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April 9, 2019

Mr. Matt Thompson
Wisconsin Department of Natural Resources
1300 W. Clairemont Avenue
Eau Claire, WI 54701

Subject: 2019 First Quarterly Report - Wauleco, Inc., Wausau, Wisconsin
BRRTS #02-37-000006

Dear Mr. Thompson:

On behalf of Wauleco, Inc., TRC is submitting a copy (enclosed) of the 2019 First Quarterly Report for the Wauleco, Inc., site in Wausau, Wisconsin.

If you have any questions or comments regarding this information, please call me at (608) 826-3644.

Sincerely,

TRC Environmental Corporation

Bruce Iverson
Project Manager

Attachments: 2019 First Quarterly Report

cc: Evan Schreiner – Wauleco, Inc. (2 copies)
David Crass – Michael Best & Friedrich, LLP (1 copy)
Tom Dushek – TRC Wauleco (1 copy)
Ken Quinn – TRC (1 copy)

Wauleco, Inc. - Wausau, Wisconsin
Quarterly Report
Submitted April 2019

Summary of 2019 First Quarter Activities

Groundwater Extraction and Treatment System Operation

Tables 1a, b, and c summarize the extraction and treatment system performance data for this reporting period. The results of the water discharged to the municipal sewer during the first quarter of 2019 are summarized as follows:

- Pentachlorophenol (PCP) screening (on-site gas chromatograph) results for the system effluent samples, which represent the water discharged to the municipal sanitary sewer, averaged 8.31 µg/L in January, 1.36 µg/L in February, and 1.48 µg/L in March.
- Laboratory results for the sampling event conducted this quarter are included in Tables 1a, b, and c for each month. The laboratory results for PCP in the system effluent was <3.0 µg/L on January 23, <3.0 µg/L on February 13, and <3.0 µg/L March 20, 2019.
- Both laboratory and on-site screening results indicate that the effluent PCP concentrations were below the monthly average permit level of 150 µg/L and the daily maximum concentration of 300 µg/L.
- Total treatment system efficiency (including carbon polishing units) removed more than 99 percent of the PCP between the influent and the effluent.
- In January, the treatment system was shutdown for one week (January 12 to 19) for replacement of the carbon in polishing tanks 3 through 8. Cleaning of the FFR tank, Settling Tank and piping, and plumbing repairs were also completed.
- In February, the treatment system was shutdown for one day (February 6) for replacement of carbon polishing tanks 1 and 2.

On-site screening PCP influent concentrations ranged from 3,035 µg/L to 11,285 µg/L during the quarter (Tables 1a, b, and c). PCP influent and effluent concentrations in the fluidized bed reactor (FBR) are presented graphically, both as individual data points and as moving averages, on Figure 1. FBR results included the following:

- As shown on Figure 1 and in Tables 1a, b, and c, PCP concentrations in the FBR influent fluctuated during the quarter, and generally remain within normal concentrations.
- The average PCP removal efficiency for the biological portion (*i.e.*, FBR influent to the fixed film reactor [FFR] effluent) of the system during this quarter is compared to the following:

MONTH	AVERAGE PCP REMOVAL (%)	PREVIOUS 12 MONTH AVERAGE (%)	AVERAGE 1 YEAR AGO (%)
January 2019	84	85	85
February 2019	88	86	84
March 2019	87	86	80

- The dissolved oxygen concentration in the influent to the FBR averaged 2.4 mg/L in January, 2.95 mg/L in February, and 2.5 mg/L in March 2019.

Laboratory results for the mercury analysis of the system effluent samples are included in Tables 1a, b, and c. The mercury concentration in the system effluent sample (discharged to the sanitary sewer) was 0.35 µg/L on January 23, <0.02 µg/L on February 13, and 0.047 µg/L on March 20, which are below the permit discharge limit of 1.6 µg/L. The mass loading for mercury in February was calculated using half the detection limit of 0.01 µg/L, at 0.00000259 lb/24 hours, which is below the permit discharge limit of 0.00048 lb/24 hours. The mass loading for mercury in January was calculated at 0.0000978 lb/24 hours, and 0.0000120 lb/24 hours in March, which are below the permit discharge limit of 0.00048 lb/24 hours.

The daily groundwater flow of the effluent to the Wausau Wastewater Treatment Plant averaged 23.26 gpm for January, 21.56 gpm for February, and 21.23 gpm for March 2019 (Tables 2a, b, and c). Since June, 2012 the pumping rate has been operated at approximately 22 gpm.

Figure 2 shows the average groundwater flow extracted and the average daily flow discharged to the Wausau Wastewater Treatment Plant.

Groundwater Monitoring

Water table elevations for the month of January 2019 are included in Table 3. Monthly water table elevations have been discontinued, with only quarterly elevations being measured, and semi-annual preparation of water table maps as discussed in the 2014 Annual Groundwater Monitoring Report dated April 16, 2015. A water table map for the month of January 2019 is included as Drawing 1.

The product thickness data for January 2019 are summarized in Table 4. Measurements show a small amount of product present in January. One production well and three monitoring wells had free product: PW19 had 0.02 ft., W4A had 0.03 ft., W7 had 0.13 ft., W40 had 0.03 ft.

Enclosures:
- Tables 1a, b, and c – Above Ground Treatment System Data
- Tables 2a, b, and c – Treatment System Flows
- Table 3 – Groundwater Elevation Data
- Table 4 – Free Product Measurements
- Figure 1 – FBR Influent and Effluent PCP Concentrations
- Figure 2 – Average Groundwater Extraction Rates and Water Level Deviation Versus Time
- Drawing 1 – Water Table Map – January 4, 2019

TABLE 1a
JANUARY 2019

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	1/23/2019	12	<				<	
Chemical Oxygen Demand	mg/L	1/23/2019	35	25				18	
Chloride	mg/L	1/23/2019	180	180				180	
Dissolved Oxygen	mg/L	1/3/2019	2	1	6.4				
	mg/L	1/10/2019	2	1.2	6.8				
	mg/L	1/23/2019	2.6	1.2	6.8				
	mg/L	1/31/2019	2.9	1.3	7.2				
Nitrogen, Ammonia	mg/L	1/3/2019	1.1	1.1	1				
	mg/L	1/10/2019	1.1	0.9	0.9				
	mg/L	1/23/2019	1	0.9	0.9				
	mg/L	1/31/2019	1	0.8	0.9				
Nitrogen, Nitrate	mg/L	1/3/2019	<	<	<				
	mg/L	1/10/2019	<	<	<				
	mg/L	1/23/2019	<	<	<				
	mg/L	1/31/2019	<	<	<				
Nitrogen, Nitrate + Nitrite	mg/L	1/23/2019	<	<				<	
Nitrogen, Total Kjeldahl	mg/L	1/23/2019	<	<				<	
Pentachlorophenol-Screen	µg/L	1/1/2019						9	
	µg/L	1/2/2019						9	
	µg/L	1/3/2019	11285	3122	1474			17	
	µg/L	1/4/2019						22	
	µg/L	1/5/2019						20	
	µg/L	1/6/2019						20	
	µg/L	1/7/2019						20	
	µg/L	1/8/2019						23	
	µg/L	1/9/2019						9	
	µg/L	1/10/2019	10885	1249	721			8	
	µg/L	1/11/2019						12	
	µg/L	1/12/2019						12	
	µg/L	1/18/2019						1	
	µg/L	1/19/2019						1	
	µg/L	1/20/2019						1	
	µg/L	1/21/2019						1	
	µg/L	1/22/2019						2	
	µg/L	1/23/2019	4204	1160	1044			2	
	µg/L	1/24/2019						5	
	µg/L	1/25/2019						4	
	µg/L	1/26/2019						4	
	µg/L	1/27/2019						4	
	µg/L	1/28/2019						4	
	µg/L	1/29/2019						3	
	µg/L	1/30/2019						1	
	µg/L	1/31/2019	3709	1064	794			2	
pH	S.U.	1/3/2019	6.7	6.7	6.8				

TABLE 1a
JANUARY 2019

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
pH	S.U.	1/10/2019	6.75	6.7	6.8				
	S.U.	1/23/2019	6.8	6.75	6.8				
	S.U.	1/31/2019	6.75	6.75	6.75				
Phosphorus, Ortho	mg/L	1/23/2019	<	<				<	
Phosphorus, Phosphate	mg/L	1/3/2019	0.9	1.4	1.3				
	mg/L	1/10/2019	0.9	1.3	1				
	mg/L	1/23/2019	1.1	1.3	1.2				
	mg/L	1/31/2019	1	1.1	0.9				
Solids, Total Suspended	mg/L	1/23/2019	11	22				<	
Mercury	µg/L	1/23/2019	0.33					0.35	
Phenol									
2,3,4,6-Tetrachlorophenol	µg/L	1/23/2019	300	40	40			<	<
2,4,5-Trichlorophenol	µg/L	1/23/2019	<	<	<			<	<
2,4,6-Trichlorophenol	µg/L	1/23/2019	<	<	<			<	<
2,4-Dichlorophenol	µg/L	1/23/2019	<	<	<			<	<
2,4-Dimethylphenol	µg/L	1/23/2019	<	<	<			<	<
2,4-Dinitrophenol	µg/L	1/23/2019	<	<	<			<	<
2,6-Dichlorophenol	µg/L	1/23/2019	<	<	<			<	<
2-Chlorophenol	µg/L	1/23/2019	<	<	<			<	<
2-Methylphenol	µg/L	1/23/2019	<	<	<			<	<
2-Nitrophenol	µg/L	1/23/2019	<	<	<			<	<
3&4-Methylphenol	µg/L	1/23/2019	<	<	<			<	<
4,6-Dinitro-2-Methylphenol	µg/L	1/23/2019	<	<	<			<	<
4-Chloro-3-Methylphenol	µg/L	1/23/2019	<	<	<			<	<
4-Nitrophenol	µg/L	1/23/2019	<	<	<			<	<
Pentachlorophenol	µg/L	1/23/2019	3800	370	350			<	<
Phenol	µg/L	1/23/2019	<	<	<			<	<

TABLE 1b
FEBRUARY 2019

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	2/13/2019	8.6	2.5				<	
Chemical Oxygen Demand	mg/L	2/13/2019	23	<				<	
Chloride	mg/L	2/13/2019	160	170				160	
Dissolved Oxygen	mg/L	2/7/2019	2.6	1.2	6.5				
	mg/L	2/13/2019	2.8	1.4	6.7				
	mg/L	2/20/2019	3.2	1.6	6.8				
	mg/L	2/28/2019	3.2	1.6	6.6				
Nitrogen, Ammonia	mg/L	2/7/2019	1	1	1.1				
	mg/L	2/13/2019	1.1	0.9	0.8				
	mg/L	2/20/2019	1.2	1	1				
	mg/L	2/28/2019	1.1	1.2	1				
Nitrogen, Nitrate	mg/L	2/7/2019	<	<	<				
	mg/L	2/13/2019	<	<	<				
	mg/L	2/20/2019	<	<	<				
	mg/L	2/28/2019	<	<	<				
Nitrogen, Total Kjeldahl	mg/L	2/13/2019	<	<				<	
Pentachlorophenol-Screen	µg/L	2/1/2019						4	
	µg/L	2/2/2019						1	
	µg/L	2/3/2019						1	
	µg/L	2/4/2019						1	
	µg/L	2/5/2019						1	
	µg/L	2/6/2019						2	
	µg/L	2/7/2019	3035	284	350			1	
	µg/L	2/8/2019						2	
	µg/L	2/9/2019						1	
	µg/L	2/10/2019						1	
	µg/L	2/11/2019						1	
	µg/L	2/12/2019						1	
	µg/L	2/13/2019	8065	990	1153		10	1	
	µg/L	2/14/2019						1	
	µg/L	2/15/2019						1	
	µg/L	2/16/2019						1	
	µg/L	2/17/2019						1	
	µg/L	2/18/2019						1	
	µg/L	2/19/2019						1	
	µg/L	2/20/2019	4784	391	481			1	
	µg/L	2/21/2019						2	
	µg/L	2/22/2019						1	
	µg/L	2/23/2019						3	
	µg/L	2/24/2019						3	
	µg/L	2/25/2019						1	
	µg/L	2/26/2019						1	
	µg/L	2/27/2019						1	

TABLE 1b
FEBRUARY 2019

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	2/28/2019	7580	1412	1014			1	
pH	S.U.	2/7/2019	6.75	6.7	6.75				
	S.U.	2/13/2019	6.8	6.7	6.7				
	S.U.	2/20/2019	6.8	6.7	6.7				
	S.U.	2/28/2019	6.75	6.6	6.65				
Phosphorus, Ortho	mg/L	2/13/2019	<	<				<	
Phosphorus, Phosphate	mg/L	2/7/2019	1	1	0.9				
	mg/L	2/13/2019	1	1	0.9				
	mg/L	2/20/2019	0.9	1	0.9				
	mg/L	2/28/2019	1	1	0.9				
Solids, Total Suspended	mg/L	2/13/2019	8.8	12				<	
Mercury	µg/L	2/13/2019						<	
Phenol									
2,3,4,6-Tetrachlorophenol	µg/L	2/13/2019	280		38		<	<	<
2,4,5-Trichlorophenol	µg/L	2/13/2019	<		<		<	<	<
2,4,6-Trichlorophenol	µg/L	2/13/2019	<		<		<	<	<
2,4-Dichlorophenol	µg/L	2/13/2019	<		<		<	<	<
2,4-Dimethylphenol	µg/L	2/13/2019	<		<		<	<	<
2,4-Dinitrophenol	µg/L	2/13/2019	<		<		<	<	<
2,6-Dichlorophenol	µg/L	2/13/2019	<		<		<	<	<
2-Chlorophenol	µg/L	2/13/2019	<		<		<	<	<
2-Methylphenol	µg/L	2/13/2019	<		<		<	<	<
2-Nitrophenol	µg/L	2/13/2019	<		<		<	<	<
3&4-Methylphenol	µg/L	2/13/2019	<		<		<	<	<
4,6-Dinitro-2-Methylphenol	µg/L	2/13/2019	<		<		<	<	<
4-Chloro-3-Methylphenol	µg/L	2/13/2019	<		<		<	<	<
4-Nitrophenol	µg/L	2/13/2019	<		<		<	<	<
Pentachlorophenol	µg/L	2/13/2019	3500		340		<	<	<
Phenol	µg/L	2/13/2019	<		<		<	<	<

TABLE 1c
MARCH 2019

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	3/20/2019	12	5.4				<	
Chemical Oxygen Demand	mg/L	3/20/2019	64	44				37	
Chloride	mg/L	3/20/2019	180	180				180	
Dissolved Oxygen	mg/L	3/7/2019	2.2	0.9	6.1				
	mg/L	3/14/2019	2.4	1.1	6.2				
	mg/L	3/20/2019	2.6	1	6.6				
	mg/L	3/27/2019	2.6	1.1	6.2				
Nitrogen, Ammonia	mg/L	3/7/2019	1.2	1.1	1.3				
	mg/L	3/14/2019	0.9	0.9	0.9				
	mg/L	3/20/2019	1.1	0.9	0.9				
	mg/L	3/27/2019	1	0.9	0.9				
Nitrogen, Nitrate	mg/L	3/7/2019	<	<	<				
	mg/L	3/14/2019	<	<	<				
	mg/L	3/20/2019	<	<	<				
	mg/L	3/27/2019	<	<	<				
Nitrogen, Total Kjeldahl	mg/L	3/20/2019	0.41	0.37				0.26	
Pentachlorophenol-Screen	µg/L	3/1/2019						2	
	µg/L	3/2/2019						3	
	µg/L	3/3/2019						3	
	µg/L	3/4/2019						3	
	µg/L	3/5/2019						2	
	µg/L	3/6/2019						2	
	µg/L	3/7/2019	6428	452	600			1	
	µg/L	3/8/2019						1	
	µg/L	3/9/2019						1	
	µg/L	3/10/2019						1	
	µg/L	3/11/2019						1	
	µg/L	3/12/2019						1	
	µg/L	3/13/2019						1	
	µg/L	3/14/2019	3284	452	429			2	
	µg/L	3/15/2019						2	
	µg/L	3/16/2019						2	
	µg/L	3/17/2019						2	
	µg/L	3/18/2019						2	
	µg/L	3/19/2019						1	
	µg/L	3/20/2019	4177	632	866		40	1	
	µg/L	3/21/2019						1	
	µg/L	3/22/2019						1	
	µg/L	3/23/2019						1	
	µg/L	3/24/2019						1	
	µg/L	3/25/2019						1	
	µg/L	3/26/2019						1	
	µg/L	3/27/2019	5823	833	532			1	
	µg/L	3/28/2019						2	

TABLE 1c
MARCH 2019

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	3/29/2019						1	
	µg/L	3/30/2019						1	
	µg/L	3/31/2019						1	
pH	S.U.	3/7/2019	6.75	6.65	6.7				
	S.U.	3/14/2019	6.8	6.75	6.75				
	S.U.	3/20/2019	6.8	6.65	6.7				
	S.U.	3/27/2019	6.8	6.65	6.7				
Phosphorus, Ortho	mg/L	3/20/2019	<	<				<	
Phosphorus, Phosphate	mg/L	3/7/2019	0.9	1.1	1				
	mg/L	3/14/2019	1	1.1	1.1				
	mg/L	3/20/2019	1	1.3	1.2				
	mg/L	3/27/2019	0.9	1	1				
Solids, Total Suspended	mg/L	3/20/2019	10	15				<	
Mercury	µg/L	3/20/2019						0.047	
Phenol									
2,3,4,6-Tetrachlorophenol	µg/L	3/20/2019	380	50	48			<	<
2,4,5-Trichlorophenol	µg/L	3/20/2019	<	14	13			<	<
2,4,6-Trichlorophenol	µg/L	3/20/2019	<	<	<			<	<
2,4-Dichlorophenol	µg/L	3/20/2019	<	<	<			<	<
2,4-Dimethylphenol	µg/L	3/20/2019	<	<	<			<	<
2,4-Dinitrophenol	µg/L	3/20/2019	<	<	<			<	<
2,6-Dichlorophenol	µg/L	3/20/2019	<	<	<			<	<
2-Chlorophenol	µg/L	3/20/2019	<	<	<			<	<
2-Methylphenol	µg/L	3/20/2019	<	<	<			<	<
2-Nitrophenol	µg/L	3/20/2019	<	<	<			<	<
3&4-Methylphenol	µg/L	3/20/2019	<	<	<			<	<
4,6-Dinitro-2-Methylphenol	µg/L	3/20/2019	<	<	<			<	<
4-Chloro-3-Methylphenol	µg/L	3/20/2019	<	<	<			<	<
4-Nitrophenol	µg/L	3/20/2019	<	<	<			<	<
Pentachlorophenol	µg/L	3/20/2019	3600	580	530			<	<
Phenol	µg/L	3/20/2019	<	<	<			<	<

TABLE 2a
JANUARY 2019

Treatment System Flows
Wauleco, Inc.
Wausau, Wisconsin

Date	Influent Groundwater Flow Rate [1] [3] (gpm)	POTW Discharge Flow Rate [1] [4] (gpm)	POTW Totalized Discharge [3] (gal)
1/1/2019	21.45	25.29	72757946
1/2/2019	21.36	25.33	72794421
1/3/2019	21.39	25.54	72831192
1/4/2019	21.51	26.03	72868673
1/5/2019	21.53	26.03	72906155
1/6/2019	21.48	25.88	72943421
1/7/2019	21.40	26.52	72981609
1/8/2019	21.19	26.43	73019663
1/9/2019	21.22	25.83	73056860
1/10/2019	20.94	26.51	73095032
1/11/2019	20.75	26.44	73133099
1/12/2019	2.92	6.75	73142818
1/13/2019	0.00		
1/14/2019	0.00		
1/15/2019	0.00		
1/16/2019	0.00		
1/17/2019	0.00		
1/18/2019	1.55		
1/19/2019	11.59	15.38	73164965
1/20/2019	15.75	22.80	73197794
1/21/2019	15.77	22.88	73230738
1/22/2019	15.76	22.74	73263483
1/23/2019	16.09	22.75	73296243
1/24/2019	16.29	22.81	73329086
1/25/2019	16.31	22.79	73361901
1/26/2019	16.30	22.94	73394939
1/27/2019	16.36	23.01	73428069
1/28/2019	16.16	22.83	73460937
1/29/2019	16.14	22.60	73493479
1/30/2019	16.17	22.51	73525887
1/31/2019	16.32	22.90	73558863
Monthly Average	14.31	23.26	
Total[2]:			837,328

Footnotes:

[1] Influent and POTW discharge flow rates are daily averages. These may not be equal due to balancing in the treatment system and calibration of individual flowmeters. The influent groundwater flow rate is calculated by adding the instantaneous flow rate from each pumping well (i.e., 16 meters). The POTW discharge flow rate is recorded directly from the effluent meter.

[2] Total is the cumulative gallons discharged to the POTW during the reporting period. This number is calculated by subtracting the total of the previous month's last day from the total of the current month's last day, see previous month's report for the number used. The total from the first day of the current month is not used in the calculation.

[3] Totalizers were reset to 0 on August 23, 2012 during the system shutdown for maintenance.

[4] A new effluent meter was installed in April, 2017 during the system shutdown for maintenance.

TABLE 2b
FEBRUARY 2019

Treatment System Flows
Wauleco, Inc.
Wausau, Wisconsin

Date	Influent Groundwater Flow Rate [1] [3] (gpm)	POTW Discharge Flow Rate [1] [4] (gpm)	POTW Totalized Discharge [3] (gal)
2/1/2019	16.24	22.60	73591409
2/2/2019	16.15	22.57	73623916
2/3/2019	16.19	22.53	73656358
2/4/2019	16.18	22.62	73688925
2/5/2019	16.16	22.64	73721520
2/6/2019	4.59	6.05	73730233
2/7/2019	15.98	21.60	73761332
2/8/2019	17.84	25.44	73797960
2/9/2019	14.47	21.70	73829210
2/10/2019	14.08	21.21	73859756
2/11/2019	14.11	21.56	73890803
2/12/2019	14.29	21.31	73921495
2/13/2019	14.28	21.35	73952243
2/14/2019	14.25	21.32	73982939
2/15/2019	14.86	21.84	74014391
2/16/2019	15.20	21.86	74045866
2/17/2019	15.22	21.99	74077537
2/18/2019	15.23	22.33	74109698
2/19/2019	14.92	22.75	74142458
2/20/2019	14.59	21.43	74173315
2/21/2019	14.17	21.23	74203888
2/22/2019	14.95	21.95	74235503
2/23/2019	14.92	21.91	74267054
2/24/2019	14.96	22.37	74299260
2/25/2019	14.98	22.37	74331478
2/26/2019	15.02	22.36	74363675
2/27/2019	15.03	22.41	74395951
2/28/2019	15.05	22.38	74428180
Average For The Month	14.78	21.56	
Total[2]:			869,317

Footnotes:

[1] Influent and POTW discharge flow rates are daily averages. These may not be equal due to balancing in the treatment system and calibration of individual flowmeters. The influent groundwater flow rate is calculated by adding the instantaneous flow rate from each pumping well (i.e., 16 meters). The POTW discharge flow rate is recorded directly from the effluent meter.

[2] Total is the cumulative gallons discharged to the POTW during the reporting period. This number is calculated by subtracting the total of the previous month's last day from the total of the current month's last day, see previous month's report for the number used. The total from the first day of the current month is not used in the calculation.

[3] Totalizers were reset to 0 on August 23, 2012 during the system shutdown for maintenance.

[4] A new effluent meter was installed in April, 2017 during the system shutdown for maintenance.

TABLE 2c
MARCH 2019

Treatment System Flows
Wauleco, Inc.
Wausau, Wisconsin

Date	Influent Groundwater Flow Rate [1] [3] (gpm)	POTW Discharge Flow Rate [1] [4] (gpm)	POTW Totalized Discharge [3] (gal)
3/1/2019	15.08	21.78	74459536
3/2/2019	15.10	21.96	74491158
3/3/2019	15.11	21.98	74522813
3/4/2019	15.25	21.52	74553806
3/5/2019	15.37	21.23	74584376
3/6/2019	15.39	21.19	74614892
3/7/2019	15.44	21.04	74645195
3/8/2019	15.48	21.12	74675602
3/9/2019	15.52	21.33	74706319
3/10/2019	14.84	20.23	74735449
3/11/2019	15.45	21.19	74765962
3/12/2019	15.44	21.16	74796430
3/13/2019	15.44	21.05	74826747
3/14/2019	15.52	21.03	74857030
3/15/2019	15.63	20.80	74886977
3/16/2019	15.87	21.33	74917690
3/17/2019	15.90	21.50	74948650
3/18/2019	15.92	22.28	74980726
3/19/2019	15.92	20.42	75010132
3/20/2019	15.96	20.62	75039823
3/21/2019	16.04	20.36	75069142
3/22/2019	16.13	20.33	75098412
3/23/2019	15.85	20.13	75127395
3/24/2019	14.38	20.14	75156396
3/25/2019	14.33	19.94	75185115
3/26/2019	16.85	21.87	75216607
3/27/2019	17.40	22.17	75248531
3/28/2019	17.33	21.90	75280060
3/29/2019	17.54	22.30	75312170
3/30/2019	17.65	22.19	75344124
3/31/2019	17.45	22.06	75375896
Average	15.82	21.23	
Total[2]:			947,716

Footnotes:

[1] Influent and POTW discharge flow rates are daily averages. These may not be equal due to balancing in the treatment system and calibration of individual flowmeters. The influent groundwater flow rate is calculated by adding the instantaneous flow rate from each pumping well (i.e., 16 meters). The POTW discharge flow rate is recorded directly from the effluent meter.

[2] Total is the cumulative gallons discharged to the POTW during the reporting period. This number is calculated by subtracting the total of the previous month's last day from the total of the current month's last day, see previous month's report for the number used. The total from the first day of the current month is not used in the calculation.

[3] Totalizers were reset to 0 on August 23, 2012 during the system shutdown for maintenance.

[4] A new effluent meter was installed in April, 2017 during the system shutdown for maintenance.

TABLE 3

Groundwater Elevation Data
Wauleco, Inc.
Wausau, Wisconsin

Well	January 04, 2019 (ft msl)	February 2019	March 2019
PW01	1163.88	----	----
PW02	Abandoned	----	----
PW03	1163.69	----	----
PW3S	1162.9	----	----
PW04	1162.75	----	----
PW05	1162.82	----	----
PW06	1163.21	----	----
PW07	1162.96	----	----
PW08	1164.09	----	----
PW09I	-----	----	----
PW09O	1162.78	----	----
PW10	1162.99	----	----
PW11	1161.42	----	----
PW12	1164.07	----	----
PW13	1162.82	----	----
PW14	1162.07	----	----
PW15	1162.16	----	----
PW16	1162.22	----	----
PW17	1158.83	----	----
PW18	1162.78	----	----
PW19	1162.13	----	----
PW20	1161.6	----	----
PW21	1162.33	----	----
PW22	1162.85	----	----
PW23	1162.76	----	----
PW24	1161.3	----	----
PW25	1158.98	----	----
PW26	1160.50	----	----
PW27	1159.79	----	----
PW28	1163.83	----	----
PW29	1163.96	----	----
P01	1162.74	----	----
OW01	1165.2	----	----
W01A	1164.36	----	----
W01B	1164.38	----	----
W02	1163.54	----	----
W03A	1161.83	----	----
W03B	1162.23	----	----
W04A	1163.20	----	----
W04B	1163.2	----	----
W05	1162.8	----	----
W06R	1164.26	----	----
W07	1163.95	----	----
W08	1173.71	----	----
W09	1162.73	----	----
W10A	1161.34	----	----
W10B	1161.37	----	----
W11	1161.23	----	----
W12	1160.84	----	----
W13	1161.98	----	----
W14	1161.11	----	----
W16	1162.52	----	----
W17	1162	----	----
W18	1161.31	----	----
W19	1163.67	----	----

TABLE 3 (continued)

Groundwater Elevation Data
Wauleco, Inc.
Wausau, Wisconsin

Well	January 04, 2019 (ft msl)	February 2019	March 2019
W21	1161.1	----	----
W22	1161.93	----	----
W23	1161.18	----	----
W24A	1161.16	----	----
W25	1164.34	----	----
W26	1161.27	----	----
W27	1161.97	----	----
W28	1161.3	----	----
W29	1161.16	----	----
W30	1162.74	----	----
W31	1161.12	----	----
W32	1161.13	----	----
W33	1163.7	----	----
W34	1162.93	----	----
W35	1162.95	----	----
W36	1163.53	----	----
W39	1162.26	----	----
W40	1161.754	----	----
W41	1162.85	----	----
W42	1163.6	----	----
W44	1162.75	----	----
W45	1162.91	----	----
W46	1162.58	----	----
W47	1161.44	----	----
W48	1161.72	----	----
W49	1162.17	----	----
W66	1164.12	----	----
W67	1164.09	----	----
W68A	1164.12	----	----
W68B	1164.03	----	----
W69	1163.12	----	----
W70B	Abandoned	----	----
River	-----	----	----
IW01	1162.78	----	----
IW01A	1162.78	----	----
FP01	1161.06	----	----
FP02	1161.08	----	----
FP03	1159.58	----	----
FP04	1161.06	----	----
3M Basin	Ice/Water in both Basins	----	----
DFOWM 5	1163.62	----	----
DFOWM 9	Abandoned	----	----
DFOWM 10A	Abandoned	----	----
DFOWM 11	1162.17	----	----
DFOWM 12	1163.35	----	----
W71	1167.52	----	----
W72	1164.72	----	----
W73	1163.52	----	----
W74	1163.06	----	----

Notes:

1. ft msl = feet mean sea level
2. PW09O denotes the outer well and PW09I denotes the inner well
3. ----- = Well not measured
4. Groundwater elevations have been adjusted for product thickness.
5. Top of casing elevations were resurveyed for the on-site wells on December 4, 2009 . Use of the new data began in January 2010.

Table 4

Free Product Measurements
Wauleco, Inc.
Wausau, Wisconsin

Well	January 04, 2019 (ft)	February 2019	March 2019
PW01	0.00	----	----
PW02	Abandoned	----	----
PW03	0.00	----	----
PW3S	0.00	----	----
PW04	0.00	----	----
PW05	0.00	----	----
PW06	0.00	----	----
PW07	0.00	----	----
PW08	0.00	----	----
PW09I	-----	----	----
PW09O	0.00	----	----
PW10	0.00	----	----
PW11	0.00	----	----
PW12	0.00	----	----
PW13	0.00	----	----
PW14	0.00	----	----
PW15	0.00	----	----
PW16	0.03	----	----
PW17	0.00	----	----
PW18	0.00	----	----
PW19	0.02	----	----
PW20	0.00	----	----
PW21	0.00	----	----
PW22	0.00	----	----
PW23	0.00	----	----
PW24	0.00	----	----
PW25	0.00	----	----
PW26	0.00	----	----
PW27	0.00	----	----
PW28	0.00	----	----
PW29	0.00	----	----
P01	0.00	----	----
OW01	0.00	----	----
W01A	0.00	----	----
W01B	0.00	----	----
W02	0.00	----	----
W03A	0.00	----	----
W03B	0.00	----	----
W04A	0.03	----	----
W04B	0.00	----	----
W05	0.00	----	----
W06R	0.00	----	----
W07	0.13	----	----
W08	0.00	----	----
W09	0.00	----	----
W10A	0.00	----	----
W10B	0.00	----	----
W11	0.00	----	----
W12	0.00	----	----
W13	0.00	----	----
W14	0.00	----	----
W16	0.00	----	----
W17	0.00	----	----

Table 4 (continued)

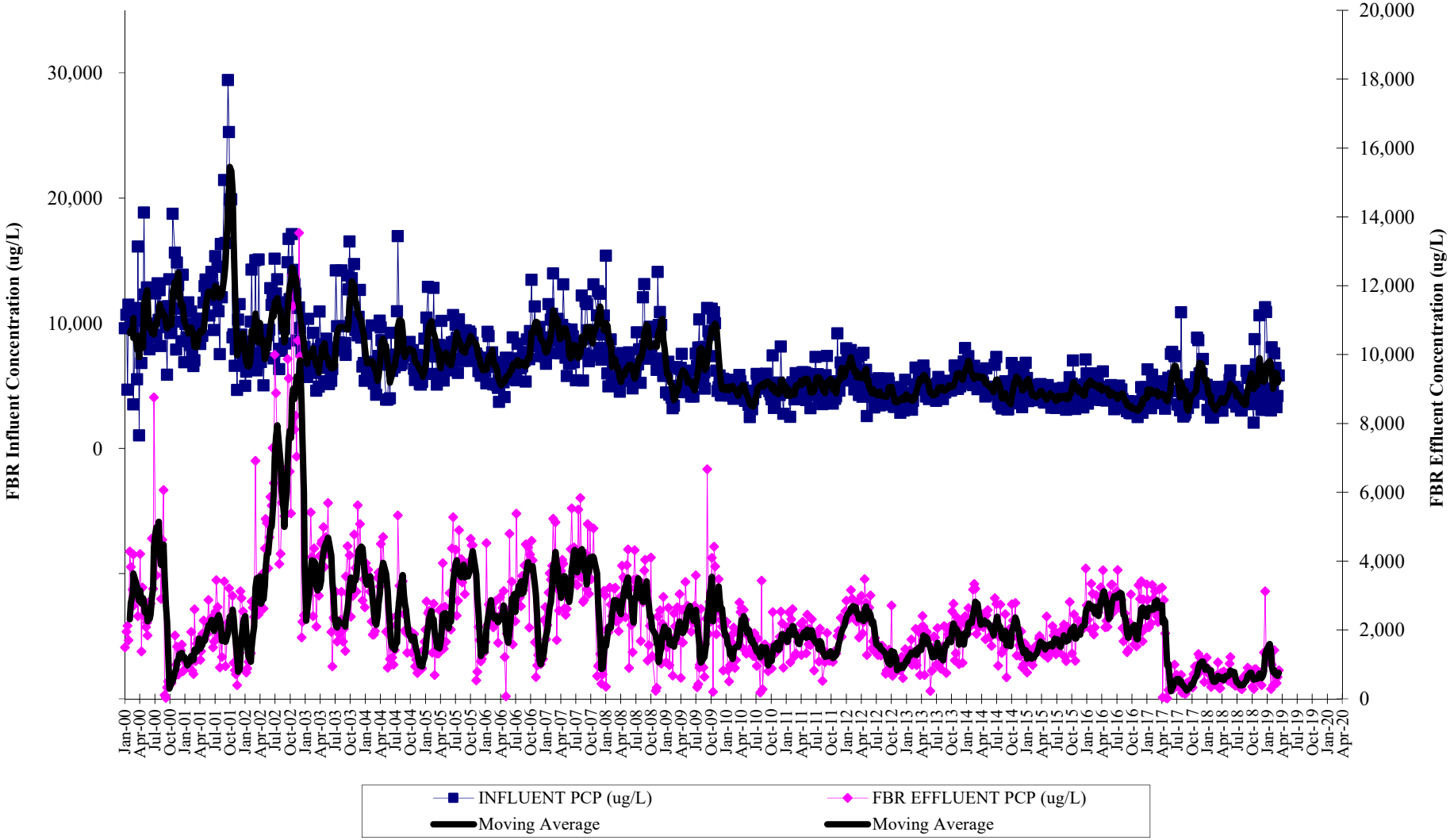
Free Product Measurements
Wauleco, Inc.
Wausau, Wisconsin

Well	January 04, 2019 (ft)	February 2019	March 2019
W18	0.00	----	----
W19	0.00	----	----
W21	0.00	----	----
W22	0.00	----	----
W23	0.00	----	----
W24A	0.00	----	----
W25	0.00	----	----
W26	0.00	----	----
W27	0.00	----	----
W28	0.00	----	----
W29	0.00	----	----
W30	0.00	----	----
W31	0.00	----	----
W32	0.00	----	----
W33	0.00	----	----
W34	0.00	----	----
W35	0.00	----	----
W36	0.00	----	----
W39	0.00	----	----
W40	0.03	----	----
W41	0.00	----	----
W42	0.00	----	----
W44	0.00	----	----
W45	0.00	----	----
W46	0.00	----	----
W47	0.00	----	----
W48	0.00	----	----
W49	0.00	----	----
W66	0.00	----	----
W67	0.00	----	----
W68A	0.00	----	----
W68B	0.00	----	----
W69	0.00	----	----
W70B	Abandoned	----	----
River	-----	----	----
IW01	0.00	----	----
IW01A	0.00	----	----
FP01	0.00	----	----
FP02	0.00	----	----
FP03	0.00	----	----
FP04	0.00	----	----
3M Basin	0.00	----	----
DFOWM 5	0.00	----	----
DFOWM 9	Abandoned	----	----
DFOWM 10A	Abandoned	----	----
DFOWM 11	0.00	----	----
DFOWM 12	0.00	----	----
W71	0.00	----	----
W72	0.00	----	----
W73	0.00	----	----
W74	0.00	----	----

Notes:

1. PW09O denotes the outer well and PW09I denotes the inner well
2. ----- = Well not measured

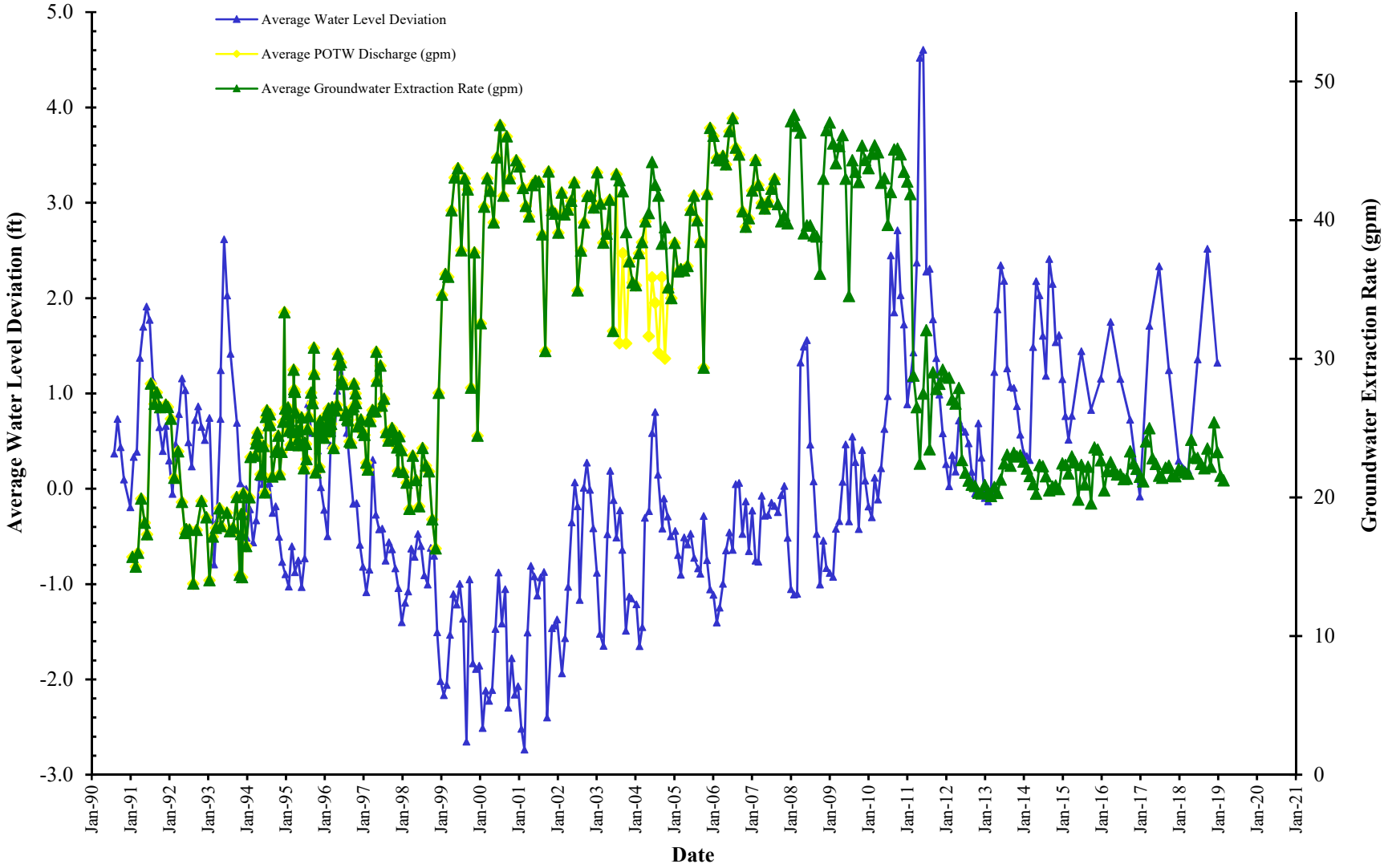
FIGURE 1
FBR Influent and Effluent PCP Concentrations
Wauleco, Inc.
Wausau, WI



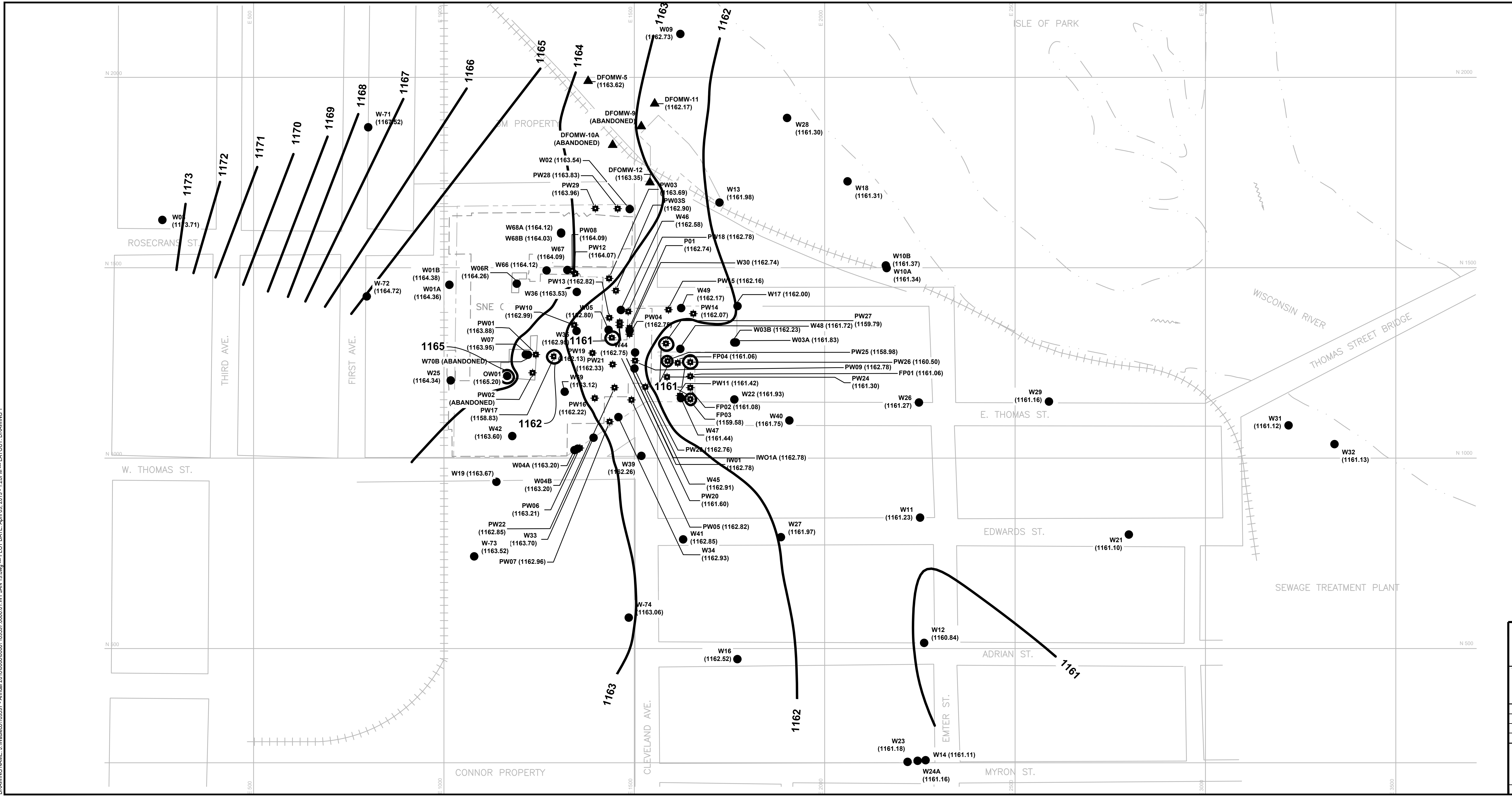
\\ntapb-madison\msn-vol6\-\WPMSN\PJT2\189597\0008\000001\1895970008-004.xlsx

FIGURE 2

Average Groundwater Extraction Rates and Water Level Deviation Versus Time
Wauleco, Inc.
Wausau, WI



Note: The Average Groundwater Extraction Rate is a monthly average of the flow into the treatment system. The monthly average POTW discharge is less than the total extraction rate during the PPT pilot test due to the injection of treated water into IW01.



LEGEND

W17 ● (1161.34)	MONITORING WELL LOCATION, NUMBER AND WATER TABLE ELEVATION
PW12 ✲ (1162.34)	EXTRACTION WELL LOCATION, NUMBER AND WATER TABLE ELEVATION
— · —	APPROXIMATE PROPERTY LINE
— — —	FORMER BUILDING OUTLINE
—1161—	WATER TABLE ELEVATION CONTOUR
DFOMW-5 ▲	3M GROUNDWATER MONITORING WELL

NOTES

1. BASE MAP DEVELOPED FROM DRAWING A107250-1 OF THE SEPTEMBER 1992 SEMI- ANNUAL GROUNDWATER MONITORING REPORT BY KEYSTONE ENVIRONMENTAL, MWH DRAWING 2082658.302160101-B1, AND 3M WELLS LOCATION BASED ON 3M MAPS.
2. WATER ELEVATIONS OBTAINED BY TRC ON JANUARY4, 2019. ON THIS DATE, THE PUMPING RATE OF THE GROUNDWATER EXTRACTION SYSTEM WAS APPROXIMATELY 26 GPM.
3. WAULECO WELLS PW02 AND W70B WERE ABANDONED ON 7/21/16 DURING SOIL MOUND REMOVAL ACTIVITIES BY TRC. 3M WELLS DFOMW9 AND DFOMW10A WERE ABANDONED BY 3M IN THE SUMMER OF 2015.

PROJECT:
WAULECO, INC.
QUARTERLY REPORT
WAUSAU, WISCONSIN

TITLE:
WATER TABLE MAP

DRAWN BY:	B. YUNUSOV	PROJ NO.:	189597.0006
CHECKED BY:	T. DUSHEK		DRAWING 1
APPROVED BY:	B. IVERSON		
DATE:	JANUARY 2019		

TRC
708 Heartland Trail
Suite 3000
Madison, WI 53717
Phone: 608.826.3600

FILE NO.: 189597.0006.01.WT JAN 19.dwg