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January 17, 2023

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

Subject: 2022 Fourth 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 2022 Fourth 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) 235-4963.

Sincerely,

TRC

A handwritten signature in blue ink, appearing to read "Bruce Iverson".

Bruce Iverson  
Project Manager

Attachments: 2022 Fourth Quarterly Report

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

**Wauleco, Inc. - Wausau, Wisconsin  
Quarterly Report  
Submitted January 2023**

**Summary of 2022 Fourth 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 fourth quarter of 2022 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 1.90 µg/L in October, 2.43 µg/L in November, and 3.23 µg/L in December.
- 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 October 19, <3.0 µg/L on November 9, and 2.4 µg/L (estimated concentration) on December 8, 2022.
- 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 3,611 µg/L to 5,614 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 (%)
October 2022	64	70	74
November 2022	59	68	75
December 2022	62	68	75

- The dissolved oxygen concentration in the influent to the FBR averaged 3.4 mg/L in October, 3.5 mg/L in November, and 3.9 mg/L in December 2022.

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 October 19, 0.036 µg/L on November 9, and 0.035 µg/L

on December 8, which are below the permit discharge limit of 1.6 µg/L. The mass loading for mercury in October was calculated using half the detection limit of 0.01 µg/L, at 0.00000274 lb/24 hours in October, which is below the permit discharge limit of 0.00048 lb/24 hours. The mass loading for mercury in November was calculated at 0.0000102 lb/24 hours, and for December was calculated at 0.0000101 lb/24 hours, 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 22.77 gpm for October, 23.47 gpm for November, and 23.98 gpm for December 2022 (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**

A complete round of water table elevations for the month of October 2022 are summarized in Table 3.

The product thickness data for October 2022 are summarized in Table 4. Measurements show minimal product present in October (e.g., W07, W35, and W40R).

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

**TABLE 1a  
OCTOBER 2022**

**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	10/19/2022	6.3	3.6				<	
Chemical Oxygen Demand	mg/L	10/19/2022	39	32				27	
Chloride	mg/L	10/19/2022	230	220				230	
Dissolved Oxygen	mg/L	10/6/2022	3.2	1.5	5.8				
	mg/L	10/13/2022	3.4	1.6	5.6				
	mg/L	10/19/2022	3.5	1.4	6				
	mg/L	10/26/2022	3.6	1.6	5.8				
Nitrogen, Ammonia	mg/L	10/6/2022	0.4	0.4	0.3				
	mg/L	10/13/2022	0.4	0.3	0.3				
	mg/L	10/19/2022	0.4	0.4	0.4				
	mg/L	10/26/2022	0.4	0.4	0.4				
Nitrogen, Nitrate	mg/L	10/6/2022	<	<	<				
	mg/L	10/13/2022	<	<	<				
	mg/L	10/19/2022	<	<	<				
	mg/L	10/26/2022	<	<	<				
Nitrogen, Nitrate + Nitrite	mg/L	10/19/2022	<	<			<		
Nitrogen, Total Kjeldahl	mg/L	10/19/2022	<	<			<		
Pentachlorophenol-Screen	µg/L	10/1/2022						2	
	µg/L	10/2/2022						2	
	µg/L	10/3/2022						2	
	µg/L	10/4/2022						2	
	µg/L	10/5/2022						1	
	µg/L	10/6/2022	4804	1521	1612			1	
	µg/L	10/7/2022						2	
	µg/L	10/8/2022						2	
	µg/L	10/9/2022						2	
	µg/L	10/10/2022						2	
	µg/L	10/11/2022						1	
	µg/L	10/12/2022						1	
	µg/L	10/13/2022	3611	1171	1280			1	
	µg/L	10/14/2022						3	
	µg/L	10/15/2022						2	
	µg/L	10/16/2022						2	
	µg/L	10/17/2022						2	
	µg/L	10/18/2022						2	
	µg/L	10/19/2022	4842	2142	1698		84	1	
	µg/L	10/20/2022						2	
	µg/L	10/21/2022						1	
	µg/L	10/22/2022						2	
	µg/L	10/23/2022						2	
	µg/L	10/24/2022						2	
µg/L	10/25/2022						1		
µg/L	10/26/2022	3895	1973	1609			1		
µg/L	10/27/2022						3		
µg/L	10/28/2022						3		

**TABLE 1a  
OCTOBER 2022**

**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	10/29/2022						3	
	µg/L	10/30/2022						3	
	µg/L	10/31/2022						3	
pH	S.U.	10/6/2022	6.6	6.55	6.7				
	S.U.	10/13/2022	6.55	6.5	6.55				
	S.U.	10/19/2022	6.55	6.55	6.6				
	S.U.	10/26/2022	6.6	6.55	6.6				
Phosphorus, Ortho	mg/L	10/19/2022	<	<				<	
Phosphorus, Phosphate	mg/L	10/6/2022	0.3	0.2	0.2				
	mg/L	10/13/2022	0.4	0.3	0.3				
	mg/L	10/19/2022	0.4	0.3	0.3				
	mg/L	10/26/2022	0.3	0.2	0.2				
Solids, Total Suspended	mg/L	10/19/2022	7.2	12				<	
Mercury	µg/L	10/19/2022	0.11					<	
<b>Phenol</b>									
2,3,4,6-Tetrachlorophenol	µg/L	10/19/2022	200		85		9.7	<	<
2,4,5-Trichlorophenol	µg/L	10/19/2022	<		19		2.1	<	<
2,4,6-Trichlorophenol	µg/L	10/19/2022	<		<		<	<	<
2,4-Dichlorophenol	µg/L	10/19/2022	<		<		<	<	<
2,4-Dimethylphenol	µg/L	10/19/2022	<		<		<	<	<
2,4-Dinitrophenol	µg/L	10/19/2022	<		<		<	<	<
2,6-Dichlorophenol	µg/L	10/19/2022	<		<		<	<	<
2-Chlorophenol	µg/L	10/19/2022	<		<		<	<	<
2-Methylphenol	µg/L	10/19/2022	<		<		<	<	<
2-Nitrophenol	µg/L	10/19/2022	<		<		<	<	<
3&4-Methylphenol	µg/L	10/19/2022	<		<		<	<	<
4,6-Dinitro-2-Methylphenol	µg/L	10/19/2022	<		<		<	<	<
4-Chloro-3-Methylphenol	µg/L	10/19/2022	<		<		<	<	<
4-Nitrophenol	µg/L	10/19/2022	<		<		<	<	<
Pentachlorophenol	µg/L	10/19/2022	2100		840		92	<	<
Phenol	µg/L	10/19/2022	<		<		<	<	<

**TABLE 1b  
NOVEMBER 2022**

**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	11/9/2022	6.2	3.9				<	
Chemical Oxygen Demand	mg/L	11/9/2022	36	44				24	
Chloride	mg/L	11/9/2022	190	200				210	
Dissolved Oxygen	mg/L	11/2/2022	4	1.8	6.2				
	mg/L	11/9/2022	3.4	1.8	6.4				
	mg/L	11/16/2022	3.4	1.6	6.1				
	mg/L	11/23/2022	3.2	1.6	6				
	mg/L	11/30/2022	3.3	1.6	6.1				
Nitrogen, Ammonia	mg/L	11/2/2022	0.6	0.5	0.5				
	mg/L	11/9/2022	0.4	0.3	0.3				
	mg/L	11/16/2022	0.5	0.3	0.3				
	mg/L	11/23/2022	0.5	0.4	0.4				
	mg/L	11/30/2022	0.5	0.4	0.5				
Nitrogen, Nitrate	mg/L	11/2/2022	<	<	<				
	mg/L	11/9/2022	<	<	<				
	mg/L	11/16/2022	<	<	<				
	mg/L	11/23/2022	<	<	<				
	mg/L	11/30/2022	<	<	<				
Nitrogen, Total Kjeldahl	mg/L	11/9/2022	<	<				<	
Pentachlorophenol-Screen	µg/L	11/1/2022						3	
	µg/L	11/2/2022	5032	2553	2712			2	
	µg/L	11/3/2022						2	
	µg/L	11/4/2022						2	
	µg/L	11/5/2022						2	
	µg/L	11/6/2022						2	
	µg/L	11/7/2022						2	
	µg/L	11/8/2022						2	
	µg/L	11/9/2022	4682	1741	1708		598	2	
	µg/L	11/10/2022						2	
	µg/L	11/11/2022						2	
	µg/L	11/12/2022						2	
	µg/L	11/13/2022						2	
	µg/L	11/14/2022						2	
	µg/L	11/15/2022						3	
	µg/L	11/16/2022	4755	1822	1709			2	
	µg/L	11/17/2022						3	
	µg/L	11/18/2022						2	
	µg/L	11/19/2022						2	
	µg/L	11/20/2022						2	
	µg/L	11/21/2022						2	
	µg/L	11/22/2022						2	
	µg/L	11/23/2022	4883	1764	1746			2	
	µg/L	11/24/2022						4	

**TABLE 1b  
NOVEMBER 2022**

**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	11/25/2022						4	
	µg/L	11/26/2022						4	
	µg/L	11/27/2022						4	
	µg/L	11/28/2022						3	
	µg/L	11/29/2022						3	
	µg/L	11/30/2022	4561	2054	1954			2	
pH	S.U.	11/2/2022	6.6	6.55	6.6				
	S.U.	11/9/2022	6.55	6.55	6.55				
	S.U.	11/16/2022	6.65	6.6	6.65				
	S.U.	11/23/2022	6.6	6.6	6.6				
	S.U.	11/30/2022	6.6	6.6	6.6				
Phosphorus, Ortho	mg/L	11/9/2022	<	<				<	
Phosphorus, Phosphate	mg/L	11/2/2022	0.4	0.3	0.3				
	mg/L	11/9/2022	0.4	0.3	0.3				
	mg/L	11/16/2022	0.5	0.3	0.3				
	mg/L	11/23/2022	0.5	0.3	0.3				
	mg/L	11/30/2022	0.4	0.3	0.3				
Solids, Total Suspended	mg/L	11/9/2022	12	14				2.4	
Mercury	µg/L	11/9/2022						0.036	
<b>Phenol</b>									
2,3,4,6-Tetrachlorophenol	µg/L	11/9/2022	180	93	86			<	<
2,4,5-Trichlorophenol	µg/L	11/9/2022	<	<	<			<	<
2,4,6-Trichlorophenol	µg/L	11/9/2022	<	<	<			<	<
2,4-Dichlorophenol	µg/L	11/9/2022	<	<	<			<	<
2,4-Dimethylphenol	µg/L	11/9/2022	<	<	<			<	<
2,4-Dinitrophenol	µg/L	11/9/2022	<	<	<			<	<
2,6-Dichlorophenol	µg/L	11/9/2022	<	<	<			<	<
2-Chlorophenol	µg/L	11/9/2022	<	<	<			<	<
2-Methylphenol	µg/L	11/9/2022	<	<	<			<	<
2-Nitrophenol	µg/L	11/9/2022	<	<	<			<	<
3&4-Methylphenol	µg/L	11/9/2022	<	<	<			<	<
4,6-Dinitro-2-Methylphenol	µg/L	11/9/2022	<	<	<			<	<
4-Chloro-3-Methylphenol	µg/L	11/9/2022	<	<	<			<	<
4-Nitrophenol	µg/L	11/9/2022	<	<	<			<	<
Pentachlorophenol	µg/L	11/9/2022	2500	950	850			<	<
Phenol	µg/L	11/9/2022	<	<	<			<	<

**TABLE 1c  
DECEMBER 2022**

**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	12/8/2022	6.7	3.7				<	
Chemical Oxygen Demand	mg/L	12/8/2022	39	34				32	
Chloride	mg/L	12/8/2022	160	160				170	
Dissolved Oxygen	mg/L	12/8/2022	3.4	1.6	6.4				
	mg/L	12/14/2022	4	1.8	6.5				
	mg/L	12/21/2022	4.2	1.7	6.6				
	mg/L	12/28/2022	4.2	1.8	6.6				
Nitrogen, Ammonia	mg/L	12/8/2022	0.5	0.5	0.4				
	mg/L	12/14/2022	0.5	0.4	0.4				
	mg/L	12/21/2022	0.4	0.4	0.4				
	mg/L	12/28/2022	0.4	0.5	0.3				
Nitrogen, Nitrate	mg/L	12/8/2022	<	<	<				
	mg/L	12/14/2022	<	<	<				
	mg/L	12/21/2022	<	<	<				
	mg/L	12/28/2022	<	<	<				
Nitrogen, Total Kjeldahl	mg/L	12/8/2022	<	1.2				<	
Pentachlorophenol-Screen	µg/L	12/1/2022						5	
	µg/L	12/2/2022						5	
	µg/L	12/3/2022						2	
	µg/L	12/4/2022						2	
	µg/L	12/5/2022						2	
	µg/L	12/6/2022						4	
	µg/L	12/7/2022						4	
	µg/L	12/8/2022	5199	1533	1846		669	4	
	µg/L	12/9/2022						3	
	µg/L	12/10/2022						4	
	µg/L	12/11/2022						4	
	µg/L	12/12/2022						4	
	µg/L	12/13/2022						3	
	µg/L	12/14/2022	5456	2752	2148			3	
	µg/L	12/15/2022						3	
	µg/L	12/16/2022						3	
	µg/L	12/17/2022						3	
	µg/L	12/18/2022						3	
	µg/L	12/19/2022						3	
	µg/L	12/20/2022						3	
	µg/L	12/21/2022	5614	2086	2123			3	
	µg/L	12/22/2022						3	
	µg/L	12/23/2022						3	
	µg/L	12/24/2022						3	
	µg/L	12/25/2022						3	
	µg/L	12/26/2022						3	
	µg/L	12/27/2022						3	
	µg/L	12/28/2022	4887	1790	1857			3	



**TABLE 1c  
DECEMBER 2022**

**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	12/29/2022						3	
	µg/L	12/30/2022						3	
	µg/L	12/31/2022						3	
pH	S.U.	12/8/2022	6.65	6.65	6.65				
	S.U.	12/14/2022	6.6	6.6	6.7				
	S.U.	12/21/2022	6.6	6.6	6.7				
	S.U.	12/28/2022	6.5	6.4	6.5				
Phosphorus, Ortho	mg/L	12/8/2022	<	<				<	
Phosphorus, Phosphate	mg/L	12/8/2022	0.4	0.3	0.3				
	mg/L	12/14/2022	0.9	0.3	0.3				
	mg/L	12/21/2022	0.4	0.3	0.3				
	mg/L	12/28/2022	0.4	0.2	0.2				
Solids, Total Suspended	mg/L	12/8/2022	11	17				2.0	
Mercury	µg/L	12/8/2022						0.035	
<b>Phenol</b>									
2,3,4,6-Tetrachlorophenol	µg/L	12/8/2022	190		88			<	<
2,4,5-Trichlorophenol	µg/L	12/8/2022	<		<			<	<
2,4,6-Trichlorophenol	µg/L	12/8/2022	<		<			<	<
2,4-Dichlorophenol	µg/L	12/8/2022	<		<			<	<
2,4-Dimethylphenol	µg/L	12/8/2022	<		<			<	<
2,4-Dinitrophenol	µg/L	12/8/2022	<		<			<	<
2,6-Dichlorophenol	µg/L	12/8/2022	<		<			<	<
2-Chlorophenol	µg/L	12/8/2022	<		<			<	<
2-Methylphenol	µg/L	12/8/2022	<		<			<	<
2-Nitrophenol	µg/L	12/8/2022	<		<			<	<
3&4-Methylphenol	µg/L	12/8/2022	<		<			<	<
4,6-Dinitro-2-Methylphenol	µg/L	12/8/2022	<		<			<	<
4-Chloro-3-Methylphenol	µg/L	12/8/2022	<		<			<	<
4-Nitrophenol	µg/L	12/8/2022	<		<			<	<
Pentachlorophenol	µg/L	12/8/2022	2600		900			2.4	2.3
Phenol	µg/L	12/8/2022	<		<			<	<

**TABLE 2a**  
**OCTOBER 2022**

**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>
10/1/2022	24.14	23.60	113914277
10/2/2022	24.05	23.64	113948321
10/3/2022	24.17	23.49	113982142
10/4/2022	24.08	23.80	114016416
10/5/2022	24.02	23.69	114050529
10/6/2022	23.82	23.44	114084284
10/7/2022	23.83	23.70	114118408
10/8/2022	23.62	23.68	114152511
10/9/2022	23.66	23.57	114186447
10/10/2022	23.59	23.51	114220303
10/11/2022	23.41	23.40	114253998
10/12/2022	21.51	22.32	114286133
10/13/2022	20.68	21.81	114317536
10/14/2022	20.69	21.80	114348927
10/15/2022	20.54	21.75	114380247
10/16/2022	20.58	21.80	114411635
10/17/2022	20.51	21.74	114442940
10/18/2022	20.52	21.76	114474271
10/19/2022	20.54	21.73	114505559
10/20/2022	20.55	21.29	114536213
10/21/2022	20.48	21.71	114567471
10/22/2022	20.51	22.08	114599266
10/23/2022	20.46	22.11	114631106
10/24/2022	20.47	22.08	114662901
10/25/2022	20.55	21.89	114694425
10/26/2022	20.31	21.90	114725956
10/27/2022	21.62	23.04	114759139
10/28/2022	22.08	23.81	114793432
10/29/2022	22.30	24.03	114828033
10/30/2022	22.56	24.01	114862604
10/31/2022	22.05	23.66	114896681
Average For The Month	22.00	22.77	
Total <sup>(2)</sup> :			1,016,383

Footnotes:

- <sup>(1)</sup> 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.
- <sup>(2)</sup> 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.
- <sup>(3)</sup> Totalizers were reset to 0 on August 23, 2012 during the system shutdown for maintenance.
- <sup>(4)</sup> A new effluent meter was installed in April, 2017 during the system shutdown for maintenance.

**TABLE 2b**  
**NOVEMBER 2022**  
**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)
11/1/2022	22.10	23.48	114930499
11/2/2022	22.11	23.42	114964217
11/3/2022	22.24	23.63	114998250
11/4/2022	22.34	23.73	115032428
11/5/2022	22.24	23.76	115066645
11/6/2022	23.04	24.64	115102130
11/7/2022	22.15	23.64	115136177
11/8/2022	22.10	23.52	115170039
11/9/2022	22.20	23.63	115204060
11/10/2022	22.18	23.59	115238030
11/11/2022	22.17	23.54	115271926
11/12/2022	22.16	23.59	115305899
11/13/2022	22.23	23.55	115339817
11/14/2022	22.20	23.40	115373507
11/15/2022	22.32	23.48	115407319
11/16/2022	22.31	23.48	115441128
11/17/2022	22.29	23.39	115474810
11/18/2022	22.48	23.33	115508401
11/19/2022	22.60	23.44	115542153
11/20/2022	22.66	24.00	115576720
11/21/2022	22.63	23.13	115610031
11/22/2022	22.61	23.26	115643520
11/23/2022	22.52	23.21	115676945
11/24/2022	22.48	23.26	115710433
11/25/2022	22.72	23.09	115743686
11/26/2022	22.49	23.03	115776846
11/27/2022	22.96	23.29	115810387
11/28/2022	22.83	23.15	115843717
11/29/2022	22.73	23.21	115877133
11/30/2022	22.69	23.20	115910546
Average For The Month	22.42	23.47	
Total <sup>(2)</sup> :			1,013,865

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**  
**DECEMBER 2022**

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

Date	Influent Groundwater Flow Rate <sup>(1) (3)</sup> (gpm)	POTW Discharge Flow Rate <sup>(1) (4) (5)</sup> (gpm)	POTW Totalized Discharge <sup>(3)</sup> (gal)
12/1/2022	22.66	23.46	115944329
12/2/2022	22.78	23.29	115977873
12/3/2022	22.83	23.35	116011494
12/4/2022	22.84	23.27	116045004
12/5/2022	22.74	23.20	116078406
12/6/2022	22.88	23.51	116112265
12/7/2022	22.78	23.14	116145591
12/8/2022	22.65	23.04	116178773
12/9/2022	22.79	23.17	116212141
12/10/2022	22.68	23.39	116245819
12/11/2022	22.70	23.21	116279241
12/12/2022	22.69	23.12	116312530
12/13/2022	22.71	23.29	116346072
12/14/2022	18.25	20.85	116376092
12/15/2022	21.35	24.23	116410977
12/16/2022	21.48	24.67	116446500
12/17/2022	21.50	24.79	116482196
12/18/2022	21.54	24.59	116517604
12/19/2022	21.65	24.39	116552730
12/20/2022	21.67	24.53	116588060
12/21/2022	21.70	24.63	116623527
12/22/2022	21.88	24.90	116659389
12/23/2022	21.95	25.12	116695556
12/24/2022	22.16	25.32	116732015
12/25/2022	22.09	25.23	116768350
12/26/2022	22.05	25.31	116804800
12/27/2022	22.07	25.23	116841130
12/28/2022	22.19	25.21	116877436
12/29/2022	22.13	25.21	116913737
12/30/2022	22.24	23.60	116947723
12/31/2022	22.23	23.02	116980876
Average For The Month	22.12	23.98	
Total <sup>(2)</sup> :			1,070,330

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.
- (5) The reed switch was replaced in early December, 2021.

**TABLE 3**

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

<u>Well</u>	<b>October 03, 2022 (ft msl)</b>	<b>November 2022</b>	<b>December 2022</b>
PW01	1163.29	----	----
PW02	Abandoned	----	----
PW03	1163.1	----	----
PW3S	1162.42	----	----
PW04	1162.23	----	----
PW05	1162.23	----	----
PW06	1162.55	----	----
PW07	1162.37	----	----
PW08	1163.49	----	----
PW09I	----	----	----
PW09O	1162.28	----	----
PW10	1162.49	----	----
PW11	1161	----	----
PW12	1163.37	----	----
PW13	1162.31	----	----
PW14	1161.79	----	----
PW15	1161.87	----	----
PW16	1160.54	----	----
PW17	1160.41	----	----
PW18	1162.26	----	----
PW19	1162.34	----	----
PW20	1160.58	----	----
PW21	1160.14	----	----
PW22	1162.27	----	----
PW23	1162.18	----	----
PW24	1159.75	----	----
PW25	1156.52	----	----
PW26	1159.25	----	----
PW27	1157.7	----	----
PW28	1163.2	----	----
PW29	1163.3	----	----
P01	1162.23	----	----
OW01	1164.45	----	----
W01A	Abandoned	----	----
W01B	Abandoned	----	----
W02	1162.9	----	----
W03A	1161.5	----	----
W03B	1161.8	----	----
W04A	1162.64	----	----
W04B	1162.56	----	----
W05	1162.31	----	----
W06R	1163.54	----	----
W07	1163.33	----	----
W08	1171.88	----	----
W09	1162.12	----	----
W10A	1161.07	----	----
W10B	1161.1	----	----
W11	1160.91	----	----
W12	1160.54	----	----
W13	1161.58	----	----
W14	1160.78	----	----
W16	1161.82	----	----
W17	1161.74	----	----
W18	1161.15	----	----
W19	Abandoned	----	----

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

<u>Well</u>	<u>October 03, 2022 (ft msl)</u>	<u>November 2022</u>	<u>December 2022</u>
W21	1160.86	----	----
W22	1161.4	----	----
W23	1160.87	----	----
W24A	1160.83	----	----
W25	1163.62	----	----
W26/W26R	1161.06	----	----
W27	1161.5	----	----
W28	1161.15	----	----
W29/W29R	1160.99	----	----
W30	1162.21	----	----
W31	1161.01	----	----
W32	1161.04	----	----
W33	1162.39	----	----
W34	1162.34	----	----
W35	1162.46	----	----
W36	1162.93	----	----
W39	Abandoned	----	----
W40/W40R	1161.4	----	----
W41	1162.3	----	----
W42	1163	----	----
W44	1162.19	----	----
W45	1162.34	----	----
W46	1162.08	----	----
W47	1161.13	----	----
W48	1161.33	----	----
W49	1161.94	----	----
W66	1163.41	----	----
W67	1163.37	----	----
W68A	1163.43	----	----
W68B	1163.32	----	----
W69	1162.49	----	----
W70B	Abandoned	----	----
River	----	----	----
IW01	1162.33	----	----
IW01A	1162.23	----	----
FP01	1160.17	----	----
FP02	1160.57	----	----
FP03	1159.94	----	----
FP04	1160.51	----	----
3M Basin	Water in both Basins	----	----
DFOWM 5	----	----	----
DFOWM 9	Abandoned	----	----
DFOWM 10A	Abandoned	----	----
DFOWM 11	----	----	----
DFOWM 12	----	----	----
W71	1165.33	----	----
W72	1163.86	----	----
W73	1162.81	----	----
W74	1162.33	----	----

**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	October 03, 2022 (ft)	November 2022	December 2022
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	0.00	----	----
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	Abandoned	----	----
W01B	Abandoned	----	----
W02	0.00	----	----
W03A	0.00	----	----
W03B	0.00	----	----
W04A	0.00	----	----
W04B	0.00	----	----
W05	0.00	----	----
W06R	0.00	----	----
W07	0.03	----	----
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

Well	October 03, 2022 (ft)	November 2022	December 2022
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	0.01	----	----
W36	0.00	----	----
W39	Abandoned	----	----
W40/W40R	0.10	----	----
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	----	----	----
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**

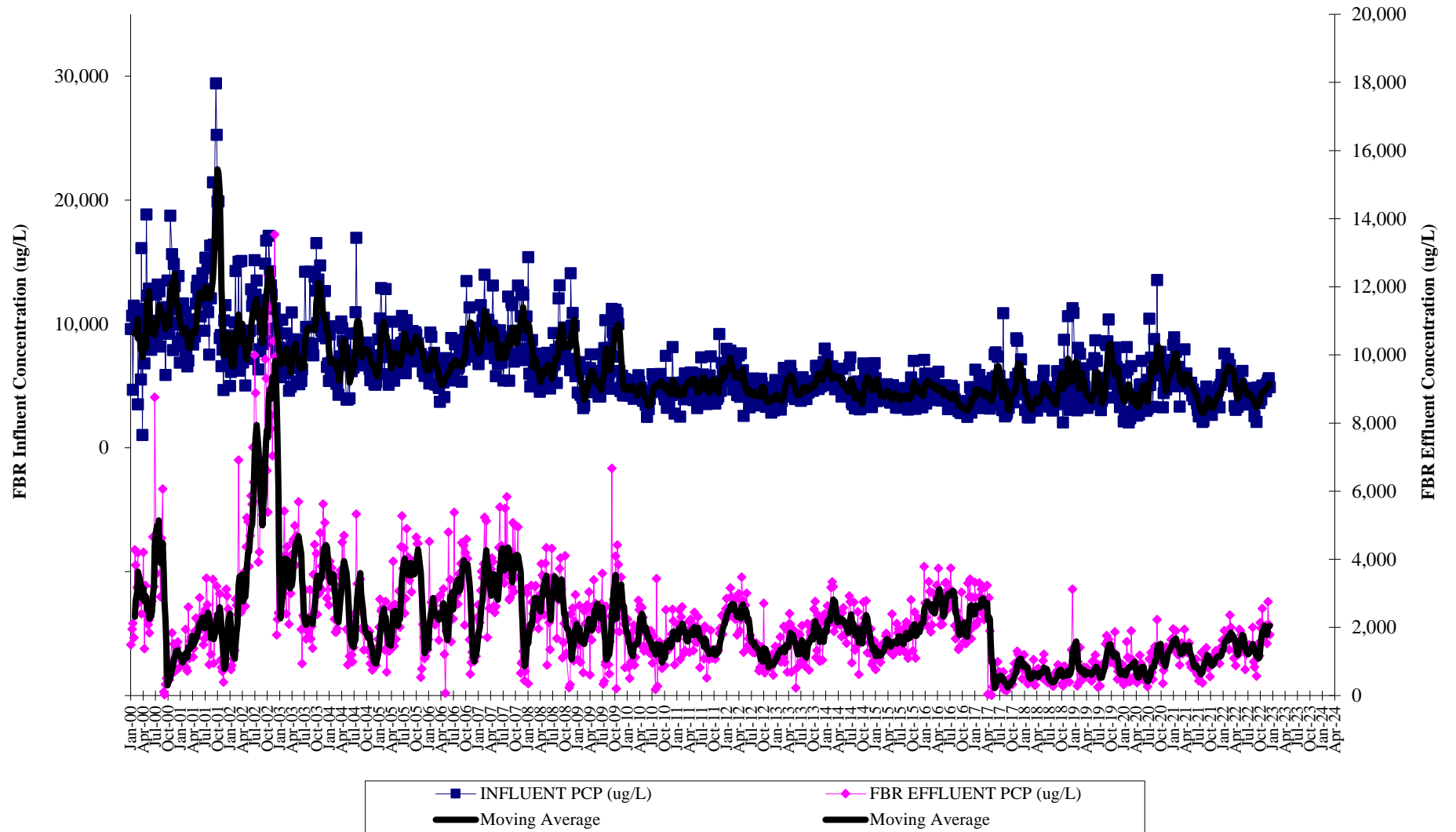
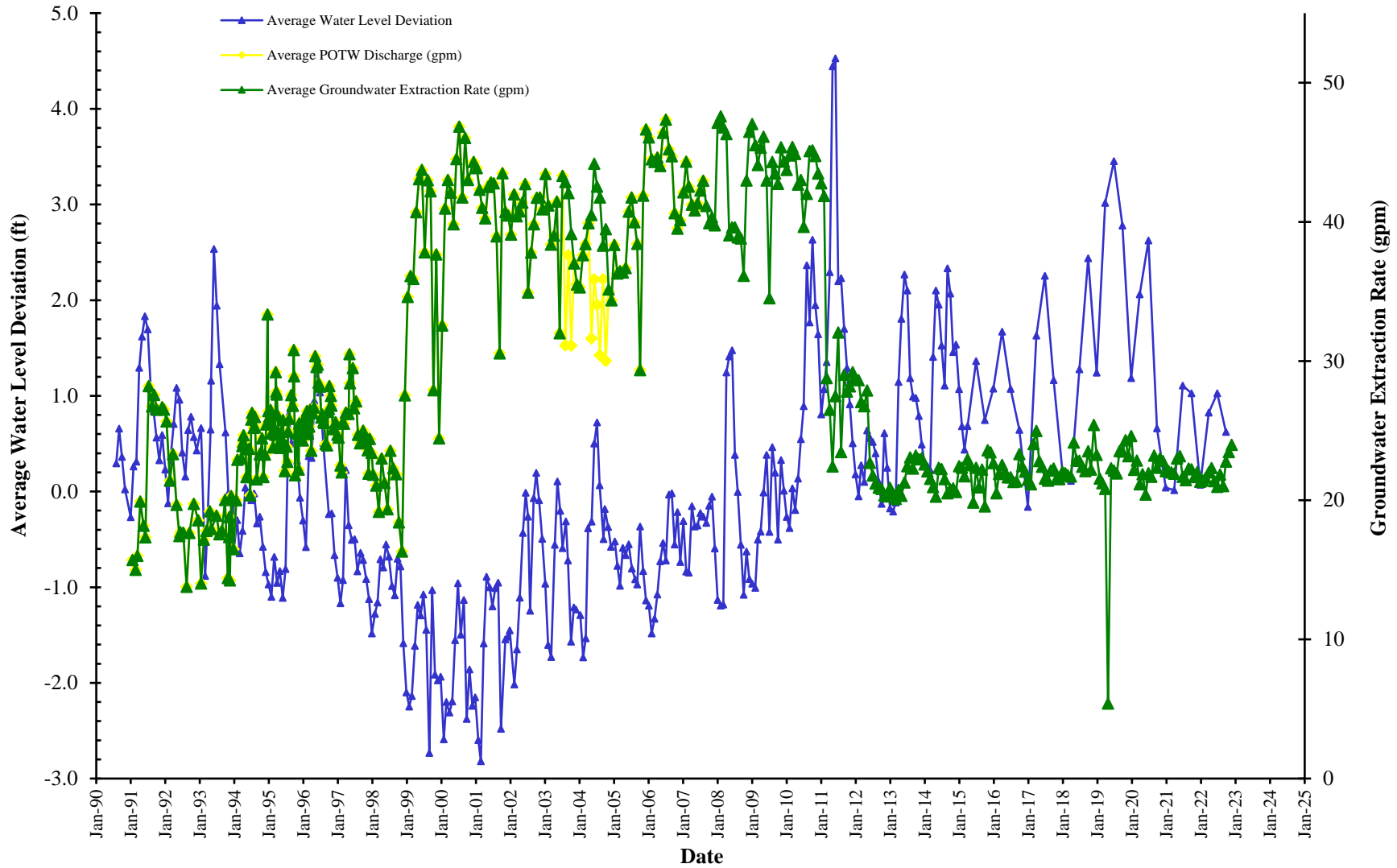


FIGURE 2

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.