To:	Nevada Division of Environmental Protection Nevada Environmental Response Trust
Cc:	Nevada Environmental Response Trust Stakeholders
From:	Michael Del Vecchio, Director of Engineering and Project Management
Date:	January 27, 2025
Subject:	NERT –GWETS Operation Monthly Report –December 2024

At the request of the Nevada Environmental Response Trust (Trust), Envirogen Technologies, Inc. (ETI) is providing this summary of the groundwater extraction and treatment system (GWETS) operation and performance during December 2024.

Summary of GWETS Operation

Envirogen Technologies, Inc. (ETI) mechanically operated the GWETS and ion exchange (IX) system normally in December 2024. Flow from PC-118, PC-119, PC-120, PC-121, and PC-133 were routed to the IX system, bypassing all flow meters associated with the FBR plant for December. The flow rate to the IX system averaged approximately 251 gallons per minute (gpm). The flow rate to the FBR plant averaged approximately 910 gpm. At the end of the month, the filled GW-11 Pond volume was at 36.3 million gallons (MG), which would allow 18.2 days of additional storage in the event of an emergency FBR plant shutdown with continued well- field pumping. The water volume stored in the GW-11 Pond has increased since November 2024; Figure 1 in this report depicts the actual GW-11 pond volumes and additional storage available.

The influent perchlorate concentration in the IX system averaged 1.2 mg/L for the month, and the concentration in the FBR plant averaged 46 mg/L for the month, with a maximum concentration of 52 mg/L.

During December, ETI continued implementing a preventative maintenance program to refurbish all front and back- side FBRs. Through this program, FBRs will be systematically emptied and dismantled to determine the extent of refurbishment. Additional information on this program is presented later in this report.

Enhanced Operational Metrics

Tables 1 and 2 summarize the current GWETS operational metrics data for flow rates, perchlorate and chromium concentrations, and mass removal. Figure 2 graphically presents historical perchlorate mass flux information. Attachment A summarizes the NPDES permit analytes with numerical discharge limits.

Operational Issues

All routine plant repairs conducted by ETI were performed in accordance with the NERT Perchlorate Treatment System Operations Manual. The following is a list of operational issues, major repairs, and/or equipment replaced during this reporting period.

1. **GW-11**
   There were no operational issues with GW-11 in December.

2. **Biological Plant**
   There were influent/effluent diversions during the reporting period associated with general maintenance or FBR refurbishment activities as well as extraction well short-term shutdown events. Below is a description of the events that occurred:

Diversion Events / Well Shutdowns

- An effluent diversion occurred on December 7, 2024, from 10:16 pm to 11:09 pm, due to a high turbidity reading. Adjustments to the plant were made, laboratory testing was completed, effluent compliance was confirmed, and the effluent was discharged into the outfall.

- An influent diversion occurred on December 11, 2024, from 11:52 pm to 1:16 am, due to a PLC fault. The maintenance team replaced a failed uninterruptible power supply (UPS), and the plant resumed normal operations.

- LS-1, SWF, and IX were shut down for scheduled generator maintenance on December 20, 2024, from 1:13 pm to 1:50 pm. The preventive maintenance for the generator was completed and the SWF and IX returned to normal operations.

- Scheduled PLC maintenance for LS-2 occurred on December 20, 2024, from 2:26 PM to 2:59 PM. LS-1, IX, LS-3, and SWF and AWF wells were shut down during this period. The maintenance team completed the necessary calibrations and repairs. Following this maintenance, LS-1, LS-2, IX, LS-3, and SWF and AWF wells resumed normal operations.

3. **IX Treatment Plant**
   The concentration of perchlorate in shallow groundwater remains elevated in the western wells of the SWF. This increase is a result of the City of Henderson (City) discharging water to Birding Ponds 10 through 13 from late August through October 2023. The perchlorate concentrations in groundwater adjacent to the western leg of the SWF are expected to remain elevated for an extended period as a result of this activity.

4. Treatment System Extension (TSE)

In December 2024, operations at the TSE plant continued to be idle. In July 2024, NERT developed a new version of the Cooperative Agreement to facilitate system restart and provided it to TIMET for their review. While NERT has conceptually discussed the TSE restart with TIMET, TIMET has yet to provide comments to NERT. The timeline for restarting the system will be established during the negotiation of the updated Cooperative Agreement.

5. Effluent Filtration System(EFS)

During December 2024, the EFS operated normally and produced approximately 446,400 gallons of filtered GWETS effluent, which supported the utility water requirements of GWETS operations.

6. Chromium Treatment Subsystem(CTS)

During December 2024, The CTS operated normally and treated approximately 2,423,269 gallons of groundwater.

7. Spills

There were no reportable spills during December.

8. Maintenance

Major maintenance performed by ETI in the reporting month included:

I. Three combo valves were replaced on the effluent pipeline.
II. The network cable on the (VFD) at Lift Station 1 (LS-1) has been replaced.
III. An air pressure sensor for the plant's air supply was installed and programmed into the SCADA.
IV. Maintenance replaced the 200-amp circuit breaker for the influent pump.
V. A temporary repair of a leak in FBR 2 was completed.
VI. The media return pump on Separator 2 has been replaced.
VII. The north sump pump was replaced.

Preventative maintenance performed by ETI in the reporting month included:

I. The effluent pipeline combo valves were inspected for leaks.
II. The primary sump pump and vault were inspected and cleaned.
III. The TSE plant was inspected.
IV. The control valves at the EQ were inspected.
V. The backstage equipment was inspected (FBR, Separators, DAF, T-621).
VI. Cleaned and inspected the recycle pump strainers.
VII. Inspected LS-3 equipment and area security.

FBR Refurbishment

I. The refurbishment of FBR 7 is currently in progress.

Facility Projects

1. Facility Repair/Replacement Items – Envirogen and the Trust have finalized a list of facility items to be addressed in connection with Amendment 8 to the O&M Agreement. All work except for the replacement of the DAF and concrete repairs has been completed. Specific details on in-progress items are provided below:

    A (WA23-03) Dissolved Air Flotation(DAF) Vessel replacement

        1. The replacement DAF was delivered in December 2023. Installation began in September 2024 and will be completed in January 2025.

    B Concrete Repair at various locations on the FBR pad

        1. Work will be completed in January 2025.

2. Improved Biological Treatment Plant Efficiency – Consistent with Attachment D to the December 2021 GWETS Operation Monthly Report, Envirogen plans to take three FBRs out of service and maintain them in working condition should they be needed. This action will reduce electricity and water use while maintaining sufficient treatment capacity to address current groundwater extracted from the IWF, AWF, and SWF. FBR A was placed into offline mode on April 13, 2022. After the ongoing FBR refurbishment, the remaining four FBRs scheduled to be taken out of service will be addressed in the 2nd quarter of 2025.

Tables

Operational Metrics

Nevada Environmental Response Trust I Groundwater Extraction and Treatment System I Monthly Stakeholder Metrics				
Location ID	**Average Flow Rate (gpm)[6]**	**Perchlorate (mg/L)[7]**	**Chromium (TR) (mg/L)[7]**	**Chromium(VI) (mg/L)[7]**
SWF Total Extraction[1,2]	718	11	0.00092	0.0034
AWF Total Extraction[1,2]	424	48	0.13	0.13
IWF Total Extraction[1,2]	47	297	5.7	5.3
AP Area Total Extraction[1,2]	7.7	492	0.18	0.18
Chromium Treatment Subsystem Effluent[3,4]	56	336	1.6	ND
GW-11 Influent[1,2]	0.34	31	0.065	0.062
FBR Influent[3,4]	910	46	0.11	0.048
Treatment System Extension Influent[3,4,5]	0.0	0.0	0.0	0.0

Notes:

ND = Not detected above laboratory method detection limit (Cr(VI)= 0.25 µg/L).

1: Perchlorate and Chromium TR sampled monthly, values reported from Eurofins TestAmerica.

2: Chromium (VI) sampled monthly, values reported from Pace National.

3: Perchlorate and Chromium TR sampled weekly, values reported from Eurofins TestAmerica.

4: Chromium (VI) sampled weekly, values reported from Pace National.

5: TSE offline from 12/01 to 12/31.

6: Sum of daily average flow for individual wells.

7: All concentrations reported are monthly flow weighted averages.

Nevada Environmental Response Trust I Groundwater Extraction and Treatment System I Monthly Stakeholder Metrics			
Location ID	**Perchlorate (lbs/month)[1]**	**Chromium (TR) (lbs/month)[1]**	**Chromium (VI) (lbs/month)[1]**
SWF Total Extraction	2,374	0.20	0.75
AWF Total Extraction	7,528	20	20
IWF Total Extraction	5,226	100	93
AP Area Total Extraction	1,415	0.52	0.50
Chromium Treatment Subsystem Effluent	6,955	34	ND
GW-11 Influent	31	0.065	0.062
FBR Influent[1]	15,694	36	16
Treatment System Extension Influent[1,2]	0.0	0.0	0.0

Notes:

ND = Not detected above laboratory method detection limit (Cr(VI)= 0.25 µg/L).

TR = Total Recoverable.

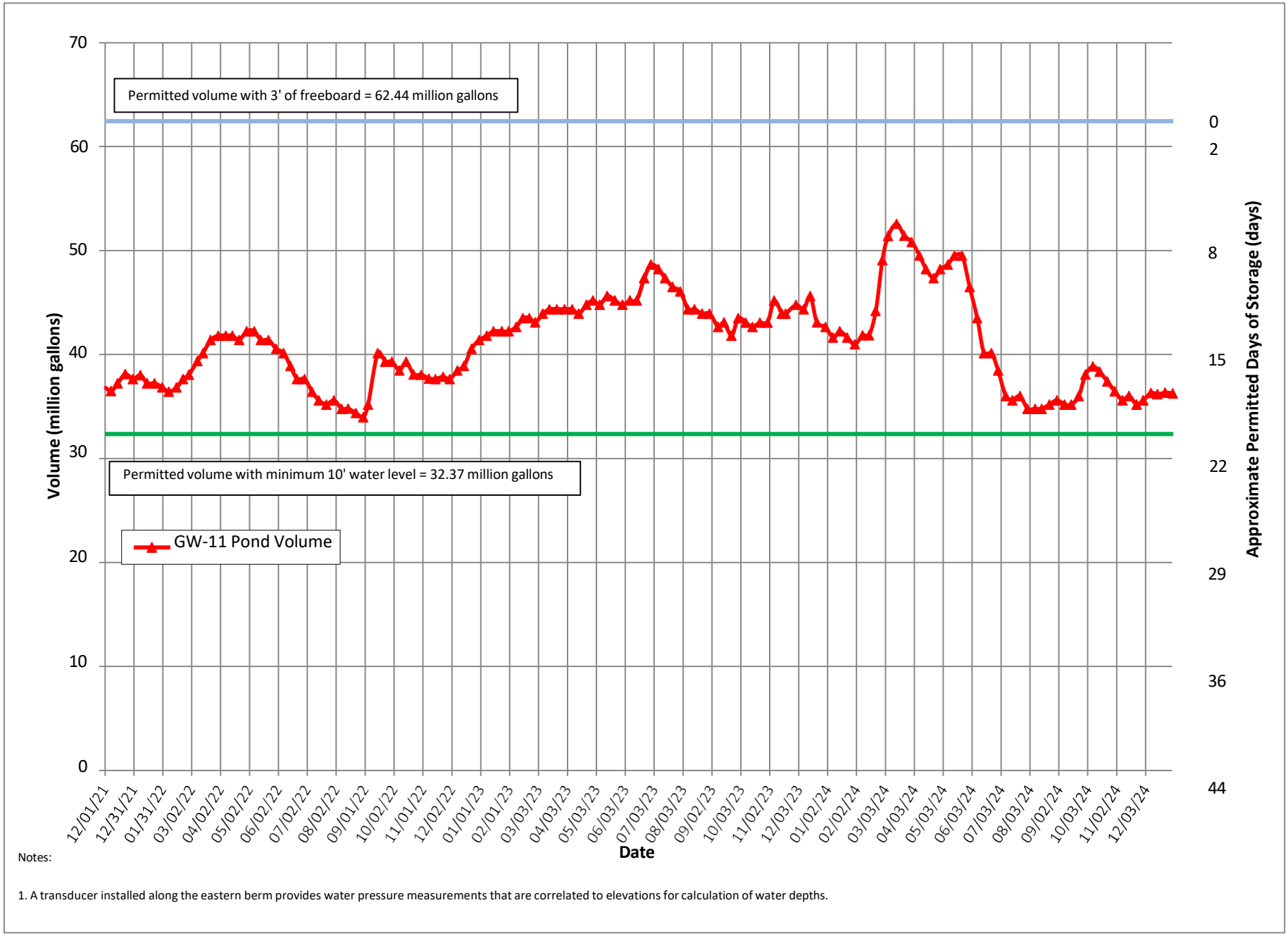
1: Total mass extracted is calculated from flow weighted average concentration and average flow (see Table 1).

2: TSE offline from 12/01 to 12/31.

Figures

Operational Metrics

Figure 1 - GW-11 Pond Volume Through 12/31/2024



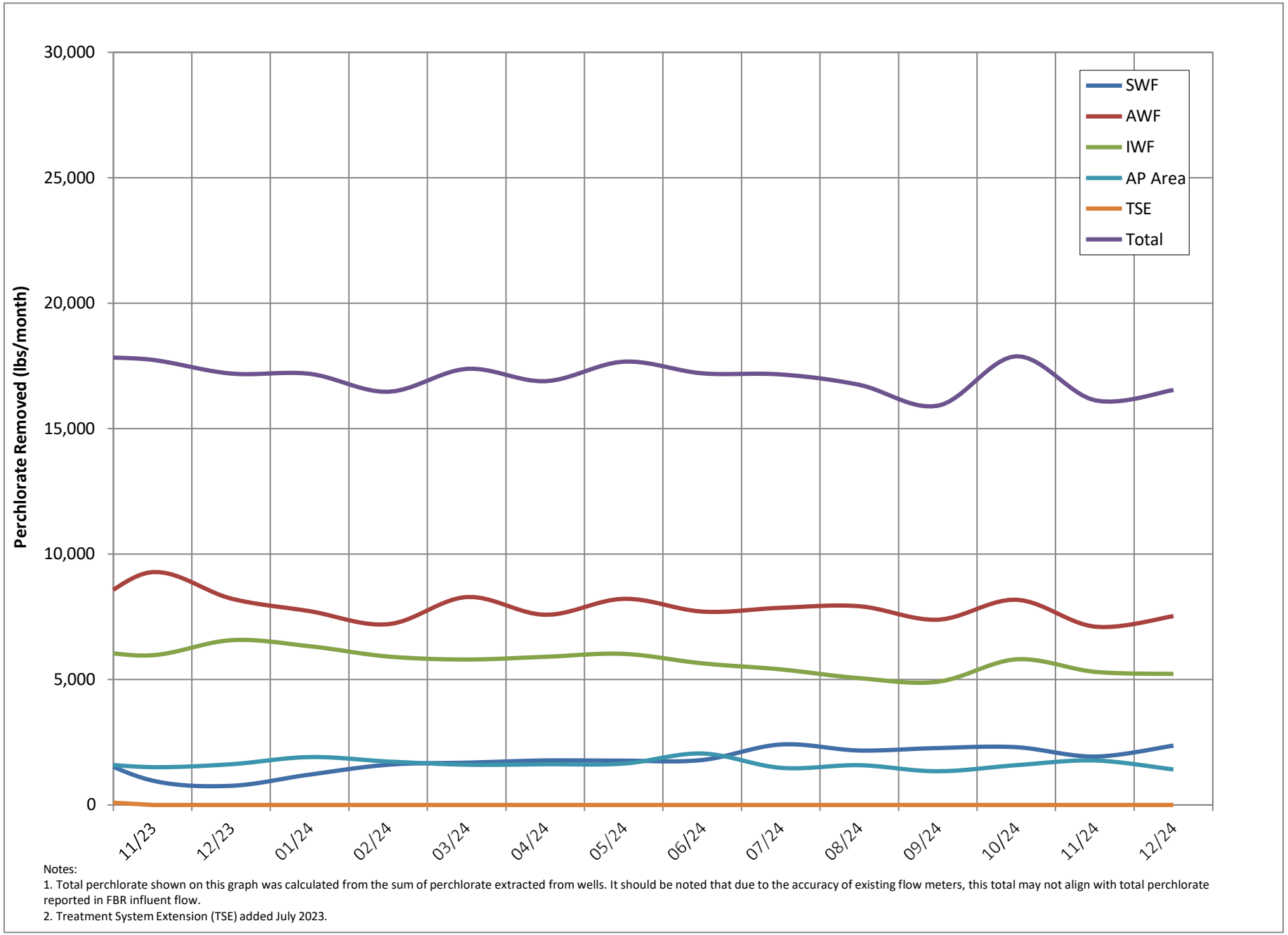
Notes:

1. A transducer installed along the eastern berm provides water pressure measurements that are correlated to elevations for calculation of water depths.

Figure 1 - GW-11 Pond Volume Through 12/31/2024

Figure Updated: 1/7/2025

Figure 2 - Historical Perchlorate Mass Removed From Environment



Notes:
1. Total perchlorate shown on this graph was calculated from the sum of perchlorate extracted from wells. It should be noted that due to the accuracy of existing flow meters, this total may not align with total perchlorate reported in FBR influent flow.
2. Treatment System Extension (TSE) added July 2023.

Figure Updated: 1/15/2025

Attachment A

NPDES Tracking Sheet (Prepared by Ramboll)

Treated Effluent at Outfall 001																								
Continuous		Daily Samples, composited weekly		Weekly Grab Samples												Weekly, collected separately			Quarterly				
Flow Rate		Perchlorate		pH		Hexavalent Chromium	Total Chromium	Manganese	Total Iron	Total Inorganic Nitrogen (TIN)	Total Suspended Solids (TSS)		Total Ammonia as N	Total Phosphorus as P		BOD_5 (inhibited)			Total Dissolved Solids (TDS)				
30-Day Avg. (MGD)	Daily Maximum (MGD)	30-Day Avg. (µg/L)	30-Day Avg. (lbs/day)	Daily Min. (S.U.)	Daily Max. (S.U.)	Daily Max. (µg/L)	Daily Max. (µg/L)	Daily Max. (µg/L)	Daily Max. (µg/L)	Daily Max. (mg/L)	30-Day Avg. (mg/L)	30-Day Avg. (lbs/day)	30-Day Avg. (lbs/day)	30-Day Avg. (lbs/day)		30-Day Avg. (mg/L)	Daily Max. (mg/L)	30-Day Avg. (lbs/day)	Daily Max. (mg/L)				
2.52	**2.88**	**18**	**0.38**	**6.5**	**9.0**	**10**	**100**	**5,000**	**10,000**	**20**	**135**	**2,839**	**20***	**10***		**25**	**40**	**525**	**8,000**				
January 2024	1.76	1.85	ND (<1.6)	0.012	6.98	7.21	ND (<0.150)	12	320	1200	1.8	20	280	1.8	5.3		4.7	13	63					
February 2024	1.35	1.88	ND (<1.6)	0.009	7.20	7.26	ND (<0.150)	35	310	1900	5.9	18	210	0.4	4.9		ND (<5.0)	ND (<5.0)	29	3,900				
March 2024	1.59	1.85	ND (<1.6)	0.011	7.04	7.40	ND (<0.150)	59	430	1000	0.87	16	210	0.8	5.8		ND (<5.0)	ND (<5.0)	34					
April 2024	1.66	1.77	ND (<1.6)	0.011	7.04	7.15	0.414	57	420	1100	1.1	20	260	2.2	2.7		ND (<5.0)	ND (<5.0)	34					
May 2024	1.54	1.83	2.0	0.026	6.68	7.25	ND (<0.200)	39	580	1100	1.7	14	190	1.7	2.6		ND (<5.0)	ND (<5.0)	33	4,300				
June 2024	1.74	1.85	0.9	0.013	6.92	7.22	ND (<0.200)	15	340	1000	2.5	19	280	2.8	3.3		3.4	6.2	51					
July 2024	1.62	1.86	ND (<1.6)	0.011	7.10	7.21	ND (<0.200)	19	430	1400	1.2	20	280	1.5	2.5		2.9	4.4	39					
August 2024	1.47	1.66	ND (<1.6)	0.010	6.85	7.18	0.225	10	420	1700	0.78	12	150	2.0	2.2		ND (<5.0)	ND (<5.0)	31	4,500				
September 2024	1.47	1.67	ND (<1.6)	0.010	6.88	7.13	ND (<0.200)	26	470	500	0.59	18	250	1.1	1.4		ND (<5.0)	ND (<5.0)	34					
October 2024	1.68	1.86	ND (<1.6)	0.011	6.62	6.98	ND (<0.200)	21	450	1300	0.73	17	230	2.2	3.4		ND (<5.0)	ND (<5.0)	34					
November 2024	1.64	1.86	ND (<1.6)	0.011	6.89	7.10	ND (<0.200)	21	500	1400	0.63	18	240	2.0	4.1		ND (<5.0)	ND (<5.0)	34	4,300				
December 2024	1.66	1.74	ND (<1.6)	0.011	6.88	7.34	ND (<0.200)	16	450	1400	0.73	13	180	1.5	2.8		ND (<5.0)	ND (<5.0)	35					

Daily Grab Sample Dates	Composite Sample Date	µg/L		lbs/day	Sample Date	S.U.	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L		lbs/day	mg/L		lbs/day	mg/L		lbs/day	Sample Date	mg/L		lbs/day	Sample Date	mg/L
12/31 - 1/6	1/6/2024	ND (<1.6)	0.8	0.012	1/3/2024	6.98	ND (<0.150)	12	260	830	0.89	--	16	233	--	0.12	1.7	--	0.44	6.4	1/3/2024	ND (<5.0)	2.5	36		
1/7 - 1/13	1/13/2024	ND (<1.6)	0.8	0.012	1/10/2024	7.18	ND (<0.150)	11	310	590	0.72	--	19	268	--	0.13	1.8	--	0.48	6.8	1/10/2024	ND (<5.0)	2.5	35		
1/14 - 1/20	1/20/2024	ND (<1.6)	0.8	0.012	1/17/2024	7.01	ND (<0.150)	12	320	1200	0.80	--	28	358	--	0.071	0.9	--	0.47	6.0	1/17/2024	Footnote 1	13	171		
1/21 - 1/27	1/27/2024	ND (<1.6)	0.8	0.012	1/24/2024	7.21	ND (<0.150)	5.0	280	360	1.8	--	17	251	--	0.27	4.0	--	0.29	4.3	1/24/2024	ND (<5.0)	2.5	37		
1/28 - 2/3	2/3/2024	ND (<1.6)	0.8	0.011	1/31/2024	7.12	ND (<0.150)	8.3	270	770	0.63	--	20	296	ND (<0.039)	0.0195	0.3	--	0.19	2.8	1/31/2024	ND (<5.0)	2.5	37		
2/4 - 2/10	2/10/2024	ND (<1.6)	0.8	0.011	2/7/2024	7.20	ND (<0.150)	35	290	1900	0.81	--	23	279	--	0.051	0.6	Footnote 2	0.69	8.4	2/7/2024	ND (<5.0)	2.5	30		
2/11 - 2/17	2/17/2024	ND (<1.6)	0.8	0.009	2/14/2024	7.24	ND (<0.150)	8.8	310	1100	5.9	--	20	240	ND (<0.039)	0.0195	0.2	--	0.51	6.1	2/14/2024	ND (<5.0)	2.5	30		
2/18 - 2/24	2/24/2024	ND (<1.6)	0.8	0.010	2/22/2024	7.24	ND (<0.150)	18	220	950	0.63	--	13	191	ND (<0.039)	0.0195	0.3	--	0.17	2.5	2/22/2024	ND (<5.0)	2.5	37	2/22/2024	3,900
2/25 - 3/2	3/2/2024	ND (<1.6)	0.8	0.005	2/29/2024	7.26	ND (<0.150)	15	160	1800	1.50	--	16	114	--	0.045	0.3	--	0.36	2.6	2/29/2024	ND (<5.0)	2.5	18		
3/3 - 3/9	3/9/2024	ND (<1.6)	0.8	0.009	3/7/2024	7.40	ND (<0.150)	17	290	440	0.69	--	14	140	--	0.059	0.6	Footnote 3	1.5	14.6	3/7/2024	ND (<5.0)	2.5	25		
3/10 - 3/16	3/16/2024	ND (<1.6)	0.8	0.011	3/13/2024	7.11	ND (<0.150)	15	430	710	0.80	--	25	358	--	0.13	1.9	--	0.40	5.7	3/13/2024	ND (<5.0)	2.5	36		
3/17 - 3/23	3/23/2024	ND (<1.6)	0.8	0.012	3/20/2024	7.04	ND (<0.150)	25	430	1000	0.84	--	11	165	ND (<0.039)	0.0195	0.3	--	0.046	0.7	3/20/2024	ND (<5.0)	2.5	37		
3/24 - 3/30	3/30/2024	ND (<1.6)	0.8	0.012	3/27/2024	7.37	ND (<0.150)	59	430	940	0.87	--	12	181	ND (<0.039)	0.0195	0.3	--	0.15	2.3	3/27/2024	ND (<5.0)	2.5	38		
3/31 - 4/6	4/6/2024	ND (<1.6)	0.8	0.011	4/3/2024	7.09	ND (<0.150)	44	420	1100	0.98	--	19	264	--	0.15	2.1	--	0.21	2.9	4/3/2024	ND (<5.0)	2.5	35		
4/7 - 4/13	4/13/2024	ND (<1.6)	0.8	0.011	4/10/2024	7.10	0.414	57	330	970	0.98	--	28	346	--	0.16	2.0	--	0.23	2.8	4/10/2024	ND (<5.0)	2.5	31		
4/14 - 4/20	4/20/2024	ND (<1.6)	0.8	0.012	4/17/2024	7.04	ND (<0.150)	26	360	740	1.1	--	13	192	--	0.21	3.1	--	0.21	3.1	4/17/2024	ND (<5.0)	2.5	37		
4/21 - 4/27	4/27/2024	ND (<1.6)	0.8	0.011	4/24/2024	7.15	ND (<0.150)	42	360	840	1.1	--	18	244	--	0.11	1.5	--	0.13	1.8	4/24/2024	ND (<5.0)	2.5	34		
4/28 - 5/4	5/4/2024	ND (<1.6)	0.8	0.010	5/1/2024	7.06	ND (<0.150)	33	380	600	0.20	ND (<10)	5	53	--	0.20	2.1	--	0.21	2.2	5/1/2024	ND (<5.0)	2.5	27		
5/5 - 5/11	5/11/2024	ND (<1.6)	0.8	0.009	5/8/2024	6.68	ND (<0.150)	18	420	930	1.2	--	23	287	--	0.084	1.0	--	0.21	2.6	5/8/2024	ND (<5.0)	2.5	31		
5/12 - 5/18	5/18/2024	ND (<1.6)	0.8	0.010	5/15/2024	7.22	ND (<0.150)	1.3	360	910	1.7	--	14	187	ND (<0.039)	0.0195	0.3	--	0.21	2.8	5/15/2024	ND (<5.0)	2.5	33		
5/19 - 5/25	5/25/2024	6.7	6.7	0.088	5/22/2024	7.25	ND (<0.200)	39	580	1100	0.46	--	18	246	ND (<0.039)	0.0195	0.3	--	0.19	2.6	5/22/2024	ND (<5.0)	2.5	34	5/22/2024	4,300
5/26 - 6/1	6/1/2024	ND (<1.6)	0.8	0.012	5/29/2024	7.19	ND (<0.200)	11	280	650	0.99	--	12	182	--	0.30	4.6	--	0.18	2.7	5/29/2024	ND (<5.0)	2.5	38		
6/2 - 6/8	6/8/2024	ND (<1.6)	0.8	0.012	6/4/2024	7.20	ND (<0.200)	9.2	230	790	2.5	--	26	399	--	0.29	4.4	--	0.23	3.5	6/4/2024	ND (<5.0)	2.5	38		
6/9 - 6/15	6/15/2024	1.3	1.3	0.018	6/11/2024	7.14	ND (<0.200)	15	260	670	2.1	--	15	217	--	0.31	4.5	--	0.29	4.2	6/11/2024	ND (<5.0)	2.5	36		
6/16 - 6/22	6/22/2024	ND (<1.6)	0.8	0.011	6/18/2024	6.92	ND (<0.200)	11	340	560	0.81	--	18	272	--	0.042	0.6	--	0.19	2.9	6/18/2024	ND (<5.0)	2.5	38		
6/23 - 6/29	6/29/2024	ND (<1.6)	0.8	0.012	6/25/2024	7.22	ND (<0.200)	12	300	1000	1.0	--	17	248	--	0.12	1.8	--	0.19	2.8	Footnote 4	Footnote 5	6.2	91		
6/30 - 7/6	7/6/2024	ND (<1.6)	0.8	0.012	7/2/2024	7.12	ND (<0.200)	13	340	880	1.2	--	18	278	--	0.10	1.5	--	0.27	4.2	7/2/2024	ND (<5.0)	2.5	39		
7/7 - 7/13	7/13/2024	ND (<1.6)	0.8	0.010	7/9/2024	7.13	ND (<0.200)	6.7	320	1200	0.91	--	34	501	--	0.14	2.1	--	0.18	2.7	7/9/2024	ND (<5.0)	2.5	37		
7/14 - 7/20	7/20/2024	ND (<1.6)	0.8	0.011	7/16/2024	7.21	ND (<0.200)	6.3	270	520	0.46	--	12	154	ND (<0.039)	0.0195	0.2	--	0.090	1.2	7/16/2024	ND (<5.0)	2.5	32		
7/21 - 7/27	7/27/2024	ND (<1.6)	0.8	0.010	7/23/2024	7.10	ND (<0.200)	19	340	1400	0.75	--	20	270	ND (<0.039)	0.0195	0.3	--	0.16	2.2	7/23/2024	ND (<5.0)	2.5	34		
7/28 - 8/3	8/3/2024	ND (<1.6)	0.8	0.011	7/30/2024	7.13	ND (<0.200)	17	430	890	0.34	--	17	199	--	0.28	3.3	--	0.20	2.3	7/30/2024	Footnote 6	4.4	51		
8/4 - 8/10	8/10/2024	ND (<1.6)	0.8	0.010	8/6/2024	6.90	0.225	10	420	930	0.71	--	13	142	--	0.22	2.4	--	0.18	2.0	8/6/2024	ND (<5.0)	2.5	27		
8/11 - 8/17	8/17/2024	ND (<1.6)	0.8	0.009	8/13/2024	7.03	ND (<0.200)	8.5	280	570	0.78	ND (<10)	5	65	--	0.16	2.1	--	0.17	2.2	8/13/2024	ND (<5.0)	2.5	32	8/13/2024	4,500
8/18 - 8/24	8/24/2024	ND (<1.6)	0.8	0.010	8/20/2024	7.18	ND (<0.150)	9.4	290	590	0.69	--	10	127	--	0.25	3.2	--	0.15	1.9	8/20/2024	ND (<5.0)	2.5	32		
8/25 - 8/31	8/31/2024	ND (<1.6)	0.8	0.010	8/27/2024	6.85	ND (<0.150)	6.9	320	1700	0.36	--	19	259	ND (<0.039)	0.0195	0.3	--	0.20	2.7	8/29/2024	ND (<5.0)	2.5	34		
9/1 - 9/7	9/7/2024	ND (<1.6)	0.8	0.011	9/3/2024	7.02	ND (<0.200)	5.8	280	360	0.59	--	14	192	--	0.13	1.8	--	0.090	1.2	9/3/2024	ND (<5.0)	2.5	34		
9/8 - 9/14	9/14/2024	ND (<1.6)	0.8	0.011	9/10/2024	6.88	ND (<0.200)	26	330	470	0.43	--	18	250	ND (<0.039)	0.0195	0.3	--	0.10	1.4	9/10/2024	ND (<5.0)	2.5	35		
9/15 - 9/21	9/21/2024	ND (<1.6)	0.8	0.010	9/17/2024	7.13	ND (<0.200)	22	470	470	0.31	--	16	217	ND (<0.039)	0.0195	0.3	--	0.10	1.4	9/17/2024	ND (<5.0)	2.5	34		
9/22 - 9/28	9/28/2024	ND (<1.6)	0.8	0.009	9/25/2024	6.89	ND (<0.200)	<3.1	330	500	0.44	--	24	331	--	0.14	1.9	--	0.11	1.5	9/25/2024	ND (<5.0)	2.5	34		
9/29 - 10/5	10/5/2024	ND (<1.6)	0.8	0.009	10/1/2024	6.90	ND (<0.200)	8.5	450	440	0.73	ND (<10)	5	52	--	0.24	2.5	--	0.19	2.0	10/1/2024	ND (<5.0)	2.5	26		
10/6 - 10/12	10/12/2024	ND (<1.6)	0.8	0.011	10/9/2024	6.62	ND (<0.200)	17	390	1300	0.68	--	22	312	--	0.30	4.3	--	0.28	4.0	10/9/2024	ND (<5.0)	2.5	35		
10/13 - 10/19	10/19/2024	ND (<1.6)	0.8	0.011	10/15/2024	6.70	ND (<0.200)	13	290	850	0.61	--	18	266	--	0.17	2.5	--	0.27	4.0	10/15/2024	ND (<5.0)	2.5	37		
10/20 - 10/26	10/26/2024	ND (<1.6)	0.8	0.012	10/23/2024	6.98	ND (<0.200)	21	350	1200	0.36	--	20	298	ND (<0.039)	0.0195	0.3	--	0.34	5.1	10/23/2024	ND (<5.0)	2.5	37		
10/27 - 11/2	11/2/2024	ND (<1.6)	0.8	0.012	10/29/2024	6.88	ND (<0.200)	13	310	810	0.46	--	18	243	--	0.093	1.3	--	0.15	2.0	10/29/2024	ND (<5.0)	2.5	34		
11/3 - 11/9	11/9/2024	ND (<1.6)	0.8	0.011	11/5/2024	6.89	ND (<0.200)	16	320	1000	0.57	--	15	202	--	0.14	1.9	--	0.19	2.6	11/5/2024	ND (<5.0)	2.5	34		
11/10 - 11/16	11/16/2024	ND (<1.6)	0.8	0.011	11/12/2024	6.92	ND (<0.200)	21	300	970	0.54	--	24	328	--	0.18	2.5	--	0.58	7.9	11/12/2024	ND (<5.0)	2.5	34		
11/17 - 11/23	11/23/2024	ND (<1.6)	0.8	0.011	11/20/2024	7.10	ND (<0.200)	16	280	1400	0.63	--	14	199	--	0.24	3.4	--	0.25	3.5	11/20/2024	ND (<5.0)	2.5	35	11/20/2024	4,300
11/24 - 11/30	11/30/2024	ND (<1.6)	0.8	0.011	11/26/2024	7.08	ND (<0.200)	13	500	960	0.45	--	19	250	ND (<0.039)	0.0195	0.3	--	0.19	2.5	11/26/2024	ND (<5.0)	2.5	33		
12/1 - 12/7	12/7/2024	ND (<1.6)	0.8	0.011	12/3/2024	6.99	ND (<0.200)	13	450	760	NS[7]	--	11	156	--	0.091	1.3	--	0.15	2.1	12/3/2024	ND (<5.0)	2.5	36		
12/8 - 12/14	12/14/2024	ND (<1.6)	0.8	0.011	12/10/2024	7.34	ND (<0.200)	10	380	1100	0.66	--	20	280	--	0.10	1.4	--	0.20	2.8	12/10/2024	ND (<5.0)	2.5	35		
12/15 - 12/21	12/21/2024	ND (<1.6)	0.8	0.011	12/17/2024	7.30	ND (<0.200)	16	380	1400	0.72	--	10	134	--	0.11	1.5	--	0.22	2.9	12/17/2024	ND (<5.0)	2.5	33		
12/22 - 12/28	12/28/2024	ND (<1.6)	0.8	0.011	12/26/2024	6.88	ND (<0.200)	13	350	1000	0.73	--	10	142	--	0.14	2.0	--	0.23	3.3	12/26/2024	ND (<5.0)	2.5	35		

Note: Analytical responsibilities are performed by Eurofins Environment Testing (Eurofins) in Phoenix, Arizona, and hexavalent chromium is analyzed by Pace Analytical (Pace) in Las Vegas, Nevada, unless otherwise indicated.

+ Additional samples were collected this week.

NA = Not Available To Date

ND = Not Detected above laboratory reporting limit; concentration in adjacent cell to right is one-half the reporting limit (per Permit condition)

NS = Not Sampled or Not Analyzed

-- = Analyte detected; see column adjacent to right

* Total phosphorus discharge limitation of 10 lbs/day applies between March 1 and October 31; Ammonia discharge limitation of 20 lbs/day applies between April 1 and September 30; no limits apply the rest of the year.

[1] Average of 8.6 mg/L and 18.25 mg/L (rerun duplicates detected 34 mg/L and ND [<5.0 mg/L], respectively).

[2] Average of 0.73 mg/L and 0.655 mg/L (rerun duplicates detected 0.64 mg/L and 0.67 mg/L, respectively).

[3] Average of 1.6 mg/L and 1.3 mg/L (rerun duplicates detected 1.3 mg/L and 1.3 mg/L, respectively).

[4] Original sample taken 6/25/2024 was analyzed out of hold. Additional sample taken 6/28/2024.

[5] Average of 2.5 mg/L (<5.0 mg/L) and 9.95 mg/L (additional sample detected 13 mg/L, and rerun duplicates detected 6.8 mg/L and 7.0 mg/L, respectively).

[6] Average of 6.3 mg/L and 2.5 mg/L (rerun duplicates were both ND [<5.0 mg/L]).

[7] The 12/3/2024 sample was received by the laboratory out of hold for Nitrate/Nitrite, so another sample was collected on 12/6/2024 for Nitrate/Nitrite analysis. Using the ammonia results from the 12/3/2024 sample and the Nitrate/Nitrite results from the 12/6/2024 sample, TIN was calculated to be 0.58 mg/L

Last Updated: January 10, 2024

Attachment B

Equipment Tracking Form

Sub-System	P&ID	Description	Status[1]	Checked	Criticality[2]	
		Main Plant Equipment				
		Seep Wells and Lift Station 1				
1.01		*Seep Well Field, 9 wells*	Running			
1.02		*Lift Station 1 Lift Pump A*	Running		3	Replaced VFD Ethernet cables
1.03		*Lift Station 1 Lift Pump B*	Standby			
1.04		*Area in and around Lift Station*	Running			
		Athens Road Wells and Lift Station 3				
2.01		*Athens Road Well Field, 9 wells*	Running			
2.02		*Lift Station 3 Lift Pump A*	Standby			
2.03		*Lift Station 3 Lift Pump B*	Running			
2.04		*Area in and around Lift Station*	Running			
		Lift Station 2 and Transmission Pipelines				
3.01		*Influent Pipeline*	Running			
3.02		*Effluent Pipeline*	Running			
3.03		*Lift Station 2 Lift Pump A*	Running			
3.04		*Lift Station 2 Lift Pump B*	Standby			
3.05		*Area in and around Lift Station*	Running			
		Interceptor Wells and Cr Treatment Plant				
4.01		*IWF Well Field, 30 wells*	Running			
4.02		*Ferrous Sulfate Feed System*	Running			
4.03		*Polymer Feed System*	Running			
4.04		*Clarifier*	Running			
4.05		*Filter Press*	Running			
4.06		*GWTP Effluent Tank*	Running			
4.07		*Interceptor Booster Pump*	Running			
4.08		*Interceptor Booster Pump*	Standby			
4.09		*Area In And Around GWTP*	Running			
		Equalization Area and GW-11 Pond				
5.01	PID10A	*Pond GW-11*	Running			
5.02	PID10A	*Pond Water Pump - P101A*	Running			
5.03	PID10A	*Pond Water Pump - P101B*	Standby			
5.04	PID10A	*Equalization Tanks*	Running			
5.05	PID10A	*Area in and Around EQ*	Running			
5.06	PID10A	*Raw Water Feed Pump - P102A*	Standby		3	Replaced 200 amp Circuit Breaker
5.07	PID10A	*Raw Water Feed Pump - P102B*	Running			
5.08	PID10A	*F-101 Filters*	Running			
5.09	PID10B	*Carbon Absorber - LGAC 201A*	Offline			

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Sub-System	P&ID	Description	Status[1]	Checked	Criticality[2]	
5.10	PID10B	*Carbon Absorber - LGAC 201B*	Offline			
5.11	PID10B	*Carbon Absorber - LGAC 201C*	Offline			
		First Stage FBRs A, 1 & *2*				
6.01	PID14	*FBR*	Offline			
6.02	PID14	*Separator Tank - 1401*	Offline			
6.03	PID14	*Media Return Pump - P 1401*	Offline			
6.04	PID14	*P1401A*	Offline			
6.05	PID01A	*P1401B*	Offline			
6.06	PID01A	*FBR*	Running			
6.07	PID02A	*FBR*	Standby			
6.08	PID01A	*First Stage Separator Tank - T2011*	Running			
6.09	PID01A	*Media Return Pump - P2011*	Running			
6.10	PID01A	*First Stage FBR Pump - P1011*	Standby			
6.11	PID01A	*First Stage FBR Pump - P1012*	Running			
6.12	PID01A	*First Stage FRB Pump - P101A*	Standby			
6.13	PID07A	*FBR A pHFeed Pump - P71A*	Offline			
6.14	PID07A	*FBR 1 pH Feed Pump - P711*	Offline			
6.15	PID07A	*FBR 2 pH Feed Pump - P712*	Offline			
6.16	PID07A	*FBR A Nutrient (Urea) Feed Pump - P72A*	Offline			
6.17	PID07A	*FBR 1 Nutrient (Urea) Feed Pump - P721*	Offline			
6.18	PID07A	*FBR 2 Nutrient (Urea) Feed Pump - P722*	Offline			
6.19	PID15	*FBR A Nutrient (Phos Acid) Feed Pump - P1520A*	Offline			
6.20	PID15	*FBR 1 Nutrient (Phos Acid) Feed Pump - P1521*	Running			
6.21	PID15	*FBR 2 Nutrient (Phos Acid) Feed Pump - P1522*	Running			
6.22	PID07B	*FBR A Electron Donor Assembly Pump - P73A*	Running			
6.23	PID07B	*FBR 1 Electron Donor Assembly Pump - P731*	Running			
6.24	PID07B	*FBR 2 Electron Donor Assembly Pump - P732*	Running			
		First Stage FBRs 3 & *4*				
7.01	PID01B	*FBR*	Running			
7.02	PID01B	*FBR*	Running			
7.03	PID02B	*First Stage Separator Tank - T2012*	Running		3	Replaced media return pump
7.04	PID01B	*Media Return Pump - P2012*	Running			
7.05	PID01B	*First Stage FBR Pump - P1013*	Running			
7.06	PID01B	*First Stage FRB Pump - P1014*	Running			
7.07	PID01B	*First Stage FBR Pump - P102A*	Running			
7.08	PID07A	*FBR 3 pH Feed Pump - P713*	Running			
7.09	PID07A	*FBR 4 pH Feed Pump - P714*	Running			

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Sub-System	P&ID	Description	Status[1]	Checked	Criticality[2]	
7.10	PID07A	*FBR 3 Nutrient (Urea) Feed Pump - P723*	Offline			
7.11	PID07A	*FBR 4 Nutrient (Urea) Feed Pump - P724*	Offline			
7.12	PID15	*FBR 3 Nutrient (Phos Acid) Feed Pump - P1523*	Running			
7.13	PID15	*FBR 4 Nutrient (Phos Acid) Feed Pump - P1524*	Running			
7.14	PID07B	*FBR 3 Electron Donor Assembly Pump - P733*	Running			
7.15	PID07B	*FBR 4 Electron Donor Assembly Pump - P734*	Running			
		Second Stage FBRs 5 & 6				
8.01	PID03A	*FBR*	Running			
8.02	PID03A	*FBR*	Running			
8.03	PID03C	*Second Stage Separator Tank - T3011*	Running			
8.04	PID03A	*Media Return Pump - P3011*	Running			
8.05	PID03A	*Second Stage FBR Pump - P3015*	Running			
8.06	PID03A	*Second Stage FBR Pump - P3016*	Standby			
8.07	PID03A	*Second Stage FBR Pump - P301A*	Running			
8.08	PID07A	*FBR 5 pH Feed Pump - P715*	Offline			
8.09	PID07A	*FBR 6 pH Feed Pump - P716*	Offline			
8.1	PID07A	*FBR 5 Nutrient (Urea) Feed Pump - P725*	Offline			
8.11	PID07A	*FBR 6 Nutrient (Urea) Feed Pump - P726*	Offline			
8.12	PID07B	*FBR 5 Electron Donor Assembly Pump - P735*	Running			
8.13	PID07B	*FBR 6 Electron Donor Assembly Pump - P736*	Running			
		Second Stage FBRs 7 & 8				
9.01	PID03B	*FBR*	Maintenance		3	FBR 7 down due to refurbishment
9.02	PID03B	*FBR*	Running			
9.03	PID03D	*Second Stage Separator Tank - T3012*	Running			
9.04	PID03B	*Media Return Pump - P3012*	Running			
9.05	PID03B	*Second Stage FBR Pump - P3017*	Maintenance		3	Out of service for factory pump rebuild
9.06	PID03B	*Second Stage FBR Pump - P3018*	Running			
9.07	PID03B	*Second Stage FBR Pump - P302A*	Running			
9.08	PID07A	*FBR 7 pH Feed Pump - P717*	Offline			
9.09	PID07A	*FBR 8 pH Feed Pump - P718*	Offline			
9.10	PID07A	*FBR 7 Nutrient (Urea) Feed Pump - P727*	Offline			
9.11	PID07A	*FBR 8 Nutrient (Urea) Feed Pump - P728*	Offline			
9.12	PID07B	*FBR 7 Electron Donor Assembly Pump - P737*	Running			
9.13	PID07B	*FBR 8 Electron Donor Assembly Pump - P738*	Running			
10		**Aeration and DAF System**				
10.01	PID04	*Aeration Tank*	Running			
10.02	PID04	*Aeration Blower - B401*	Running			

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Sub-System	P&ID	Description	Status[1]	Checked	Criticality[2]	
10.03	PID04	*Bio filter*	Running			
10.04	PID04	*Nutrient Solution*	Running			
10.05	PID04	*Bio filter Sump*	Running			
10.06	PID04	*Nutrient Pump - P401*	Running			
10.07	PID04	*Bio filter Sump Pump - P402A*	Standby			
10.09	PID04	*Bio filter Blower*	Running			
10.10	PID05	*DAF Pressure Tanks*	Running			
10.11	PID05	*DAF Vessel - D501*	Running			
10.12	PID05	*DAF Pressure Pump - P501*	Running			
10.13	PID05	*DAF Float Pump - P502*	Running			
10.14	PID05	*DAF Vessel - D551*	Offline		3	Offline due to New DAF installation
10.15	PID05	*DAF Pressure Pump - P551*	Offline		3	Offline due to New DAF installation
10.16	PID05	*DAF Float Pump - P552*	Running			
10.17	PID05	*Screw Conveyer Drive*	Standby			
10.18	PID05	*Skimmer Drive*	Running			
11		**Pumping System (Old Effluent)**				
11.01	PID06	*Effluent Tank 601*	Running			
11.02	PID06	*Effluent Pump - P601*	Standby			
11.03	PID06	*Effluent Pump - P602*	Running			
12		**Sand Filter System**				
12.01	PID17	*Sand Filter*	Running			
12.02	PID17	*Filter Reject Tank*	Running			
12.03	PID17	*Filter Reject Pump - P1701A*	Standby			
12.04	PID17	*Filter Reject Pump - P1701B*	Running			
13		**Effluent Tank and Pumping**				
13.01	PID10C	*UV Effluent Tank*	Running			
13.02	PID10C	*Effluent Booster Pump - P1302A*	Running			
13.03	PID10C	*Effluent Booster Pump - P1302B*	Standby			
13.04	PID10C	*Area Around Effluent and North D-*	Running			
14		**Solids Collection and Pressing System**				
14.01	PID16	*Sludge Storage Tank*	Running			
14.02	PID16	*Solids Storage Effluent Pump - P1601*	Running			
14.03	PID16	*Solids Cond. Tank*	Running			
14.04	PID09	*Sludge Mixer*	Running			
14.05	PID09	*Filter Press Pump - P901*	Running			
14.06	PID09	*Filter Press Pump - P902*	Standby			
14.07	PID09	*West Press*	Standby			

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Sub-System	P&ID	Description	Status[1]	Checked	Criticality[2]	
14.08	PID09	*East Press*	Running			
14.09	PID09	*Filtrate Tank*	Running			
14.10	PID09	*Filtrat Tank Effluent (recycle) Pump - P903*	Running			
		Chemical System				
15		**Electron Donor System**				
15.01	PID07B	*Electron Donor Tank*	Running			
15.02	PID07B	*Booster Pump P739A*	Running			
15.03	PID07B	*Booster Pump P739B*	Standby			
17	PID07C	*Micro Nutrient System*	Running			
18	PID07C	*Hydrogen Peroxide System*	Running			
19	PID07C	*De-Foam System*	Running			
20	PID15	*Nutrient (Phosphoric Acid) System (Tank only - pumps included in FBRs)*	Running			
21	PID07A	*Nutrient(Urea) System (Tank only - pumps included in FBRs)*	Running			
22	PID07A	*pHSystem (Tank and effluent pH feed pump only - other pumps included in FBRs)*	Running			
23	PID07C	*Ferric Chloride*	Running			
24	PID07B	*Polymer Systems - DAF*	Running			
25	PID09	*Polymer System - Solids Dewatering (2 tanks, 2 centrifugal pumps, mixer, volumetric feeder)*	Running			
		Utility Systen				
26		**Compressed Air System**				
26.01	PID08	*West Compressor*	Running			
26.02	PID08	*East Compressor*	Standby			
26.03	PID08	*O2 Compressor*	Offline			
26.04	PID08	*Compressed Air Receiver Tank*	Running			
26.05	PID08	*Air Dryer*	Running			
26.06	PID08	*Oil Removal Filter*	Running			
26.07	PID08	*Particulate Filter*	Running			
27	PID16	*Oxygen System*	Offline			
28		*GWETS Plant Controls/ Siemens Controls*	Running		3	Installed pressure sensor to SCADA
29		*Well Control System/ Allen Bradley Controls*	Running			
30		*MCC FBR Pad*	Running			
31		*MCC in D-*	Running			
32		*MCC in EQ area*	Running			

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Sub-System	P&ID	Description	Status[1]	Checked	Criticality[2]	
		Miscellaneous System				
33		*Operations Office/Network*	Running			
34		*Laboratory Analyzers*	Running			
35		*Security Systems*	Running			
		Shelf Spare				
		Media Return Pump Rebuild Kit	In stock			
		pH Feed Pump	In stock			
		Nutrient Feed Pump	In stock			
		Electron Donor Feed Pump	In stock			
		Phosphoric Acid Feed Pump	In stock			
		Interceptor Well Pumps (4 each)	In stock			
		Seep Well Pump (1 each, same as Athens so total of 2)	In stock			
		Athens Road Well Pump (1 each, same as Seep so total of 2)	In stock			

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