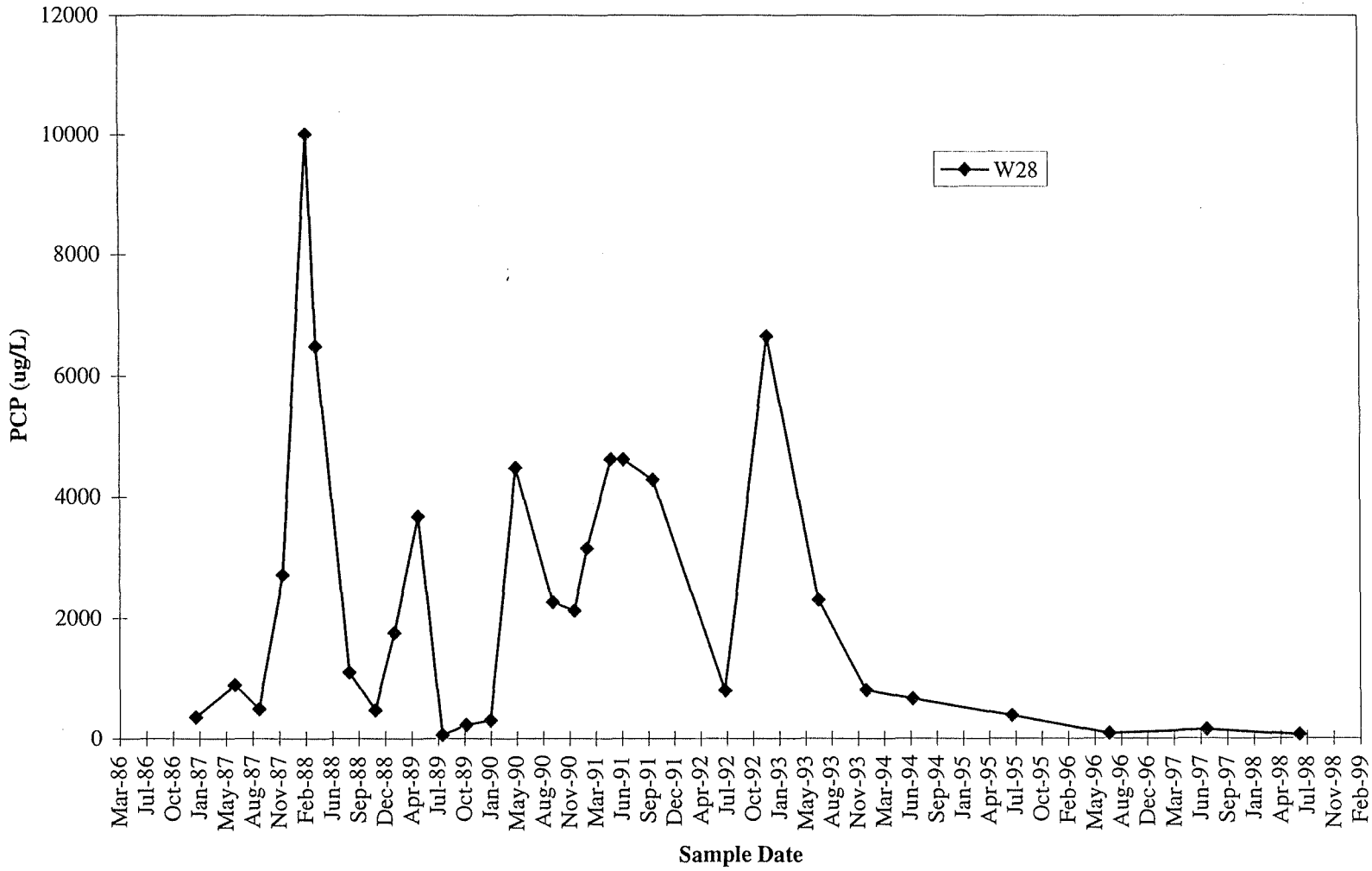
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Pentachlorophenol Concentrations
Quarterly Groundwater Monitoring



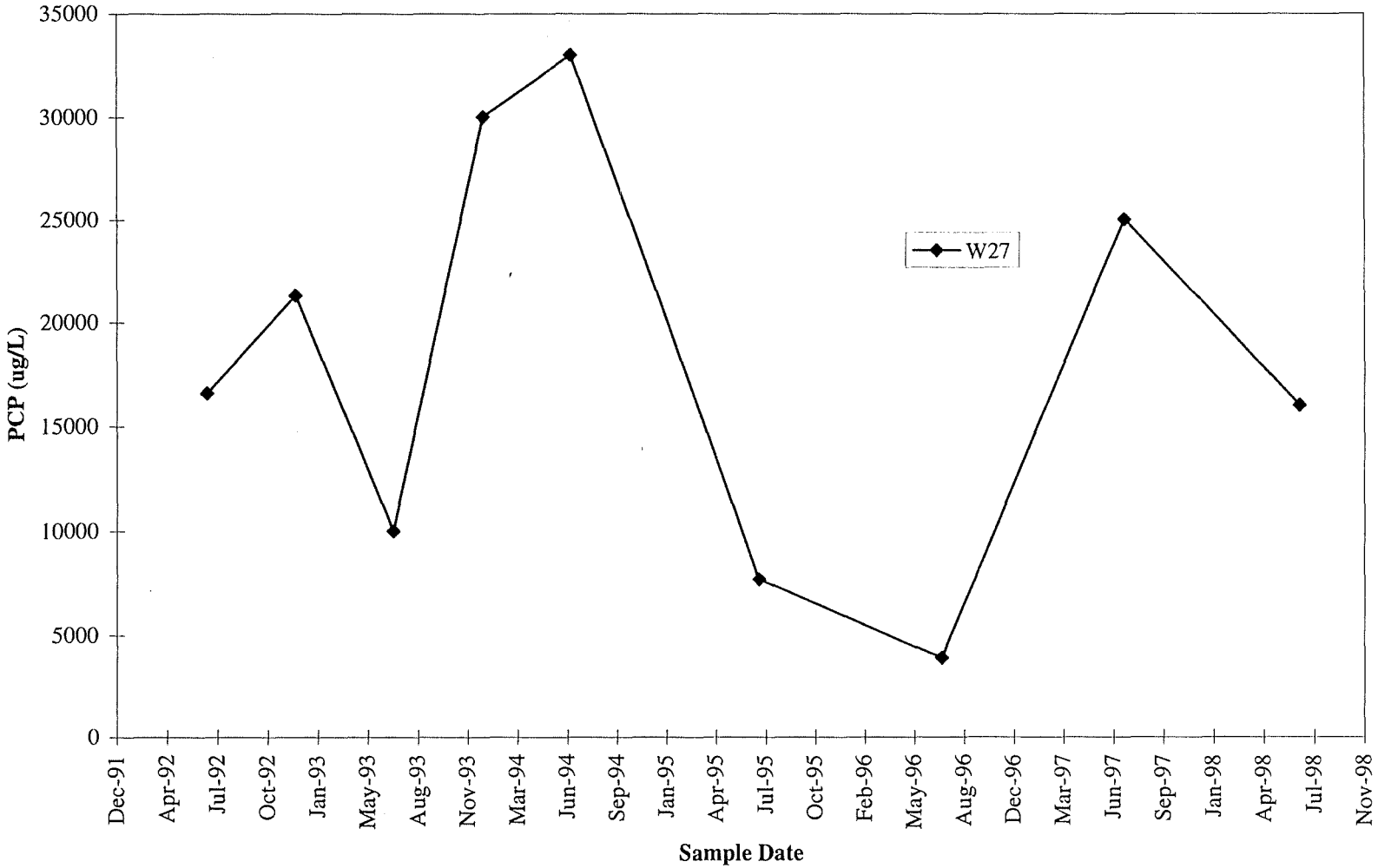
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Pentachlorophenol Concentrations
Quarterly Groundwater Monitoring



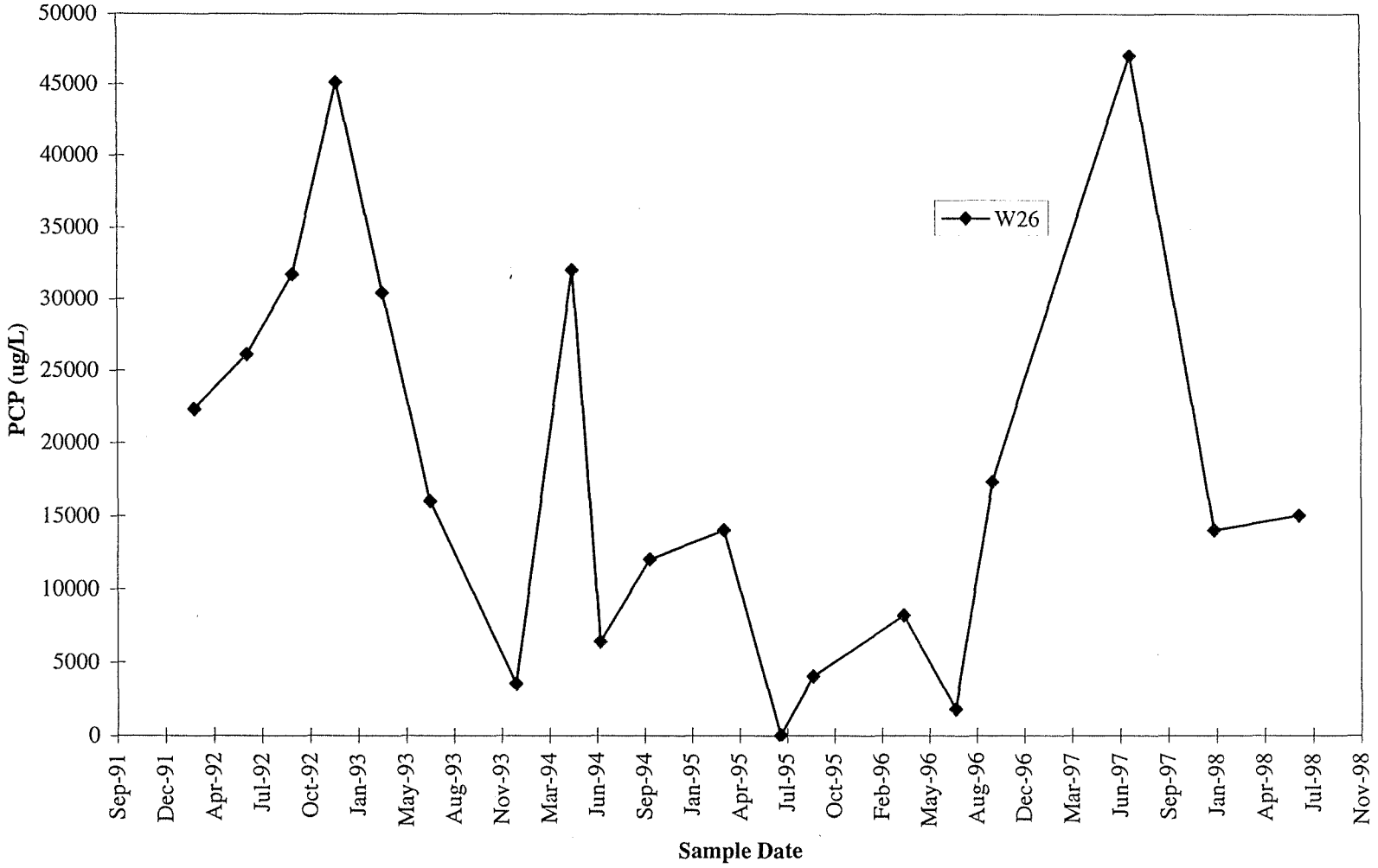
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Pentachlorophenol Concentrations
Quarterly Groundwater Monitoring



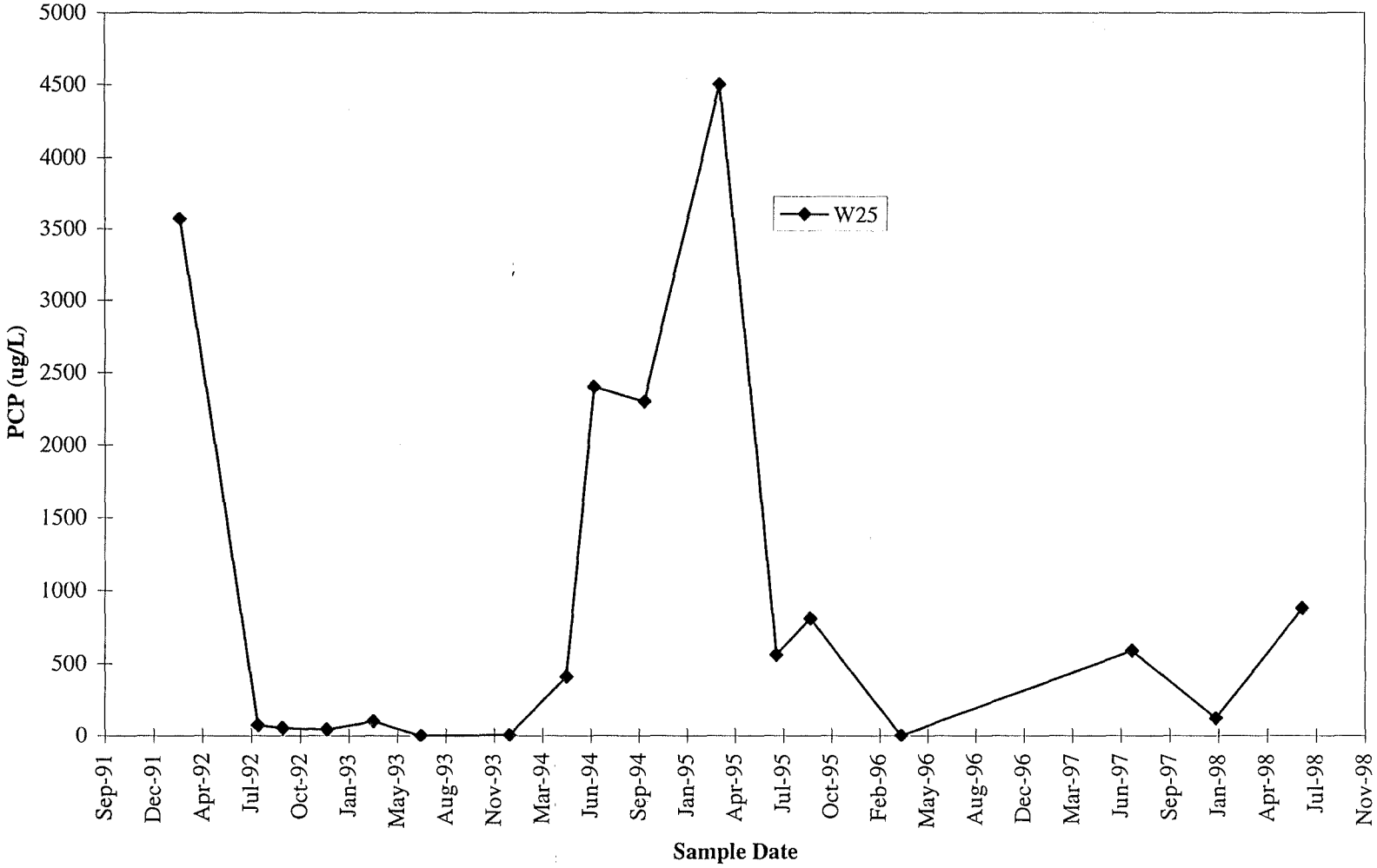
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Pentachlorophenol Concentrations
Quarterly Groundwater Monitoring



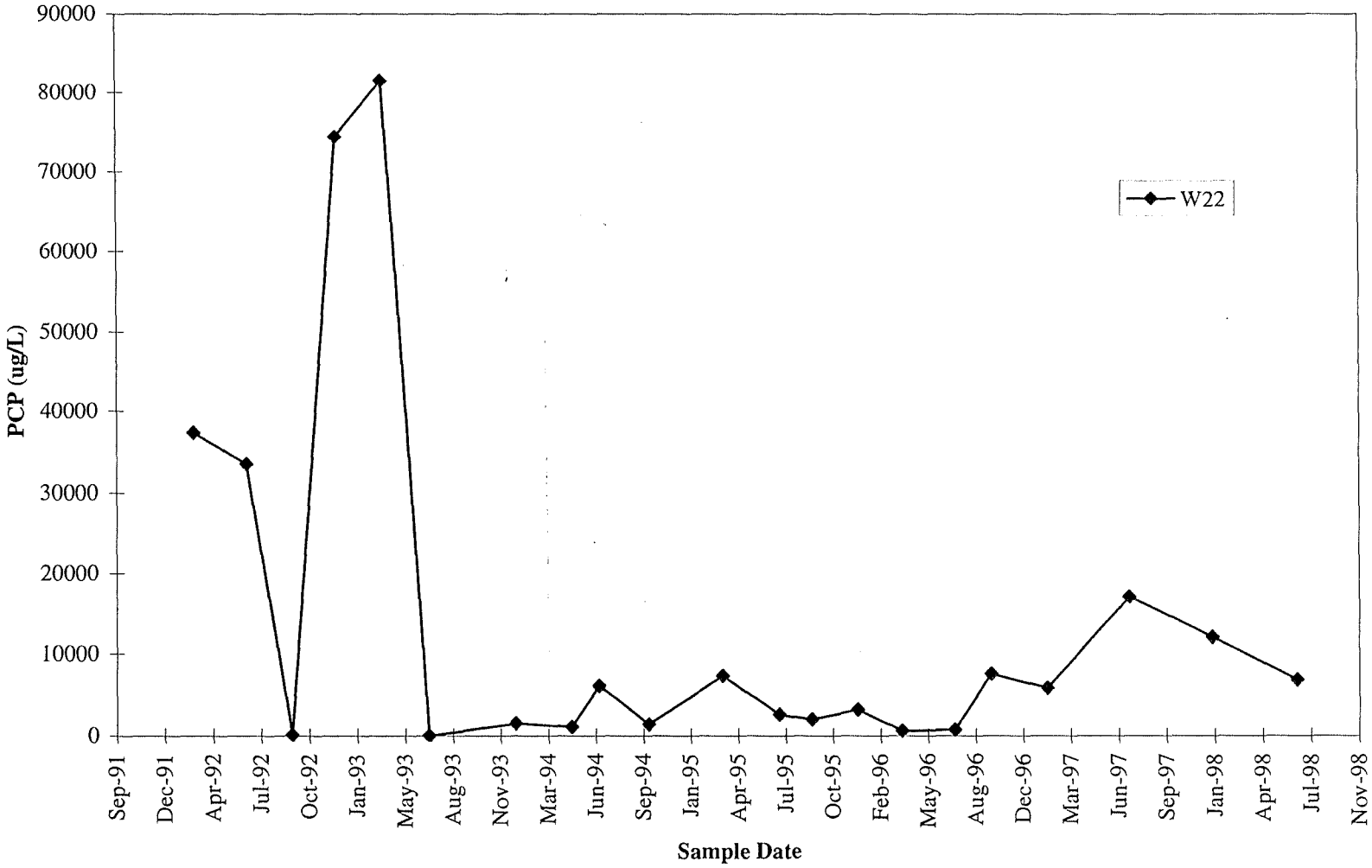
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Pentachlorophenol Concentrations
Quarterly Groundwater Monitoring



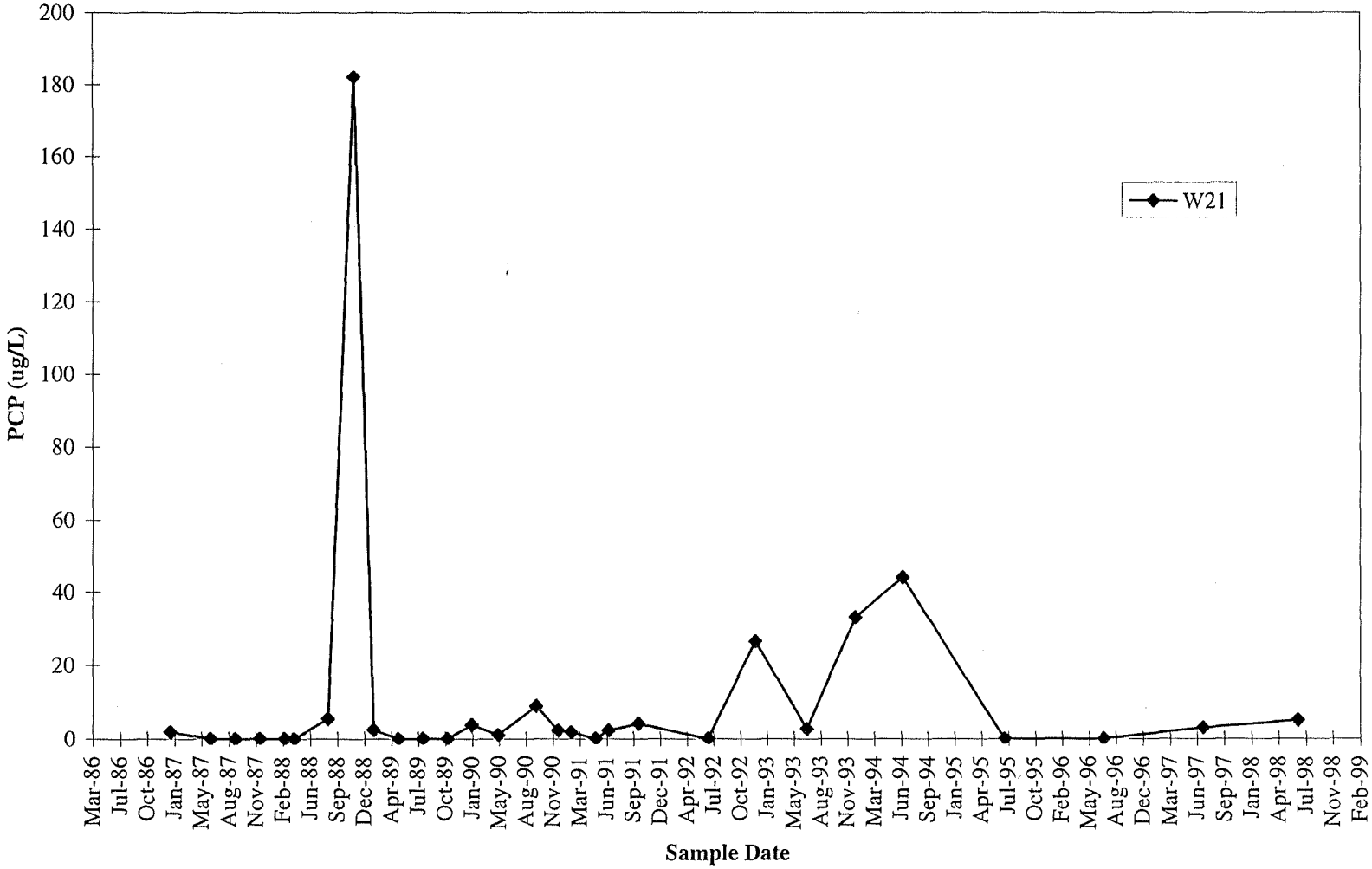
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Pentachlorophenol Concentrations
Quarterly Groundwater Monitoring



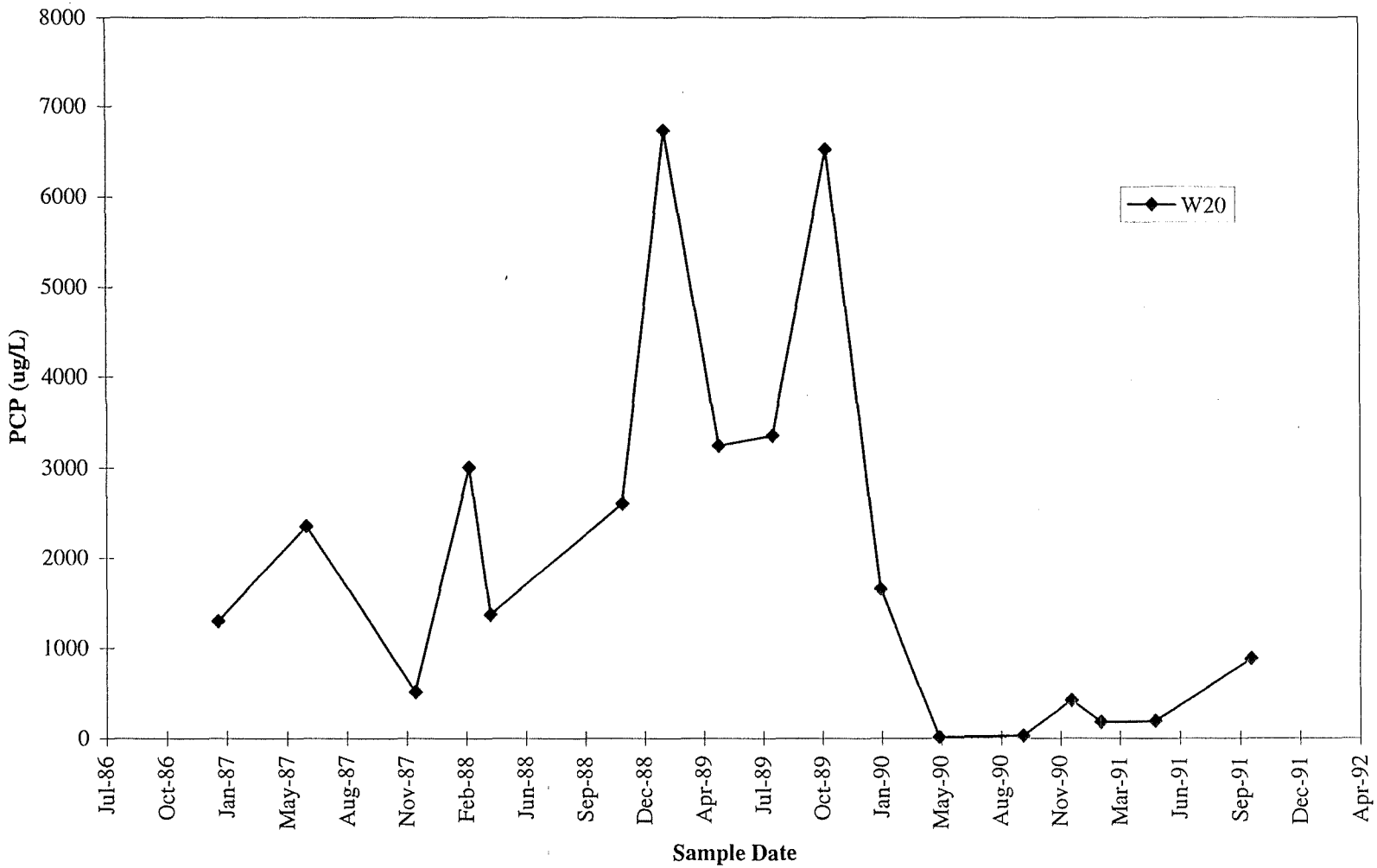
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Pentachlorophenol Concentrations
Quarterly Groundwater Monitoring



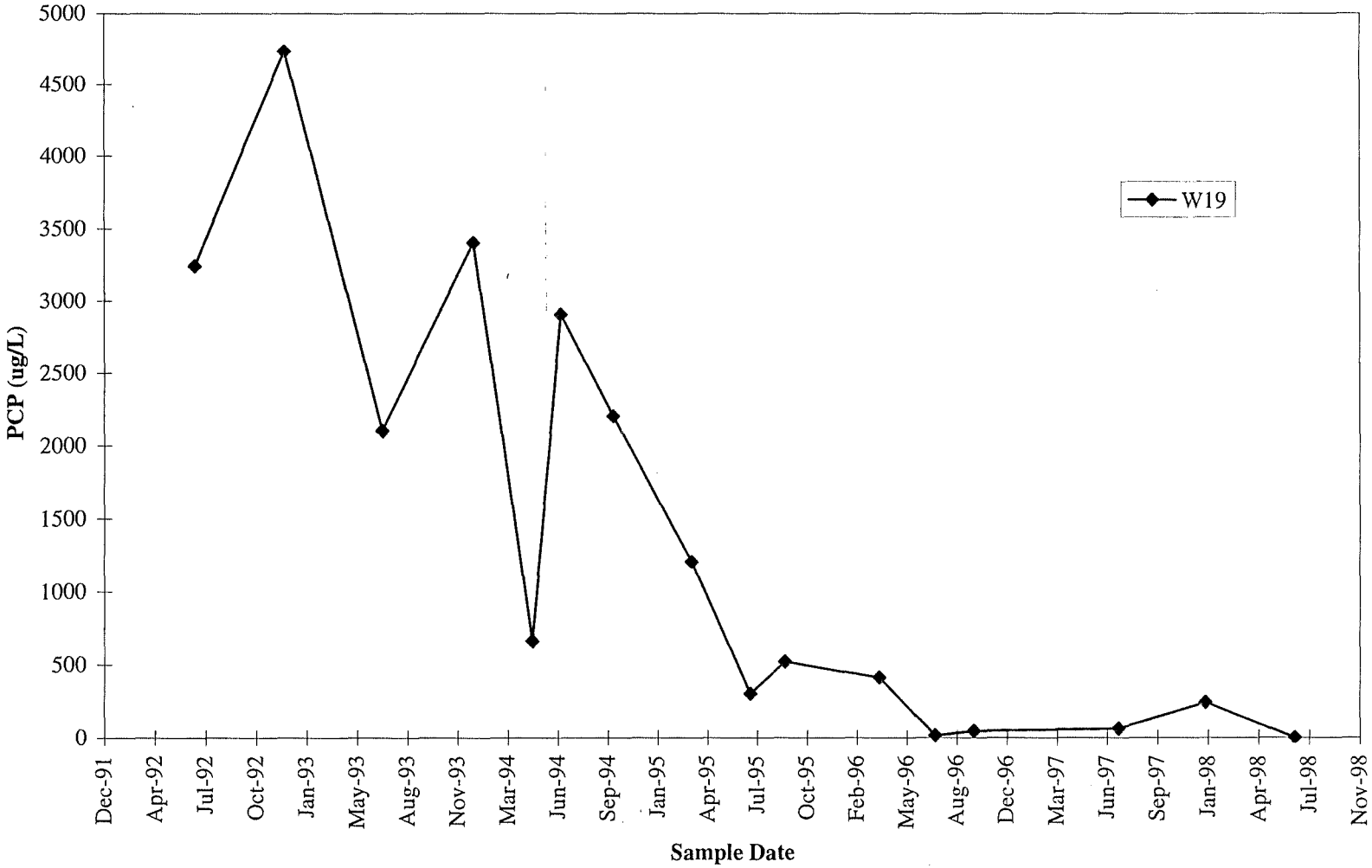
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Pentachlorophenol Concentrations
Quarterly Groundwater Monitoring



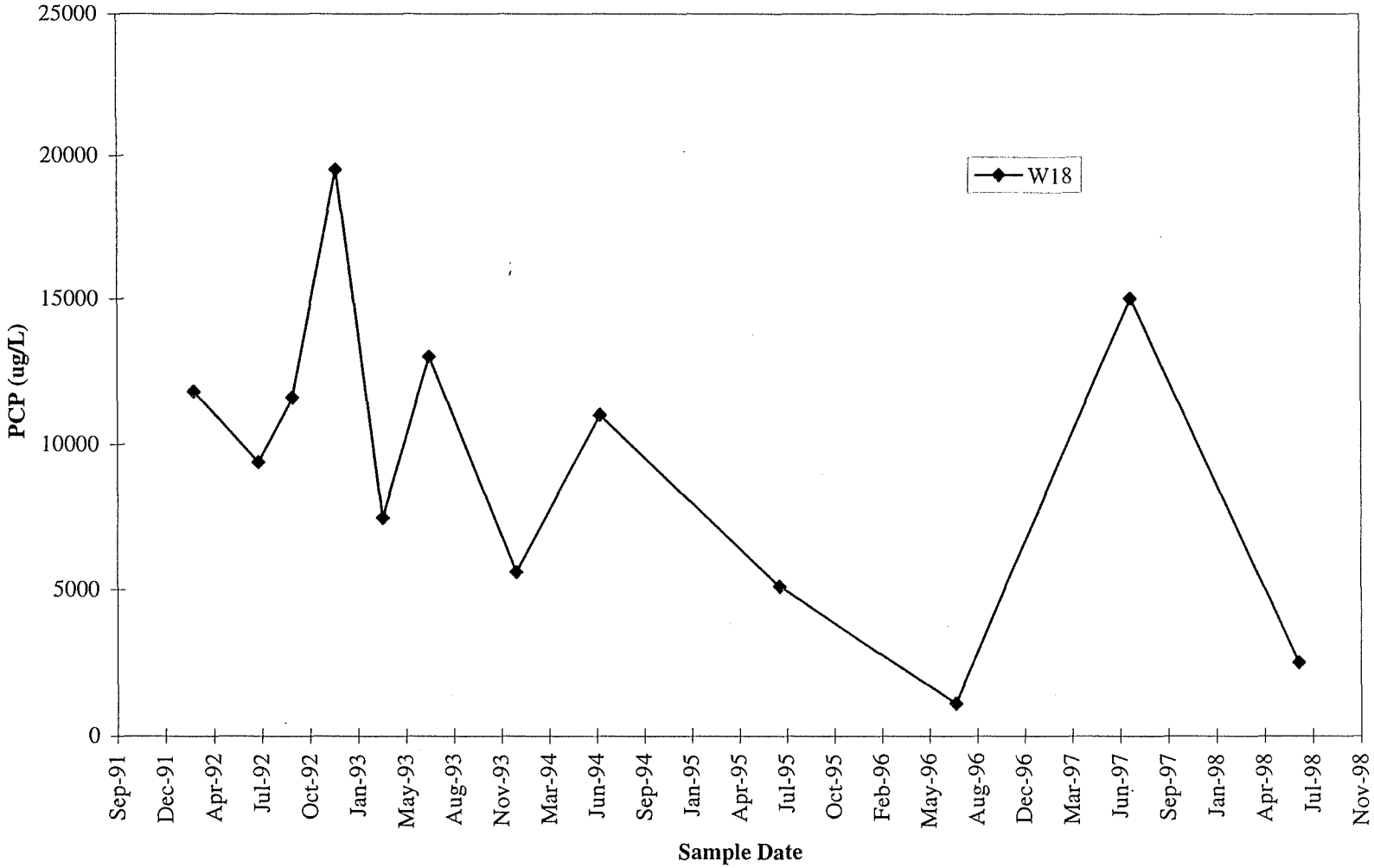
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Pentachlorophenol Concentrations
Quarterly Groundwater Monitoring



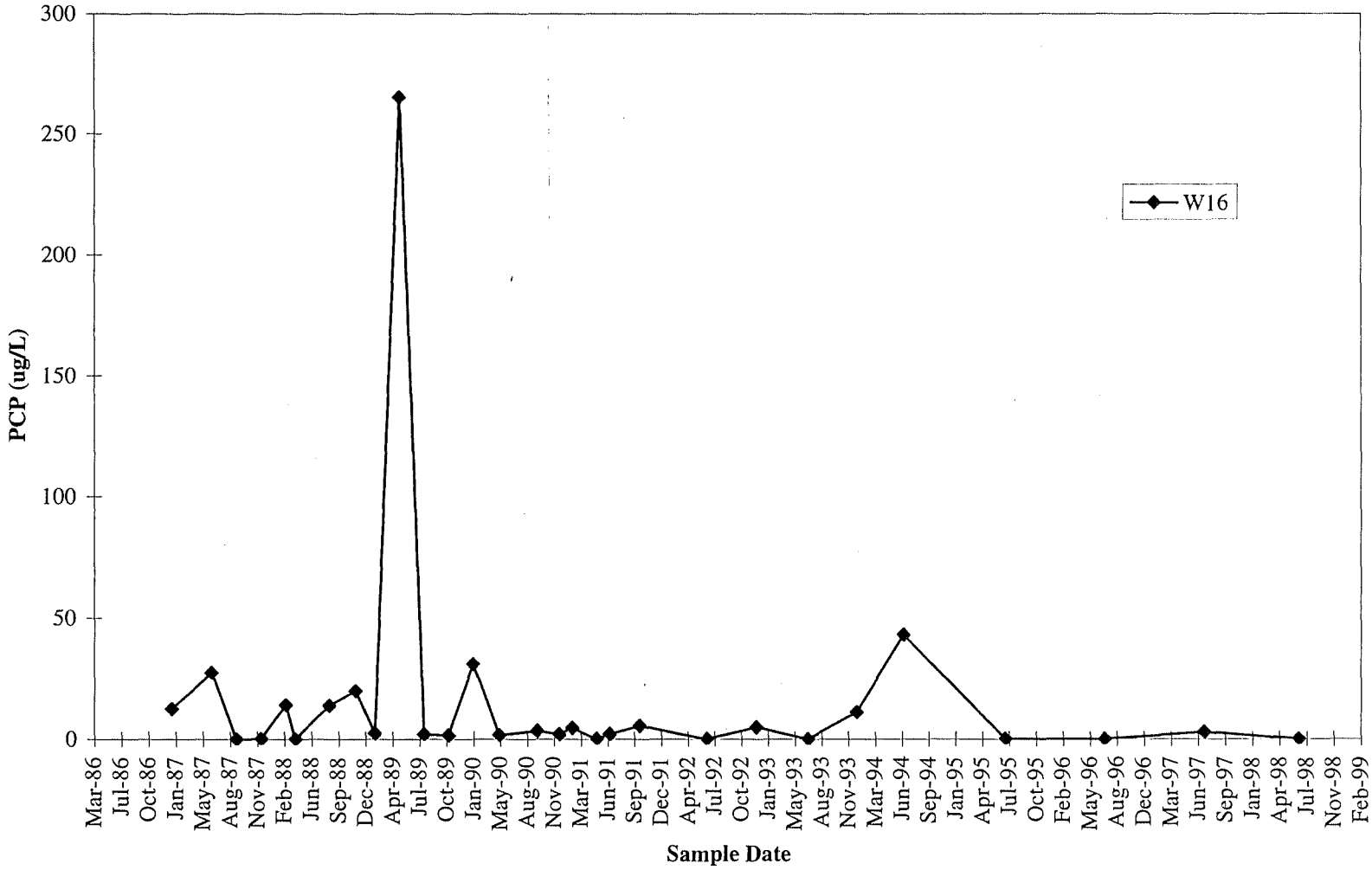
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Pentachlorophenol Concentrations
Quarterly Groundwater Monitoring



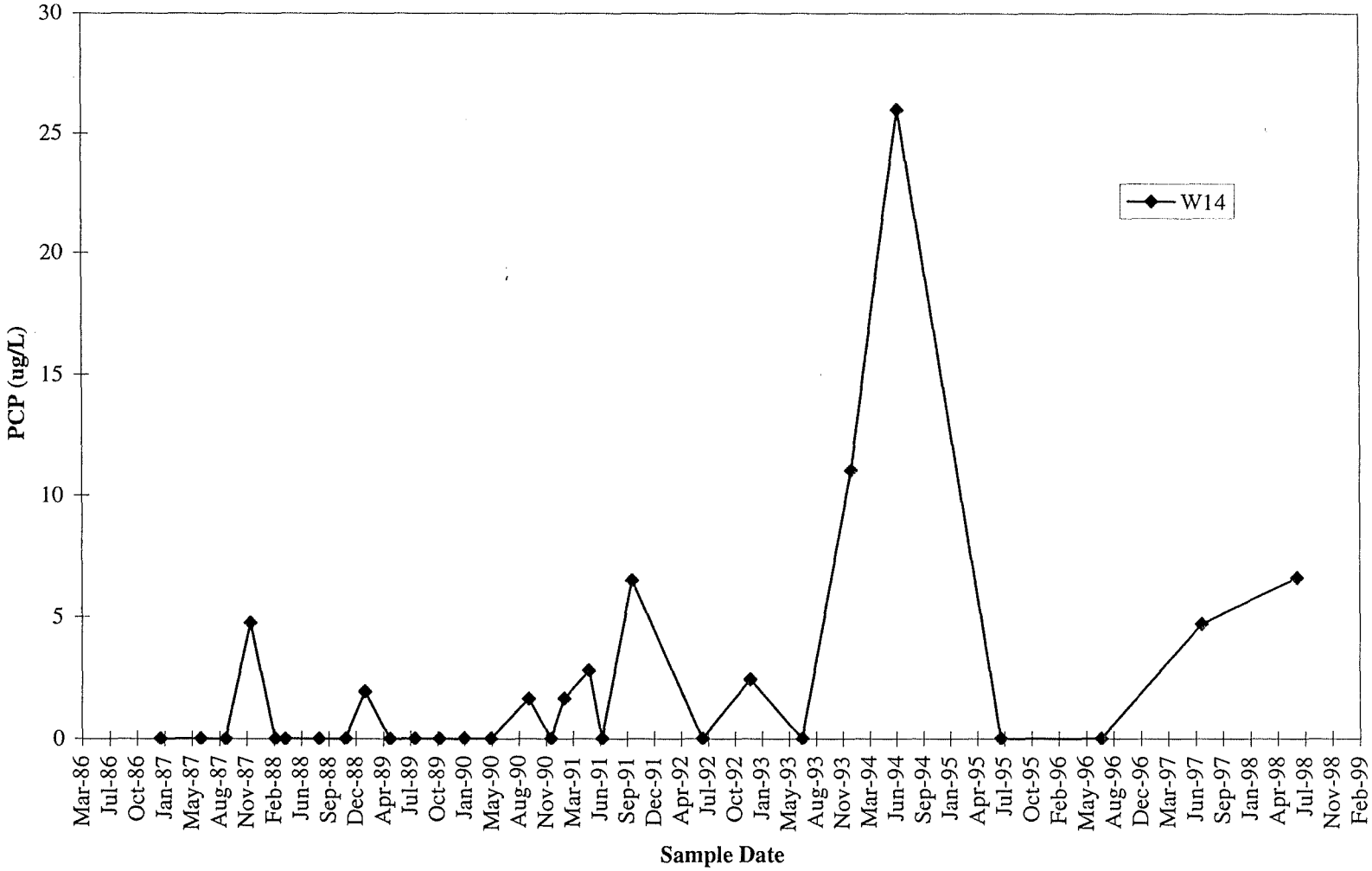
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Pentachlorophenol Concentrations
Quarterly Groundwater Monitoring



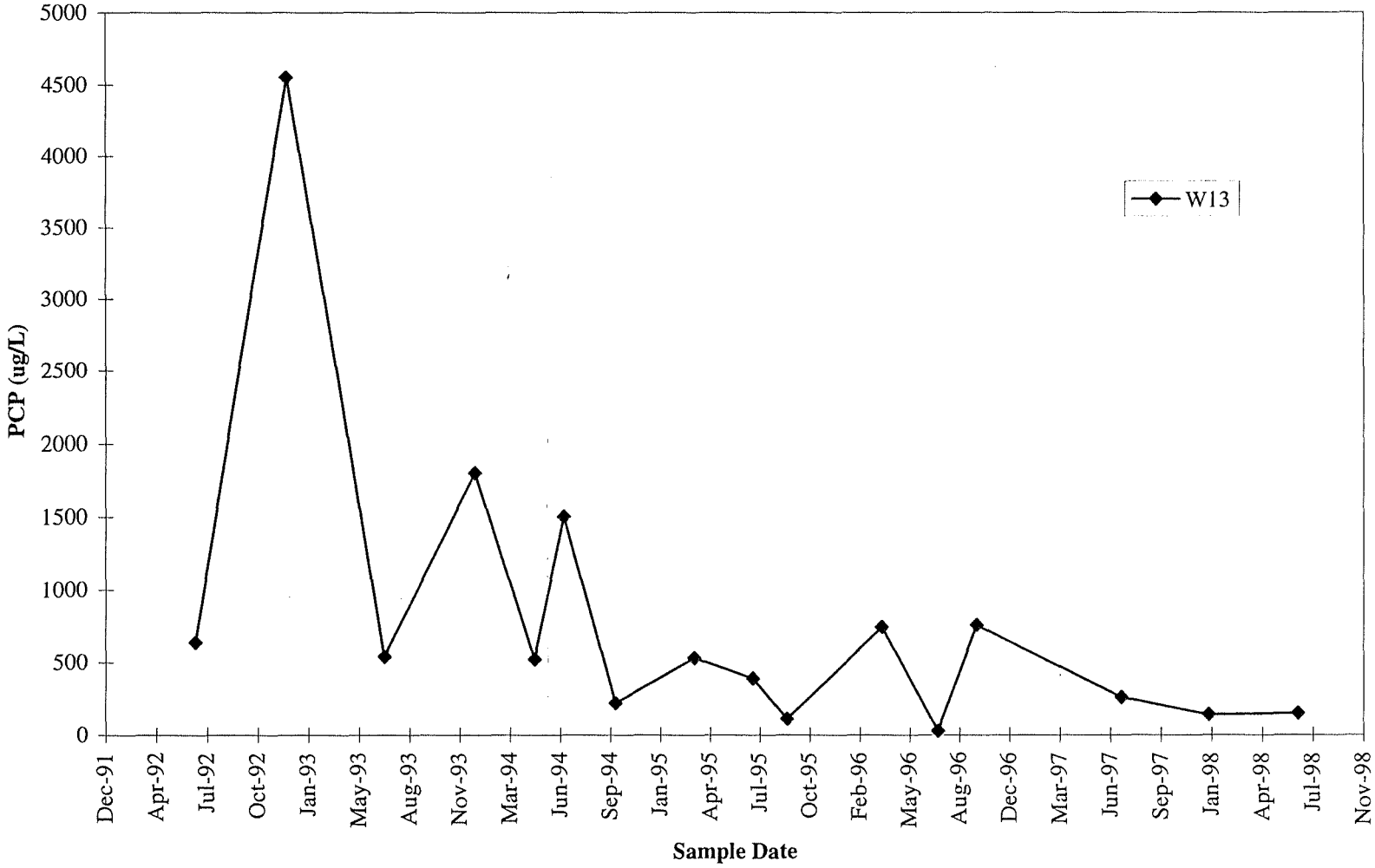
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Pentachlorophenol Concentrations
Quarterly Groundwater Monitoring



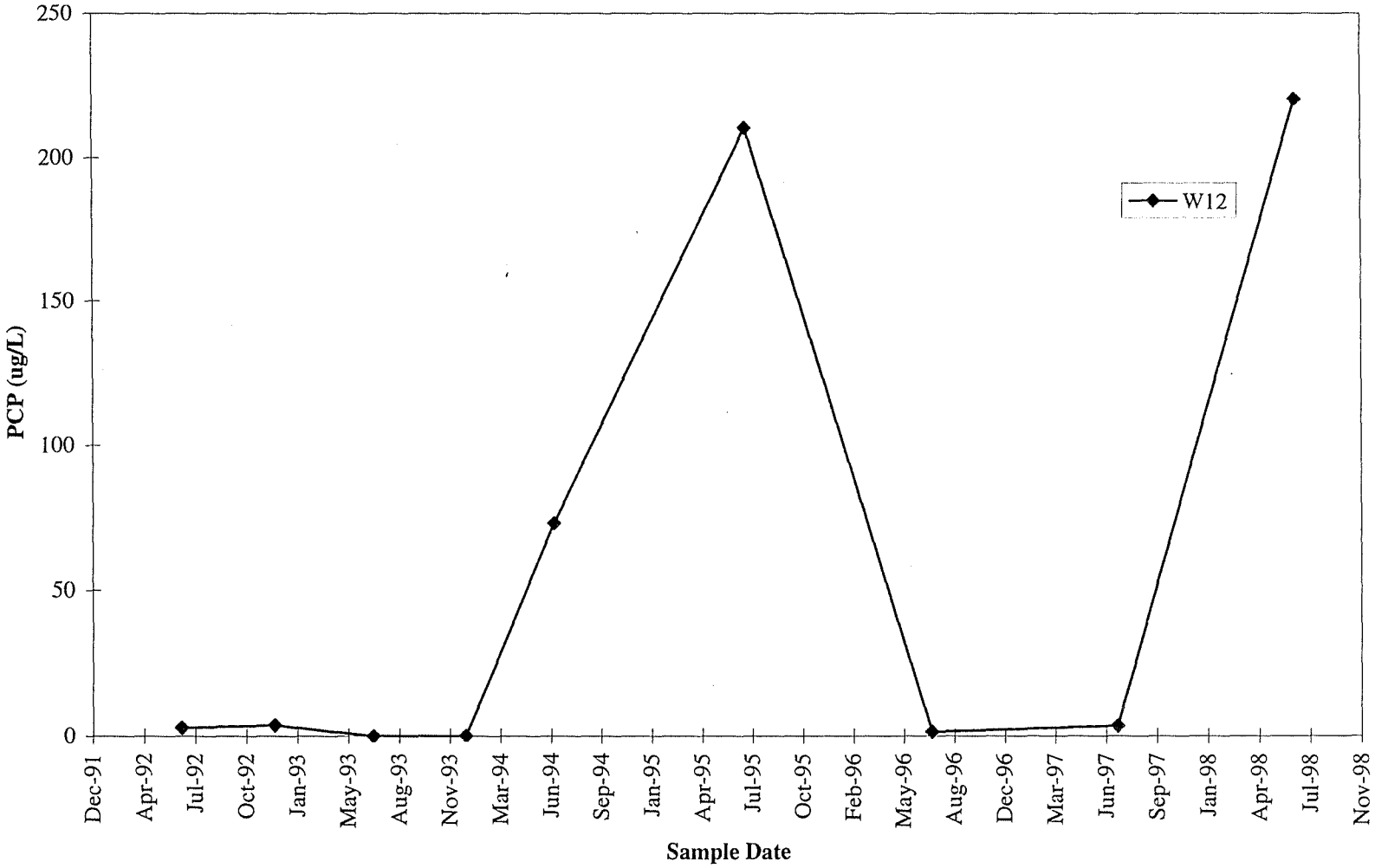
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Pentachlorophenol Concentrations
Quarterly Groundwater Monitoring



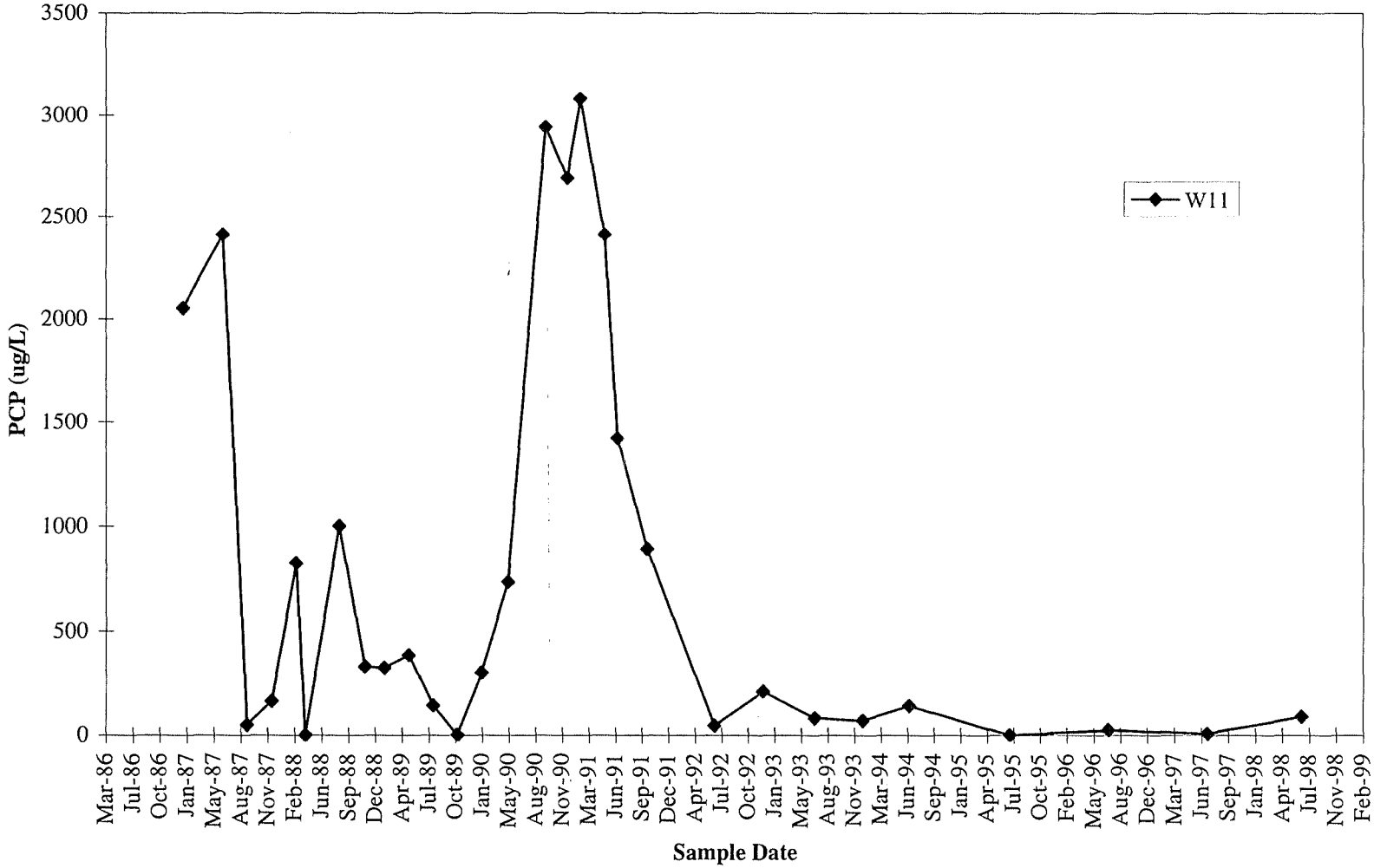
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Pentachlorophenol Concentrations
Quarterly Groundwater Monitoring



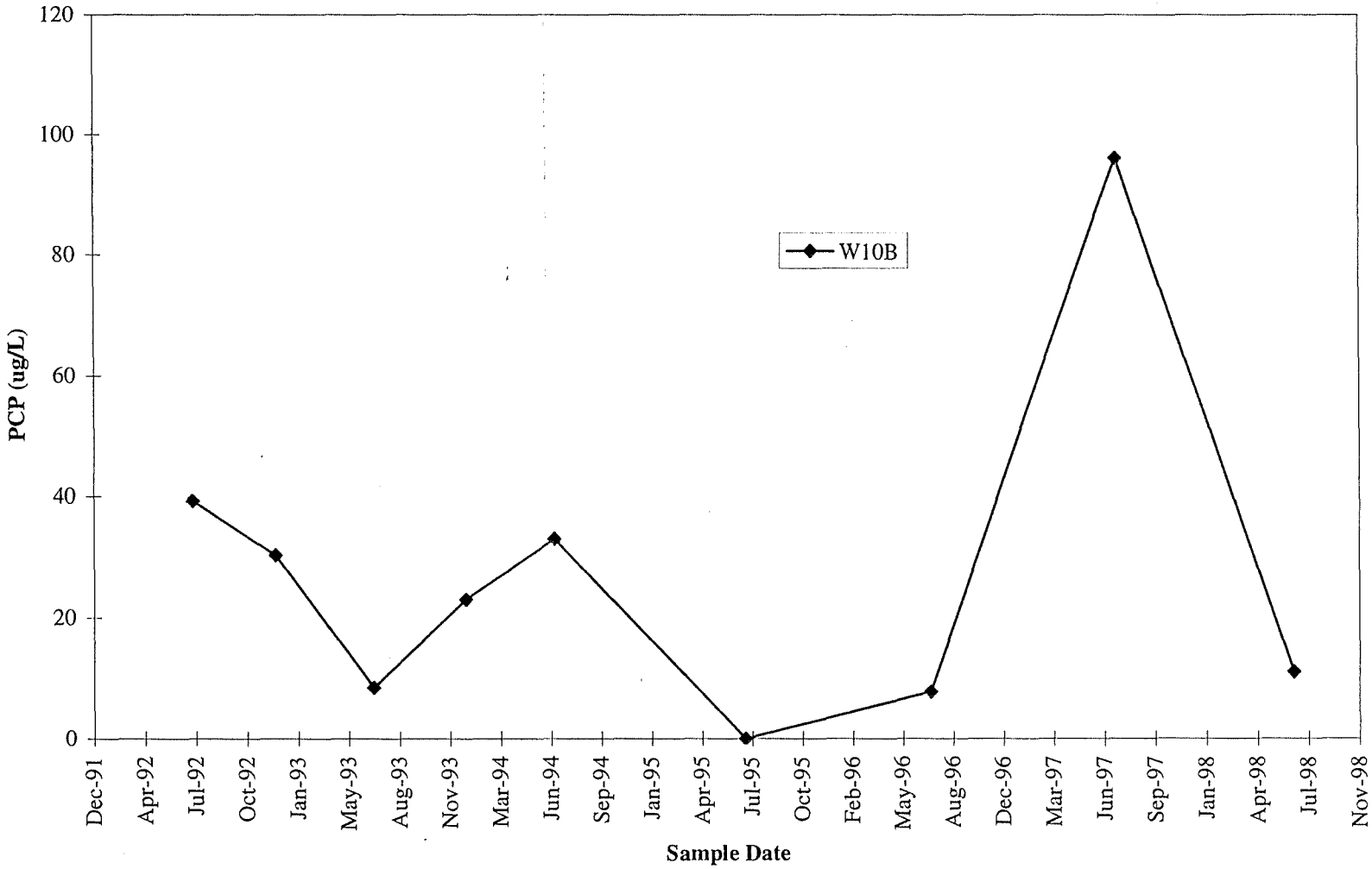
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Pentachlorophenol Concentrations
Quarterly Groundwater Monitoring



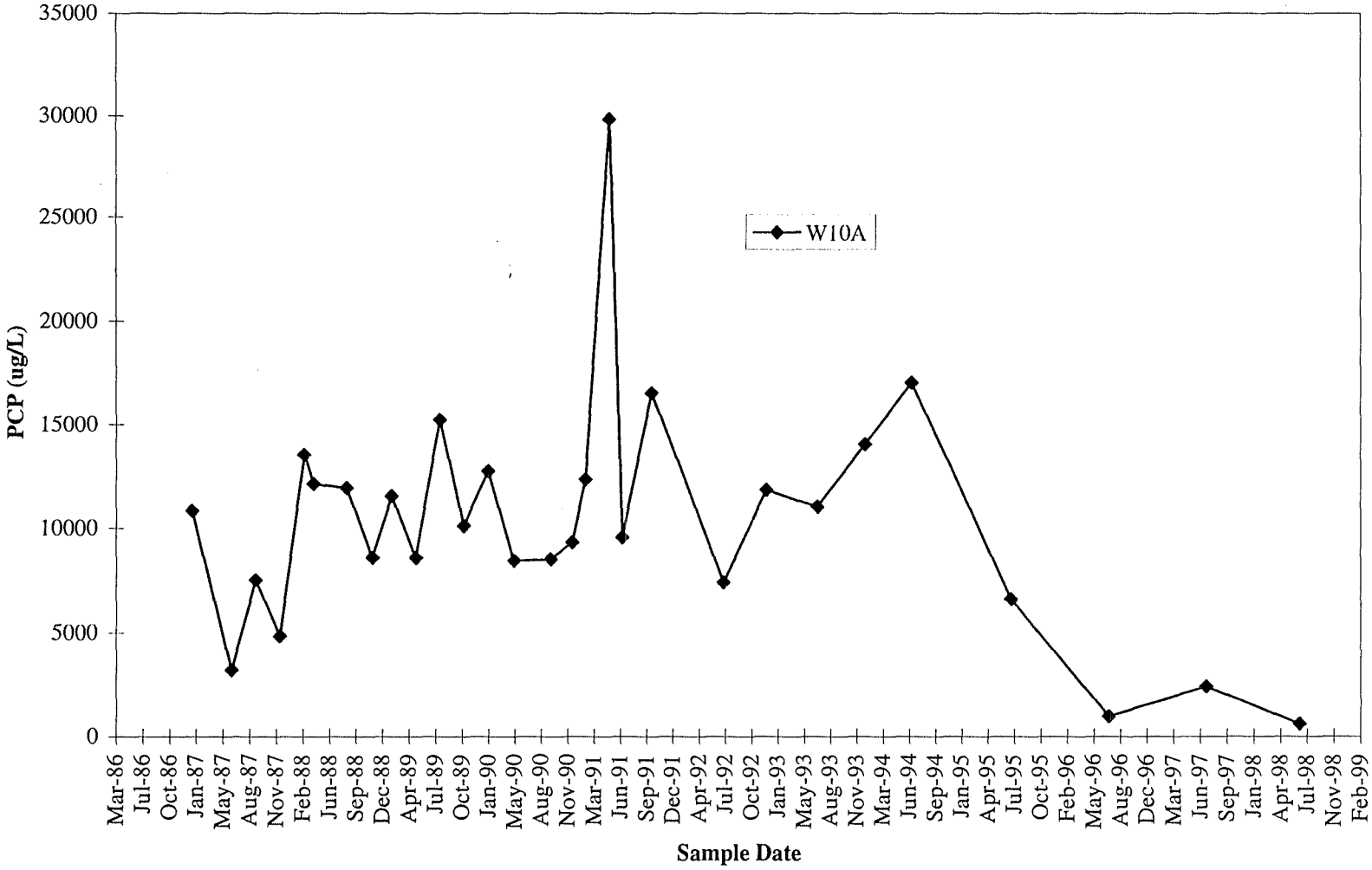
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Pentachlorophenol Concentrations
Quarterly Groundwater Monitoring



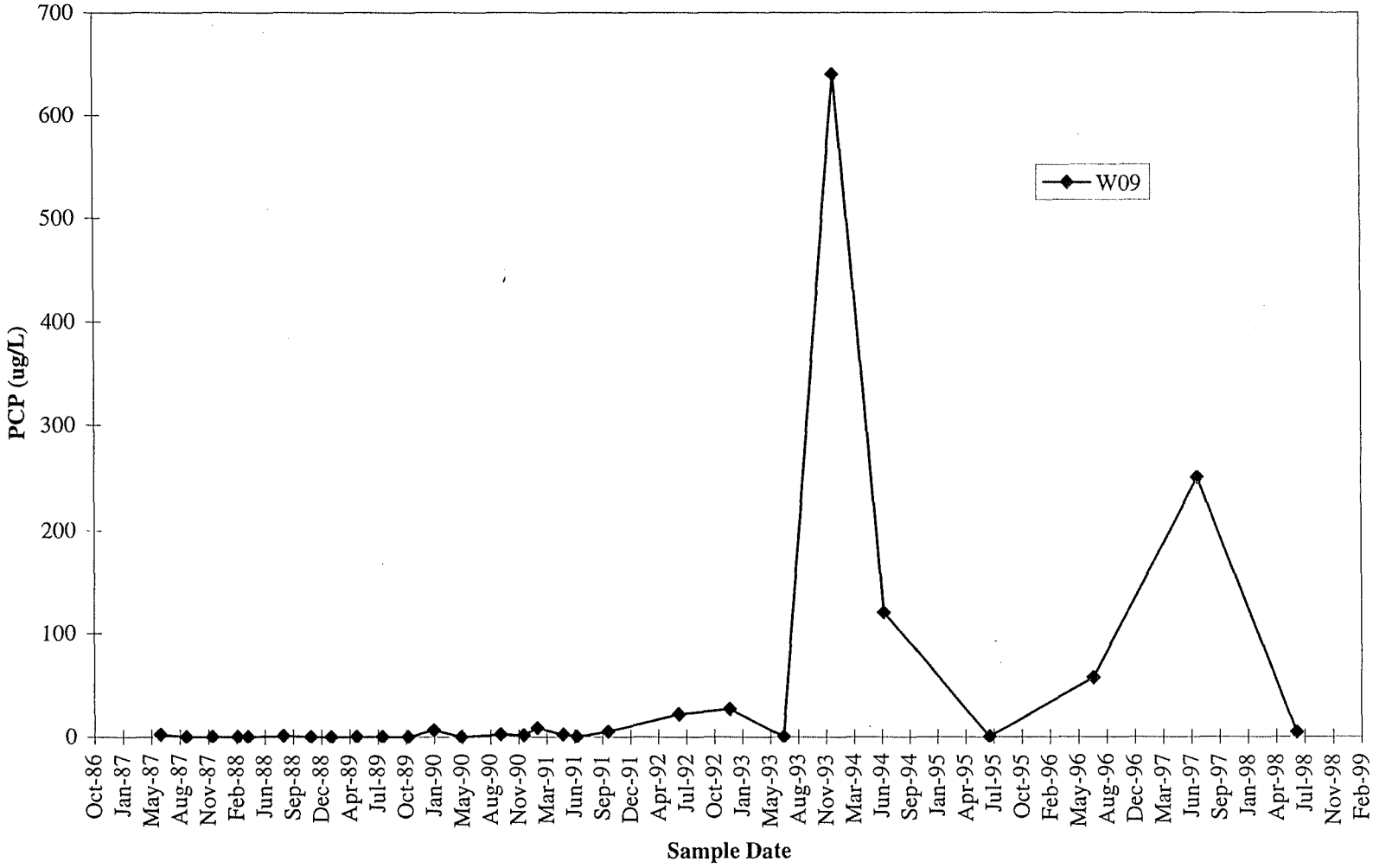
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Pentachlorophenol Concentrations
Quarterly Groundwater Monitoring



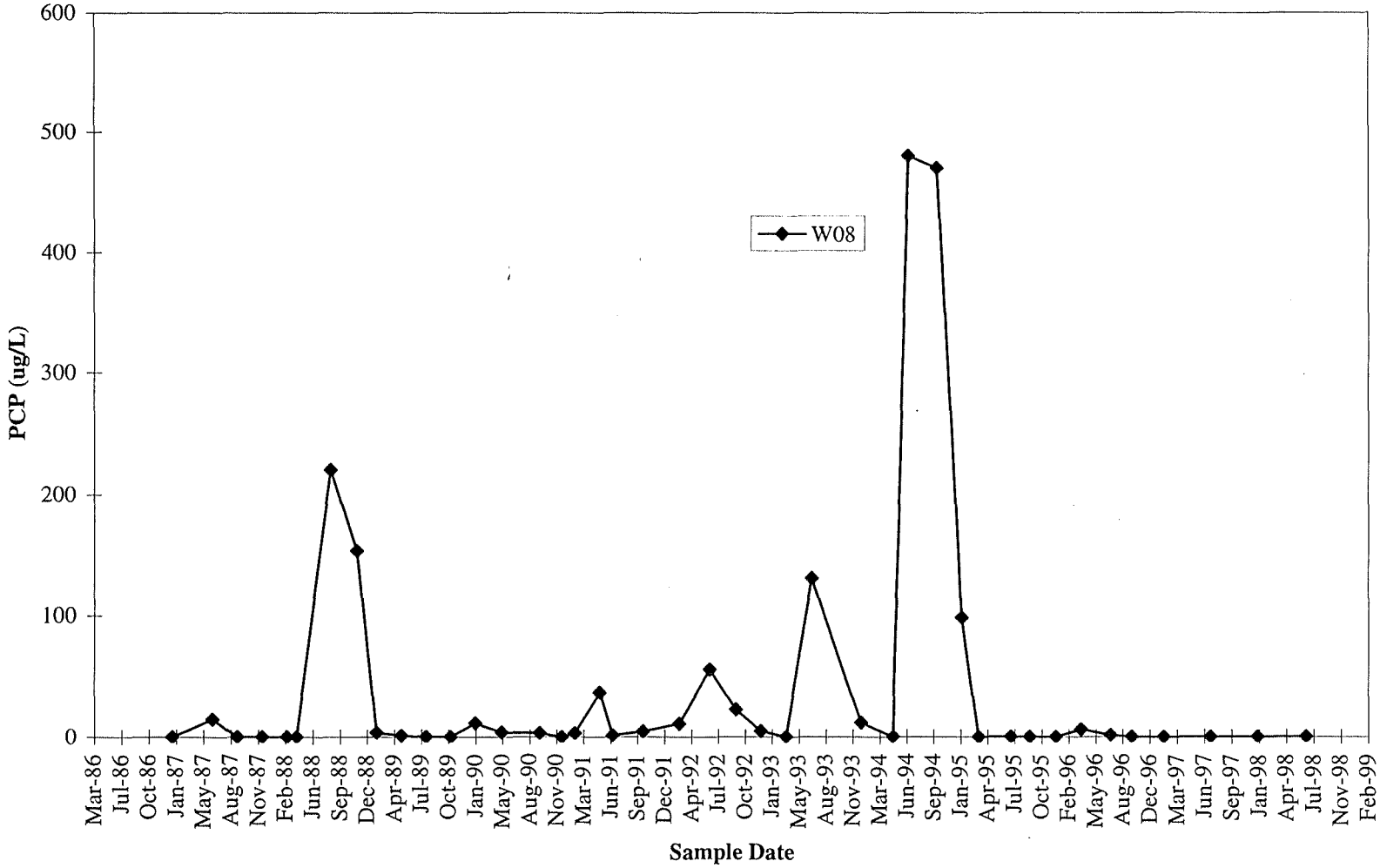
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Pentachlorophenol Concentrations
Quarterly Groundwater Monitoring



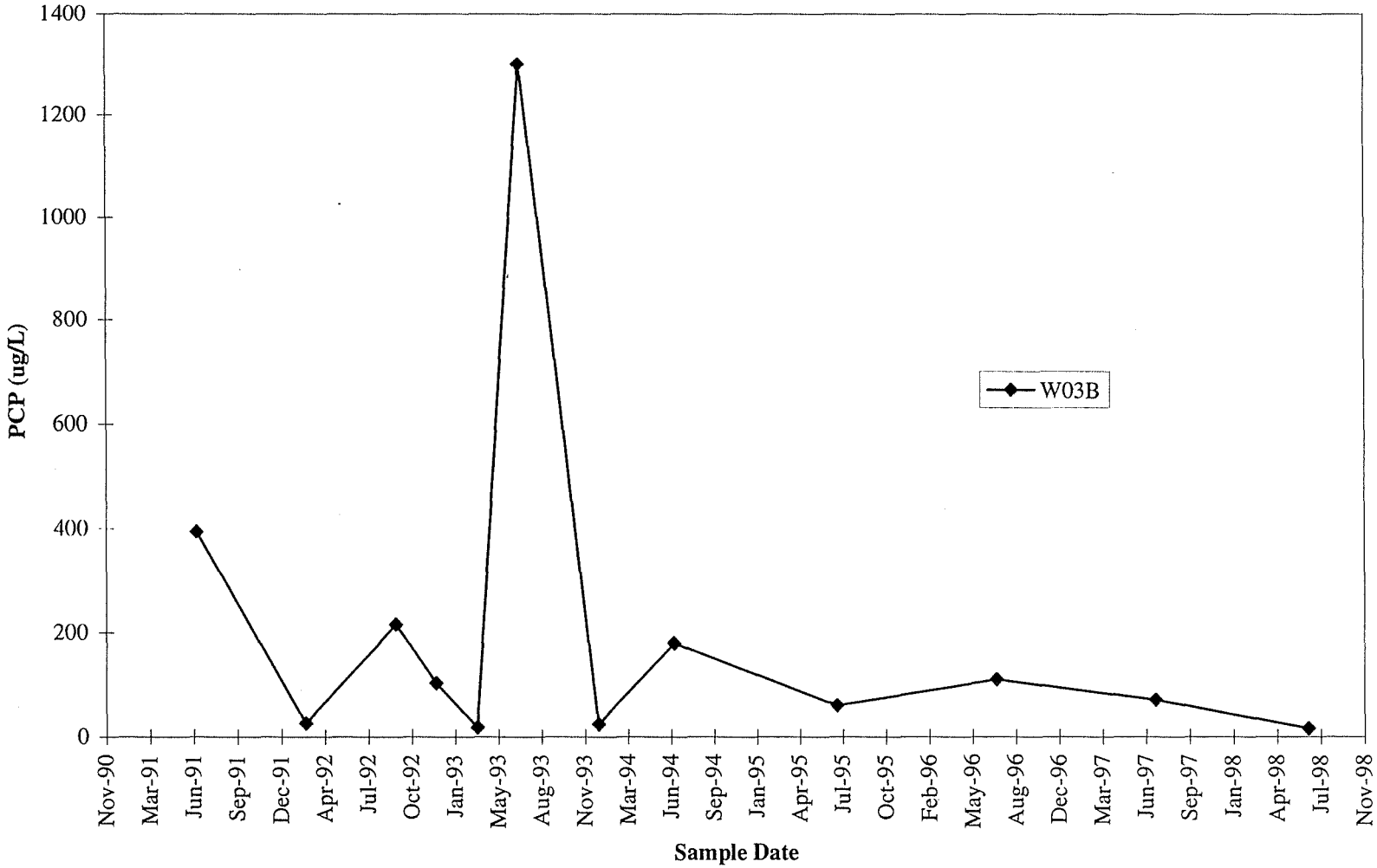
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Pentachlorophenol Concentrations
Quarterly Groundwater Monitoring



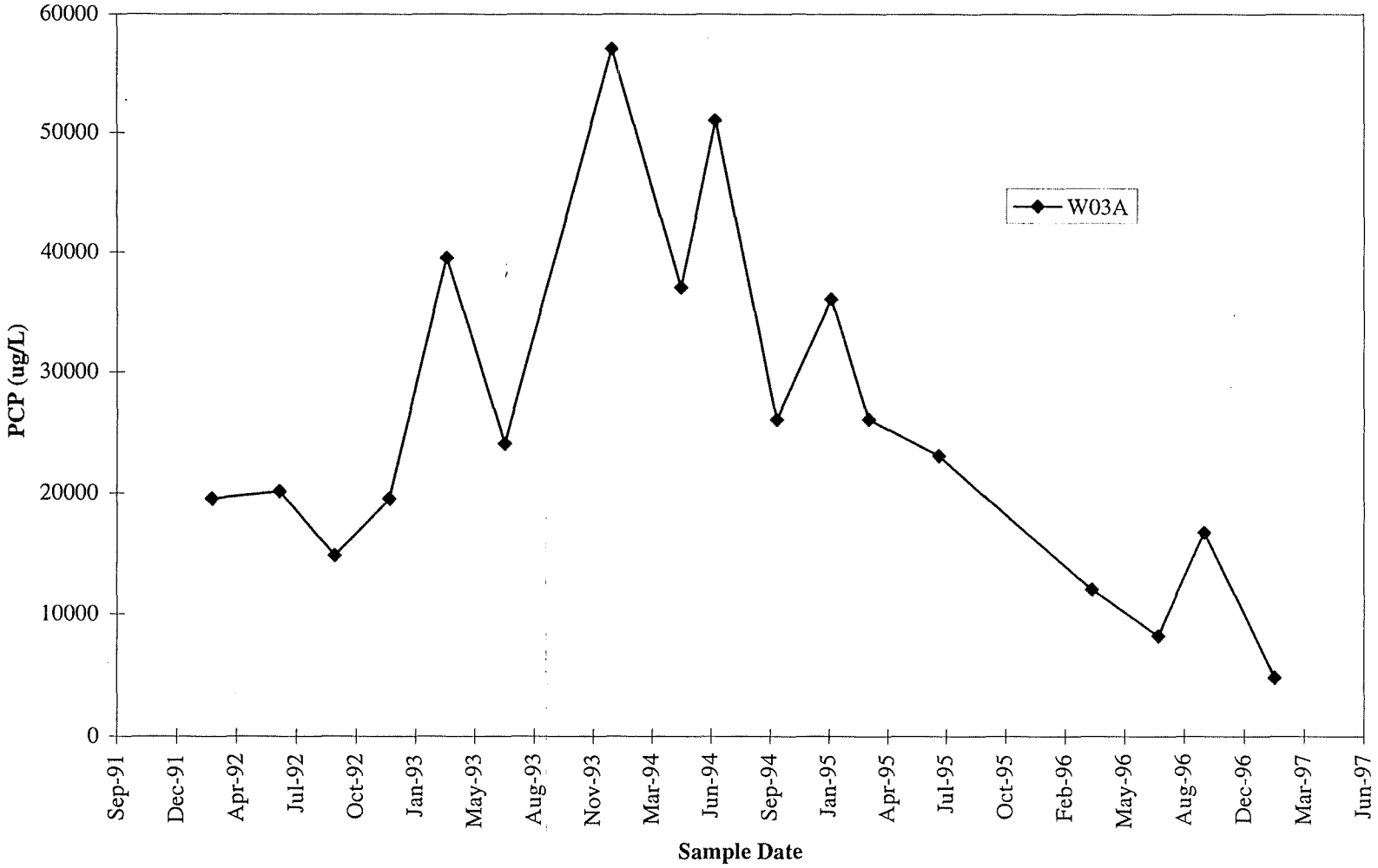
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Pentachlorophenol Concentrations
Quarterly Groundwater Monitoring



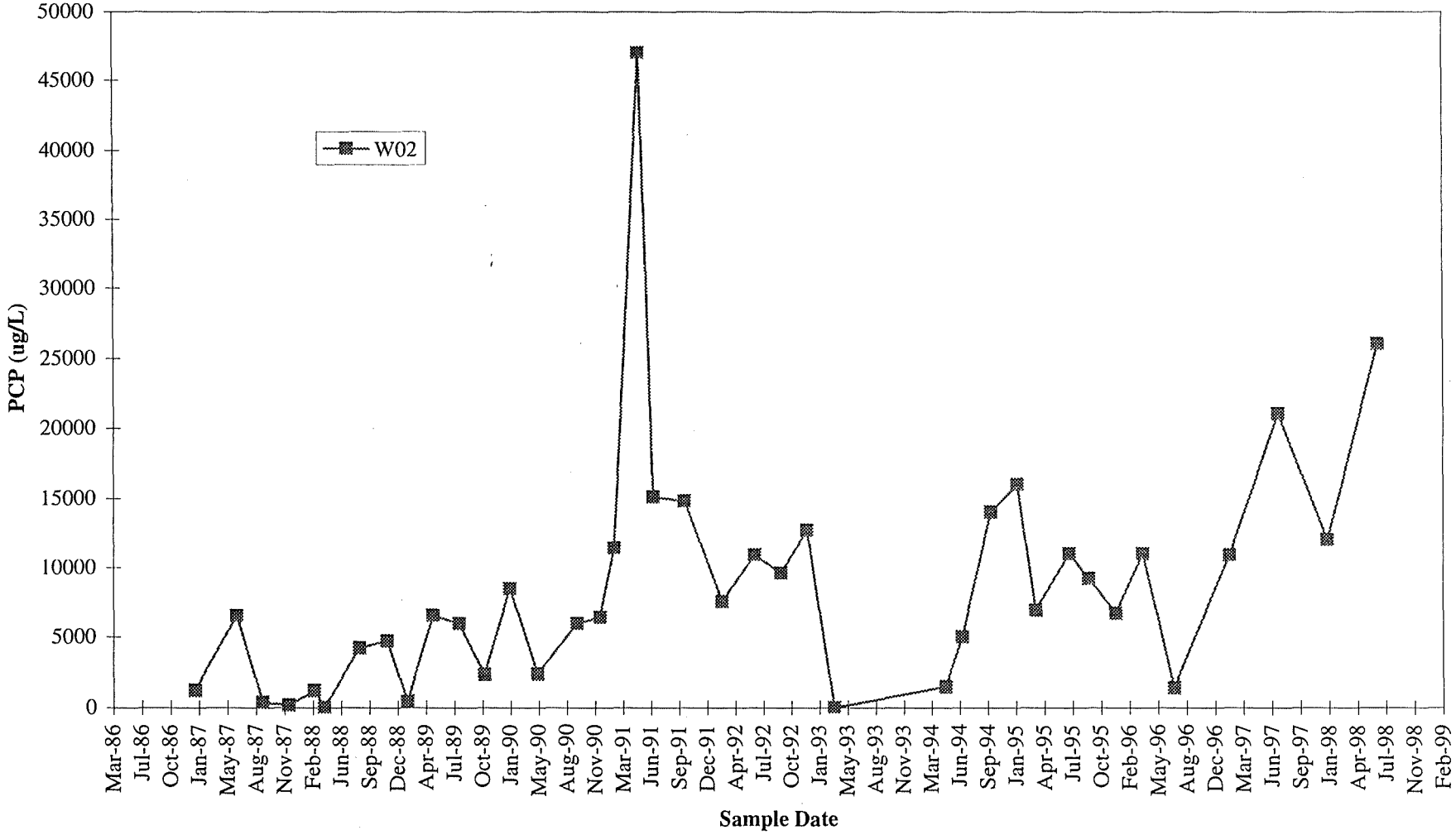
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Pentachlorophenol Concentrations
Quarterly Groundwater Monitoring



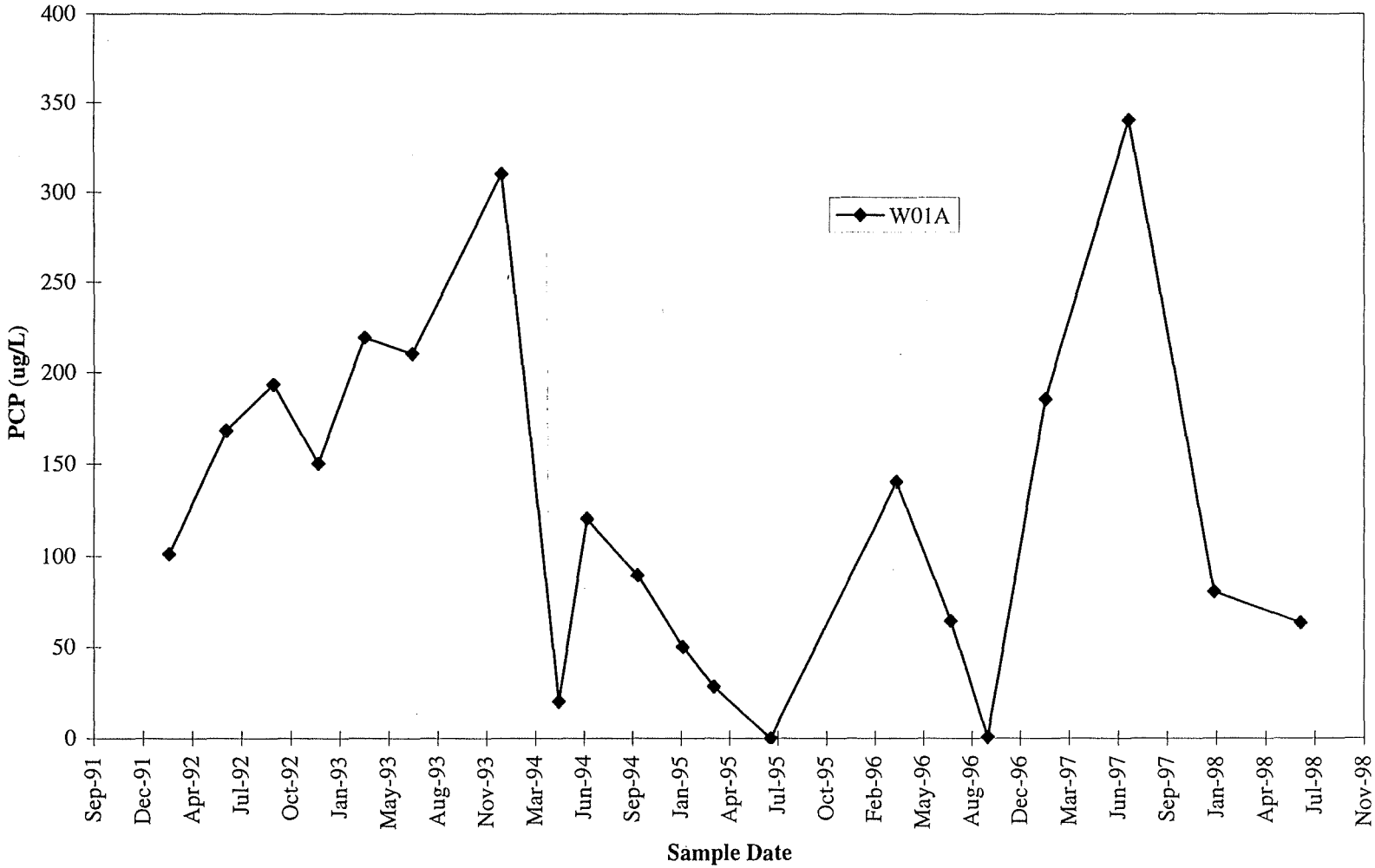
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Pentachlorophenol Concentrations
Quarterly Groundwater Monitoring



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Pentachlorophenol Concentrations
Quarterly Groundwater Monitoring

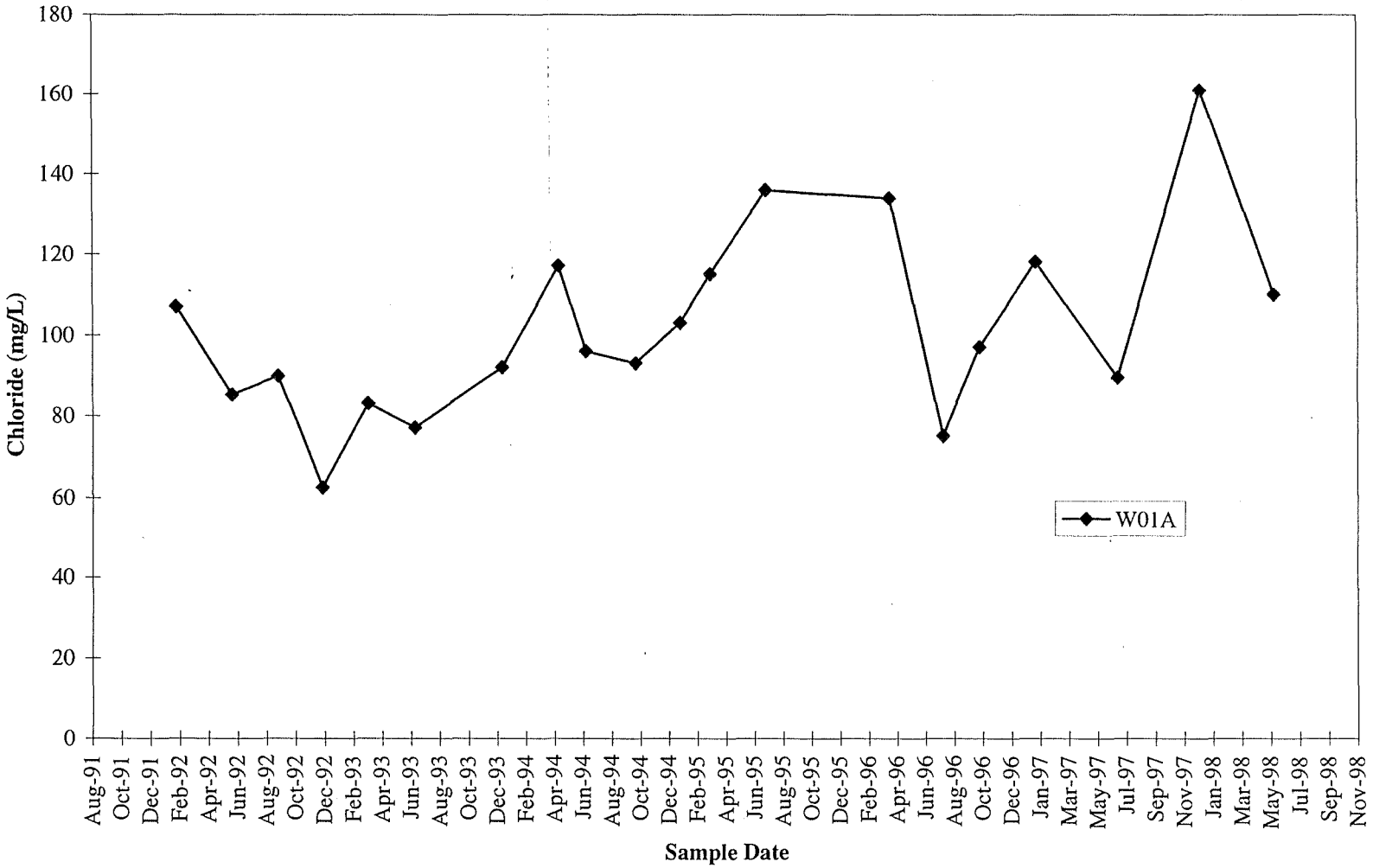


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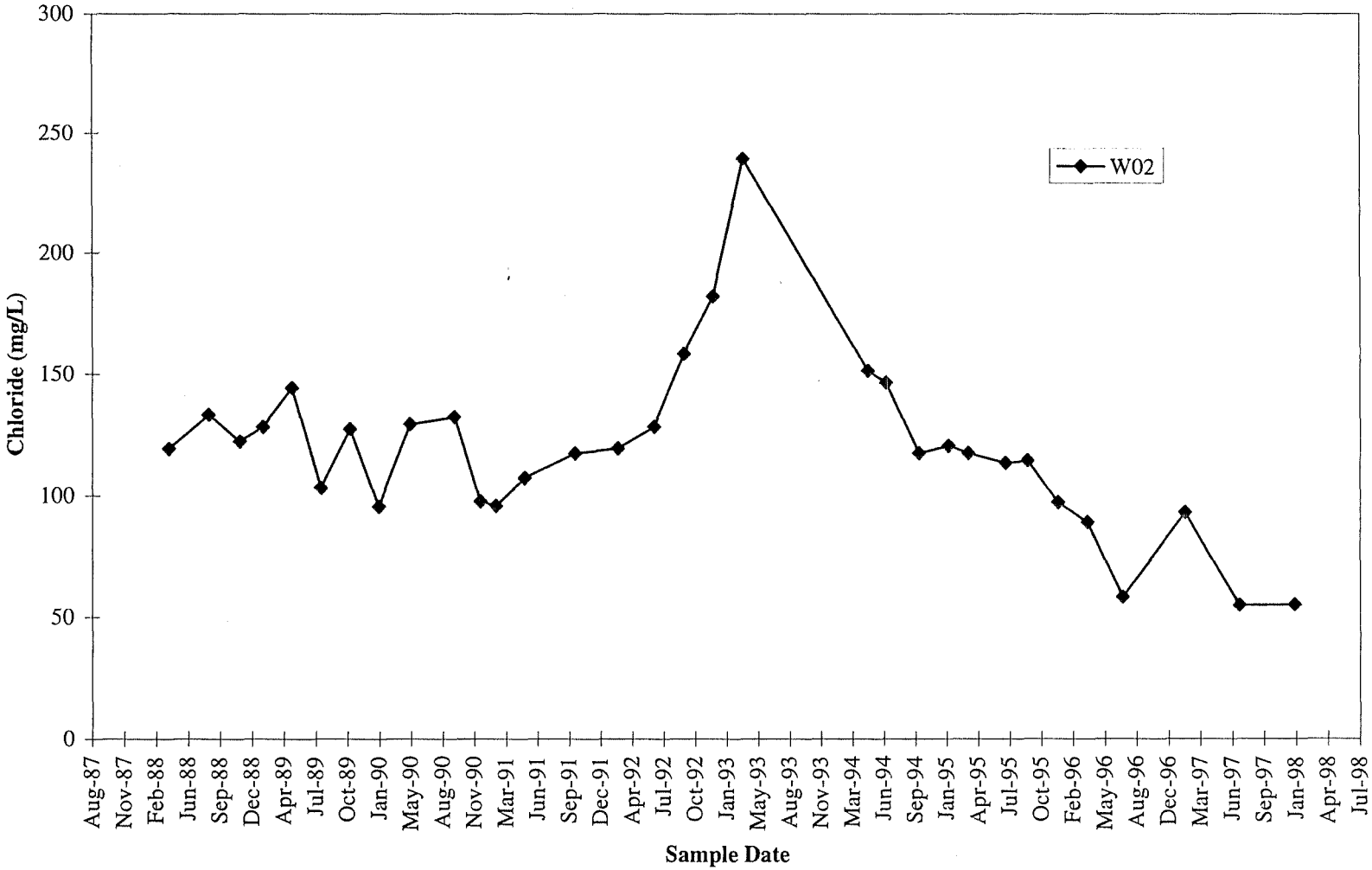
Chloride Time Trends

Chloride Concentrations
Quarterly Groundwater Monitoring



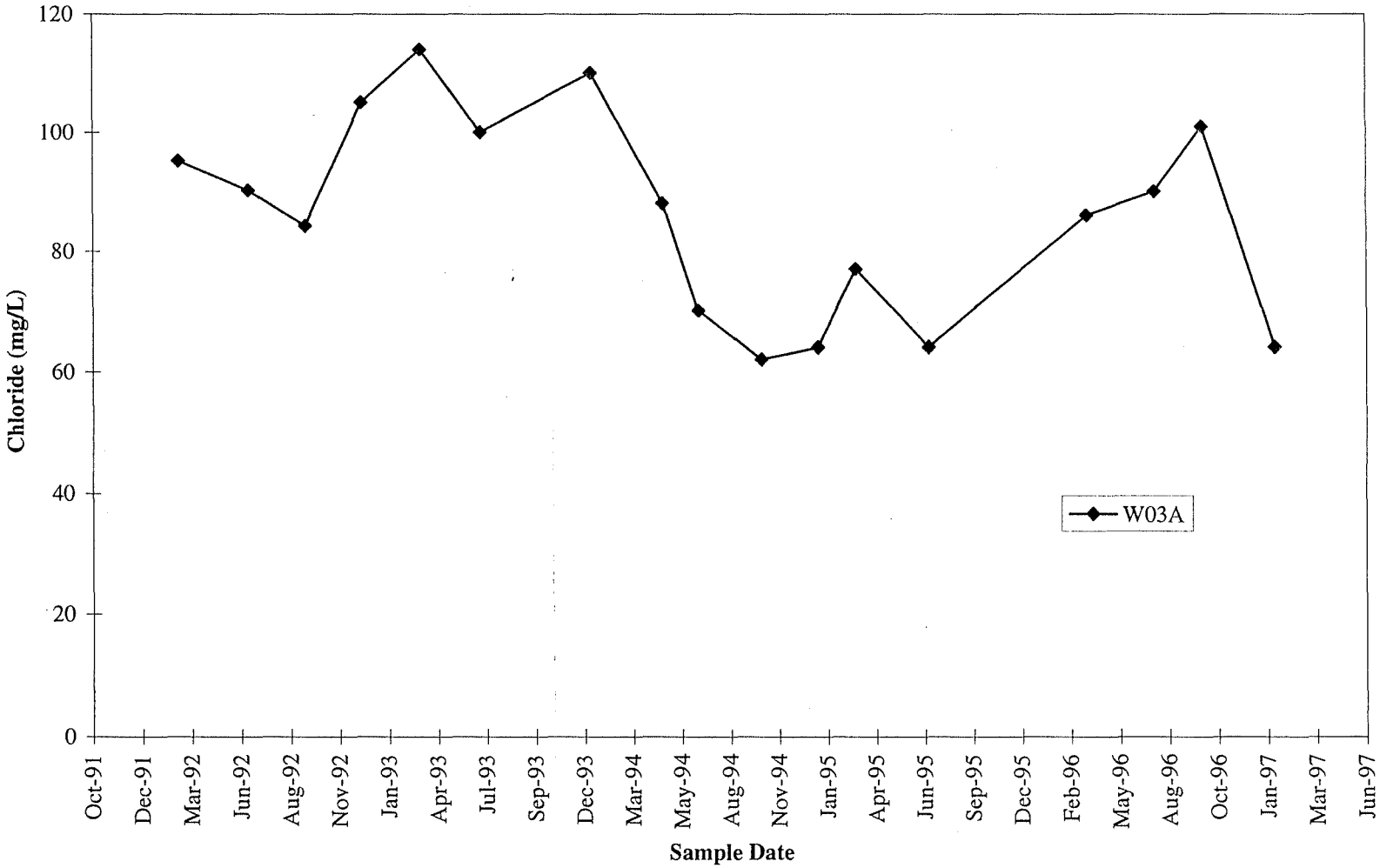
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Chloride Concentrations
Quarterly Groundwater Monitoring



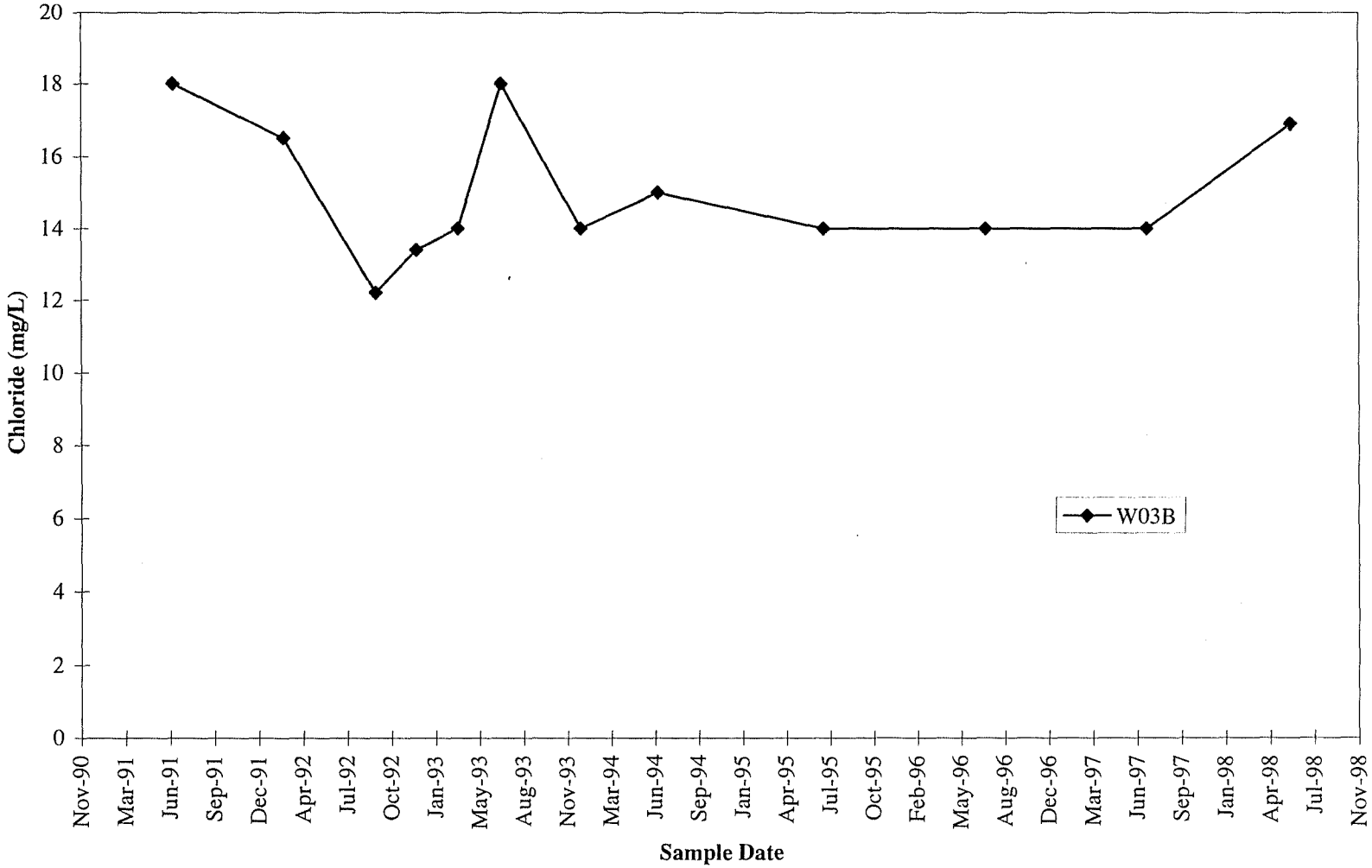
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Chloride Concentrations
Quarterly Groundwater Monitoring



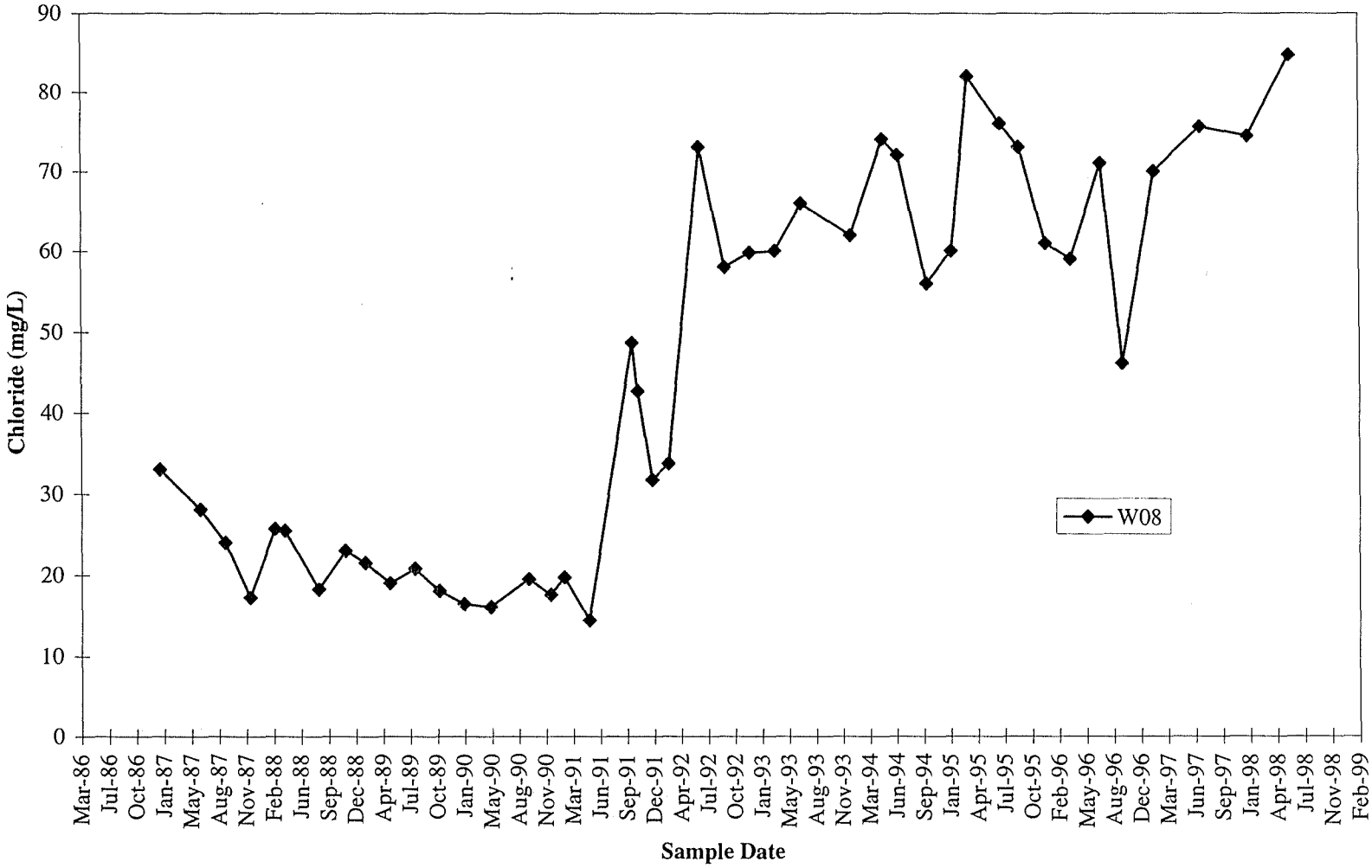
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Chloride Concentrations
Quarterly Groundwater Monitoring



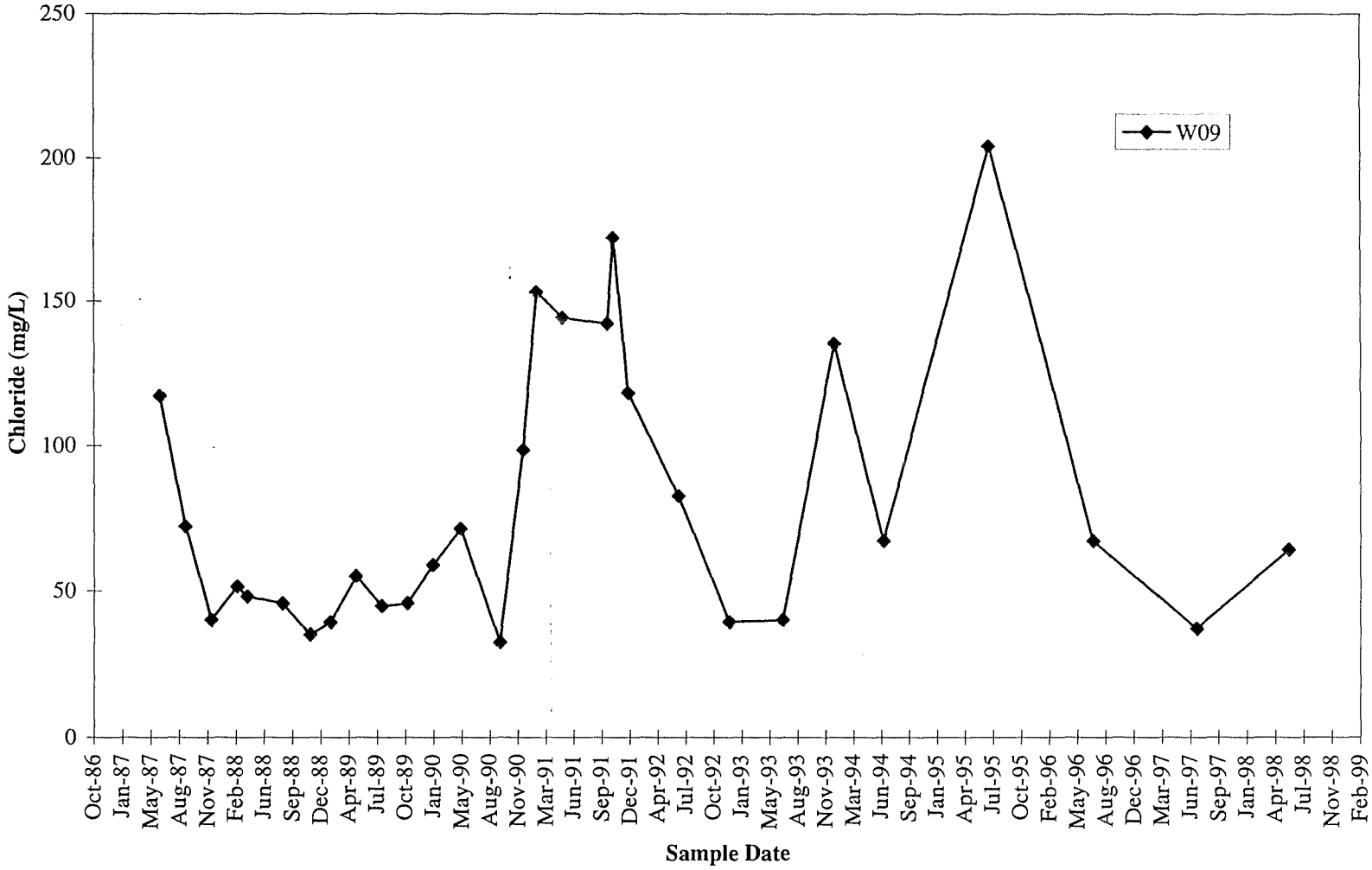
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Chloride Concentrations
Quarterly Groundwater Monitoring



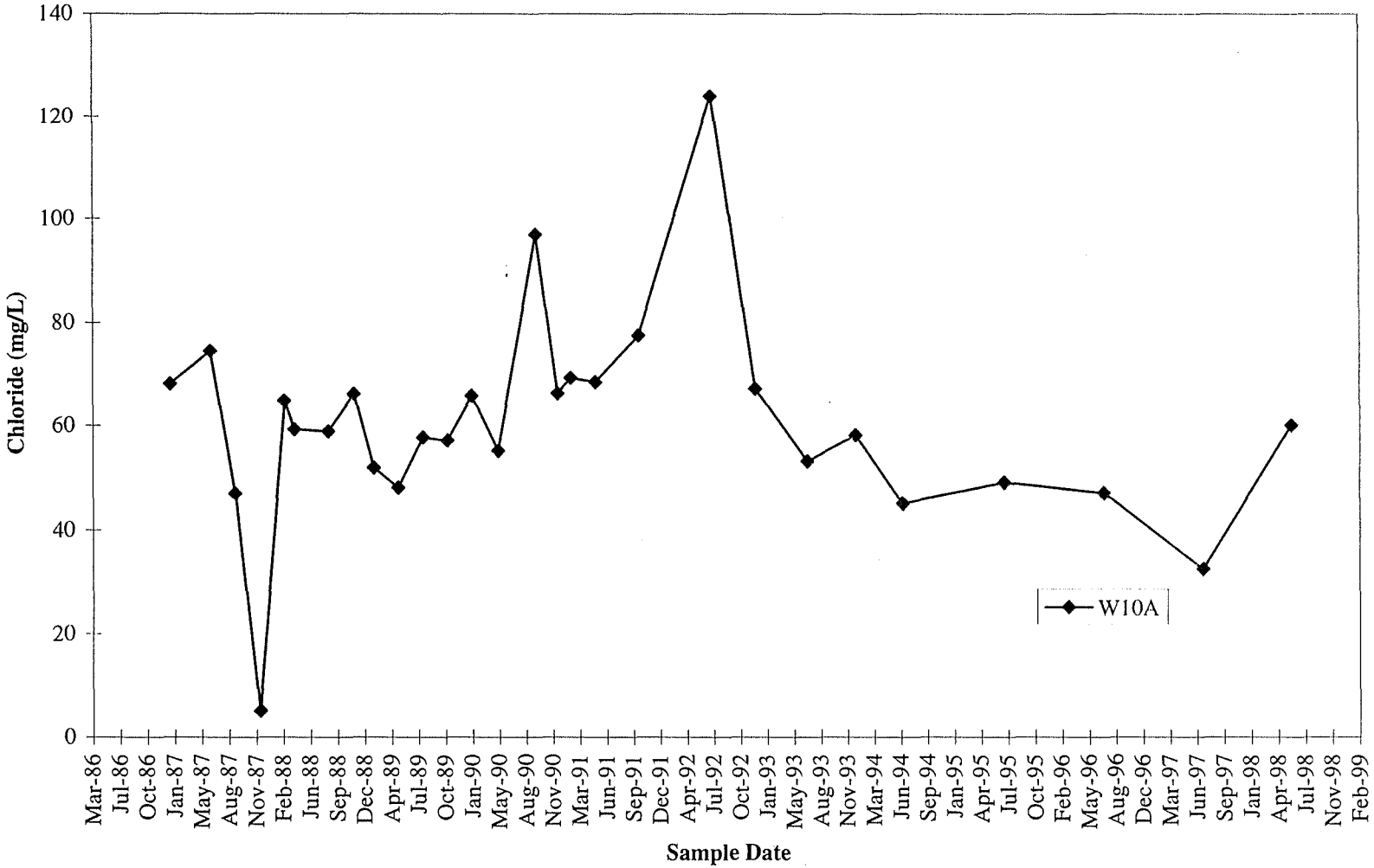
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Chloride Concentrations
Quarterly Groundwater Monitoring



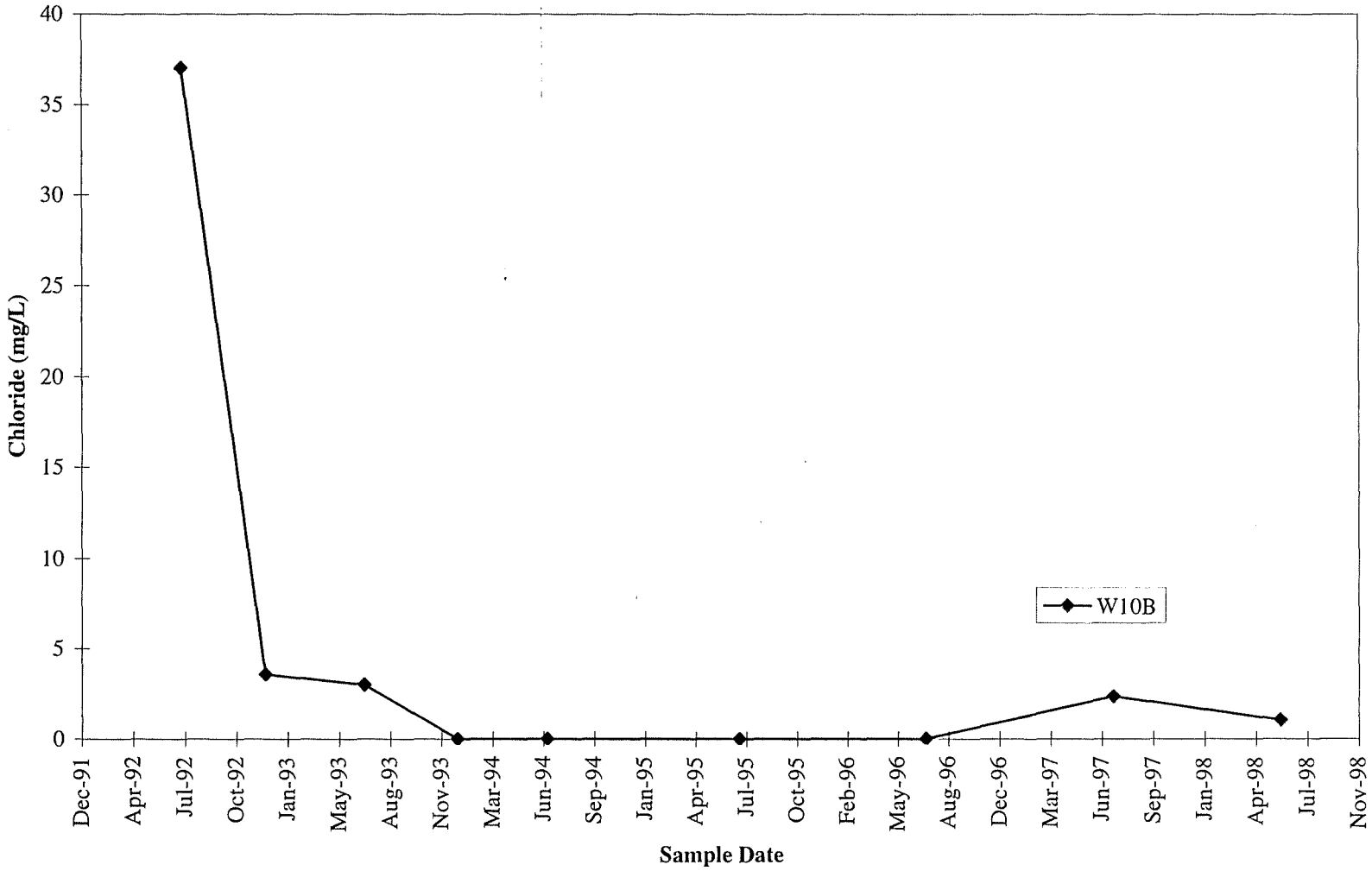
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Chloride Concentrations
Quarterly Groundwater Monitoring



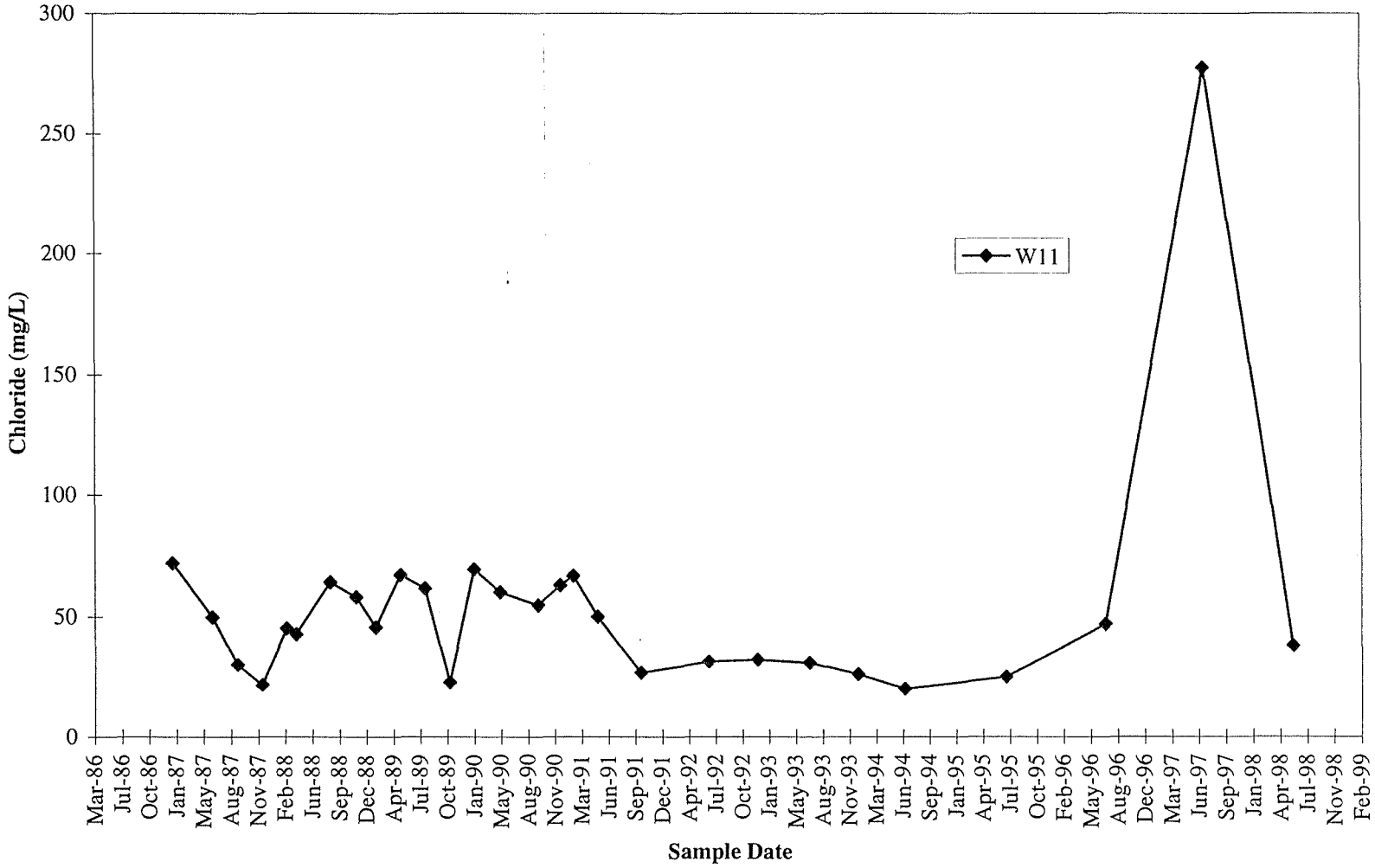
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Chloride Concentrations
Quarterly Groundwater Monitoring



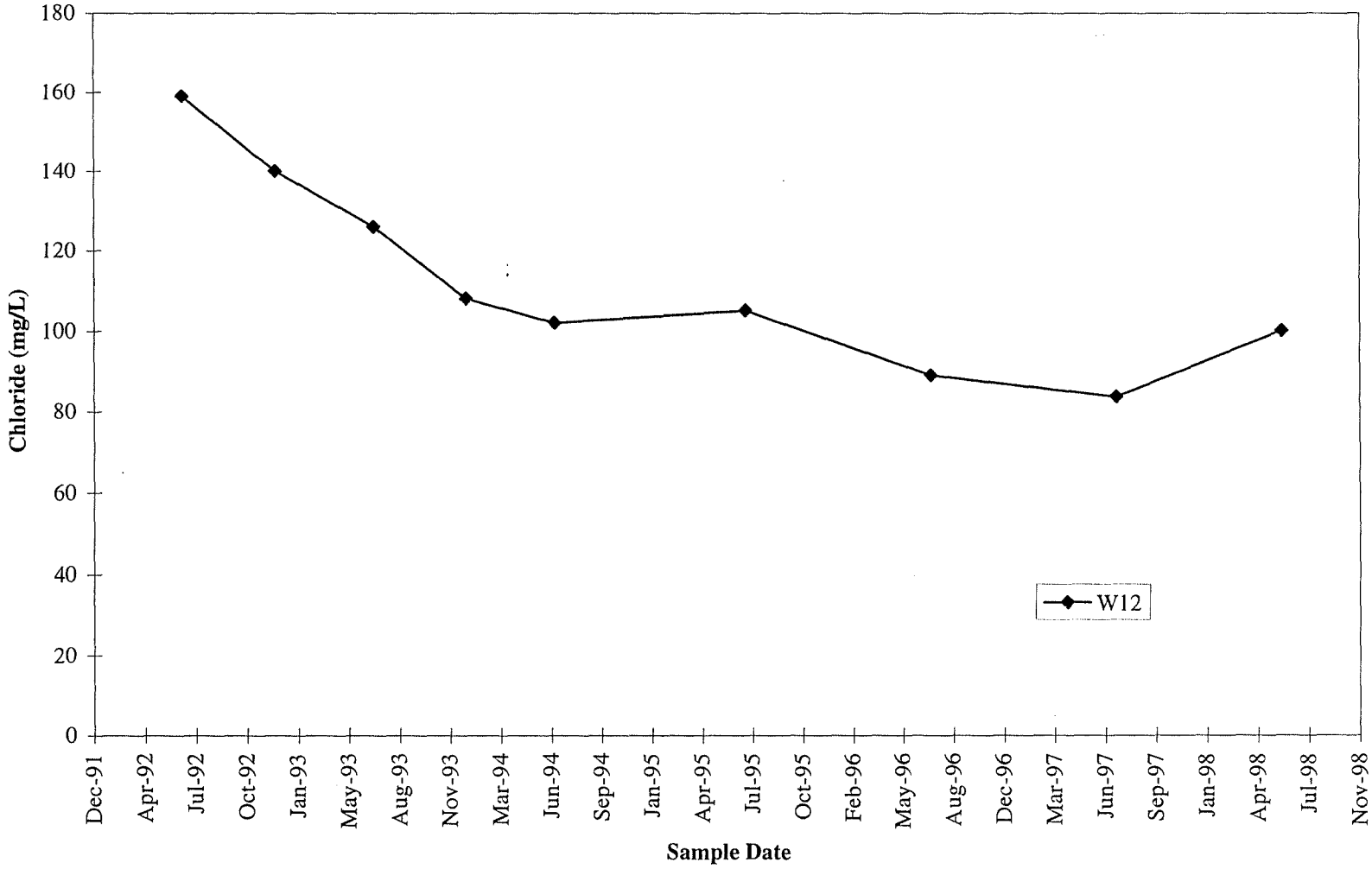
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Chloride Concentrations
Quarterly Groundwater Monitoring



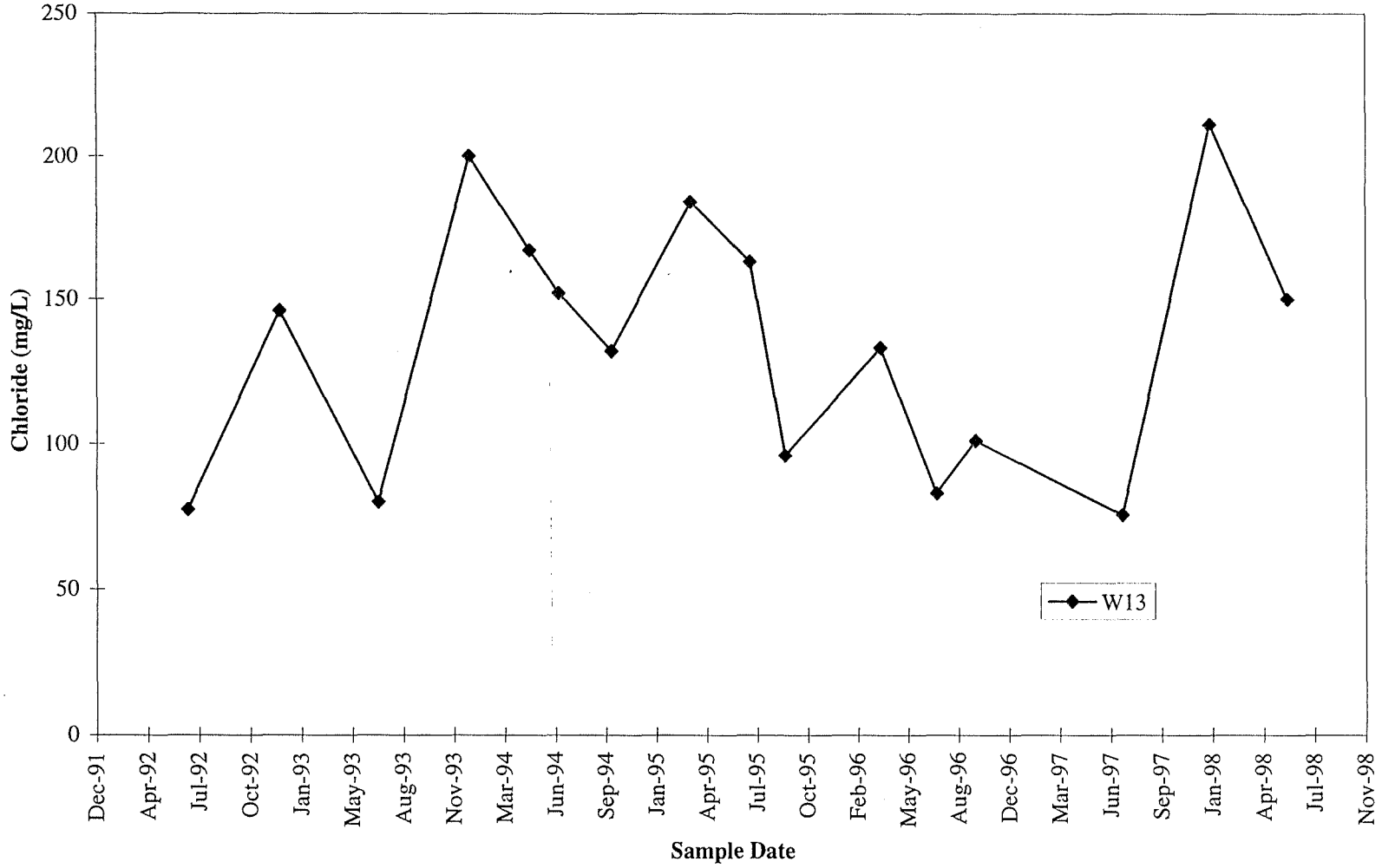
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Chloride Concentrations
Quarterly Groundwater Monitoring



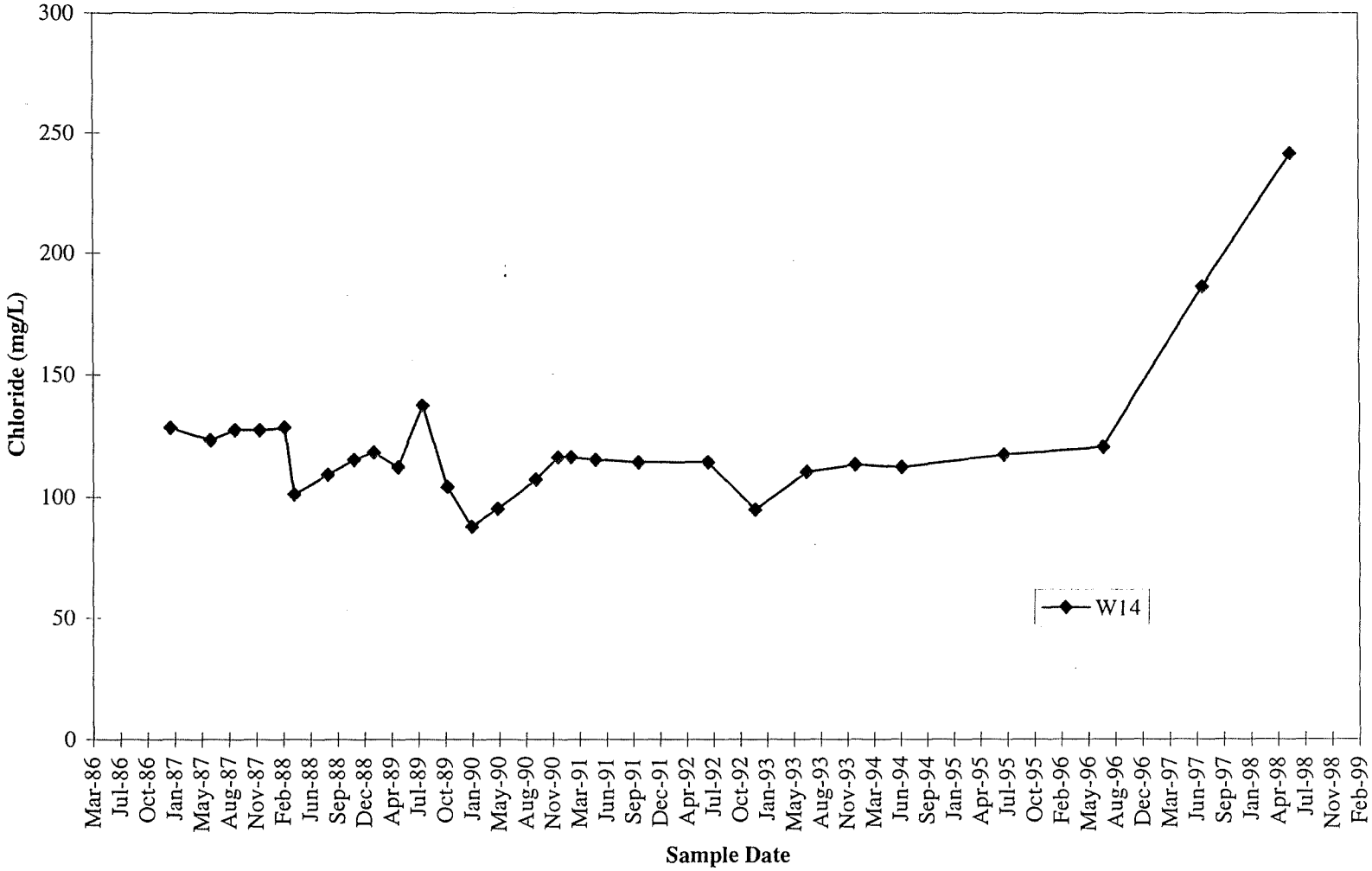
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Chloride Concentrations
Quarterly Groundwater Monitoring



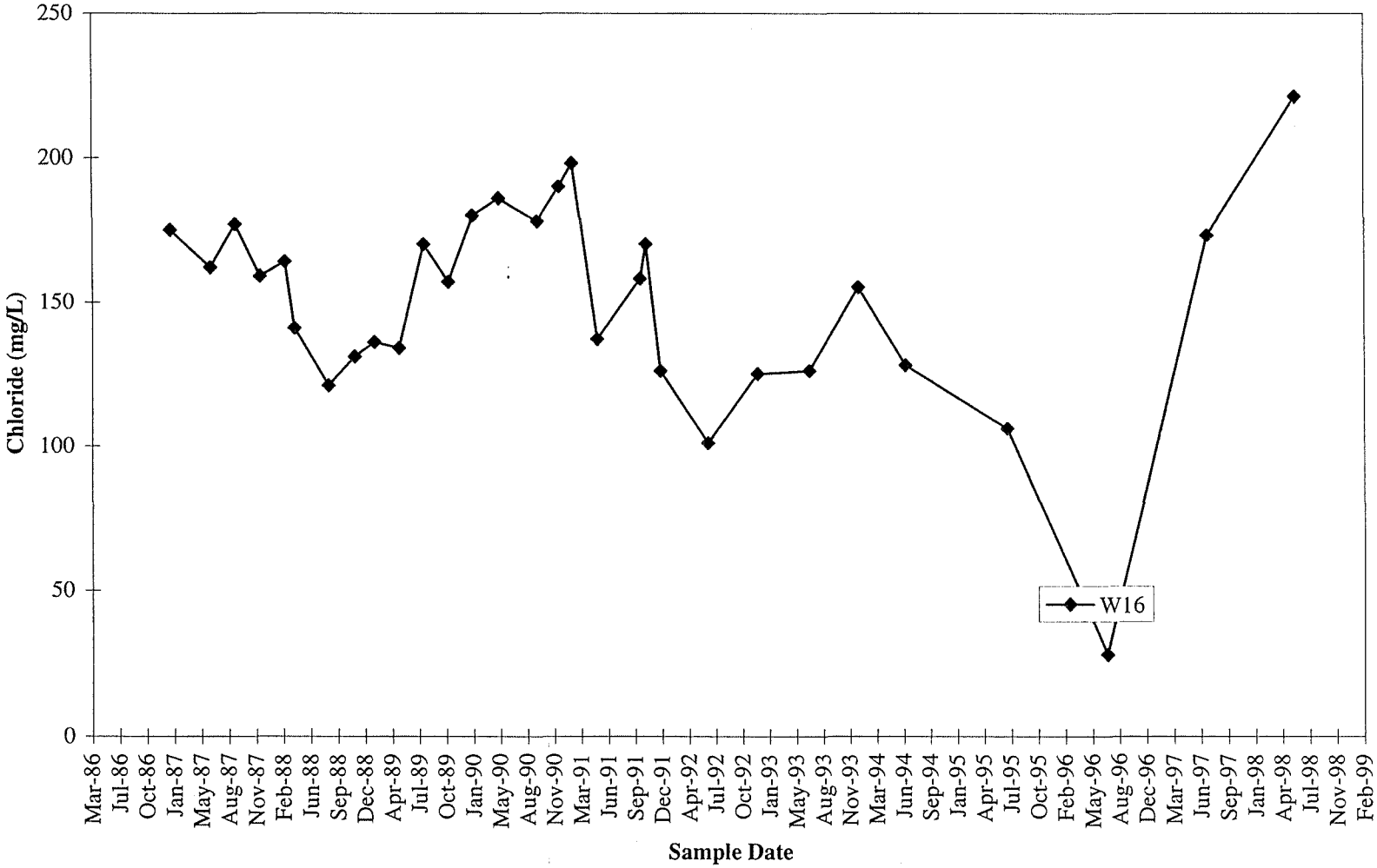
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Chloride Concentrations
Quarterly Groundwater Monitoring



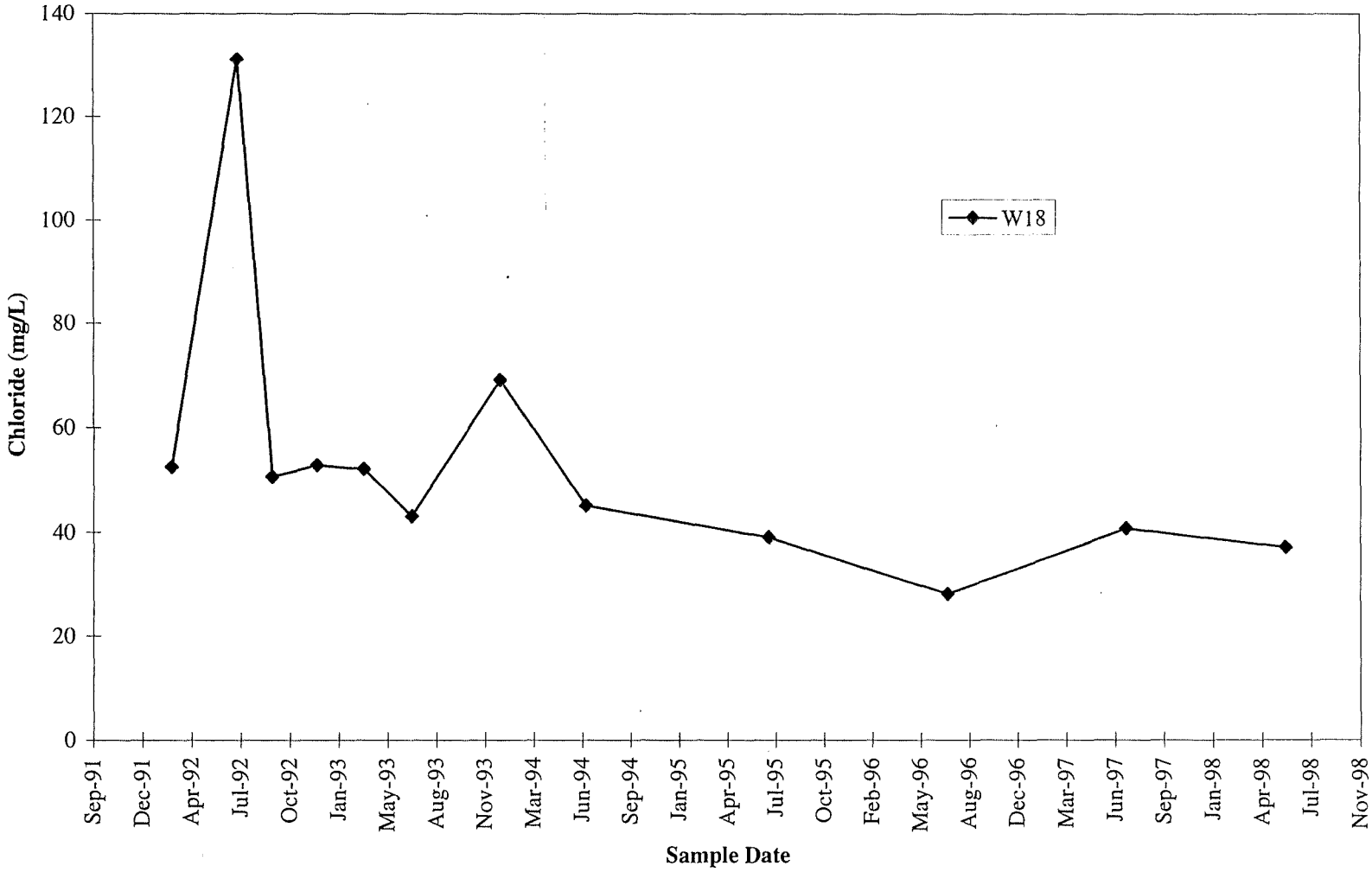
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Chloride Concentrations
Quarterly Groundwater Monitoring



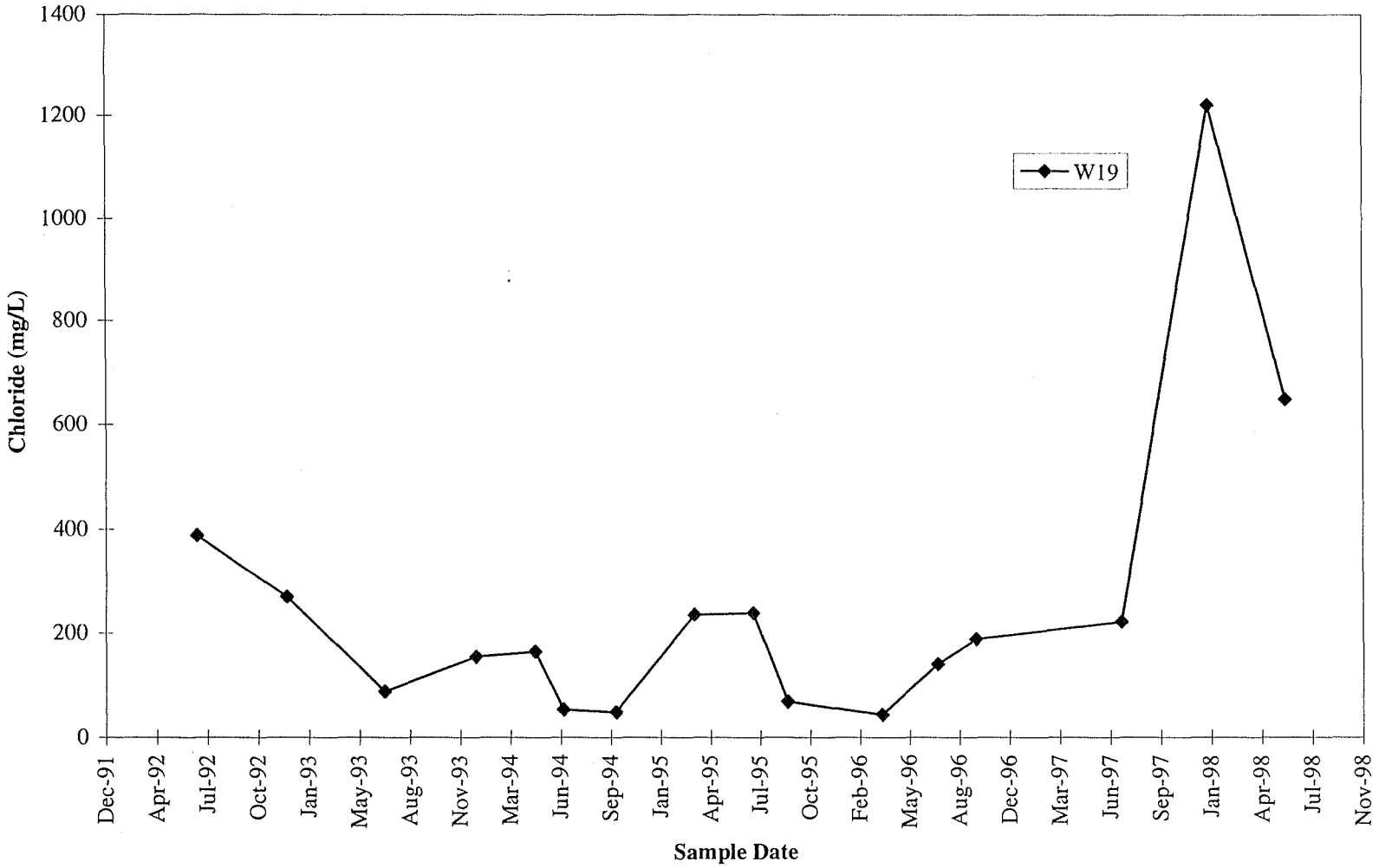
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Chloride Concentrations
Quarterly Groundwater Monitoring



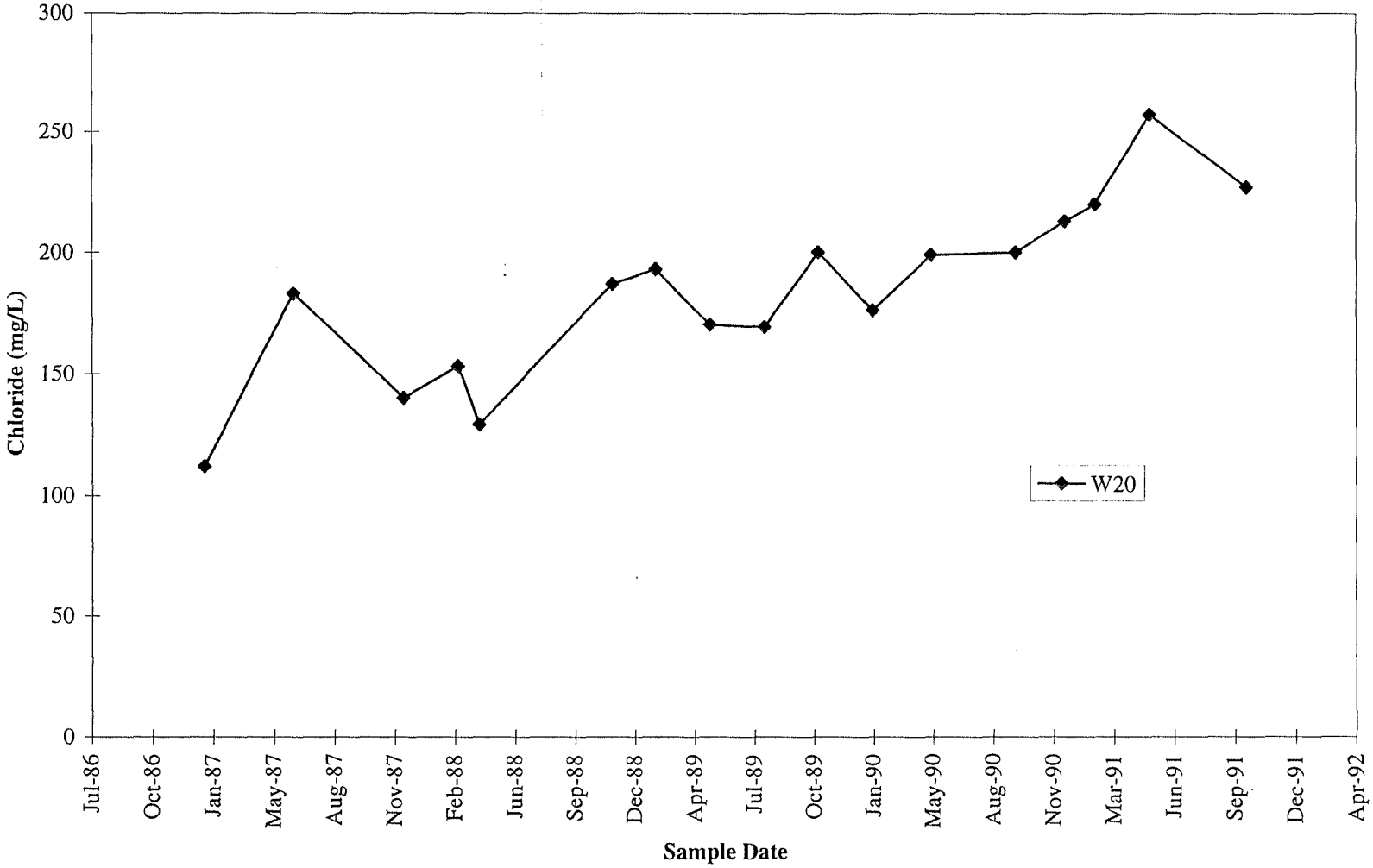
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Chloride Concentrations
Quarterly Groundwater Monitoring



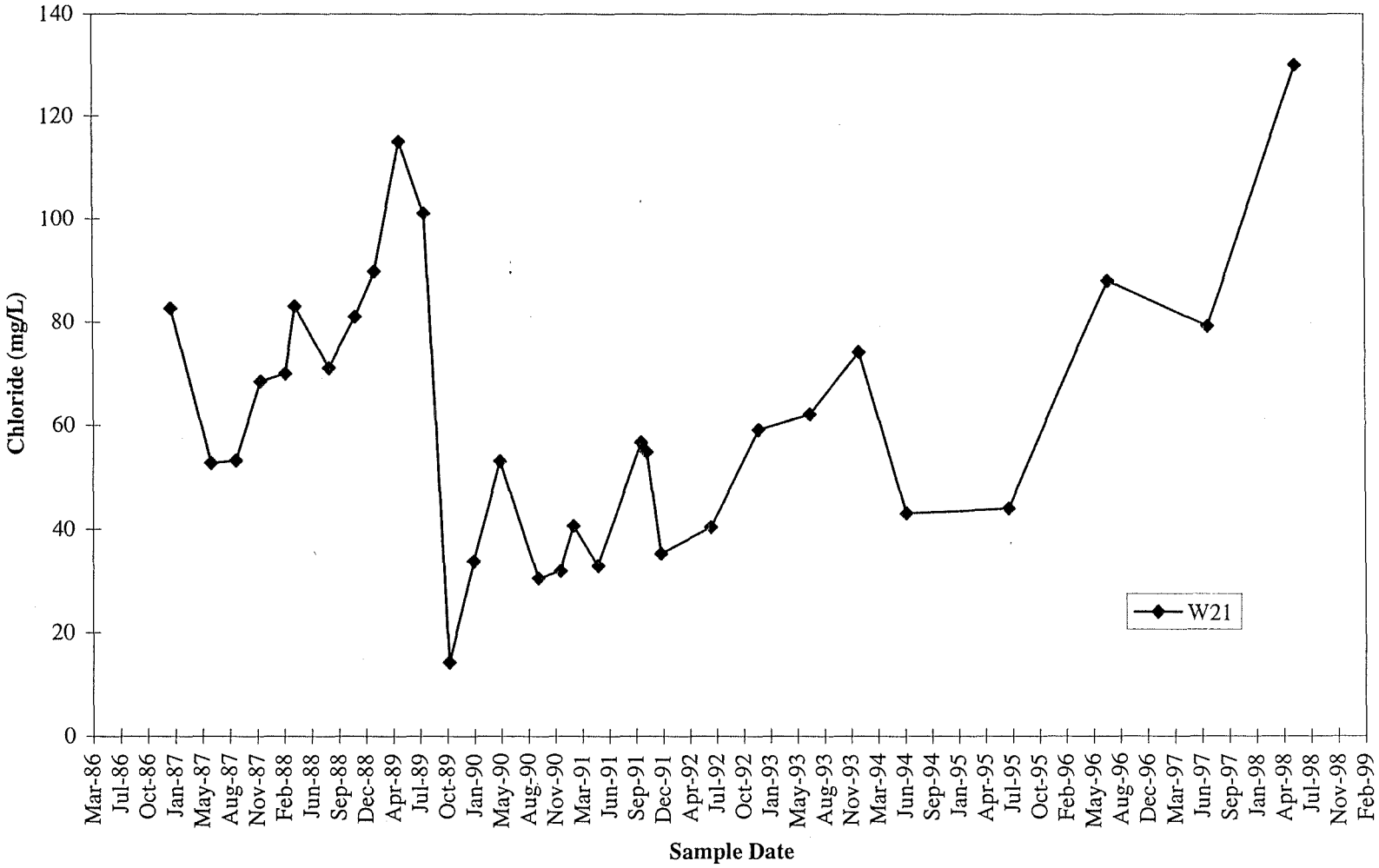
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Chloride Concentrations
Quarterly Groundwater Monitoring



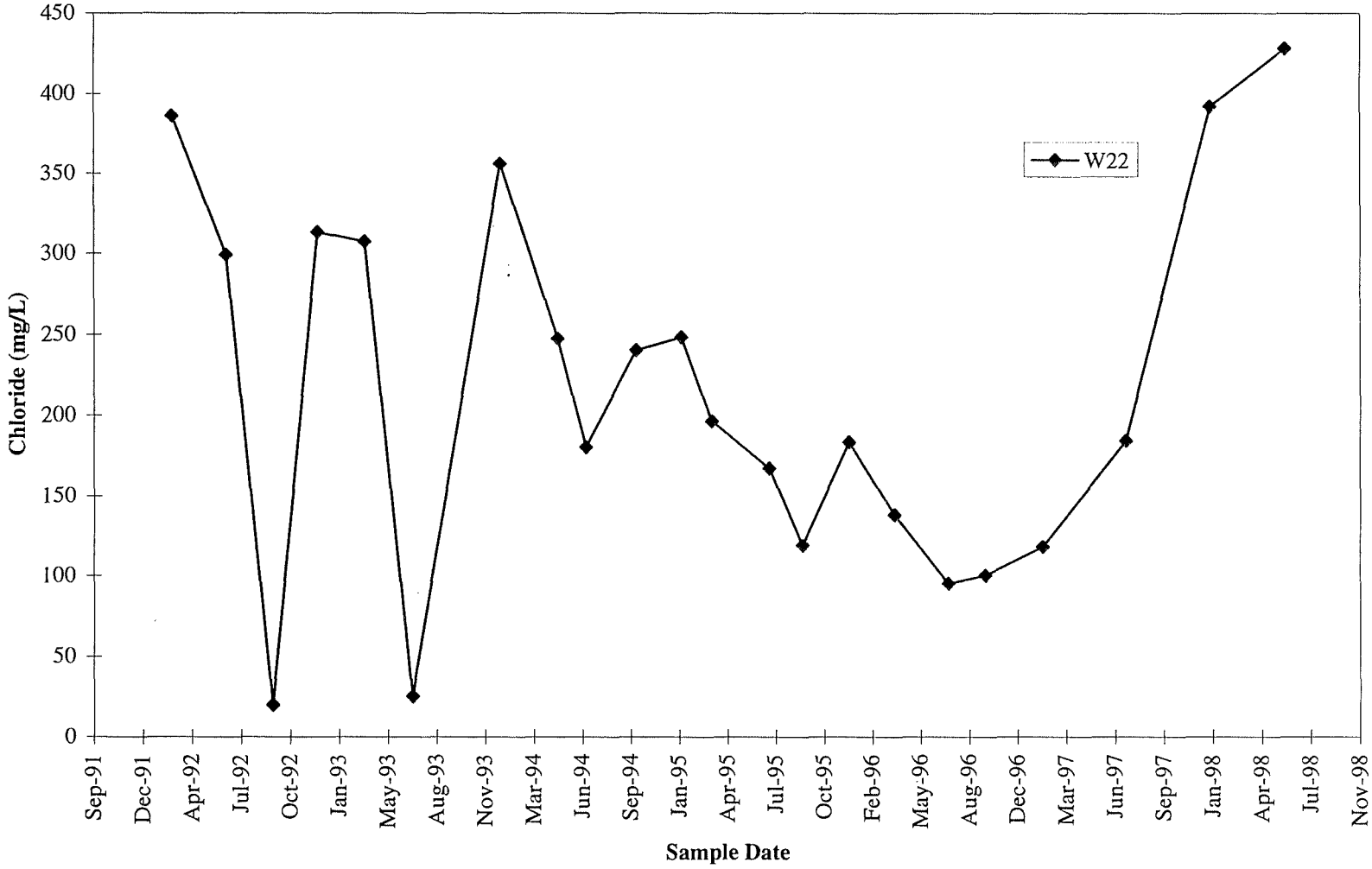
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Chloride Concentrations
Quarterly Groundwater Monitoring



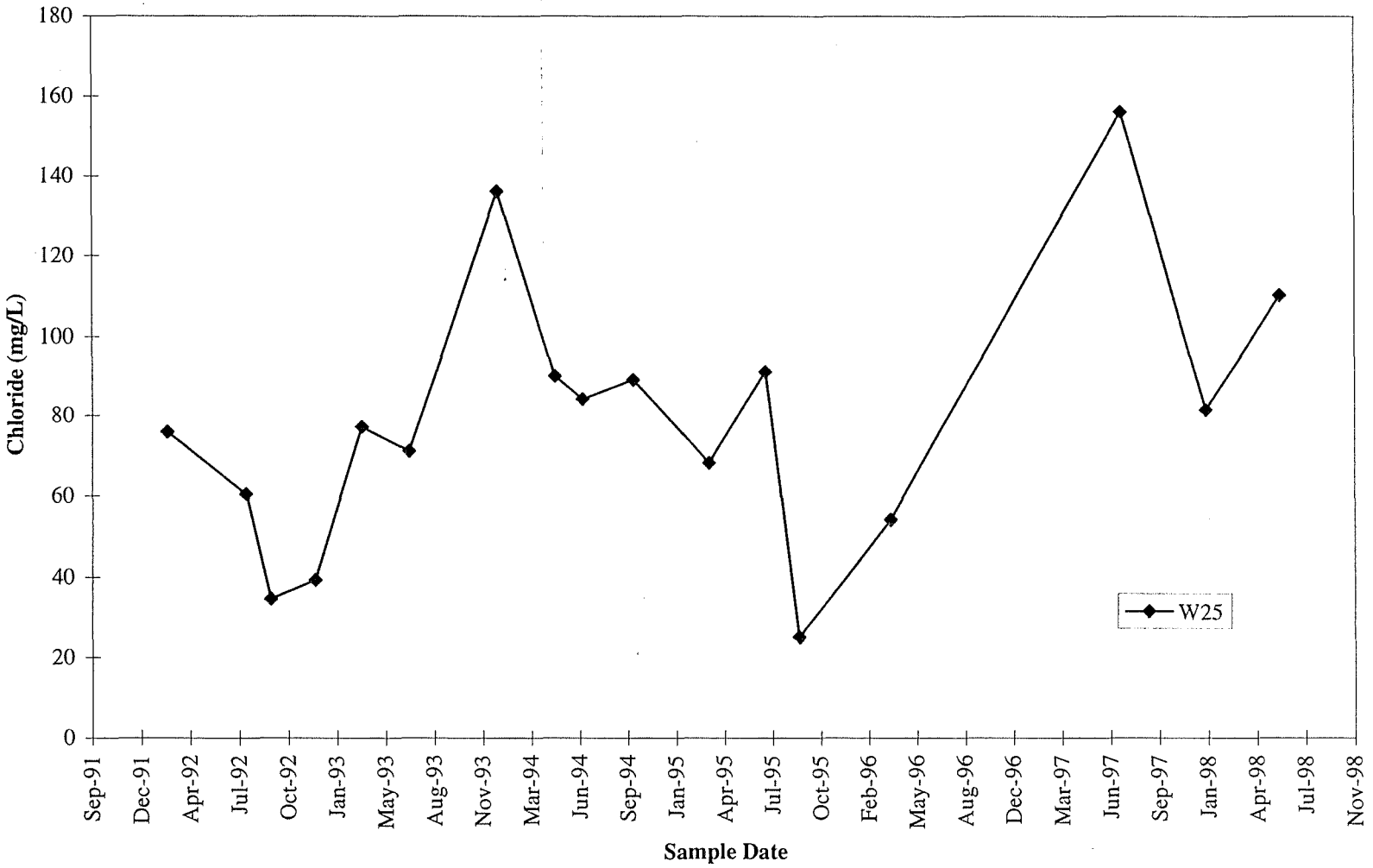
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Chloride Concentrations
Quarterly Groundwater Monitoring



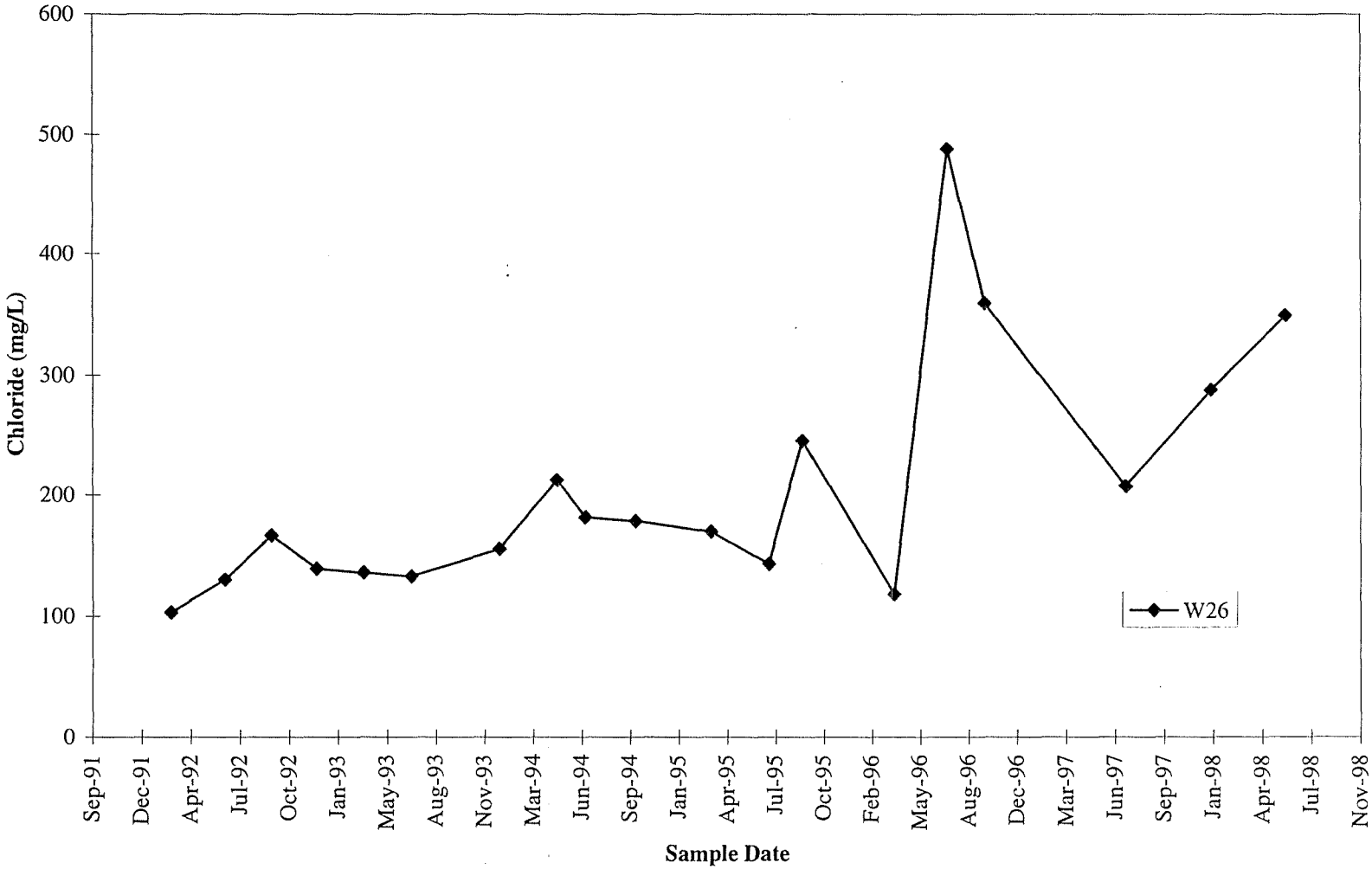
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Chloride Concentrations
Quarterly Groundwater Monitoring



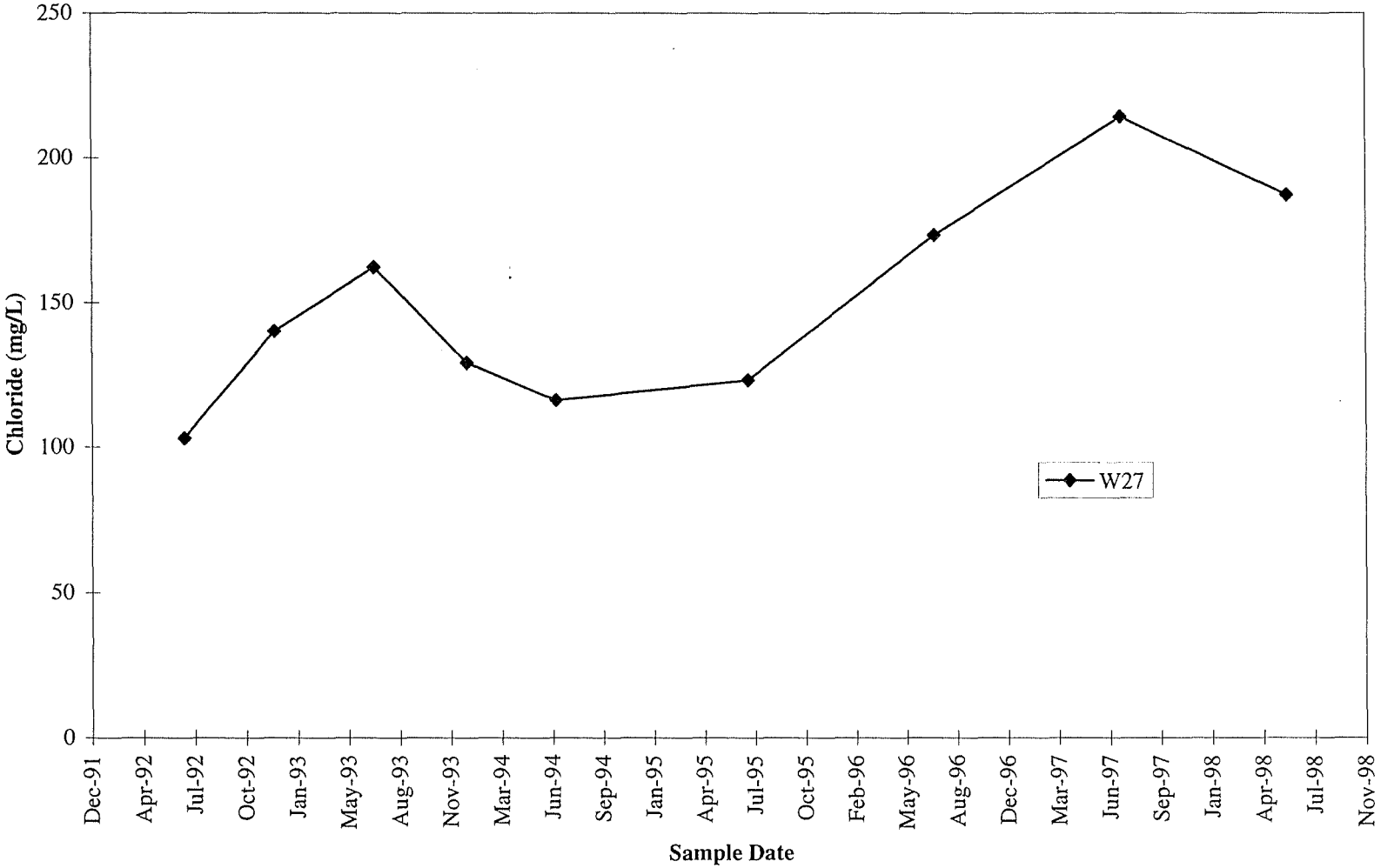
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8/24/95

Chloride Concentrations
Quarterly Groundwater Monitoring



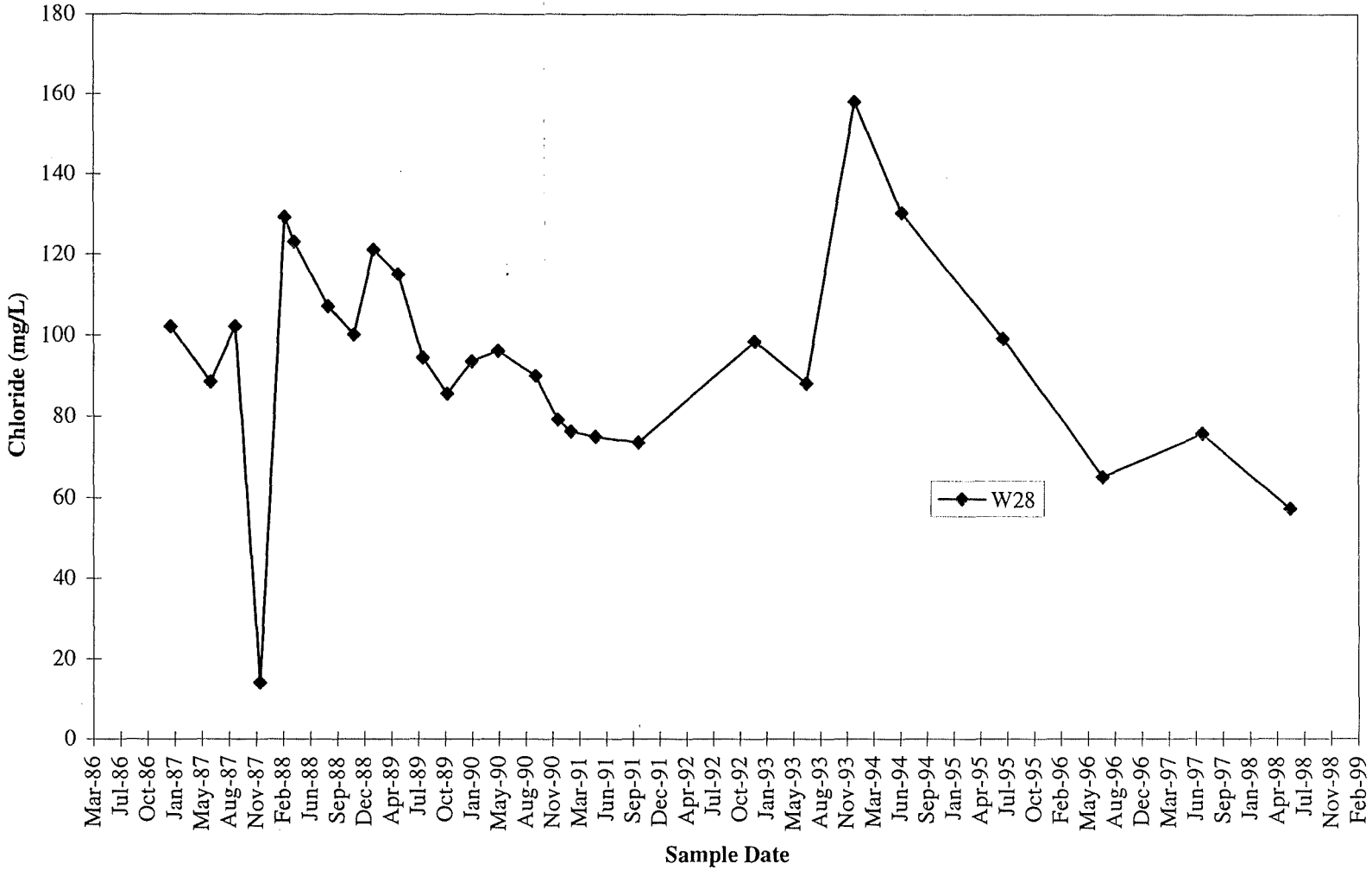
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Chloride Concentrations
Quarterly Groundwater Monitoring



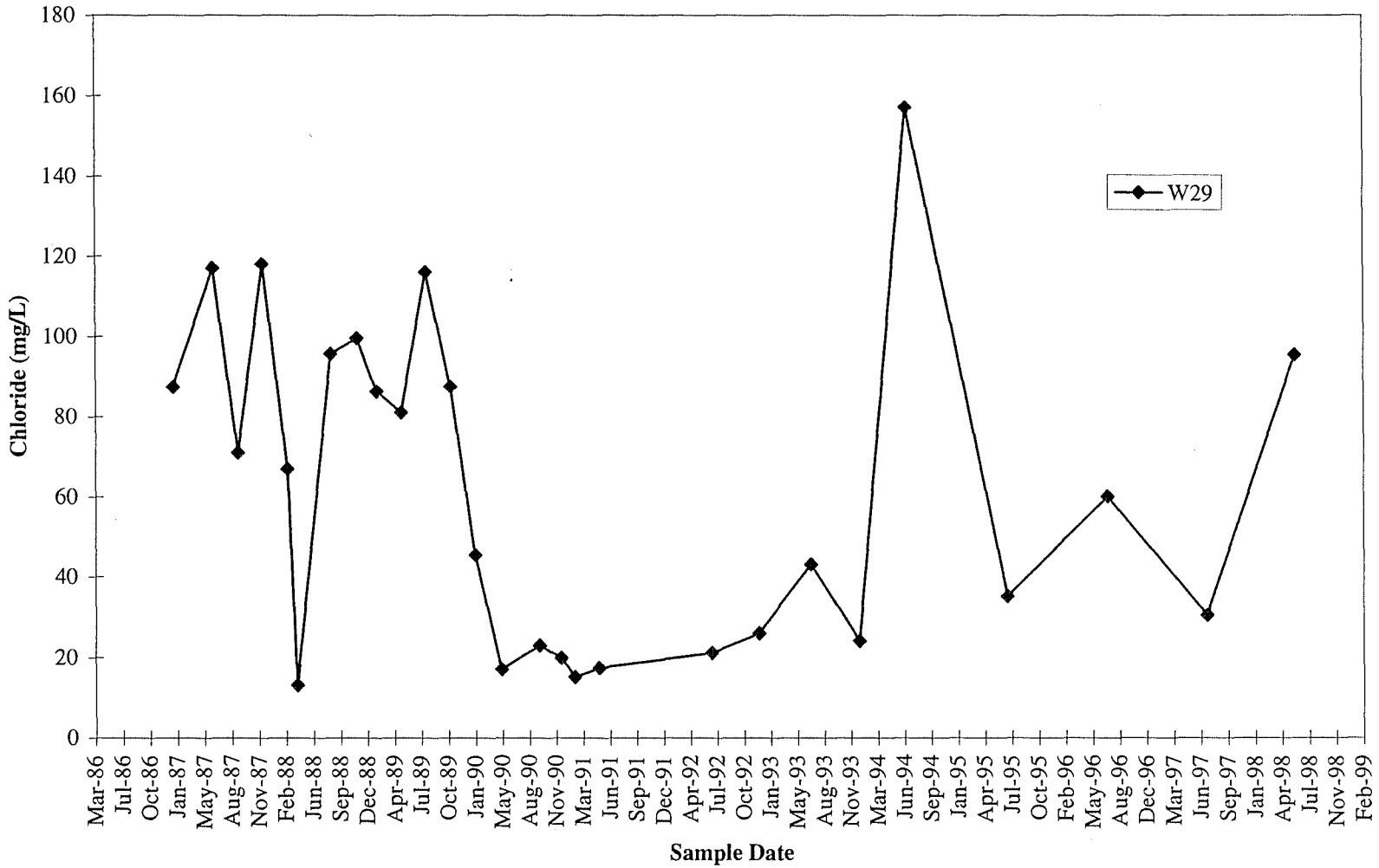
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Chloride Concentrations
Quarterly Groundwater Monitoring



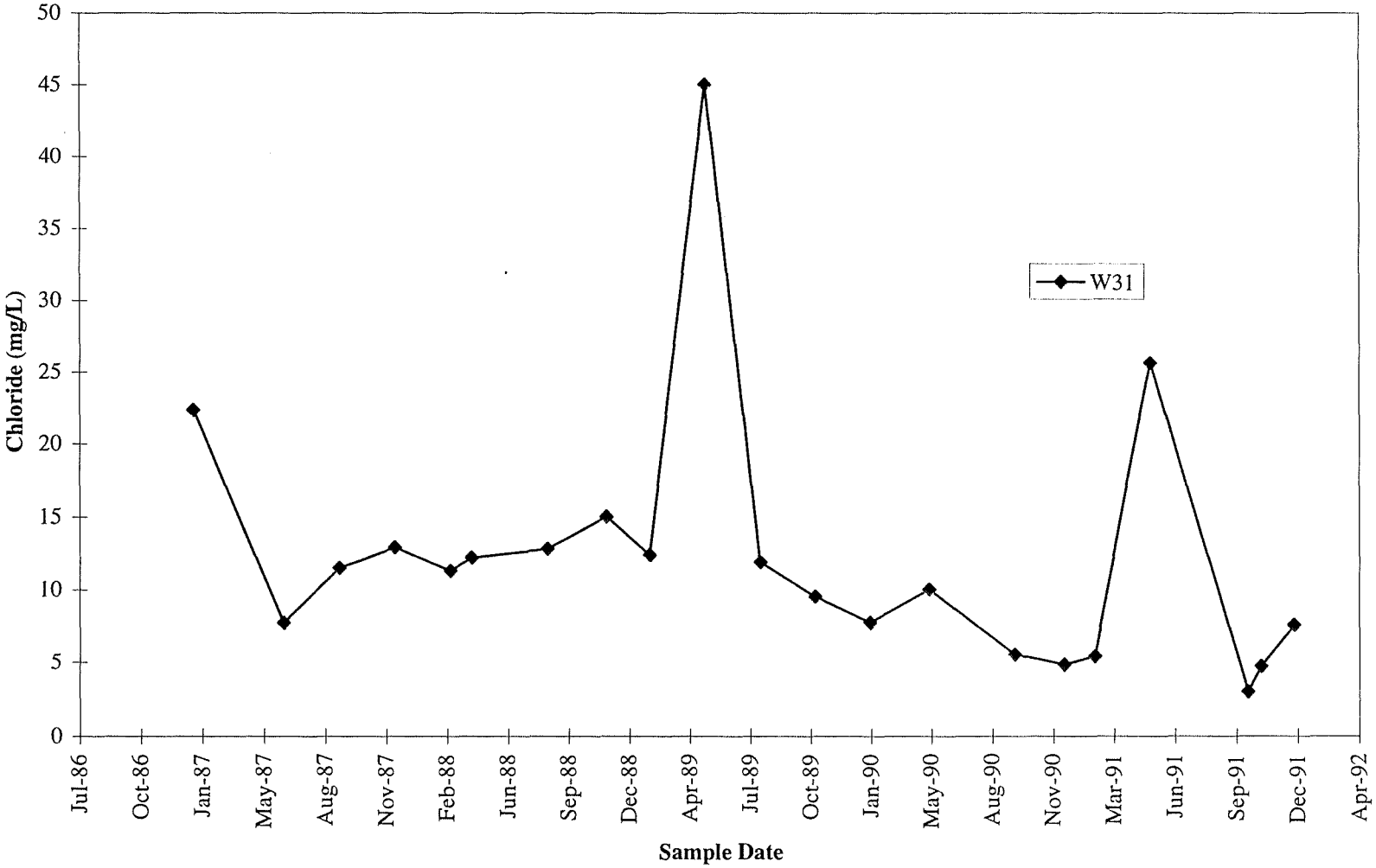
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Chloride Concentrations
Quarterly Groundwater Monitoring



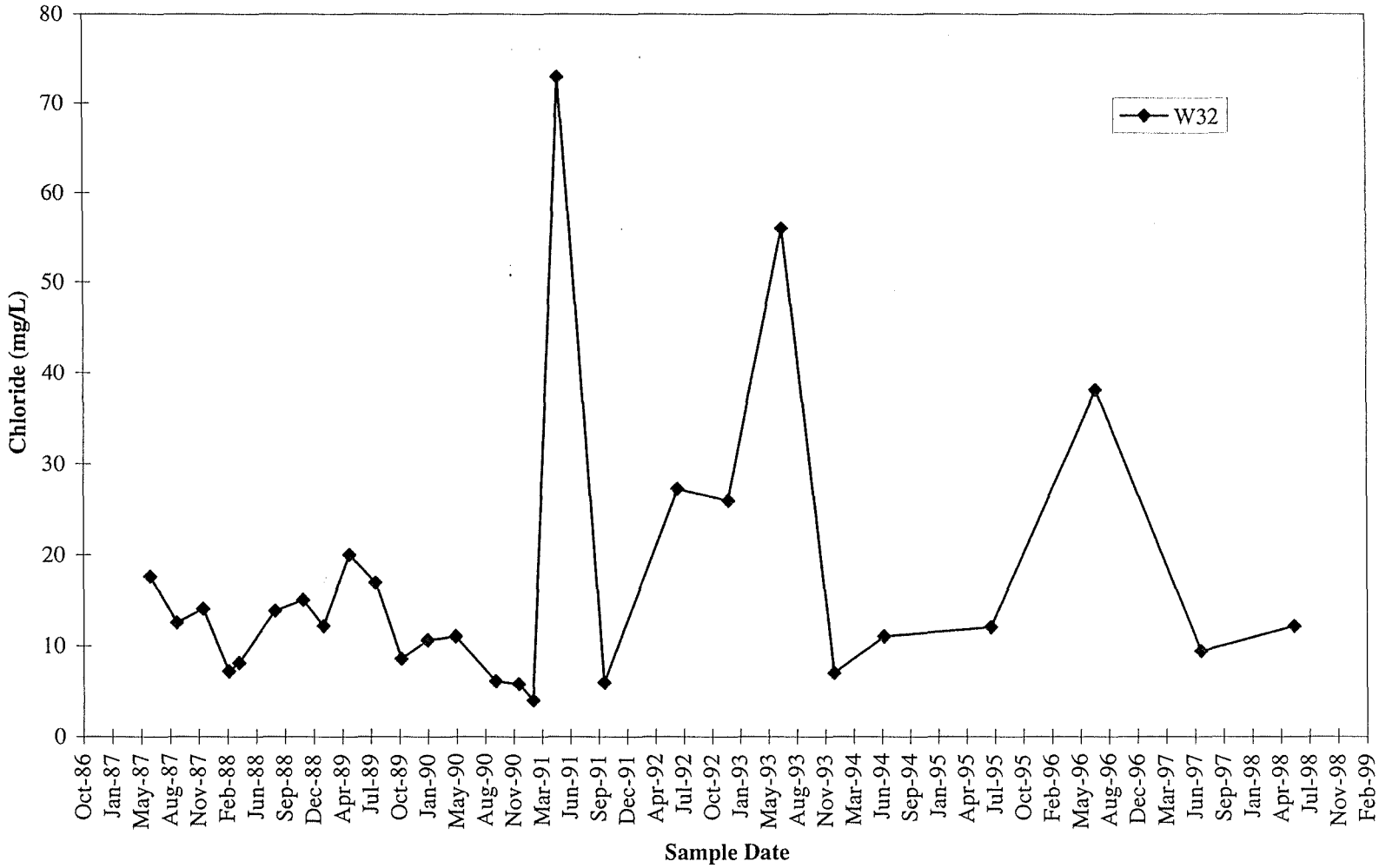
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8/24/95

Chloride Concentrations
Quarterly Groundwater Monitoring



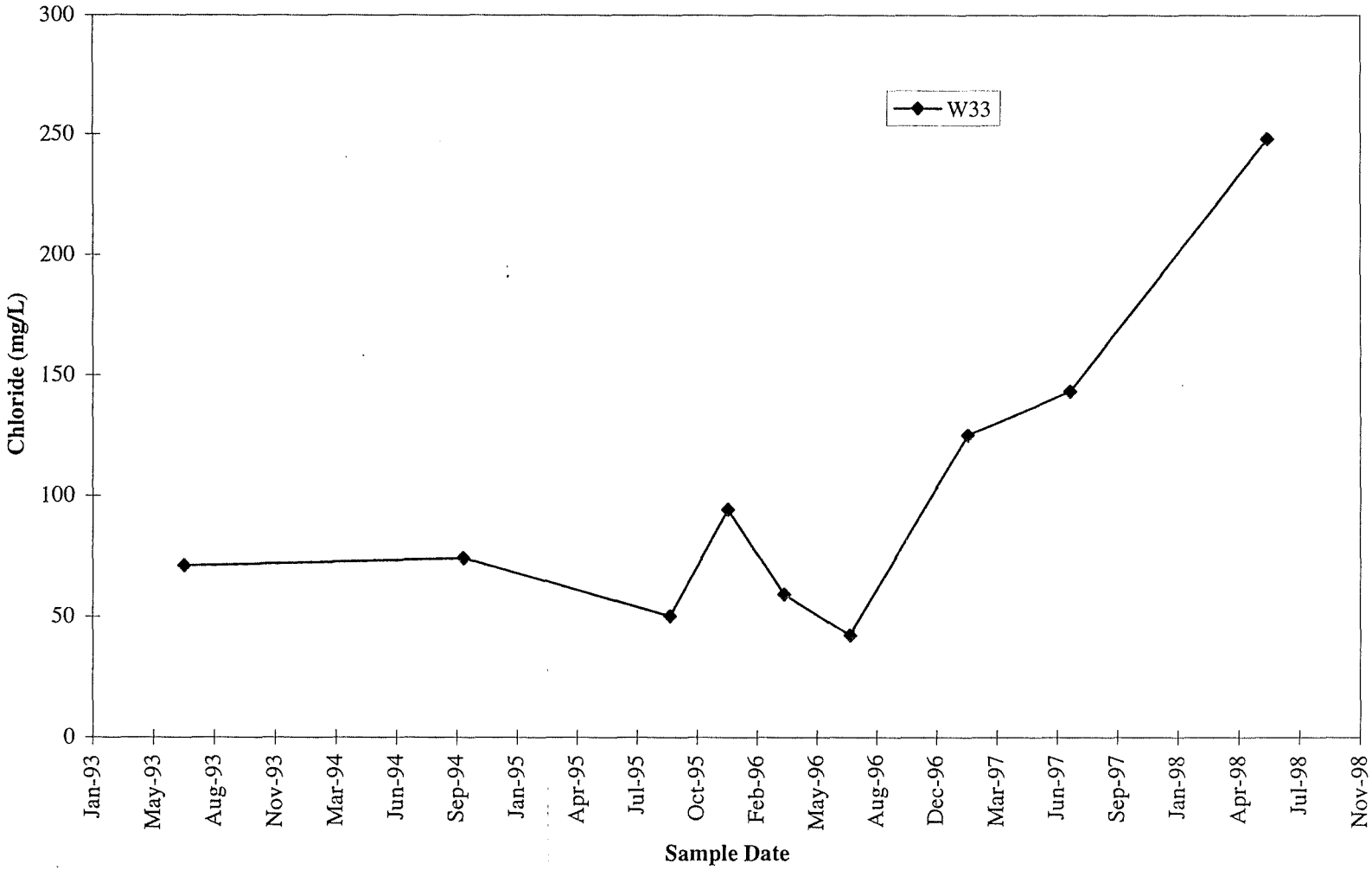
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8/24/95

Chloride Concentrations
Quarterly Groundwater Monitoring



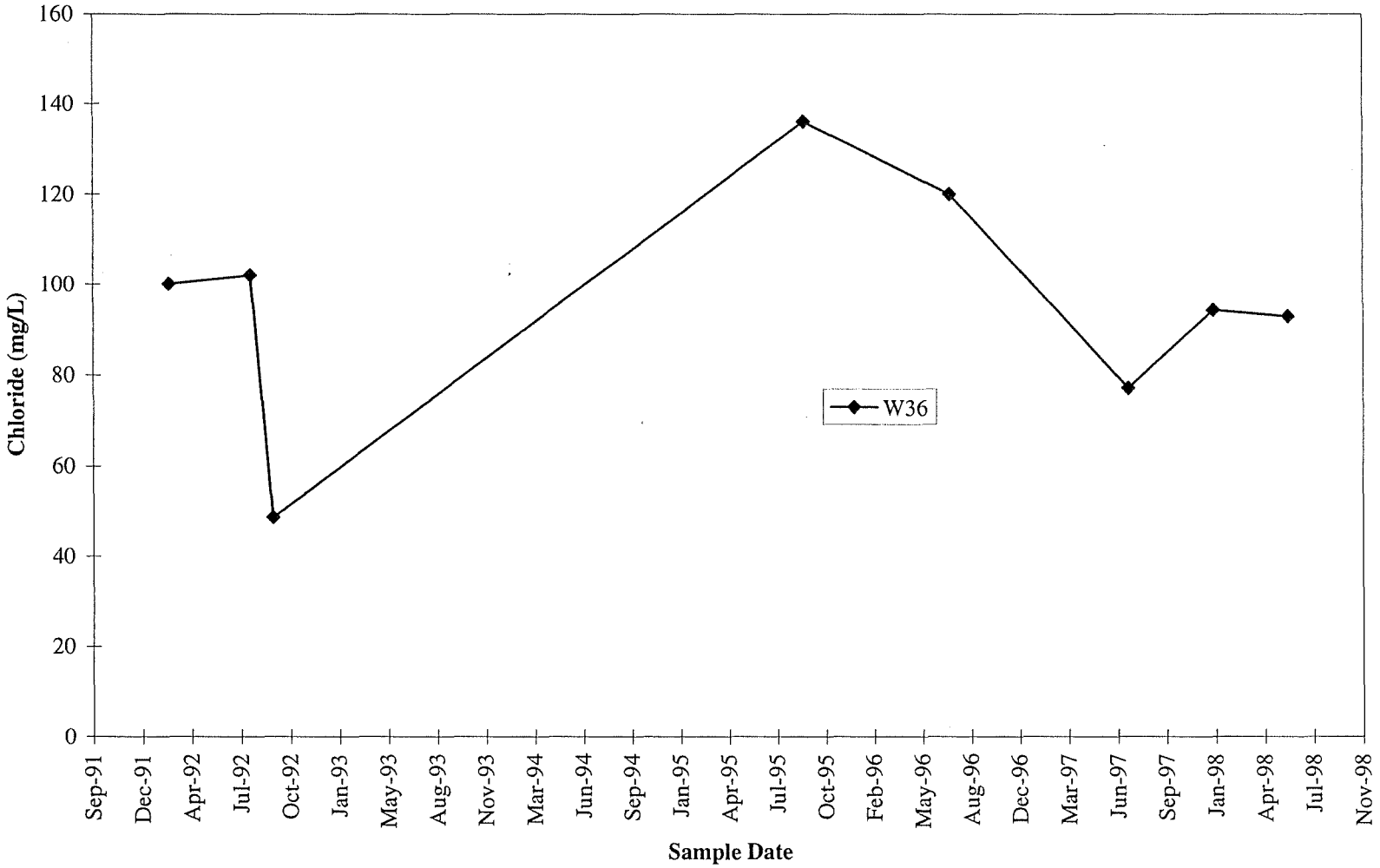
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8/24/95

Chloride Concentrations
Quarterly Groundwater Monitoring



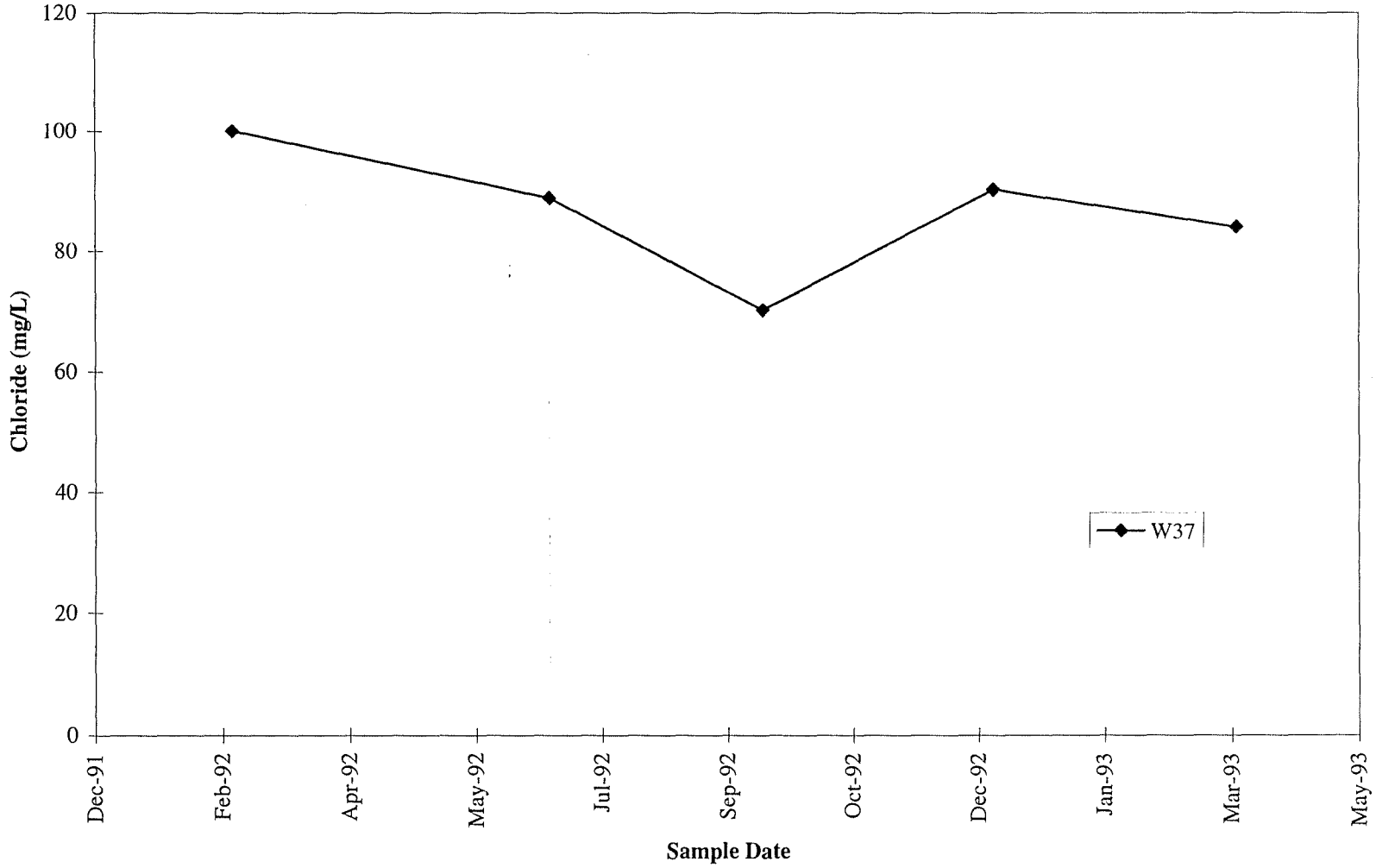
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8/24/95

Chloride Concentrations
Quarterly Groundwater Monitoring



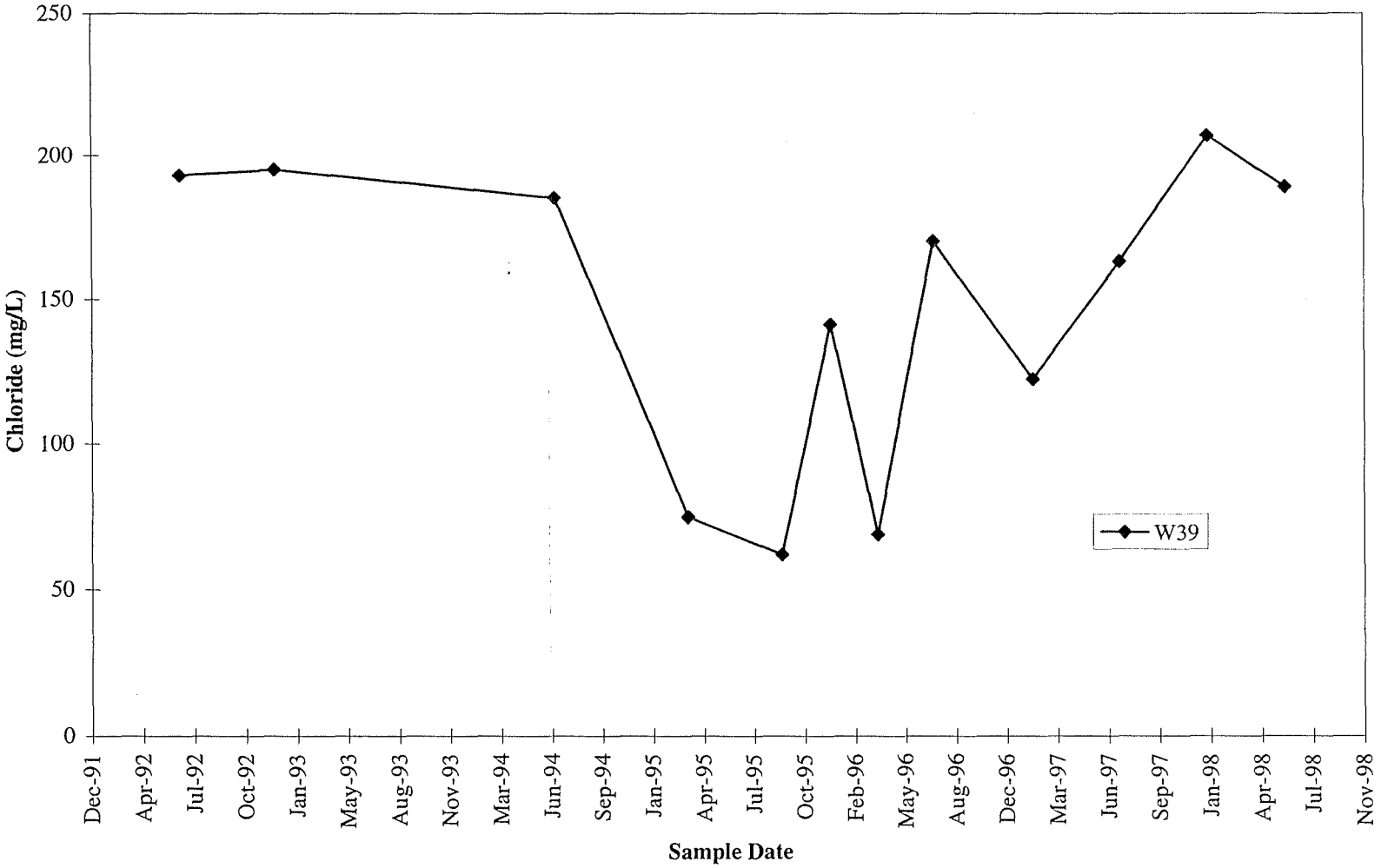
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8/24/95

Chloride Concentrations
Quarterly Groundwater Monitoring



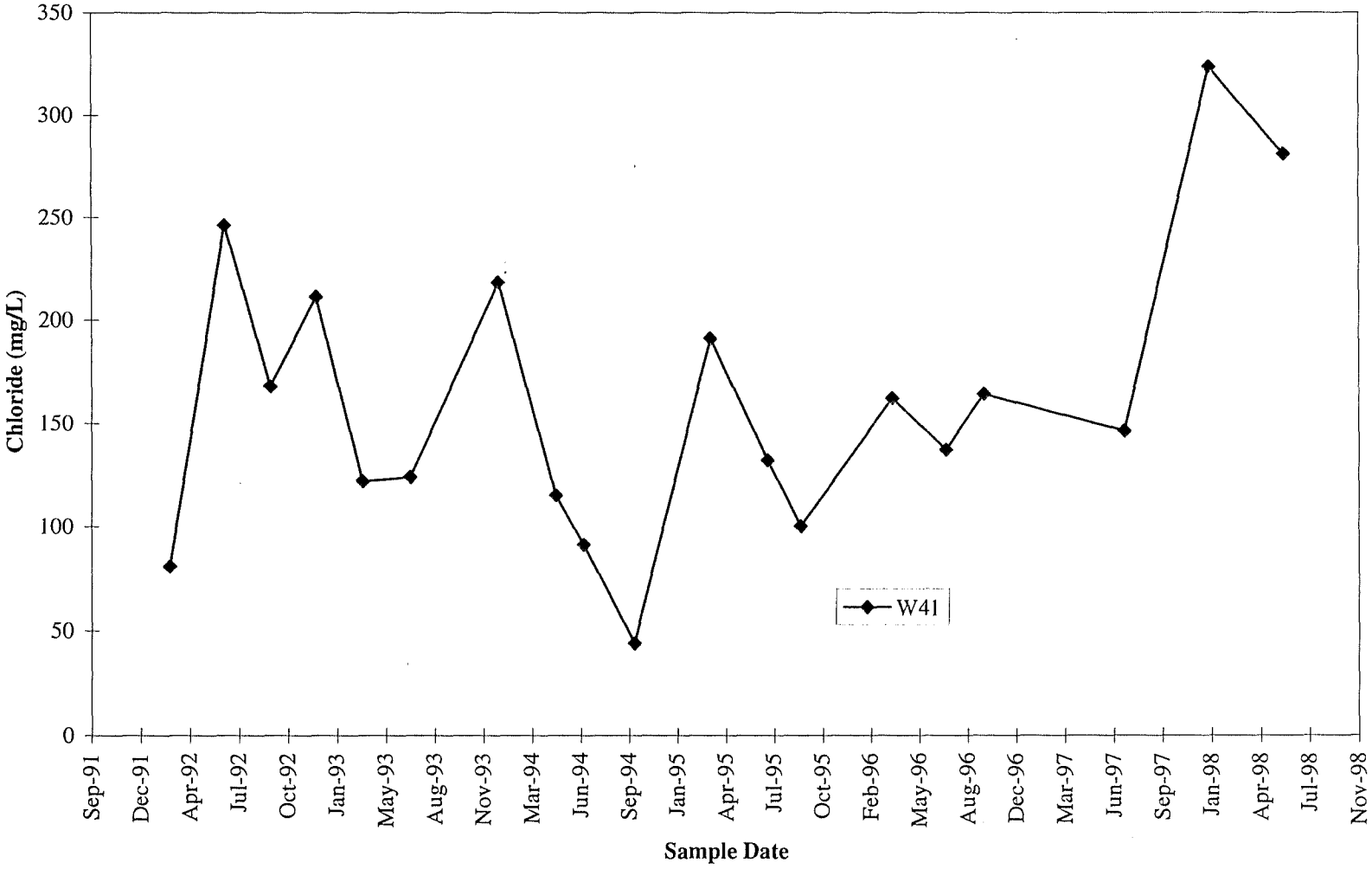
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8/24/95

Chloride Concentrations
Quarterly Groundwater Monitoring



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8/24/95

Chloride Concentrations
Quarterly Groundwater Monitoring

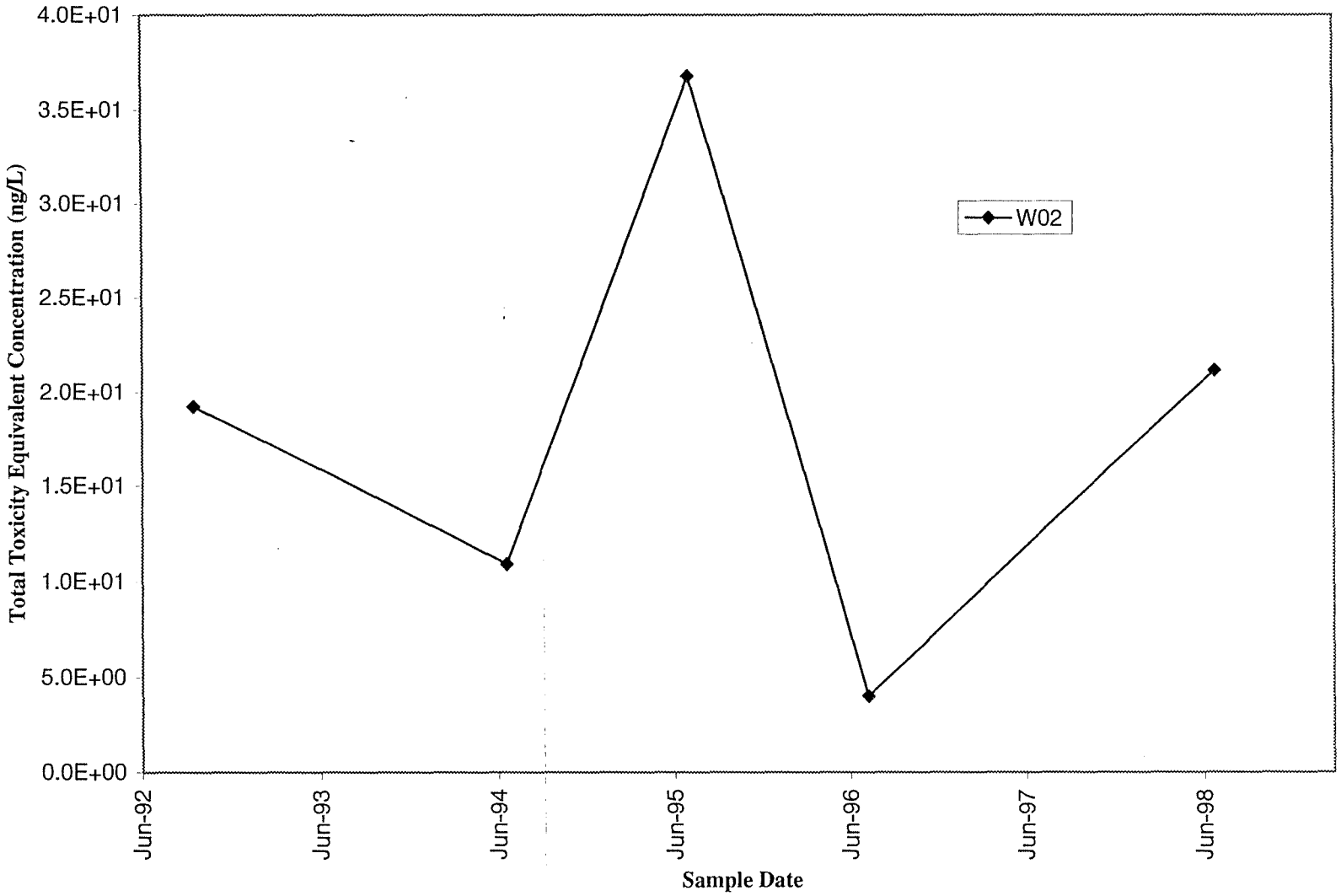


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8/24/95

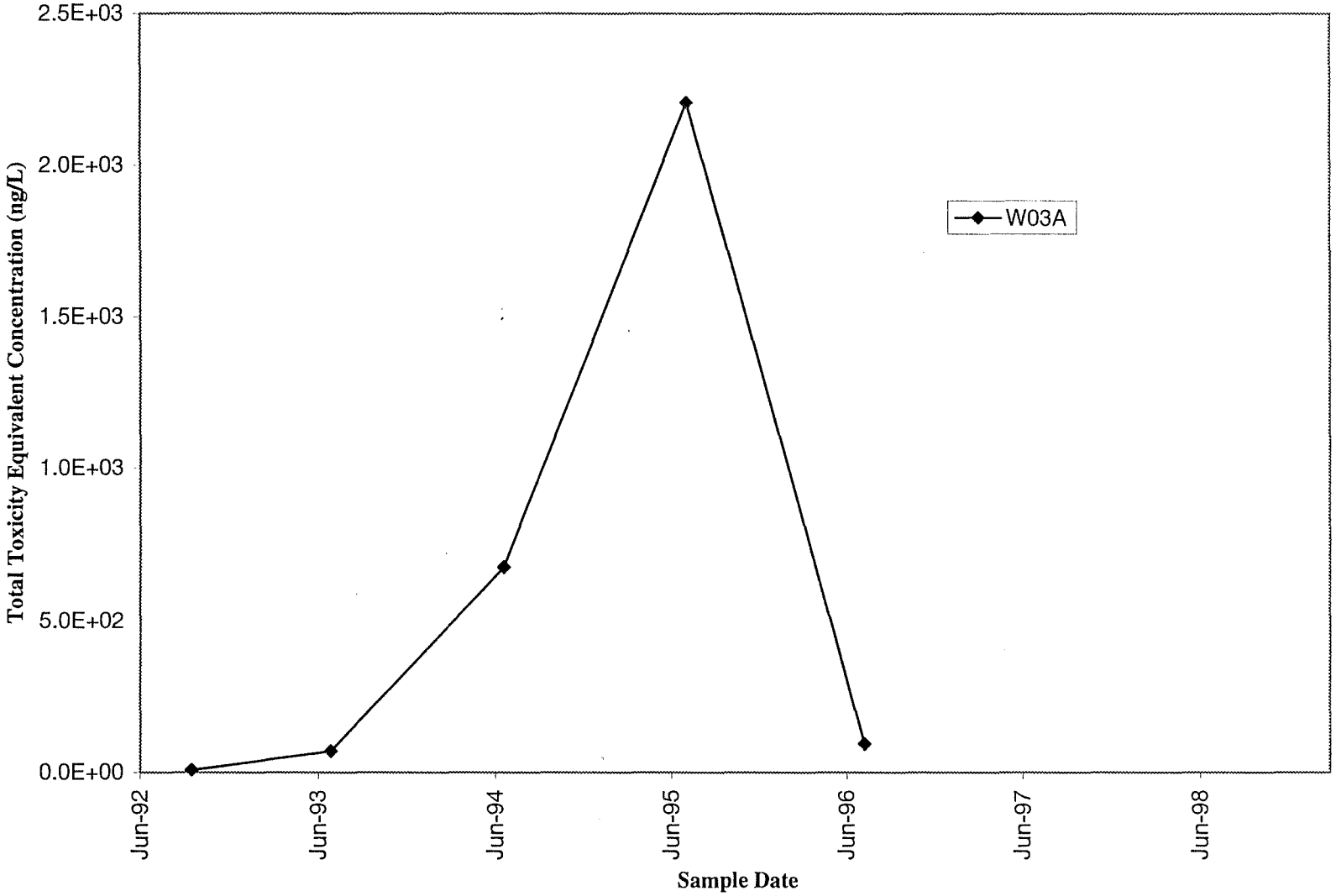
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Dioxin/Furan Toxicity Equivalent Time Trends

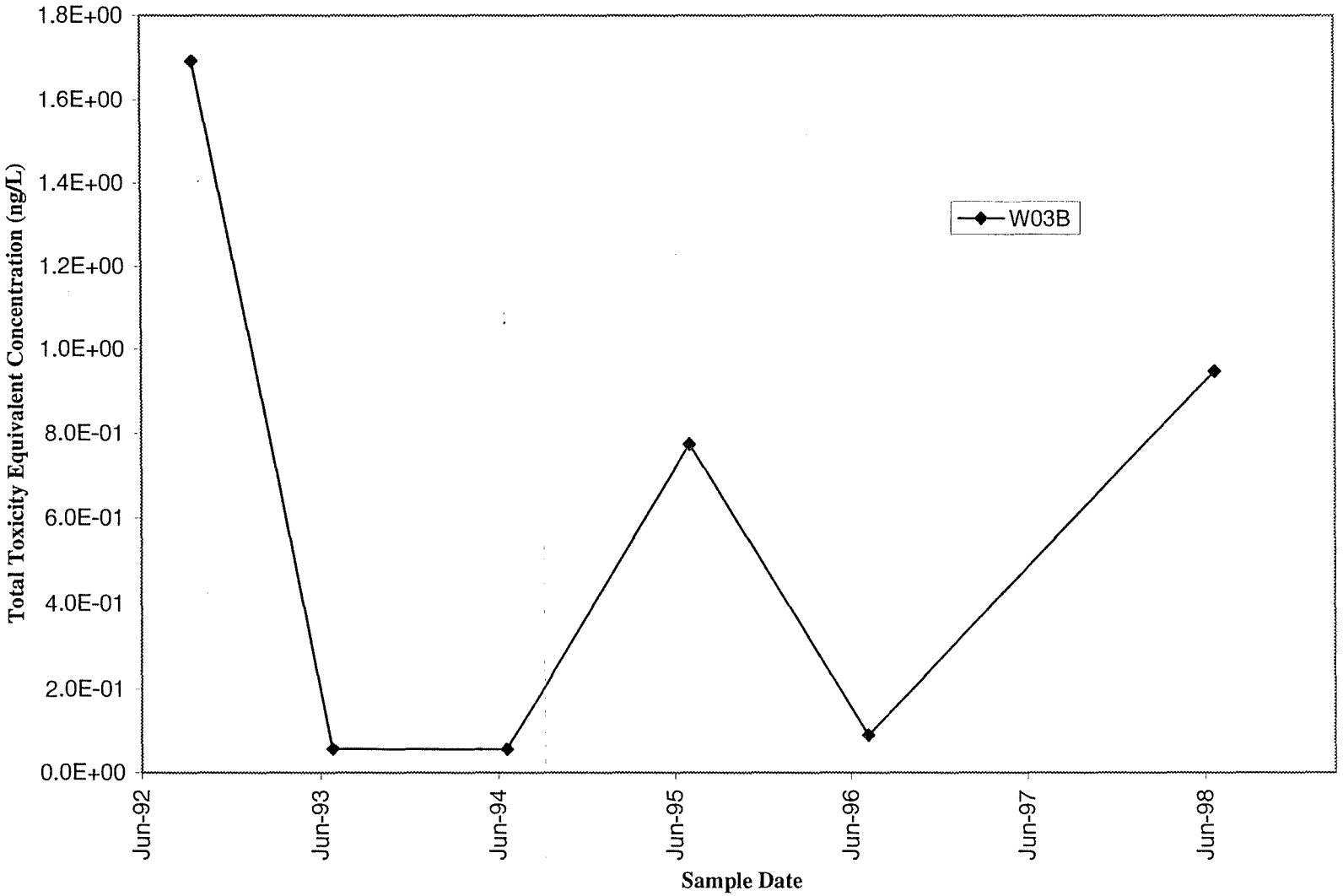
Total Dioxin/Furan Toxicity Equivalents
Quarterly Groundwater Monitoring



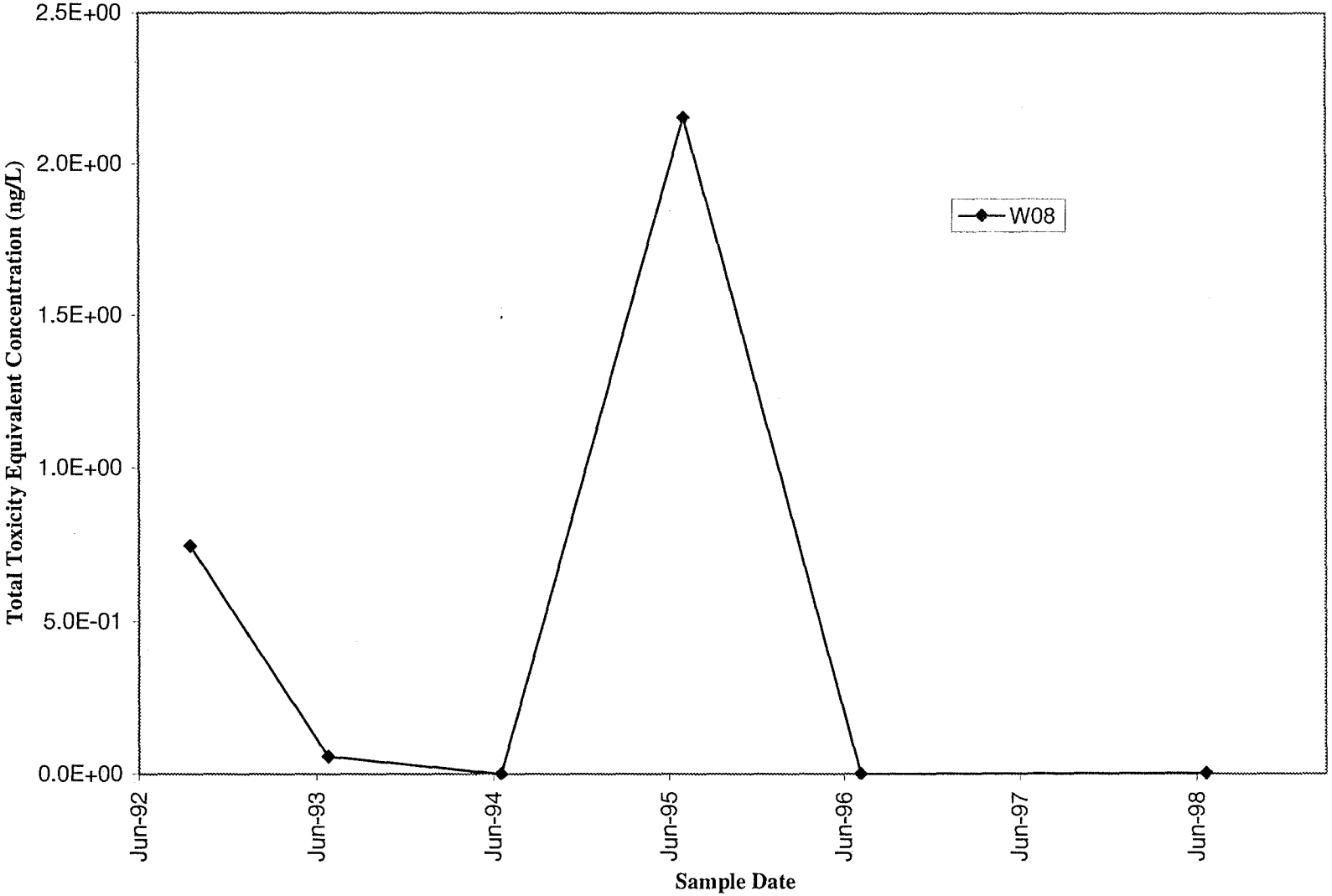
Total Dioxin/Furan Toxicity Equivalents
Quarterly Groundwater Monitoring



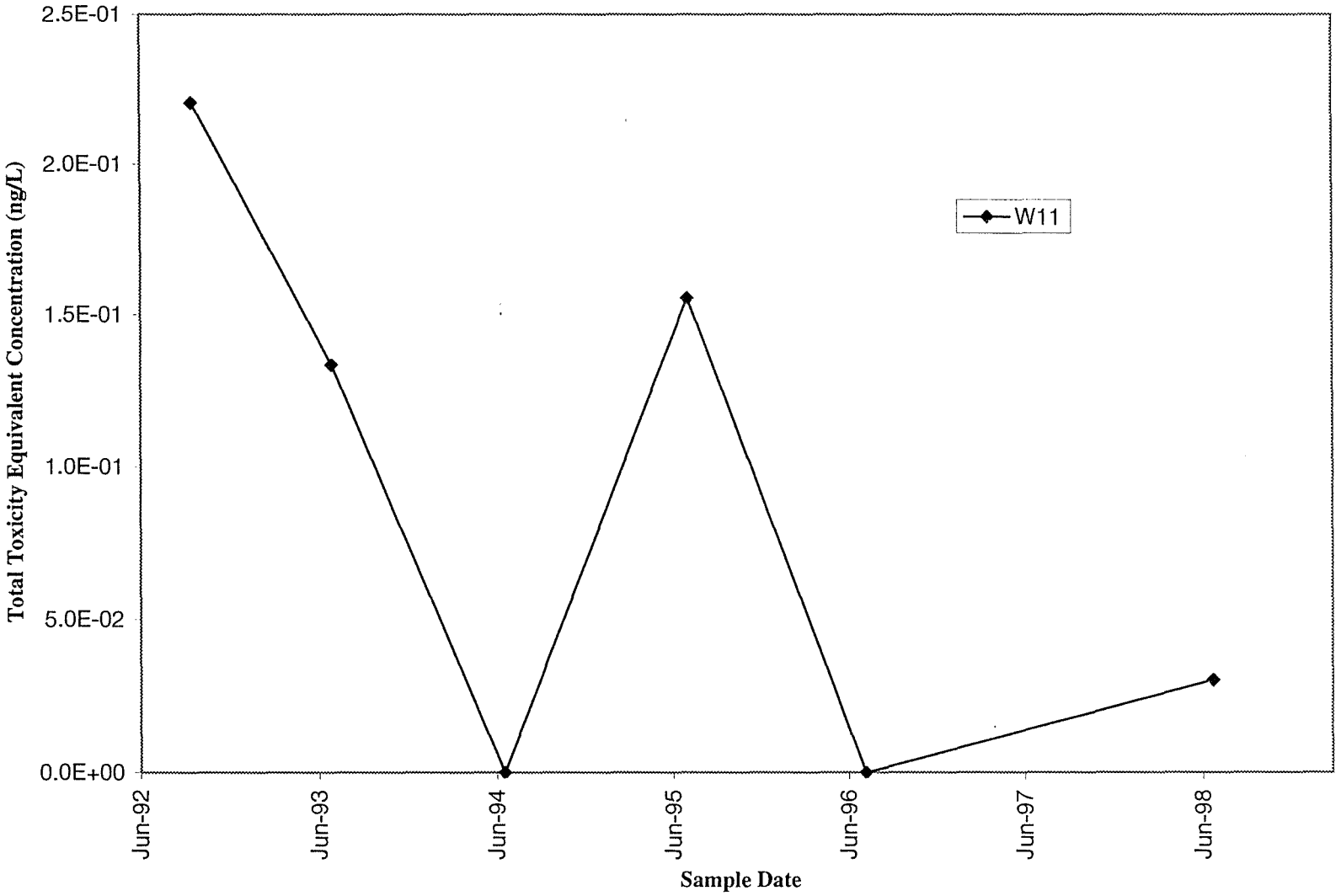
Total Dioxin/Furan Toxicity Equivalents
Quarterly Groundwater Monitoring



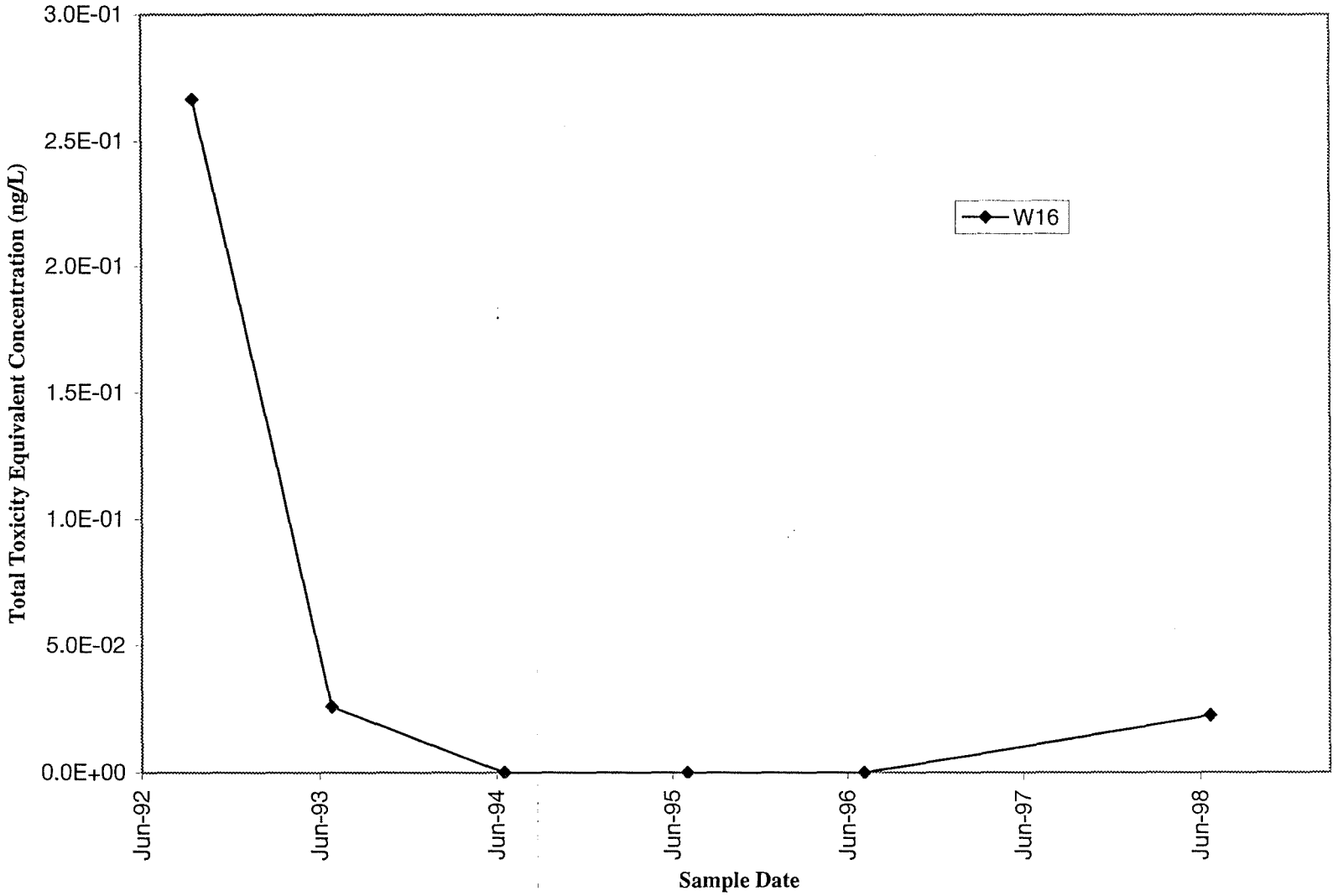
Total Dioxin/Furan Toxicity Equivalents
Quarterly Groundwater Monitoring



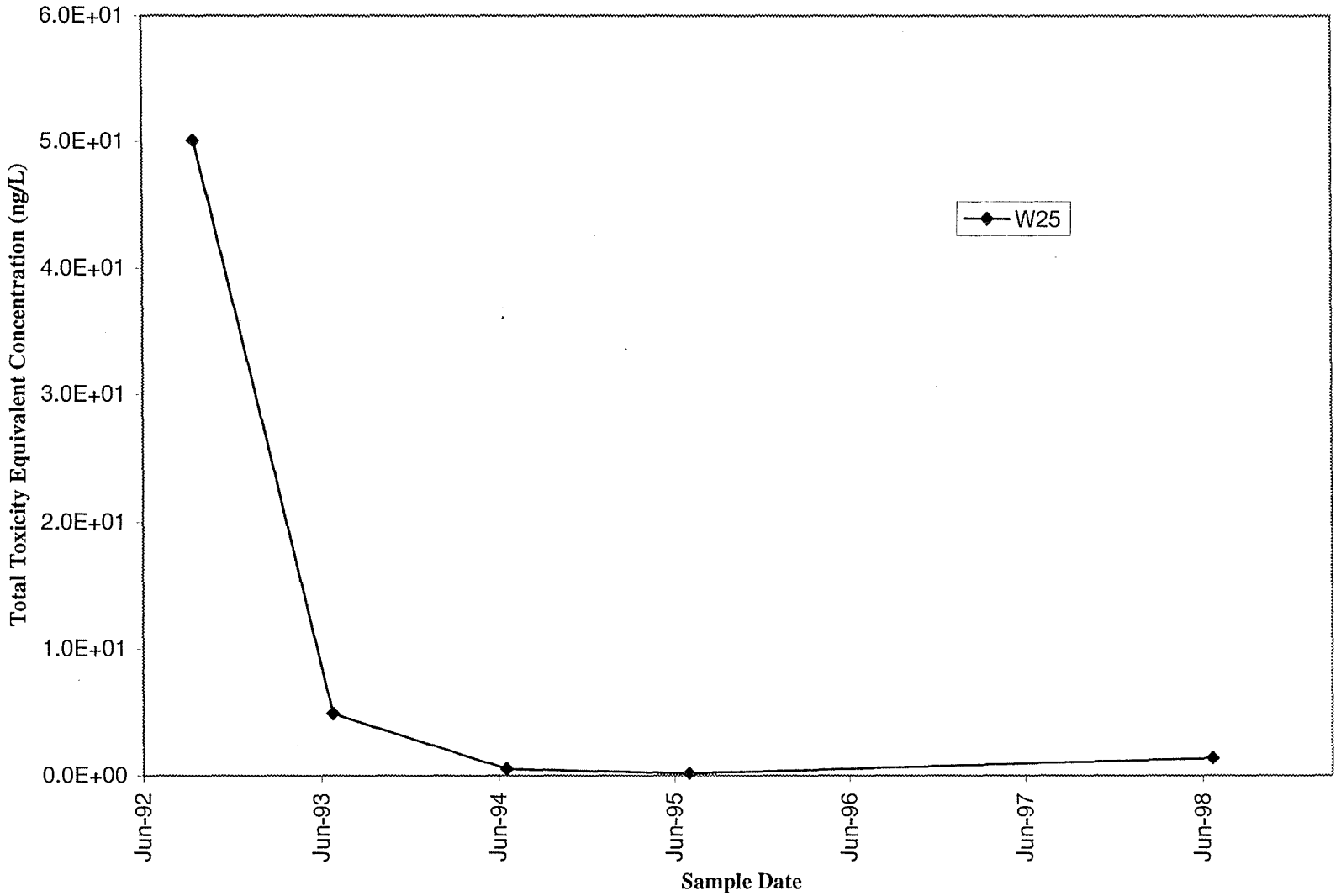
Total Dioxin/Furan Toxicity Equivalents
Quarterly Groundwater Monitoring



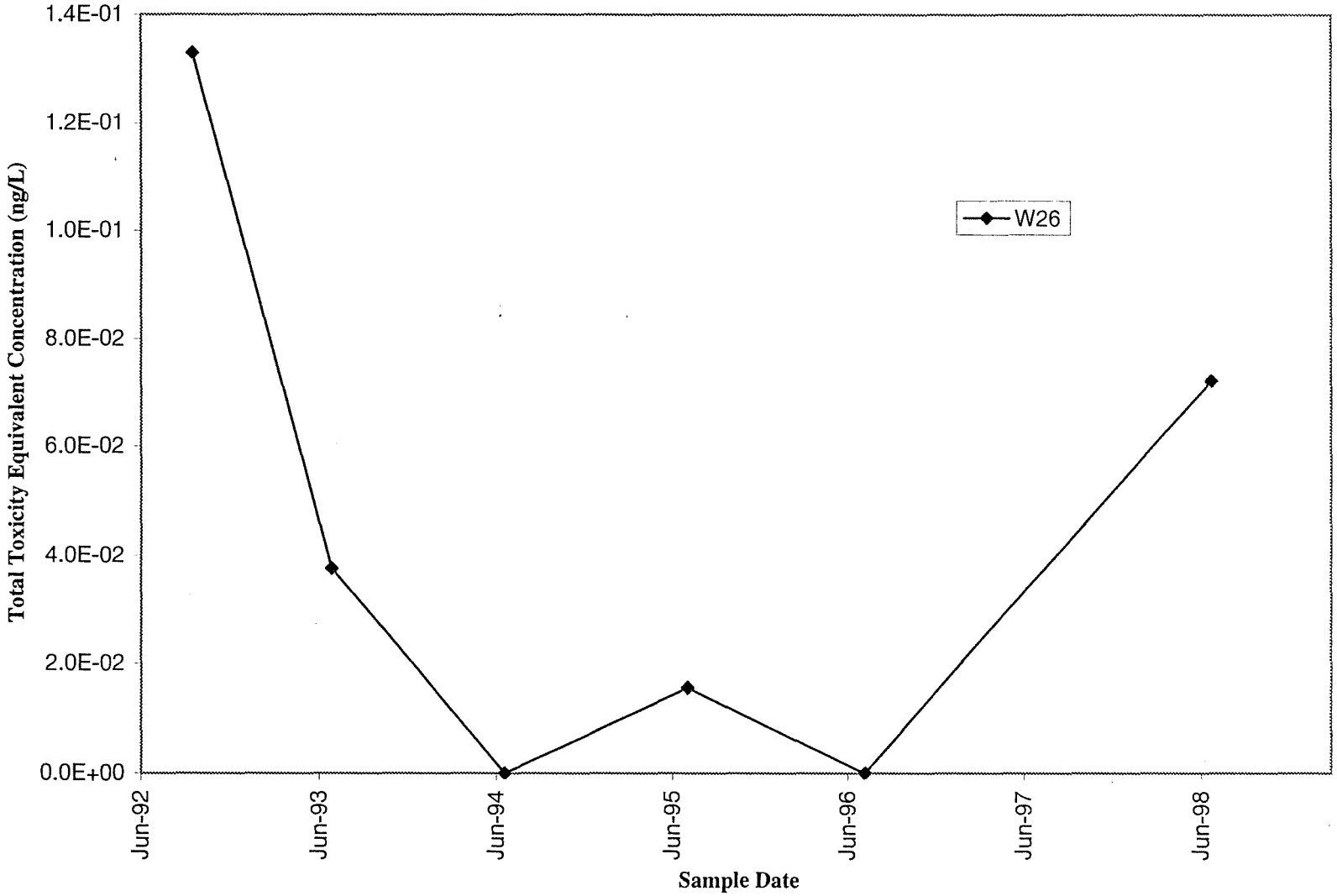
Total Dioxin/Furan Toxicity Equivalents
Quarterly Groundwater Monitoring



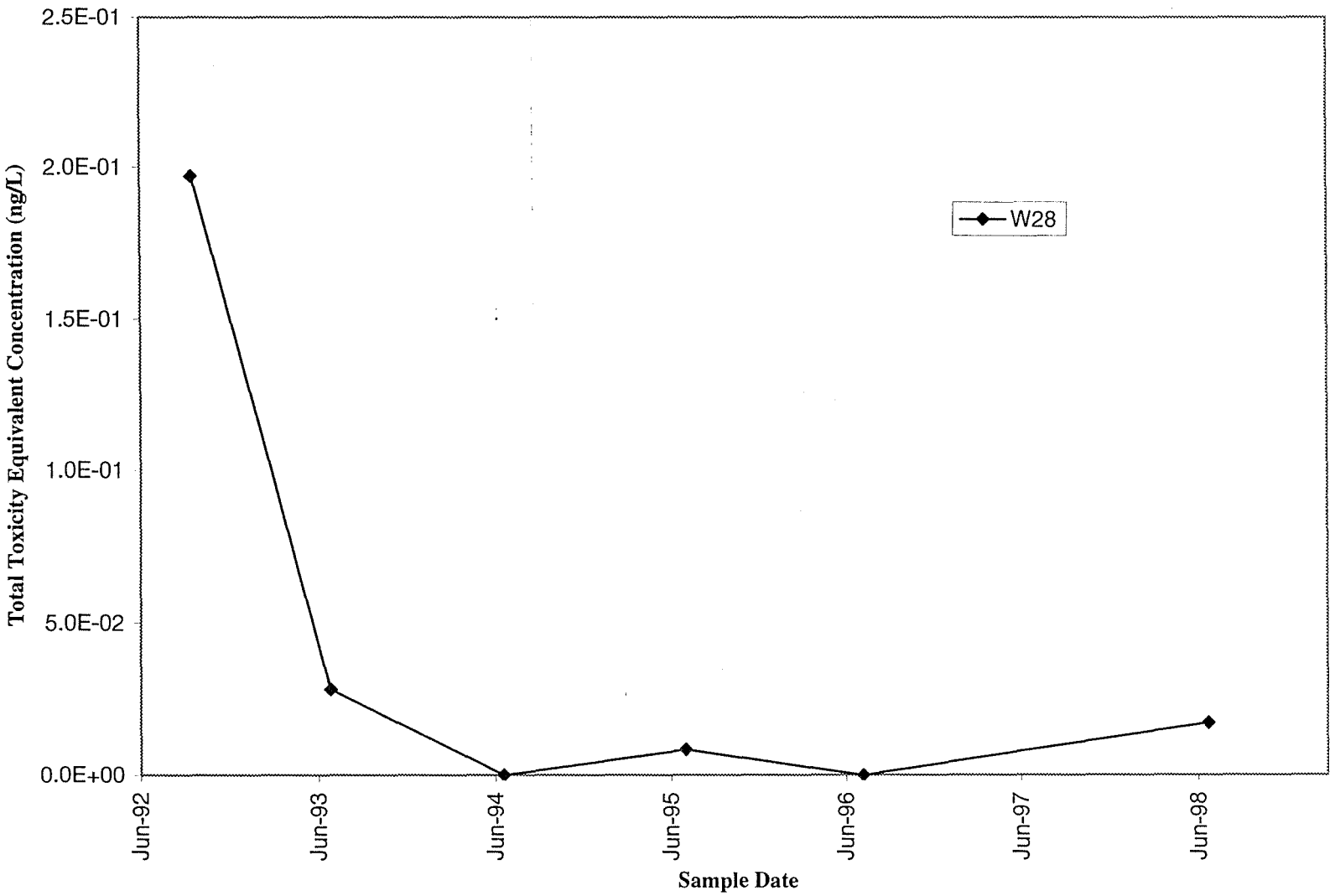
Total Dioxin/Furan Toxicity Equivalents
Quarterly Groundwater Monitoring



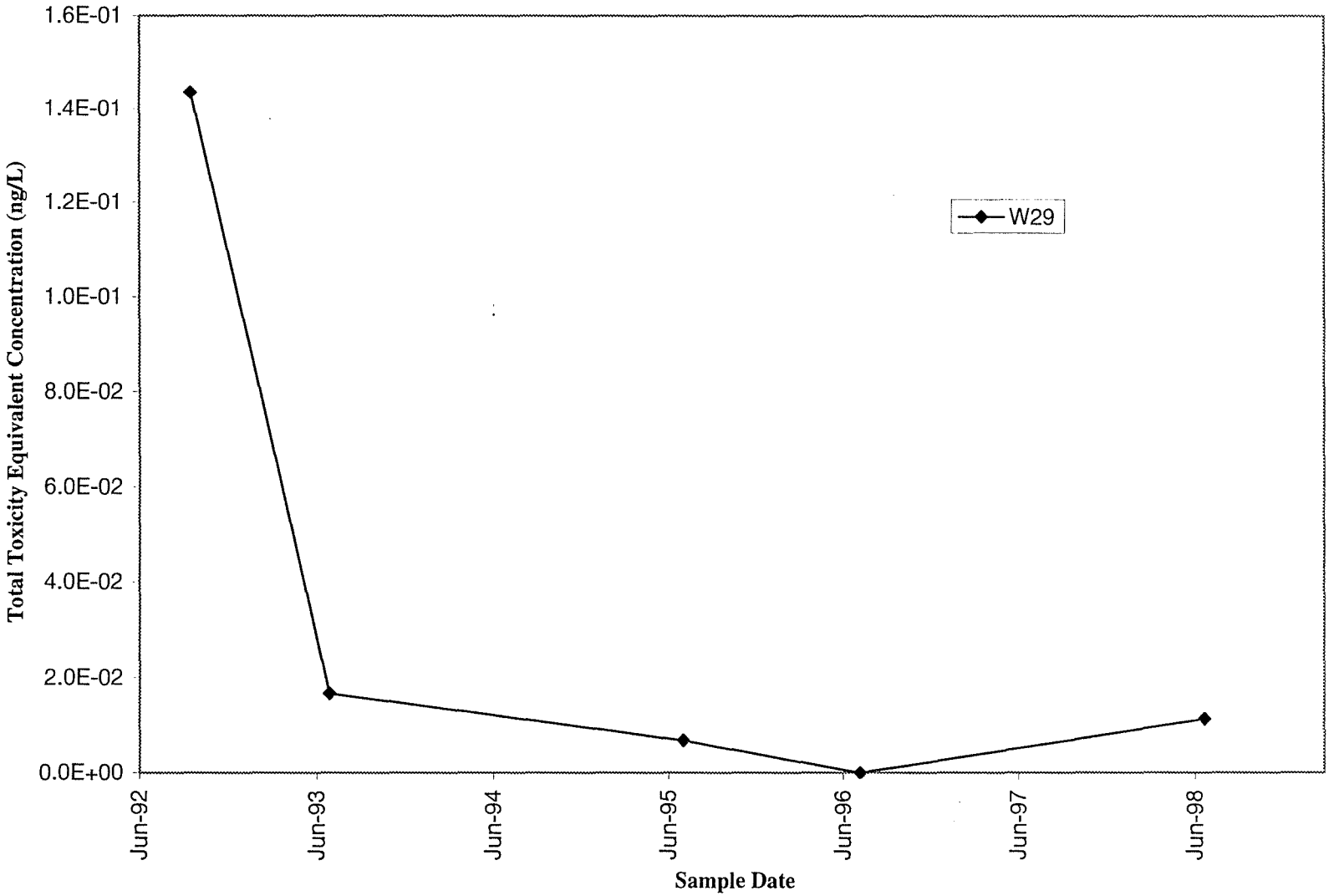
Total Dioxin/Furan Toxicity Equivalents
Quarterly Groundwater Monitoring



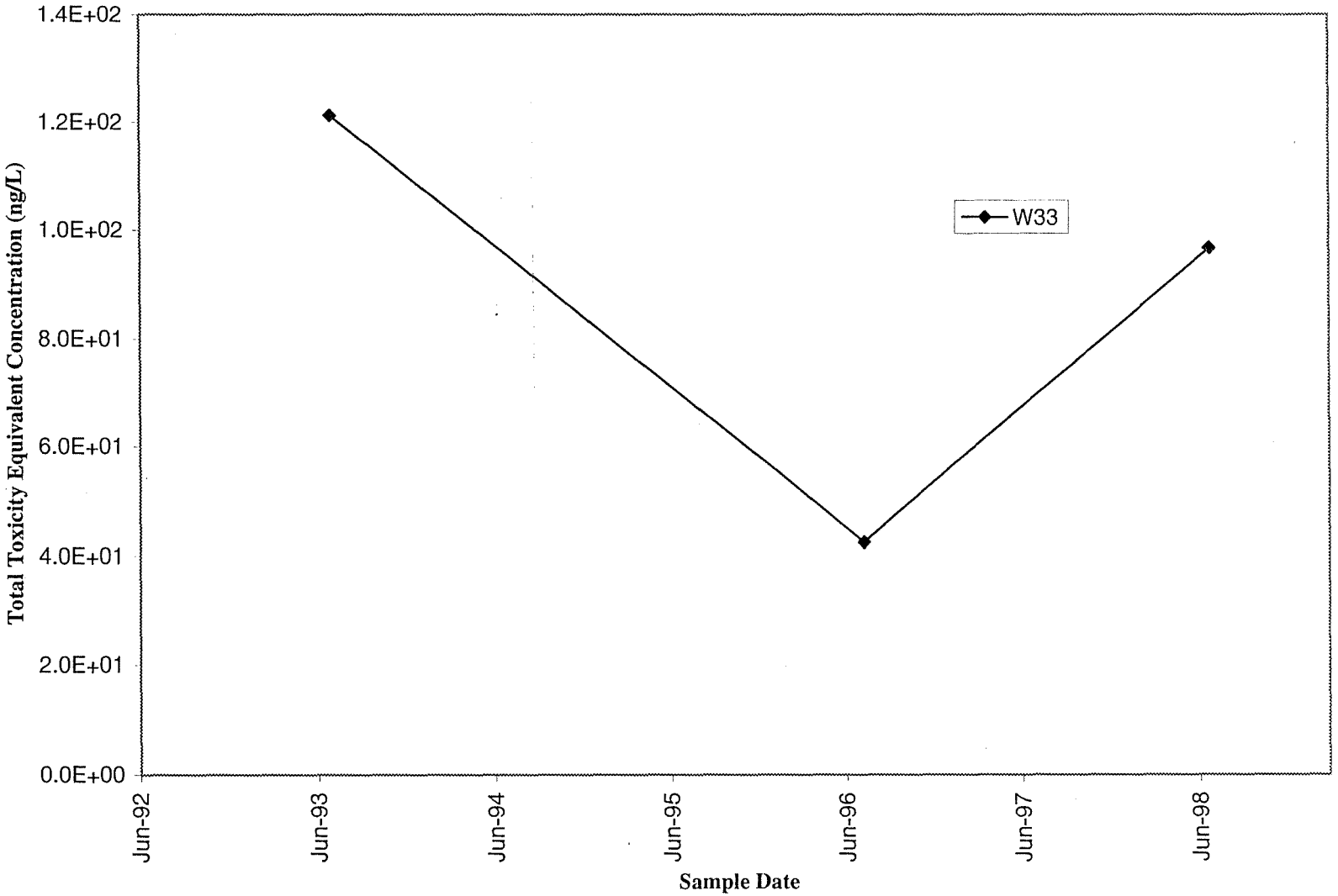
Total Dioxin/Furan Toxicity Equivalents
Quarterly Groundwater Monitoring



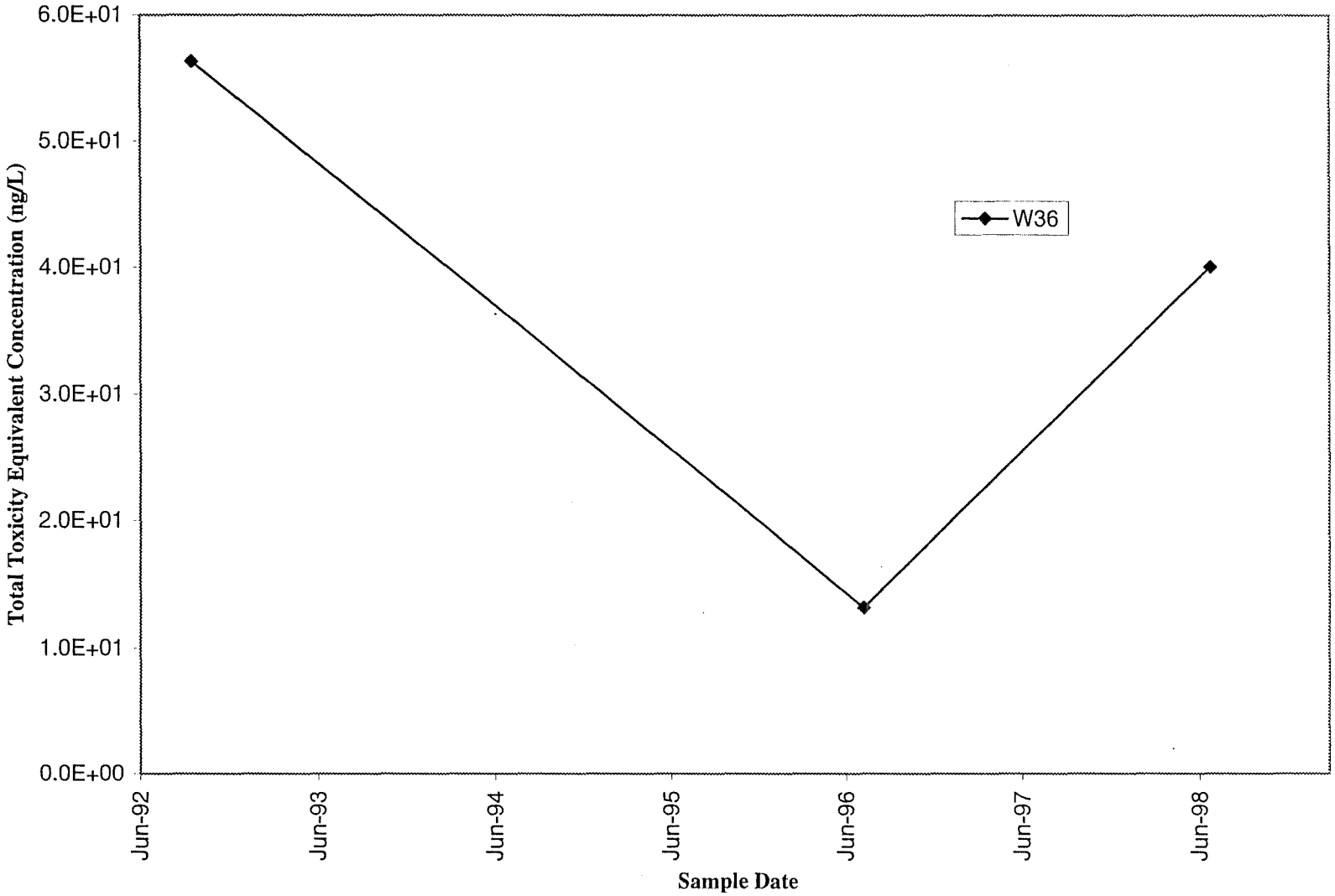
Total Dioxin/Furan Toxicity Equivalents
Quarterly Groundwater Monitoring



Total Dioxin/Furan Toxicity Equivalents
Quarterly Groundwater Monitoring



Total Dioxin/Furan Toxicity Equivalents
Quarterly Groundwater Monitoring



1/20/99

MONTGOMERY WATSON

January 20, 1999

Ms. Lisa Gutknecht
Wisconsin Department of Natural Resources
5301 Rib Mountain Drive
Wausau, Wisconsin 54401

Re: December Progress Report
WAULECO, Inc.
Wausau, Wisconsin
Administrative Order No. NCD-91-04

BRRTS# 02-37-000006

Dear Ms. Gutknecht:

On behalf of WAULECO, Montgomery Watson is submitting two copies (enclosed) of the December Progress Report for the WAULECO, Inc. site in Wausau, Wisconsin. The report is submitted in fulfillment of Paragraph 41 of Administrative Order No. NCD-91-04.

If you have any questions or comments regarding this information, please call.

Sincerely,

MONTGOMERY WATSON

John D. Dadisman
Senior Chemist

Douglas J. Bach, P.E.
Project Manager

Enclosures: Monthly Report

cc: Wastewater Engineer - WDNR (Wausau, WI) (w/1 encl.)
J. Gehin - Wausau Utilities Director (w/1 encl.)
P. Peshek (w/1 encl.)
R. Brandt (w/1 encl.)

JDD/vlr/JDD
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WAUSAU DNR

One Science Court
P.O. Box 5385
Madison, Wisconsin
53705-0385

Tel: 608 231 4747
Fax: 608 231 4777

Serving the World's Environmental Needs

WAULECO INCORPORATED
WAUSAU, WISCONSIN
MONTHLY REPORT
DECEMBER 1998

SUMMARY OF DECEMBER 1998 ACTIVITIES

Groundwater Extraction and Treatment System Operation

Treatment system performance data for this reporting period are summarized in Table 1. PCP screening (on-site gas chromatograph) results for the system effluent samples, which represent the discharge water to the municipal sewer, averaged 3.2 ug/L for the month of December, with a maximum single day concentration of 5 ug/L. These results indicate PCP concentrations were below the permit levels of 150 ug/L (monthly average) and 300 ug/L (daily maximum). The result for laboratory samples collected on November 13th and December 10th, 1998, confirmed that the effluent PCP concentration was less than 300 ug/L.

Laboratory results for mercury analyses of the FBR influent, FBR effluent, and system effluent samples collected on the November 13th and December 10th sampling dates are included in Table 1. The mercury concentration in the system effluent samples (discharged to the sanitary sewer) ranged from not detected to 0.7 ug/L.

PCP influent concentrations ranged from 18,175 ug/L to 22,505 ug/L during December 1998 (Table 1). PCP influent and effluent concentrations in the FBR are presented graphically both as individual data points and as a 30-day moving average in Figure 1. As shown in Figure 1, the FBR effluent concentrations increased during the month of December. The average PCP removal efficiency for the FBR during December was 89% compared to an average of 94% during the previous five months. The decrease in PCP removal efficiency is attributable to the increased flow rate through the treatment system during the December startup of the new extraction wells. Daily groundwater flow through the treatment system (Table 2) ranged from 15 to 42 gallons per minute (gpm) during December, compared to a typical range between 15 and 25 gpm during previous months. It is expected that as flow rates are stabilized in the targeted 40 to 50 gpm range, treatment efficiency in the FBR will stabilize at a level below 90 percent. Total treatment system efficiency (including carbon polishing units) continues to be greater than 99%.

Treatment System Modifications

Eleven new extraction wells (PW17 through PW27) were gradually brought on-line during the month of December. A copy of the system modification construction documentation report will be forwarded for WDNR files.

Product Recovery

Product recovery data for the reporting period are presented in Table 3. Historic product recovery (since July 1990) compared to average water level deviation is presented in Figure 2. The effect of the new extraction wells on groundwater levels is shown on Figure 2. Water levels in the extraction area were the lowest recorded since the startup of the extraction system in 1990. The low water levels had the intended effect of increasing product recovery to 1,295 gal during

the month of December, compared to the 199 gal removed in November. As shown in Table 3, approximately one-half of the 1,295 product recovered during December, came from the new extraction wells, with the most production from PW18.

Groundwater Monitoring

Groundwater elevation and product thickness data for October, November, and December are summarized in Table 4. The winter round of semi-annual groundwater monitoring is scheduled for the week of January 18, 1999.

JDD/vlr/DJB
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TABLES

TABLE 1

Above Ground Treatment System Data
Wauleco, Inc.
Wausau, Wisconsin

Parameter	UNIT	DATE	FBR Influent	FBR Effluent	FFR Influent	FFR Effluent	System Effluent
Biological Oxygen Demand	mg/L	11/13/98	24	13			<
		12/10/98	13	8			2
Chemical Oxygen Demand	mg/L	11/13/98	38	25			15
		12/10/98	48	29			<
Chloride	mg/L	11/13/98	179	173			175
		12/10/98	152	154			155
Dissolved Oxygen	mg/L	12/3/98	7.8	3.2	5.7	4.6	
		12/10/98	8	3.6	5.9	4.9	
		12/16/98	7.5	3.4	5	4.8	
		12/23/98	8	4	5.5	4.1	
		12/28/98	8.2	4.3	5.7	4.2	
Nitrogen, Ammonia	mg/L	11/10/98	3	<	<	<	
		11/17/98	3	0.5	<	<	
		11/24/98	3	<	<	<	
		11/30/98	3	1	0.5	<	
		12/3/98	3	<	<	<	
		12/10/98	2	0.5	<	<	
		12/16/98	3	<	<	<	
		12/23/98	<	<	<	<	
		12/28/98	3	<	<	<	
Nitrogen, Nitrate	mg/L	12/3/98	<	<		<	
		12/10/98	<	<		0.5	
		12/16/98	<	0.5		0.5	
		12/23/98	<	<		<	
		12/28/98	<	<		0.5	
Nitrogen, Nitrate + Nitrite	mg/L	11/13/98	0.43	1.06			0.15
		12/10/98	0.44	0.99			<
Nitrogen, Total Kjeldahl	mg/L	11/13/98	0.7	1.1			0.6
		12/10/98	2.29	1.07			0.78
Pentachlorophenol-Screen	ug/L	12/1/98					4
		12/2/98					3
		12/3/98	22505	2678		2343	3
		12/4/98					4
		12/5/98					3

TABLE 1
Above Ground Treatment System Data
Wauleco, Inc.
Wausau, Wisconsin

Parameter	UNIT	DATE	FBR Influent	FBR Effluent	FFR Influent	FFR Effluent	System Effluent
Pentachlorophenol-Screen	ug/L	12/6/98					3
		12/7/98					3
		12/8/98					5
		12/9/98					4
		12/10/98	20829	2306		2099	5
		12/11/98					2
		12/12/98					3
		12/13/98					3
		12/14/98					3
		12/15/98					2
		12/16/98	18999	2154		1980	2
		12/17/98					3
		12/18/98					4
		12/19/98					4
		12/20/98					4
		12/21/98					4
		12/22/98					2
		12/23/98	20175	1954		1865	<
		12/24/98					2
		12/25/98					3
		12/26/98					4
		12/27/98					3
		12/28/98	18175	1847		1732	2
		12/29/98					3
		12/30/98					4
		12/31/98					1
pH	S.U.	12/3/98	6.6	6.7		6.8	
		12/10/98	6.6	6.7		6.8	
		12/16/98	6.7	6.8		6.8	
		12/23/98	6.7	6.7		6.8	
		12/28/98	6.7	6.7		6.8	
Phosphorus, Ortho	mg/L	11/13/98	2.68	2.16			1.89
		12/10/98	0.19	0.19			0.35
Phosphorus, Phosphate	mg/L	12/3/98	2	1.5		1.5	
		12/10/98	<	<		0	
		12/16/98	2	<		0	
		12/23/98	2	2		1.5	
		12/28/98	2.5	2		1.5	
Solids, Total Suspended	mg/L	11/13/98	7	30			<
		12/10/98	<	16			<
Mercury	ug/L	11/13/98	1.57	1.56			<
		12/10/98	0.6	0.9			0.7

TABLE 1
Above Ground Treatment System Data
Wauleco, Inc.
Wausau, Wisconsin

Parameter	UNIT	DATE	FBR Influent	FBR Effluent	FFR Influent	FFR Effluent	System Effluent
Phenols							
2,3,5,6-Tetrachlorophenol	ug/L	11/13/98	<	82		<	<
		12/10/98	<	180		<	<
2,4,5-Trichlorophenol	ug/L	11/13/98	<	<		<	<
		12/10/98	<	<		<	19
2,4,6-Trichlorophenol	ug/L	11/13/98	<	<		<	<
		12/10/98	<	<		<	12
2,4-Dichlorophenol	ug/L	11/13/98	<	<		<	<
		12/10/98	<	<		<	<
2,4-Dimethylphenol	ug/L	11/13/98	<	<		<	<
		12/10/98	<	<		<	<
2,4-Dinitrophenol	ug/L	11/13/98	<	<		<	<
		12/10/98	<	<		<	<
2,6-Dichlorophenol	ug/L	11/13/98	<	<		<	<
		12/10/98	<	<		<	<
2-Chlorophenol	ug/L	11/13/98	<	<		<	<
		12/10/98	<	<		<	5.4
2-Methylphenol	ug/L	11/13/98	<	<		<	<
	ug/L	12/10/98	<	<		390	<
2-Nitrophenol	ug/L	11/13/98	<	<		<	<
		12/10/98	<	<		410	4.1
3&4-Methylphenol	ug/L	11/13/98	<	<		<	<
		12/10/98	<	<		340	<
4,6-Dinitro-2-Methylphenol	ug/L	11/13/98	<	<		<	<
		12/10/98	<	<		<	5.2
4-Chloro-3-Methylphenol	ug/L	11/13/98	<	<		<	<
		12/10/98	<	<		<	<
4-Nitrophenol	ug/L	11/13/98	<	<		<	<
		12/10/98	<	<		<	<
Pentachlorophenol	ug/L	11/13/98	18000	590		330	4.1
		12/10/98	17000	1900		2100	6.9
Phenol	ug/L	11/13/98	<	94		<	<
		12/10/98	<	<		490	4

TABLE 2

Treatment System Flows
Wauleco, Inc.
Wausau, Wisconsin

Date	Influent Groundwater Flow Rate [1] (gpm)	POTW Discharge Flow Rate [1] (gpm)	POTW Totalized Discharge (gal)
12/1/98	23.61	18.75	634,000
12/2/98	17.36	17.36	659,000
12/3/98	15.28	15.28	681,000
12/4/98	18.18	18.18	707,186
12/5/98	18.18	18.18	733,372
12/6/98	18.18	18.18	759,558
12/7/98	41.72	23.0	819,640
12/8/98	23.0	25.0	852,760
12/9/98	42.72	42.72	914,279
12/10/98	34.55	34.55	964,029
12/11/98	36.25	36.25	1,016,228
12/12/98	36.25	36.25	1,068,427
12/13/98	36.25	36.25	1,120,626
12/14/98	20.16	20.16	1,149,657
12/15/98	32.35	32.35	1,196,244
12/16/98	31.9	31.9	1,242,182
12/17/98	31.9	31.9	1,288,120
12/18/98	31.9	31.9	1,334,058
12/19/98	31.9	31.9	1,379,996
12/20/98	31.9	31.9	1,425,934
12/21/98	27.95	27.95	1,466,178
12/22/98	29.6	29.6	1,508,800
12/23/98	32.4	32.4	1,555,460
12/24/98	32.4	32.4	1,602,120
12/25/98	32.4	32.4	1,648,780
12/26/98	21.68	21.68	1,680,000
12/27/98	21.68	21.68	1,711,220
12/28/98	26.93	19.78	1,739,696
12/29/98	26.93	19.78	1,768,172
12/30/98	26.93	19.78	1,796,648
12/31/98	34.96	56.43	1,877,901
Average	28.6	27.9	
Total [2]:			1,243,901

TABLE 3

Product Removal
(gallons per day)
Wauleco, Inc.
Wausau, Wisconsin

Date	PW04	PW05	PW07	PW09	PW10	PW11	PW12	PW13	PW15	PW16	PW17	PW18	PW19	PW20	PW21	PW22	PW23	PW24	PW25	PW26	PW27	Total
12/01/98	1.7	0	0	0	1.7	1.7	0	1.7	0	0	0	0	0	0	0	0	0	0	0	0	0	6.8
12/02/98	0	1.7	0	0	1.7	1.7	0	12	0	3.4	0	0	0	0	0	0	0	0	0	0	0	21
12/03/98	0	1.7	0	0	1.7	1.7	0	10	0	3.4	0	0	0	0	0	0	0	0	0	0	0	19
12/04/98	0	1.7	0	0	1.7	1.7	0	10	0	3.4	0	0	0	0	0	0	0	0	0	0	0	19
12/05/98	0	1.7	0	0	1.7	1.7	0	5.2	0	3.4	0	0	0	0	0	0	0	0	0	0	0	14
12/06/98	0	1.7	0	0	1.7	1.7	0	6.9	0	1.7	0	0	0	0	0	0	0	0	0	0	0	14
12/07/98	1.7	1.7	0	0	1.7	1.7	0	3.4	0	1.7	0	0	0	0	0	0	0	0	0	0	0	12
12/08/98	0	1.7	0	0	3.4	1.7	0	3.4	0	1.7	0	0	0	0	0	0	0	0	0	0	0	12
12/09/98	1.7	1.7	0	0	3.4	1.7	0	5.2	0	1.7	0	0	0	0	0	0	0	0	0	0	0	15
12/10/98	0	1.7	0	0	3.4	1.7	0	5.2	0	1.7	0	8.6	0	1.7	0	0	0	1.7	0	1.7	3.4	31
12/11/98	0	1.7	0	0	3.4	1.7	0	5.2	0	0	0	8.6	0	1.7	0	0	0	1.7	0	1.7	3.4	29
12/12/98	1.7	1.7	0	0	3.4	1.7	0	6.9	0	1.7	0	8.6	0	1.7	0	0	0	0	0	1.7	3.4	33
12/13/98	0	0	0	0	1.7	1.7	0	6.9	0	0	1.7	8.6	0	0	0	0	0	0	0	1.7	3.4	26
12/14/98	0	0	0	0	1.7	1.7	0	6.9	0	0	1.7	8.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	3.4	38
12/15/98	0	1.7	0	0	1.7	5.2	0	10	0	0	1.7	10	0	1.7	0	0	0	0	0	1.7	1.7	36
12/16/98	0	0	0	0	1.7	3.4	0	21	0	1.7	1.7	24	0	0	0	0	0	0	0	0	1.7	55
12/17/98	0	0	0	0	1.7	5.2	0	22	0	0	1.7	27	0	0	0	0	0	0	0	1.7	1.7	61
12/18/98	0	1.7	0	0	1.7	5.2	0	24	0	0	1.7	12	0	1.7	0	0	0	0	0	1.7	1.7	52
12/19/98	0	0	0	0	0	5.2	0	27	0	0	1.7	14	0	0	0	0	0	0	0	0	1.7	49
12/20/98	1.7	0	0	0	1.7	5.2	0	24	0	0	1.7	14	0	0	0	0	0	0	0	1.7	1.7	52
12/21/98	0	1.7	0	0	0	5.2	0	27	0	0	1.7	10	0	0	0	0	0	0	0	1.7	1.7	49
12/22/98	0	0	0	0	1.7	5.2	0	15	0	1.7	1.7	53	0	1.7	0	0	0	1.7	0	3.4	1.7	87
12/23/98	1.7	1.7	0	0	1.7	1.7	0	17	0	0	1.7	50	0	0	0	0	0	0	0	3.4	3.4	83
12/24/98	0	1.7	0	0	1.7	1.7	0	19	0	0	1.7	12	0	0	0	0	0	1.7	0	3.4	1.7	45
12/25/98	1.7	0	0	0	1.7	1.7	0	24	0	0	1.7	14	0	0	0	0	0	1.7	0	3.4	3.4	53
12/26/98	1.7	1.7	0	0	1.7	1.7	0	28	0	1.7	1.7	14	0	0	0	0	0	0	0	3.4	3.4	59
12/27/98	1.7	0	0	0	1.7	1.7	0	15	0	0	1.7	3.4	0	0	0	0	0	0	0	3.4	3.4	33
12/28/98	1.7	1.7	0	0	1.7	1.7	0	17	0	1.7	1.7	10	0	0	0	0	0	0	0	3.4	5.2	46
12/29/98	1.7	0	0	0	1.7	1.7	0	17	0	0	1.7	50	0	0	0	0	0	1.7	0	3.4	3.4	83
12/30/98	1.7	1.7	0	0	1.7	1.7	0	17	0	0	1.7	50	0	0	0	0	0	0	0	3.4	5.2	84
12/31/98	0	0	0	0	0	1.7	0	17	0	1.7	0	50	0	0	0	0	0	0	0	3.4	5.2	79
Date Total	21	33	0	0	57	79	0	433	0	33	31	460	1.7	12	1.7	1.7	1.7	12	1.7	52	65	1295

TABLE 4

Groundwater Elevation Data
Wauleco, Inc.
Wausau, Wisconsin

Well	October 29 1998		November 30 1998		December 29 1998	
	Oil Thickness	Water Elevation	Oil Thickness	Water Elevation	Oil Thickness	Water Elevation
PW01	0.24	1162.08	0.25	1162.05	0.21	1161.52
PW02	0.25	1162.05	0.06	1162.04	0.02	1161.98
PW03	-----	1162.43	-----	1162.51	-----	1162.48
PW3S	0.38	1160.46	0.38	1160.43	-----	1160.31
PW04	0.31	1161.53	0.20	1161.50	0.70	1155.20
PW05	1.53	1159.43	1.50	1159.43	1.10	1155.93
PW06	0.40	1161.54	0.55	1161.29	0.50	1161.24
PW07	-----	1161.63	-----	1161.60	-----	1155.70
PW08	0.30	1160.21	0.30	1160.17	0.30	1160.07
PW9I	-----	1161.10	-----	1161.08	-----	1160.98
PW9O	0.06	1161.64	0.10	1161.54	0.11	1161.43
PW10	3.07	1158.26	3.11	1158.16	1.40	1157.76
PW11	0.10	1161.40	0.10	1161.35	0.10	1161.32
PW12	0.50	1161.70	0.58	1161.61	0.30	1161.51
PW13	0.40	1159.80	0.38	1159.70	1.00	1158.70
PW14	0.36	1161.13	0.05	1161.42	0.08	1161.37
PW15	0.66	1160.91	0.68	1160.81	0.65	1160.76
PW16	0.30	1158.08	0.37	1157.96	1.60	1157.88
P01	0.45	1161.41	1.02	1161.34	0.50	1159.98
OW01	-----	1162.44	-----	1162.38	-----	1162.44
W01A	No Data	No Data	-----	1162.71	-----	1162.13
W01B	No Data	No Data	-----	1162.64	-----	1162.24
W02	No Data	No Data	-----	1162.08	-----	1161.70
W03A	0.10	1161.19	0.10	1161.14	0.58	1159.92
W03B	-----	1161.30	-----	1161.29	-----	1160.96
W04A	0.43	1161.48	0.40	1161.41	0.62	1160.66
W04B	0.21	1161.68	0.10	1161.73	0.30	1160.95
W05	0.54	1161.24	0.65	1161.23	0.63	1159.83
W06R	0.29	1162.19	0.25	1162.14	0.13	1161.02
W07	0.38	1162.02	0.37	1161.97	0.20	1162.12
W08	No Data	No Data	-----	1171.38	-----	1169.69
W09	No Data	No Data	-----	1162.11	-----	1161.57
W10A	No Data	No Data	-----	1160.74	-----	1160.68
W10B	No Data	No Data	-----	1160.84	-----	1160.73
W11	No Data	No Data	-----	1160.55	-----	1160.64
W12	No Data	No Data	-----	1159.55	-----	1160.30
W13	No Data	No Data	-----	1161.05	-----	1160.79
W14	No Data	No Data	-----	1159.40	-----	1159.34
W16	No Data	No Data	-----	1161.28	-----	1161.05
W17	No Data	No Data	-----	1160.78	0.74	1159.88
W18	No Data	No Data	-----	1160.78	-----	1160.75
W19	No Data	No Data	-----	1162.33	0.15	1161.48

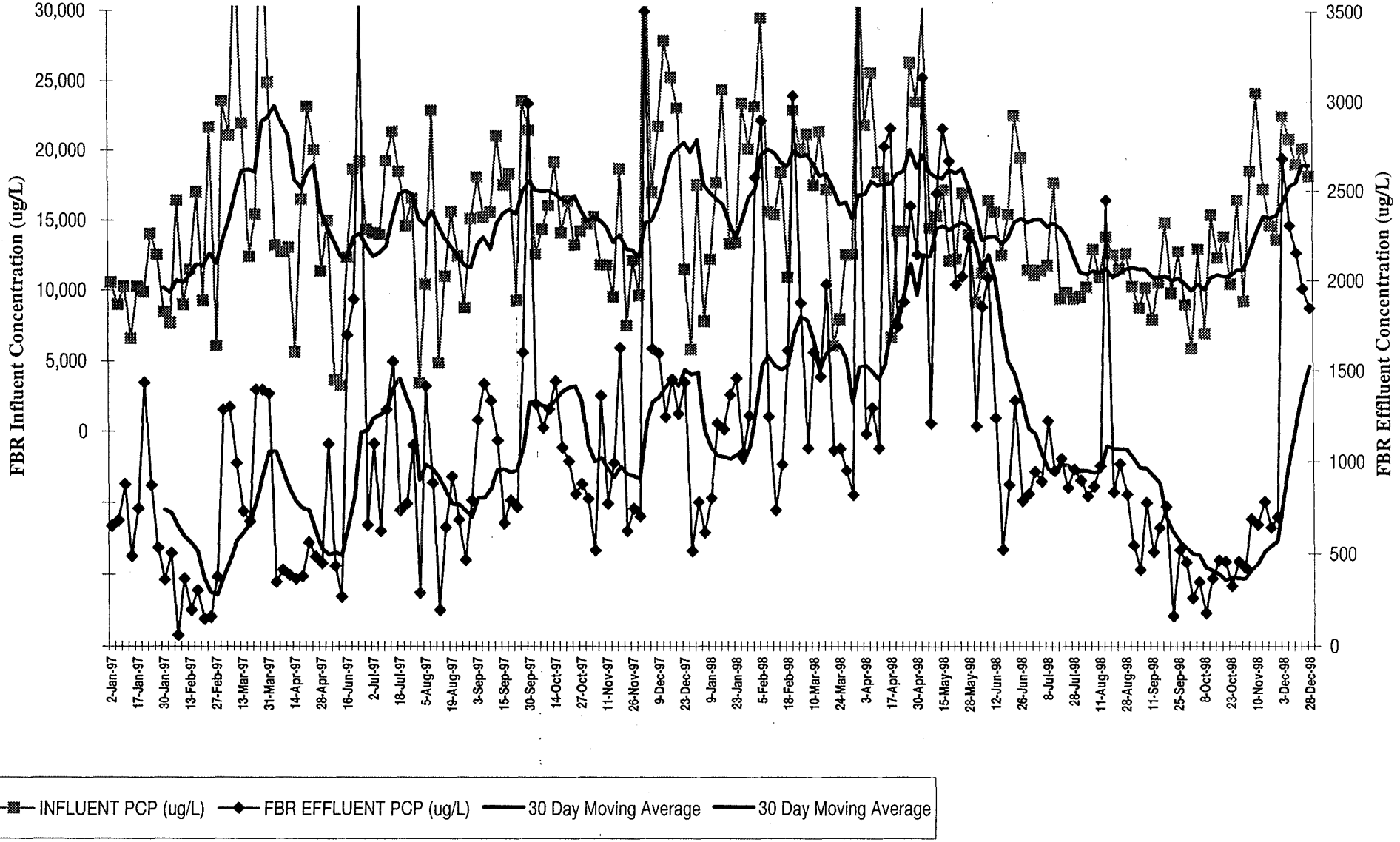
TABLE 4

Groundwater Elevation Data
Wauleco, Inc.
Wausau, Wisconsin

Well	October 29 1998		November 30 1998		December 29 1998	
	Oil Thickness	Water Elevation	Oil Thickness	Water Elevation	Oil Thickness	Water Elevation
W21	No Data	No Data	-----	1160.69	-----	1160.55
W22	No Data	No Data	-----	1160.81	-----	1160.58
W23	No Data	No Data	-----	1160.60	-----	1160.48
W24A	No Data	No Data	-----	1160.57	-----	1160.47
W25	No Data	No Data	-----	1162.60	-----	1162.08
W26	No Data	No Data	-----	1160.88	-----	1160.74
W27	No Data	No Data	-----	1161.14	-----	1160.85
W28	No Data	No Data	-----	1160.66	-----	1160.77
W29	No Data	No Data	-----	1160.80	-----	1160.74
W30	0.72	1161.05	0.74	1161.00	1.24	1159.23
W31	No Data	No Data	-----	1160.67	-----	1160.67
W32	No Data	No Data	-----	1160.63	-----	1160.68
W33	No Data	No Data	-----	1161.19	-----	1161.16
W34	0.24	1158.28	0.20	1158.25	0.32	1157.26
W35	1.04	1160.80	1.48	1160.34	0.69	1159.79
W36	-----	1161.94	-----	1161.89	-----	1161.00
W39	No Data	No Data	-----	1161.32	-----	1161.27
W40	No Data	No Data	-----	1160.39	-----	1160.34
W41	No Data	No Data	-----	1166.09	-----	1166.04
W42	0.08	1161.97	0.10	1161.92	0.08	1161.44
W44	0.54	1161.36	0.55	1161.33	0.54	1160.15
W45	0.10	1161.76	0.05	1161.73	0.10	1160.51
W46	0.50	1161.32	0.51	1161.30	0.79	1159.65
W47	-----	1158.11	-----	1158.08	0.68	1156.41
W48	0.66	1157.58	0.63	1157.53	0.57	1157.51
W49	0.66	1157.58	0.65	1157.56	-----	1157.30
W66	-----	1162.41	-----	1162.41	-----	1162.08
W67	-----	1162.36	-----	1162.32	-----	1162.02
W68A	-----	1162.43	-----	1162.45	-----	1162.05
W68B	-----	1162.36	-----	1162.34	-----	1162.01
W69	0.73	1161.25	0.68	1161.22	0.95	1160.12
W70B	-----	1162.34	-----	1162.32	-----	1161.72
River	-----	No Guage	-----	No Guage	-----	No Guage

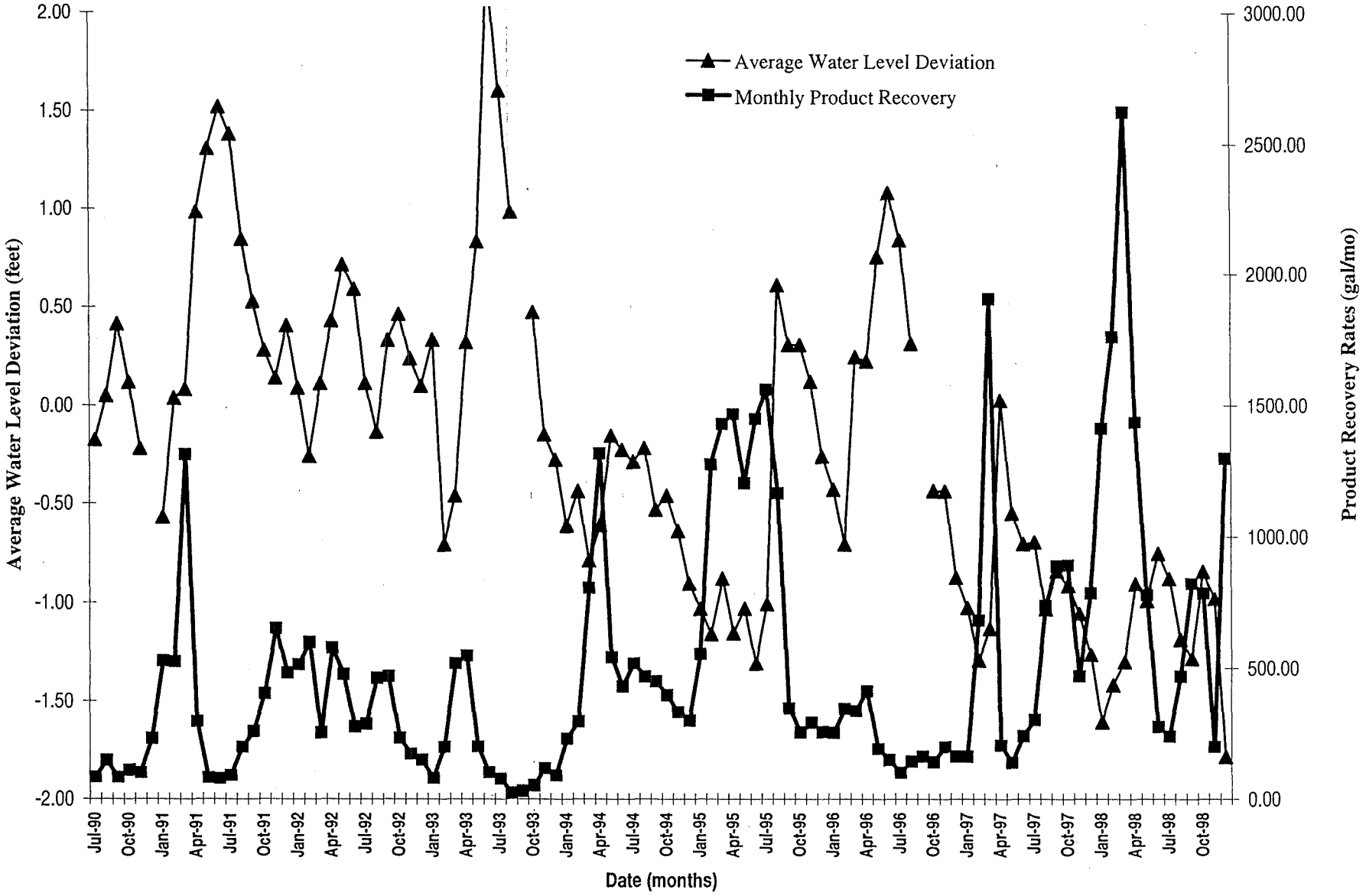
FIGURES

FIGURE 1
FBR INFLUENT/EFFLUENT
PCP CONCENTRATIONS



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FIGURE 2
Average Water Level Deviation Versus Product Recovery Rates



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