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October 30, 2019

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

Subject: 2019 Third 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 Third 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 Third 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 October 2019**

**Summary of 2019 Third 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 third 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 1.10 µg/L in July, 1.23 µg/L in August, and 1.47 µg/L in September.
- 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 July 17, <3.0 µg/L on August 21, and <3.0 µg/L on September 11, 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.

On-site screening PCP influent concentrations ranged from 3,037 µg/L to 10,358 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 (%)
July 2019	91	86	91
August 2019	83	86	89
September 2019	83	85	86

- The dissolved oxygen concentration in the influent to the FBR averaged 2.9 mg/L in July, 2.9 mg/L in August, and 2.3 mg/L in September 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 <0.020 µg/L on July 17, <0.020 µg/L on August 21, and <0.020 µg/L on September 11, which are below the permit discharge limit of 1.6 µg/L. The mass loading for mercury in July was calculated at 0.00000266 lb/24 hours, 0.00000263 lb/24 hours in August, and 0.00000283 lb/24 hours in September, 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 22.13 gpm for July, 21.92 gpm for August, and 23.53 gpm for September 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 July 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 July 2019 is included as Drawing 1.

The product thickness data for July 2019 are summarized in Table 4. Measurements show a small amount of product present in July. One pumping well and two monitoring wells had free product: PW16 had 0.02 ft., W4A had 0.03 ft., and W35 had 0.02 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 – July 3, 2019

**TABLE 1a  
JULY 2019**

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

<u>Parameter</u>	<u>UNIT</u>	<u>DATE</u>	<u>FBR Influent</u>	<u>FBR Effluent</u>	<u>FFR Effluent</u>	<u>Bag Filter Effluent</u>	<u>Filters1+2 Effluent</u>	<u>System Effluent</u>	<u>System Eff Dup</u>
Biological Oxygen Demand	mg/L	7/17/2019	<	<				<	
Chemical Oxygen Demand	mg/L	7/17/2019	43	36				19	
Chloride	mg/L	7/17/2019	310	310				310	
Dissolved Oxygen	mg/L	7/2/2019	3.8	2.8	7.2				
	mg/L	7/10/2019	2.8	1	6.4				
	mg/L	7/17/2019	2.6	1	6.6				
	mg/L	7/25/2019	2.2	0.8	5.3				
Nitrogen, Ammonia	mg/L	7/2/2019	1.1	0.8	0.8				
	mg/L	7/10/2019	1	0.8	0.8				
	mg/L	7/17/2019	1.1	0.8	0.8				
	mg/L	7/25/2019	1.1	0.7	0.7				
Nitrogen, Nitrate	mg/L	7/2/2019	<	<	<				
	mg/L	7/10/2019	<	<	<				
	mg/L	7/17/2019	<	<	<				
	mg/L	7/25/2019	<	<	<				
Nitrogen, Nitrate + Nitrite	mg/L	7/17/2019	<	<				<	
Nitrogen, Total Kjeldahl	mg/L	7/17/2019	<	<				<	
Pentachlorophenol-Screen	µg/L	7/1/2019						1	
	µg/L	7/2/2019	7022	930	691			1	
	µg/L	7/3/2019						1	
	µg/L	7/4/2019						1	
	µg/L	7/5/2019						1	
	µg/L	7/6/2019						1	
	µg/L	7/7/2019						1	
	µg/L	7/8/2019						1	
	µg/L	7/9/2019						1	
	µg/L	7/10/2019	3834	248	357			1	
	µg/L	7/11/2019						2	
	µg/L	7/12/2019						1	
	µg/L	7/13/2019						2	
	µg/L	7/14/2019						2	
	µg/L	7/15/2019						1	
	µg/L	7/16/2019						1	
	µg/L	7/17/2019	3718	557	357		85	1	
	µg/L	7/18/2019						1	
	µg/L	7/19/2019						1	
	µg/L	7/20/2019						1	
	µg/L	7/21/2019						1	
	µg/L	7/22/2019						1	
	µg/L	7/23/2019						1	
	µg/L	7/24/2019						1	
	µg/L	7/25/2019	3625	286	271			1	
	µg/L	7/26/2019						1	
	µg/L	7/27/2019						1	
	µg/L	7/28/2019						1	

**TABLE 1a  
JULY 2019**

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

<u>Parameter</u>	<u>UNIT</u>	<u>DATE</u>	<u>FBR Influent</u>	<u>FBR Effluent</u>	<u>FFR Effluent</u>	<u>Bag Filter Effluent</u>	<u>Filters1+2 Effluent</u>	<u>System Effluent</u>	<u>System Eff Dup</u>
Pentachlorophenol-Screen	µg/L	7/29/2019						1	
	µg/L	7/30/2019						1	
	µg/L	7/31/2019						1	
pH	S.U.	7/2/2019	6.8	6.7	6.75				
	S.U.	7/10/2019	6.8	6.65	6.65				
	S.U.	7/17/2019	6.8	6.7	6.7				
	S.U.	7/25/2019	6.75	6.7	6.7				
Phosphorus, Ortho	mg/L	7/17/2019	<	<				<	
Phosphorus, Phosphate	mg/L	7/2/2019	0.5	0.3	0.3				
	mg/L	7/10/2019	0.3	0.3	0.2				
	mg/L	7/17/2019	0.8	0.3	0.3				
	mg/L	7/25/2019	0.4	0.3	0.3				
Solids, Total Suspended	mg/L	7/17/2019	14	16				<	
Mercury	µg/L	7/17/2019	0.59					<	
<b>Phenol</b>									
2,3,4,6-Tetrachlorophenol	µg/L	7/17/2019	210	22	28		8.8	<	<
2,4,5-Trichlorophenol	µg/L	7/17/2019	<	<	3.2		<	<	<
2,4,6-Trichlorophenol	µg/L	7/17/2019	<	<	<		<	<	<
2,4-Dichlorophenol	µg/L	7/17/2019	<	<	<		<	<	<
2,4-Dimethylphenol	µg/L	7/17/2019	<	<	<		<	<	<
2,4-Dinitrophenol	µg/L	7/17/2019	<	<	<		<	<	<
2,6-Dichlorophenol	µg/L	7/17/2019	<	<	<		<	<	<
2-Chlorophenol	µg/L	7/17/2019	<	<	<		<	<	<
2-Methylphenol	µg/L	7/17/2019	<	<	<		<	<	<
2-Nitrophenol	µg/L	7/17/2019	<	<	<		<	<	<
3&4-Methylphenol	µg/L	7/17/2019	<	<	<		<	<	<
4,6-Dinitro-2-Methylphenol	µg/L	7/17/2019	<	<	<		<	<	<
4-Chloro-3-Methylphenol	µg/L	7/17/2019	<	<	<		<	<	<
4-Nitrophenol	µg/L	7/17/2019	<	<	<		<	<	<
Pentachlorophenol	µg/L	7/17/2019	2700	230	250		90	<	<
Phenol	µg/L	7/17/2019	<	<	<		<	<	<

**TABLE 1b  
AUGUST 2019**

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

<u>Parameter</u>	<u>UNIT</u>	<u>DATE</u>	<u>FBR Influent</u>	<u>FBR Effluent</u>	<u>FFR Effluent</u>	<u>Bag Filter Effluent</u>	<u>Filters1+2 Effluent</u>	<u>System Effluent</u>	<u>System Eff Dup</u>
Biological Oxygen Demand	mg/L	8/21/2019	13	3.2				<	
Chemical Oxygen Demand	mg/L	8/21/2019	60	41				24	
Chloride	mg/L	8/21/2019	330	340				340	
Dissolved Oxygen	mg/L	8/1/2019	3.6	1.2	6.6				
	mg/L	8/7/2019	2.3	1.4	6.6				
	mg/L	8/15/2019	2.6	1.4	6.9				
	mg/L	8/21/2019	2.8	1.6	6.7				
	mg/L	8/28/2019	3.2	1.8	6.8				
Nitrogen, Ammonia	mg/L	8/1/2019	1.2	1.4	0.7				
	mg/L	8/7/2019	1.1	1.5	0.8				
	mg/L	8/15/2019	0.8	0.8	0.8				
	mg/L	8/21/2019	1.1	0.8	0.8				
	mg/L	8/28/2019	1.3	0.9	0.9				
Nitrogen, Nitrate	mg/L	8/1/2019	<	<	<				
	mg/L	8/7/2019	<	<	<				
	mg/L	8/15/2019	<	<	<				
	mg/L	8/21/2019	<	<	<				
	mg/L	8/28/2019	<	<	<				
Nitrogen, Total Kjeldahl	mg/L	8/21/2019	<	<				<	
Pentachlorophenol-Screen	µg/L	8/1/2019	3037	653	412			1	
	µg/L	8/2/2019						2	
	µg/L	8/3/2019						1	
	µg/L	8/4/2019						1	
	µg/L	8/5/2019						1	
	µg/L	8/6/2019						1	
	µg/L	8/7/2019	3800	886	1092			1	
	µg/L	8/8/2019						1	
	µg/L	8/9/2019						1	
	µg/L	8/10/2019						2	
	µg/L	8/11/2019						2	
	µg/L	8/12/2019						2	
	µg/L	8/13/2019						1	
	µg/L	8/14/2019						1	
	µg/L	8/15/2019	4922	932	519			1	
	µg/L	8/16/2019						1	
	µg/L	8/17/2019						1	
	µg/L	8/18/2019						1	
	µg/L	8/19/2019						1	
	µg/L	8/20/2019						1	
	µg/L	8/21/2019	4062	811	641		147	1	
	µg/L	8/22/2019						1	
	µg/L	8/23/2019						1	
	µg/L	8/24/2019						1	

**TABLE 1b**  
**AUGUST 2019**

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

<u>Parameter</u>	<u>UNIT</u>	<u>DATE</u>	<u>FBR</u> <u>Influent</u>	<u>FBR</u> <u>Effluent</u>	<u>FFR</u> <u>Effluent</u>	<u>Bag Filter</u> <u>Effluent</u>	<u>Filters1+2</u> <u>Effluent</u>	<u>System</u> <u>Effluent</u>	<u>System</u> <u>Eff Dup</u>
Pentachlorophenol-Screen	µg/L	8/25/2019						1	
	µg/L	8/26/2019						1	
	µg/L	8/27/2019						1	
	µg/L	8/28/2019	5645	856	817			1	
	µg/L	8/29/2019						2	
	µg/L	8/30/2019						2	
	µg/L	8/31/2019						2	
pH	S.U.	8/1/2019	6.8	6.7	6.7				
	S.U.	8/7/2019	6.75	6.75	6.75				
	S.U.	8/15/2019	6.8	6.8	6.85				
	S.U.	8/21/2019	6.75	6.7	6.7				
	S.U.	8/28/2019	6.9	6.85	6.85				
Phosphorus, Ortho	mg/L	8/21/2019	<	<				<	
Phosphorus, Phosphate	mg/L	8/1/2019	0.4	0.3	0.4				
	mg/L	8/7/2019	0.7	1.5	1.3				
	mg/L	8/15/2019	0.6	0.7	0.6				
	mg/L	8/21/2019	0.5	0.5	0.8				
	mg/L	8/28/2019	0.7	0.8	0.9				
Solids, Total Suspended	mg/L	8/21/2019	15	24				<	
Mercury	µg/L	8/21/2019						<	
<b>Phenol</b>									
2,3,4,6-Tetrachlorophenol	µg/L	8/21/2019	240		37			<	<
2,4,5-Trichlorophenol	µg/L	8/21/2019	<		8.1			<	<
2,4,6-Trichlorophenol	µg/L	8/21/2019	<		<			<	<
2,4-Dichlorophenol	µg/L	8/21/2019	<		<			<	<
2,4-Dimethylphenol	µg/L	8/21/2019	<		<			<	<
2,4-Dinitrophenol	µg/L	8/21/2019	<		<			<	<
2,6-Dichlorophenol	µg/L	8/21/2019	<		<			<	<
2-Chlorophenol	µg/L	8/21/2019	<		<			<	<
2-Methylphenol	µg/L	8/21/2019	<		<			<	<
2-Nitrophenol	µg/L	8/21/2019	<		<			<	<
3&4-Methylphenol	µg/L	8/21/2019	<		<			<	<
4,6-Dinitro-2-Methylphenol	µg/L	8/21/2019	<		<			<	<
4-Chloro-3-Methylphenol	µg/L	8/21/2019	<		<			<	<
4-Nitrophenol	µg/L	8/21/2019	<		<			<	<
Pentachlorophenol	µg/L	8/21/2019	3300		320			<	<
Phenol	µg/L	8/21/2019	<		<			<	<

**TABLE 1c  
SEPTEMBER 2019**

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

<u>Parameter</u>	<u>UNIT</u>	<u>DATE</u>	<u>FBR Influent</u>	<u>FBR Effluent</u>	<u>FFR Effluent</u>	<u>Bag Filter Effluent</u>	<u>Filters1+2 Effluent</u>	<u>System Effluent</u>	<u>System Eff Dup</u>
Biological Oxygen Demand	mg/L	9/11/2019	6.3	<				<	
Chemical Oxygen Demand	mg/L	9/11/2019	51	42				27	
Chloride	mg/L	9/11/2019	280	290				290	
Dissolved Oxygen	mg/L	9/4/2019	2.2	1	6.1				
	mg/L	9/11/2019	2.2	0.9	6.2				
	mg/L	9/18/2019	2.4	1.1	6.1				
	mg/L	9/27/2019	2.5	1.2	6				
Nitrogen, Ammonia	mg/L	9/4/2019	1.2	1	1.1				
	mg/L	9/11/2019	1	1.8	1.1				
	mg/L	9/18/2019	1	0.8	0.8				
	mg/L	9/27/2019	0.7	0.7	0.7				
Nitrogen, Nitrate	mg/L	9/4/2019	<	<	<				
	mg/L	9/11/2019	<	<	<				
	mg/L	9/18/2019	<	<	<				
	mg/L	9/27/2019	<	<	<				
Nitrogen, Total Kjeldahl	mg/L	9/11/2019	<	<				0.92	
Pentachlorophenol-Screen	µg/L	9/1/2019						2	
	µg/L	9/2/2019						2	
	µg/L	9/3/2019						3	
	µg/L	9/4/2019	8466	1516	1195			3	
	µg/L	9/5/2019						2	
	µg/L	9/6/2019						2	
	µg/L	9/7/2019						1	
	µg/L	9/8/2019						1	
	µg/L	9/9/2019						1	
	µg/L	9/10/2019						1	
	µg/L	9/11/2019	8300	1758	1593		12	1	
	µg/L	9/12/2019						1	
	µg/L	9/13/2019						1	
	µg/L	9/14/2019						1	
	µg/L	9/15/2019						1	
	µg/L	9/16/2019						1	
	µg/L	9/17/2019						1	
	µg/L	9/18/2019	8609	1607	1458			1	
	µg/L	9/19/2019						2	
	µg/L	9/20/2019						2	
	µg/L	9/21/2019						1	
	µg/L	9/22/2019						1	
	µg/L	9/23/2019						1	
	µg/L	9/24/2019						1	
	µg/L	9/25/2019						2	
	µg/L	9/26/2019						1	
	µg/L	9/27/2019	10358	1646	1866			1	
	µg/L	9/28/2019						2	



**TABLE 1c  
SEPTEMBER 2019**

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

<u>Parameter</u>	<u>UNIT</u>	<u>DATE</u>	<u>FBR Influent</u>	<u>FBR Effluent</u>	<u>FFR Effluent</u>	<u>Bag Filter Effluent</u>	<u>Filters1+2 Effluent</u>	<u>System Effluent</u>	<u>System Eff Dup</u>
Pentachlorophenol-Screen	µg/L	9/29/2019						2	
	µg/L	9/30/2019						2	
pH	S.U.	9/4/2019	6.9	6.85	6.85				
	S.U.	9/11/2019	6.8	6.7	6.7				
	S.U.	9/18/2019	6.8	6.7	6.75				
	S.U.	9/27/2019	6.85	6.8	6.85				
Phosphorus, Ortho	mg/L	9/11/2019	<	<				<	
Phosphorus, Phosphate	mg/L	9/4/2019	0.9	1	1				
	mg/L	9/11/2019	0.8	1.1	1.1				
	mg/L	9/18/2019	0.8	1.2	1				
	mg/L	9/27/2019	0.7	1.1	0.9				
Solids, Total Suspended	mg/L	9/11/2019	14	21				<	
Mercury	µg/L	9/11/2019						<	
<b>Phenol</b>									
2,3,4,6-Tetrachlorophenol	µg/L	9/11/2019	260	42	45			<	<
2,4,5-Trichlorophenol	µg/L	9/11/2019	<	11	11			<	<
2,4,6-Trichlorophenol	µg/L	9/11/2019	<	<	<			<	<
2,4-Dichlorophenol	µg/L	9/11/2019	<	<	<			<	<
2,4-Dimethylphenol	µg/L	9/11/2019	<	<	<			<	<
2,4-Dinitrophenol	µg/L	9/11/2019	<	<	<			<	<
2,6-Dichlorophenol	µg/L	9/11/2019	<	<	<			<	<
2-Chlorophenol	µg/L	9/11/2019	<	<	<			<	<
2-Methylphenol	µg/L	9/11/2019	<	<	<			<	<
2-Nitrophenol	µg/L	9/11/2019	<	<	<			<	<
3&4-Methylphenol	µg/L	9/11/2019	<	<	<			<	<
4,6-Dinitro-2-Methylphenol	µg/L	9/11/2019	<	<	<			<	<
4-Chloro-3-Methylphenol	µg/L	9/11/2019	<	<	<			<	<
4-Nitrophenol	µg/L	9/11/2019	<	<	<			<	<
Pentachlorophenol	µg/L	9/11/2019	3600	460	470			<	<
Phenol	µg/L	9/11/2019	<	<	<			<	<

**TABLE 2a  
JULY 2019**

**Treatment System Flows  
Wauleco, Inc.  
Wausau, Wisconsin**

<u>Date</u>	<u>Influent Groundwater Flow Rate <sup>(1)(3)</sup> (gpm)</u>	<u>POTW Discharge Flow Rate <sup>(1)(4)</sup> (gpm)</u>	<u>POTW Totalized Discharge <sup>(3)</sup> (gal)</u>
7/1/2019	23.51	21.30	77517372
7/2/2019	23.47	20.87	77547430
7/3/2019	22.91	20.51	77576967
7/4/2019	22.64	19.99	77605748
7/5/2019	22.88	20.03	77634596
7/6/2019	24.56	21.47	77665517
7/7/2019	24.92	21.82	77696934
7/8/2019	24.56	21.49	77727878
7/9/2019	24.67	21.01	77758135
7/10/2019	25.15	21.09	77788511
7/11/2019	24.50	21.48	77819439
7/12/2019	20.97	20.99	77849669
7/13/2019	22.31	22.13	77881531
7/14/2019	23.49	23.60	77915516
7/15/2019	23.67	23.37	77949167
7/16/2019	24.19	22.99	77982276
7/17/2019	24.89	22.60	78014822
7/18/2019	25.35	22.30	78046930
7/19/2019	25.46	22.08	78078721
7/20/2019	24.86	22.85	78111625
7/21/2019	24.41	23.15	78144967
7/22/2019	24.68	22.84	78177854
7/23/2019	25.27	22.91	78210841
7/24/2019	24.94	22.76	78243610
7/25/2019	24.54	22.30	78275716
7/26/2019	24.63	21.54	78306736
7/27/2019	24.68	22.61	78339298
7/28/2019	24.73	23.57	78373241
7/29/2019	24.35	22.84	78406137
7/30/2019	23.96	23.56	78440065
7/31/2019	24.05	24.05	78474696
Average For The Month	24.17	22.13	
Total <sup>(2)</sup> :			988,000

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**  
**AUGUST 2019**

**Treatment System Flows**  
**Wauleco, Inc.**  
**Wausau, Wisconsin**

Date	Influent Groundwater Flow Rate <sup>(1) (3)</sup> (gpm)	POTW Discharge Flow Rate <sup>(1) (4)</sup> (gpm)	POTW Totalized Discharge <sup>(3)</sup> (gal)
8/1/2019	24.56	23.66	78508769
8/2/2019	25.08	22.70	78541450
8/3/2019	24.71	22.13	78573319
8/4/2019	24.43	21.36	78604078
8/5/2019	24.37	20.79	78634011
8/6/2019	23.87	22.34	78666174
8/7/2019	24.14	23.11	78699457
8/8/2019	22.50	21.66	78730649
8/9/2019	22.93	21.35	78761386
8/10/2019	23.37	21.47	78792306
8/11/2019	23.39	21.12	78822723
8/12/2019	23.66	20.89	78852811
8/13/2019	22.95	23.81	78887100
8/14/2019	22.70	23.84	78921433
8/15/2019	22.62	23.48	78955246
8/16/2019	22.34	23.06	78988455
8/17/2019	22.59	22.47	79020806
8/18/2019	19.99	20.68	79050592
8/19/2019	18.49	18.08	79076628
8/20/2019	20.85	21.78	79107991
8/21/2019	21.11	22.29	79140092
8/22/2019	20.94	21.91	79171646
8/23/2019	20.34	21.50	79202609
8/24/2019	20.30	21.03	79232891
8/25/2019	20.42	20.97	79263085
8/26/2019	20.56	20.57	79292706
8/27/2019	20.47	22.62	79325273
8/28/2019	20.08	23.21	79358691
8/29/2019	20.16	22.96	79391748
8/30/2019	19.90	23.12	79425045
8/31/2019	19.65	23.67	79459132
Average For The Month	22.28	21.92	
Total <sup>(2)</sup> :			984,436

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**  
**SEPTEMBER 2019**

**Treatment System Flows**  
**Wauleco, Inc.**  
**Wausau, Wisconsin**

<u>Date</u>	<u>Influent Groundwater Flow Rate <sup>(1) (3)</sup> (gpm)</u>	<u>POTW Discharge Flow Rate <sup>(1) (4)</sup> (gpm)</u>	<u>POTW Totalized Discharge <sup>(3)</sup> (gal)</u>
9/1/2019	19.16	24.15	79493911
9/2/2019	19.18	24.39	79529037
9/3/2019	19.30	24.30	79564035
9/4/2019	19.66	24.33	79599073
9/5/2019	19.17	24.40	79634211
9/6/2019	19.33	24.46	79669438
9/7/2019	19.58	23.75	79703637
9/8/2019	19.87	24.20	79738489
9/9/2019	19.97	24.18	79773311
9/10/2019	20.05	24.13	79808053
9/11/2019	19.48	24.39	79843180
9/12/2019	19.64	24.40	79878320
9/13/2019	19.93	24.52	79913634
9/14/2019	17.44	22.23	79945650
9/15/2019	18.59	22.64	79978257
9/16/2019	18.63	22.33	80010413
9/17/2019	21.09	23.91	80044846
9/18/2019	22.16	24.62	80080303
9/19/2019	22.02	24.26	80115238
9/20/2019	22.72	24.09	80149934
9/21/2019	23.02	23.61	80183934
9/22/2019	22.72	23.07	80217157
9/23/2019	22.75	22.43	80249449
9/24/2019	19.80	19.73	80277860
9/25/2019	20.19	20.08	80306775
9/26/2019	22.07	22.51	80339188
9/27/2019	23.72	24.01	80373756
9/28/2019	23.95	23.92	80408194
9/29/2019	23.49	23.50	80442039
9/30/2019	22.46	23.24	80475504
Average For The Month	20.70	23.53	
Total <sup>(2)</sup> :			1,016,372

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**

<u>Well</u>	<u>July 03, 2019 (ft msl)</u>	<u>August 2019</u>	<u>September 2019</u>
PW01	1165.95	----	----
PW02	Abandoned	----	----
PW03	1165.61	----	----
PW3S	1165.47	----	----
PW04	1165.27	----	----
PW05	1165.23	----	----
PW06	1165.27	----	----
PW07	1165.18	----	----
PW08	1165.98	----	----
PW09I	----	----	----
PW09O	1165.24	----	----
PW10	1165.58	----	----
PW11	1164.62	----	----
PW12	1165.82	----	----
PW13	1165.36	----	----
PW14	1165.5	----	----
PW15	1165.57	----	----
PW16	1164.73	----	----
PW17	1164.64	----	----
PW18	1165.41	----	----
PW19	1164.85	----	----
PW20	1164.97	----	----
PW21	1164.66	----	----
PW22	1165.24	----	----
PW23	1165.15	----	----
PW24	1163.92	----	----
PW25	1164.15	----	----
PW26	1163.75	----	----
PW27	1164.43	----	----
PW28	1165.51	----	----
PW29	1165.63	----	----
P01	1165.29	----	----
OW01	1167.08	----	----
W01A	1166.26	----	----
W01B	1166.28	----	----
W02	1165.23	----	----
W03A	1164.81	----	----
W03B	1163.56	----	----
W04A	1165.32	----	----
W04B	1165.27	----	----
W05	1165.3	----	----
W06R	1166.14	----	----
W07	1165.97	----	----
W08	1175.62	----	----
W09	1163.48	----	----
W10A	1161.68	----	----
W10B	1161.78	----	----
W11	1161.65	----	----
W12	1161.16	----	----
W13	1163.17	----	----
W14	1161.46	----	----
W16	1163.71	----	----
W17	1165.2	----	----
W18	1161.66	----	----
W19	Abandoned	----	----

**Groundwater Elevation Data  
Wauleco, Inc.  
Wausau, Wisconsin**

<u>Well</u>	<u>July 03, 2019 (ft msl)</u>	<u>August 2019</u>	<u>September 2019</u>
W21	1161.29	----	----
W22	1165.08	----	----
W23	1161.58	----	----
W24A	1161.51	----	----
W25	1166.29	----	----
W26/W26R	1161.68	----	----
W27	1163.17	----	----
W28	1161.55	----	----
W29/W29R	1161.37	----	----
W30	1165.27	----	----
W31	1161.31	----	----
W32	1161.21	----	----
W33	1165.16	----	----
W34	1165.17	----	----
W35	1165.40	----	----
W36	1165.61	----	----
W39	Abandoned	----	----
W40/W40R	1163.71	----	----
W41	1164.64	----	----
W42	1165.63	----	----
W44	1165.21	----	----
W45	1165.27	----	----
W46	1165.15	----	----
W47	1164.69	----	----
W48	1165.07	----	----
W49	1165.64	----	----
W66	1165.88	----	----
W67	1165.82	----	----
W68A	1165.89	----	----
W68B	1165.72	----	----
W69	1165.57	----	----
W70B	Abandoned	----	----
River	-----	----	----
IW01	1165.3	----	----
IW01A	1165.3	----	----
FP01	1164.21	----	----
FP02	1164.19	----	----
FP03	1164.12	----	----
FP04	1164.47	----	----
3M Basin	Water in both Basins	----	----
DFOWM 5	1164.97	----	----
DFOWM 9	Abandoned	----	----
DFOWM 10A	Abandoned	----	----
DFOWM 11	1162.86	----	----
DFOWM 12	1164.84	----	----
W71	1168.49	----	----
W72	1166.84	----	----
W73	1165.37	----	----
W74	1164.63	----	----

**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.

**Free Product Measurements  
Wauleco, Inc.  
Wausau, Wisconsin**

<u>Well</u>	July 03, 2019 (ft)	August 2019	September 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	0.02	----	----
PW17	0.00	----	----
PW18	0.00	----	----
PW19	0.00	----	----
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	0.00	----	----
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	----	----

**Free Product Measurements  
Wauleco, Inc.  
Wausau, Wisconsin**

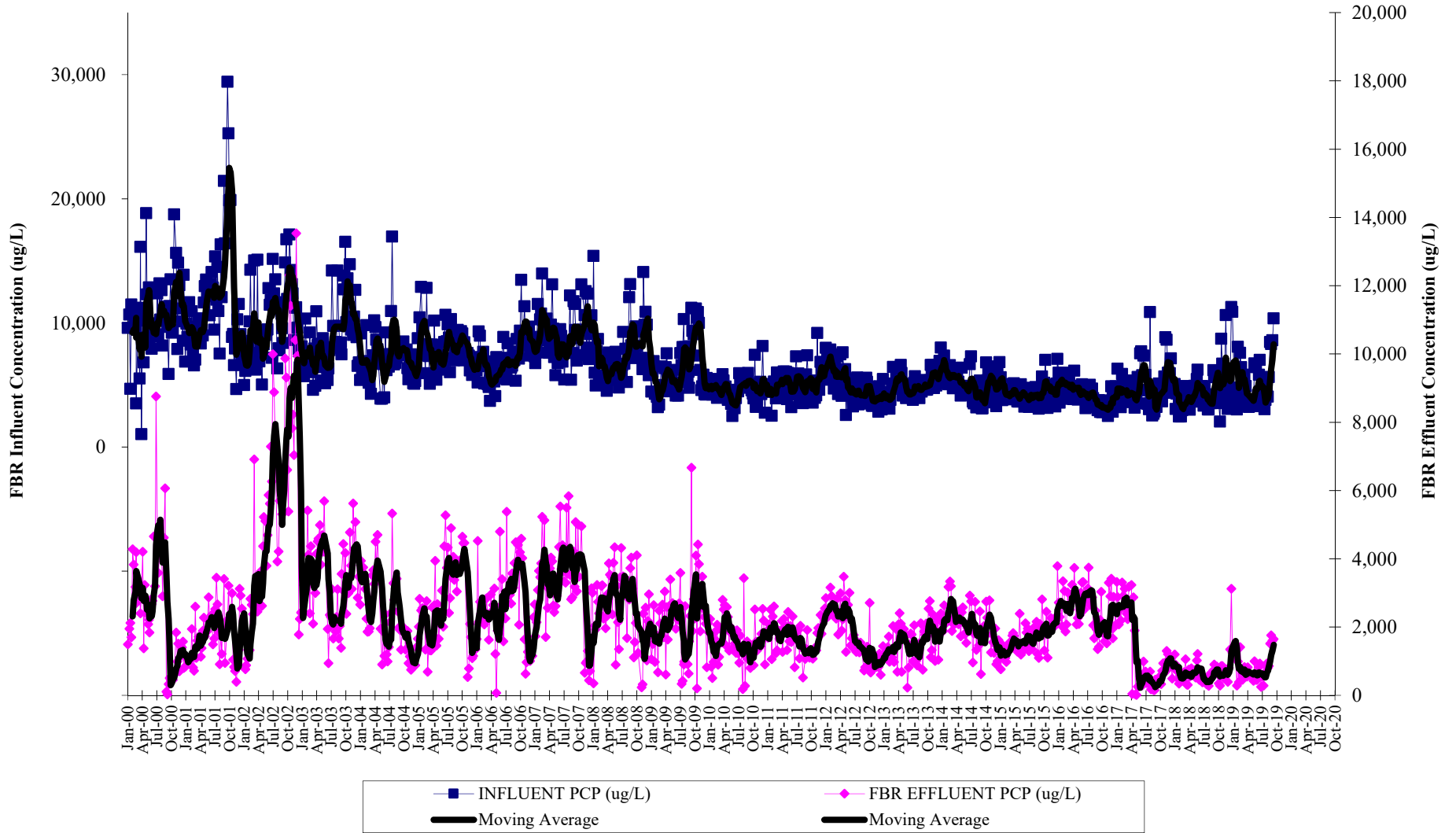
<u>Well</u>	<u>July 03, 2019 (ft)</u>	<u>August 2019</u>	<u>September 2019</u>
W18	0.00	----	----
W19	Abandoned	----	----
W21	0.00	----	----
W22	0.00	----	----
W23	0.00	----	----
W24A	0.00	----	----
W25	0.00	----	----
W26/W26R	0.00	----	----
W27	0.00	----	----
W28	0.00	----	----
W29/W29R	0.00	----	----
W30	0.00	----	----
W31	0.00	----	----
W32	0.00	----	----
W33	0.00	----	----
W34	0.00	----	----
W35	0.02	----	----
W36	0.00	----	----
W39	Abandoned	----	----
W40/W40R	0.00	----	----
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

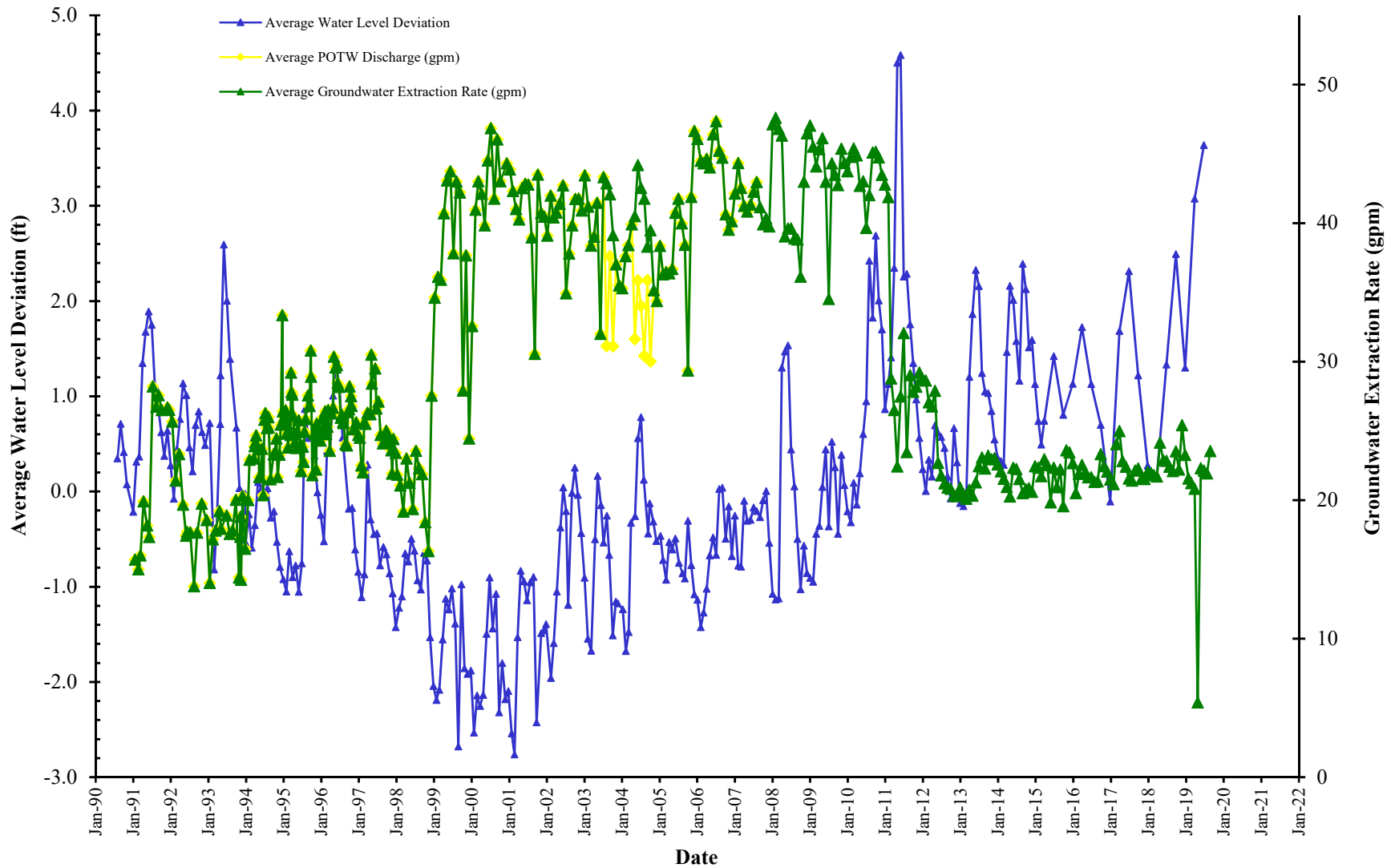


**FIGURE 1**  
**FBR Influent and Effluent PCP Concentrations**  
**Wauleco, Inc.**  
**Wausau, WI**



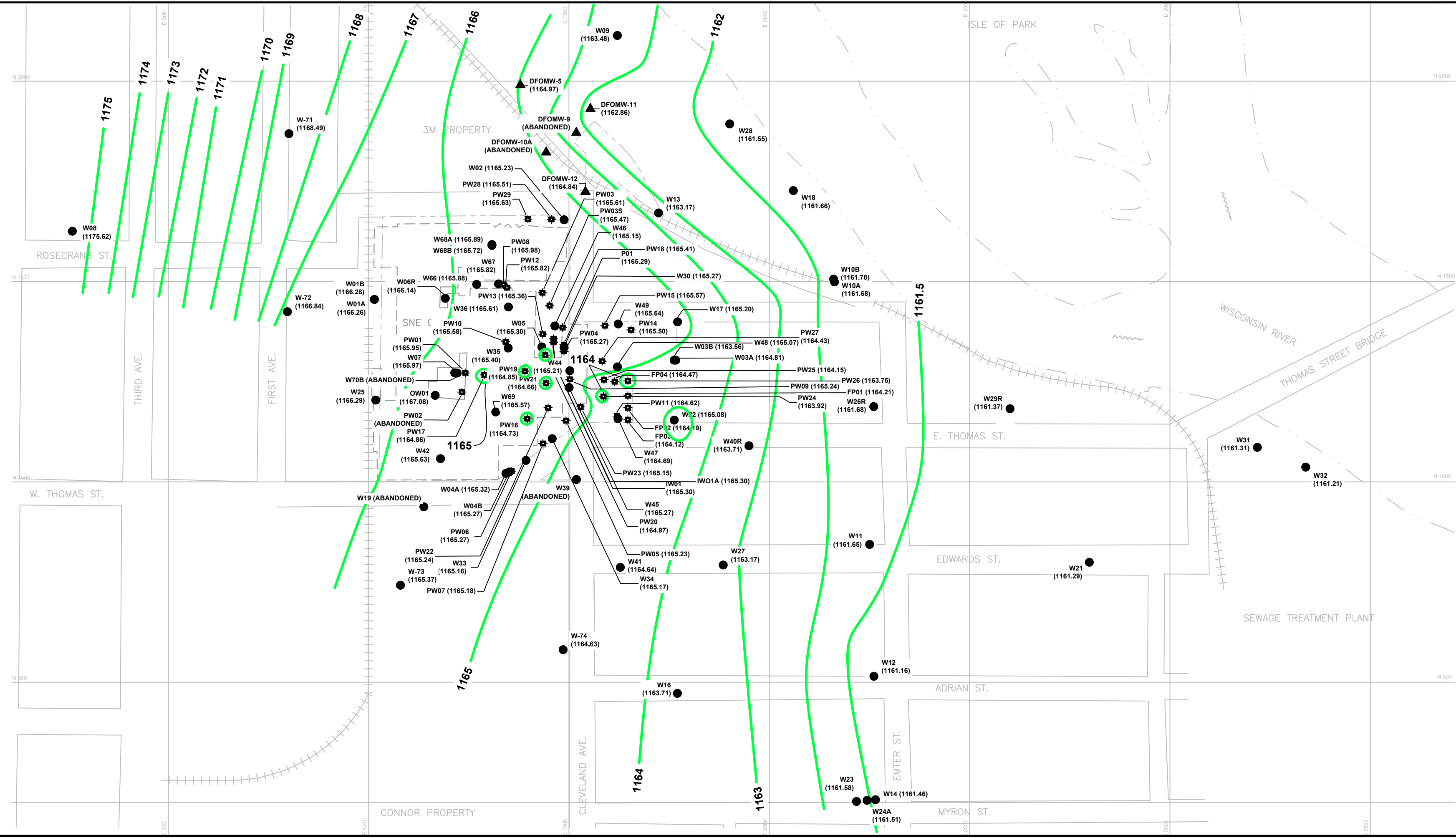
**FIGURE 2**

**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.

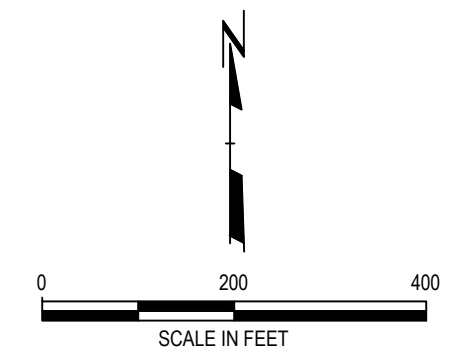
1164 - USER: B:\projects\1164\1164.dwg -- ATTACHED XREFS: B:\projects\1164\1164.dwg -- ATTACHED IMAGES: B:\projects\1164\1164.dwg  
 DRAWING NAME: J:\WAULECO\189597\189597.dwg -- ANNOTATED DATE: 2019-09-19 10:00:00 -- PLOT DATE: October 29, 2019 - 2:10 PM -- LAYOUT: DRAWING 1 WATER TABLE MAP (JULY 2019)  
 Version: 2017-10-21



**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 JULY 3, 2019. ON THIS DATE, THE PUMPING RATE OF THE GROUNDWATER EXTRACTION SYSTEM WAS APPROXIMATELY 20.5 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:		<b>WAULECO, INC. QUARTERLY REPORT WAUSAU, WISCONSIN</b>	
TITLE:		<b>WATER TABLE MAP (JULY 2019)</b>	
DRAWN BY:	B. YUNUSOV	PROJ NO.:	189597.0008
CHECKED BY:	T. DUSHEK	<b>DRAWING 1</b>	
APPROVED BY:	K. QUINN		
DATE:	SEPTEMBER 2019		
		708 Heartland Trail Suite 3000 Madison, WI 53717 Phone: 608.826.3600	
FILE NO.:		189597.0008.01.WT.SEP.19.dwg	