

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:	November 7, 2024
Subject:	NERT – GWETS Operation Monthly Report – September 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 September 2024.

Summary of GWETS Operation

Envirogen Technologies, Inc. (ETI) mechanically operated the GWETS and ion exchange (IX) system normally in September 2024. Flow from PC-118, PC-119, C-120, PC-121, and PC-133 were routed to the IX system, bypassing all flow meters associated with the FBR plant for September. The flow rate to the IX system averaged approximately 211 gallons per minute (gpm). The flow rate to the FBR plant averaged approximately 888 gpm. At the end of the month, the filled GW-11 Pond volume was at 38.1 million gallons (MG), which would allow 16.9 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 August 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 0.87 mg/L for the month. The influent perchlorate concentration in the FBR plant averaged 45 mg/L for the month, with a maximum concentration of 49 mg/L.

During September, 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 September.

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

- The Interceptor Well Field (IWF) was shut down on September 2, 2024, from 8:53 am to 1:30 pm for scheduled maintenance to repair a leak on well I-AC. Maintenance was performed to correct the problem, and the well field returned to normal operations.
- The IWF was shut down on September 3, 2024, from 4:48 am to 10:32 am due to a tripped circuit breaker. Maintenance was performed to correct the problem, and the plant returned to normal operations.
- The Athen Road Well Field (AWF) was shut down on September 4, 2024, from 5:23 am to 6:33 am
 due to a failed circuit breaker. Maintenance was performed to correct the problem, and the well field
 returned to normal operations.
- Effluent diversion occurred on September 7, 2024, from 1:45 pm to 3:00 am to increase the GW-11 Pond level to maintain compliance with site permitting.
- Lift Station 1 (LS-1) was shut down on September 16, 2024, from 3:39 pm to 4:04 pm for scheduled
 maintenance on the vertical turbine pump. Maintenance repaired the pump packing, and LS-1
 returned to normal operations.
- Effluent diversion occurred on September 20, 2024, from 5:45 pm to 6:50 pm due to a failed control valve on FBR 1. Maintenance was performed to correct the problem, and the plant returned to normal operations.
- Effluent diversion occurred on September 26, 2024, from 7:00 am to 5:50 pm due to a leak on FBR 2 that was maintained within secondary containment. The FBR was temporarily taken out of service, a temporary epoxy repair was completed to correct the problem, and the FBR was returned to normal operation.
- The Seep Well Field (SWF) and IX Treatment Plant at LS-1 were shut down on September 29, 2024, from 8:45 am to 9:04 am and September 30, 2024, from 4:18 pm to 6:18 pm due to scheduled generator maintenance. Once the maintenance was completed, the SWF and IX Treatment Plant 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 August 2024, operations at the TSE plant continued to be idle. In April, NERT advised ETI that discussions with TIMET have commenced to resume groundwater flow to the TSE. TIMET is in the process of hiring a new treatment plant operator. NERT developed a new version of the Cooperative Agreement to facilitate system restart and provided it to TIMET for their review. The timeline for restarting the system will be established during the negotiation of the updated Cooperative Agreement.

5. Effluent Filtration System(EFS)

During September 2024, the EFS operated normally and produced approximately 432,000 gallons of filtered GWETS effluent, which supported the utility water requirements of GWETS operations.

6. Chromium Treatment Subsystem (CTS)

During September 2024, The CTS operated normally and treated approximately 2,073,430 gallons of groundwater.

7. Spills

A reportable spill occurred on September 1, 2024, from approximately 1:33 p.m. to 4:20 p.m. Upon physical examination, it was determined that the release was caused by a failed pipe fitting on the I-AC well discharge line above the IWF conveyance pipeline. This pipe fitting was at the transition from stainless steel pipe to schedule 40 polyvinyl chloride pipe. Undue stress was inadvertently put on a plastic fitting, which caused the fitting to fail. The stress was caused by recent well-maintenance activities and a section of pipe that was left unsupported. The spill was reported to the hotline on September 2, 2024, at 10:06 am and was assigned a spill number of 240902-01.

8. Maintenance

Major maintenance performed by ETI in the reporting month included:

- I. The #3 FBR valve controller was replaced.
- I. The #2 FBR ORP sensor was replaced and calibrated.
- The CTS mixer gearbox was replaced.
- M. The #8 FBR feed flow meter controller was replaced.
- V. The effluent turbidity meter was calibrated.
- M. The level control at the ferric tank was repaired.
- M. The electrical outlet at the polymer pump was repaired.

Preventative maintenance performed by ETI in the reporting month included:

- I Inspected Lift Station 1 for any defects and tested high-level floats.
- Inspected and lubricated FBR recycle pumps 1 through 4.
- L Cleaned, tested & inspected containment pad sump pumps.
- M. Inspected and lubricated FBR recycle pumps.
- V. Inspected chemical spill containment.
- M Safety Shower Inspection at D1 Building.
- M. Inspected compressed air system.

FBR Refurbishment

I FBR #3, is online and operational.

Facility Projects

- 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 have been completed. Specific details on inprogress items are provided below:
 - A (WA23-03) Dissolved Air Flotation (DAF) Vessel replacement
 - 1. The replacement DAF was delivered in December 2023, and installation began in September 2024 and will continue through October 2024.
 - B. Concrete Repair at various locations on the FBR pad
 - 1. Scheduling work with a selected contractor. Work is anticipated to be completed in December 2024.
- 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 T	rust I Groundwater Extraction	on 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}	711	11	0.0038	0.0032
AWF Total Extraction ^{1,2}	417	49	0.14	0.12
IWF Total Extraction ^{1,2}	41	331	5.2	5.0
AP Area Total Extraction ^{1,2}	7.8	477	0.20	0.14
Chromium Treatment Subsystem Effluent ^{3,4}	53	340	0.71	ND
GW-11 Influent ^{1,2}	10	31	0.074	0.067
FBR Influent ^{3,4}	888	45	0.16	0.044
Treatment System Extension Influent ^{3,4,5}	0.0	0.0	0.0	0.0

Notes:

ND = Not detected above laboratory method detection limit ($Cr(VI) = 0.25 \mu g/L$).

- 1: Perchlorate and chromium TR sampled monthly, values reported from Eurofins TestAmerica.
- 2: Chromium (VI) sampled monthly, values reported from Pace National.
- ${\tt 3: Perchlorate and chromium TR sampled weekly, values reported from Eurofins Test America.}$
- 4: Chromium (VI) sampled weekly, values reported from Pace National.
- 5: TSE offline from 09/01 to 09/30.
- 6: Sum of daily average flow for individual wells.
- 7: All concentrations reported are monthly flow weighted averages.

Table Updated: 10/16/2024

Nevada Environmental Response Tr	rust Groundwater Extraction and Trea	atment System I Monthly Stakeholde	er Metrics
Location ID	Perchlorate (lbs/month) ¹	Chromium (TR) (lbs/month) ¹	Chromium (VI) (lbs/month) ¹
SWF Total Extraction	2,272	0.81	0.69
AWF Total Extraction	7,386	21	18
IWF Total Extraction	4,913	76	74
AP Area Total Extraction	1,344	0.55	0.40
Chromium Treatment Subsystem Effluent	6,529	14	ND
GW-11 Influent	31	0.074	0.067
FBR Influent ¹	14,548	52	14
Treatment System Extension Influent ^{1,2}	0.0	0.0	0.0

Notes:

ND = Not detected above laboratory method detection limit (Cr(VI)= $0.25 \mu g/L$).

TR = Total Recoverable.

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

2: TSE offline from 09/01 to 09/30.

Table Updated: 10/16/2024

Figures

Operational Metrics

Figure 1 - GW-11 Pond Volume Through 09/30/2024

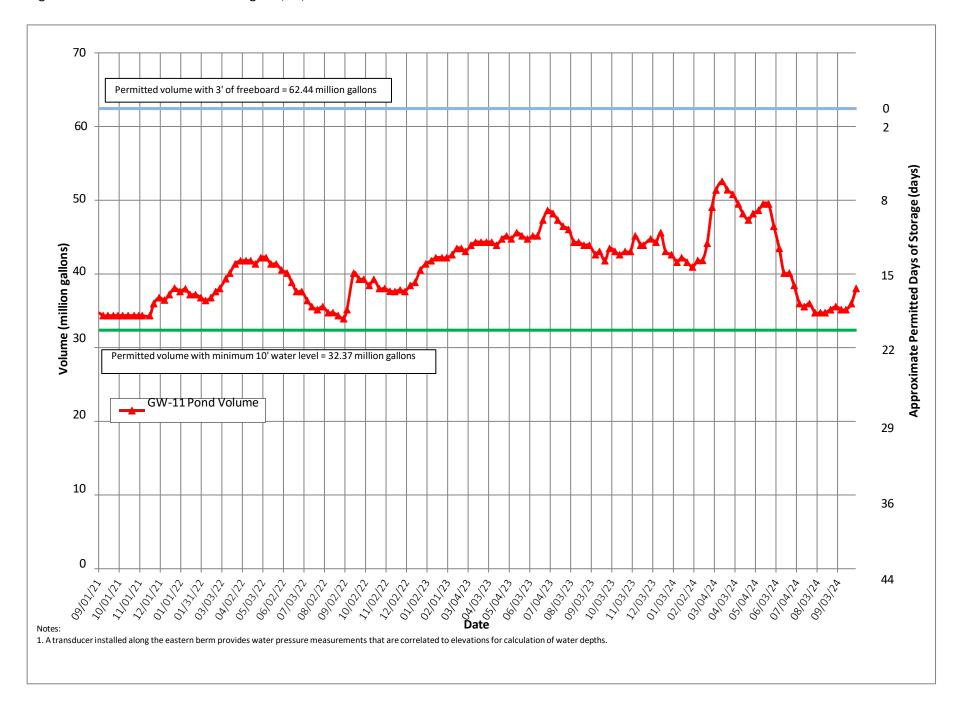
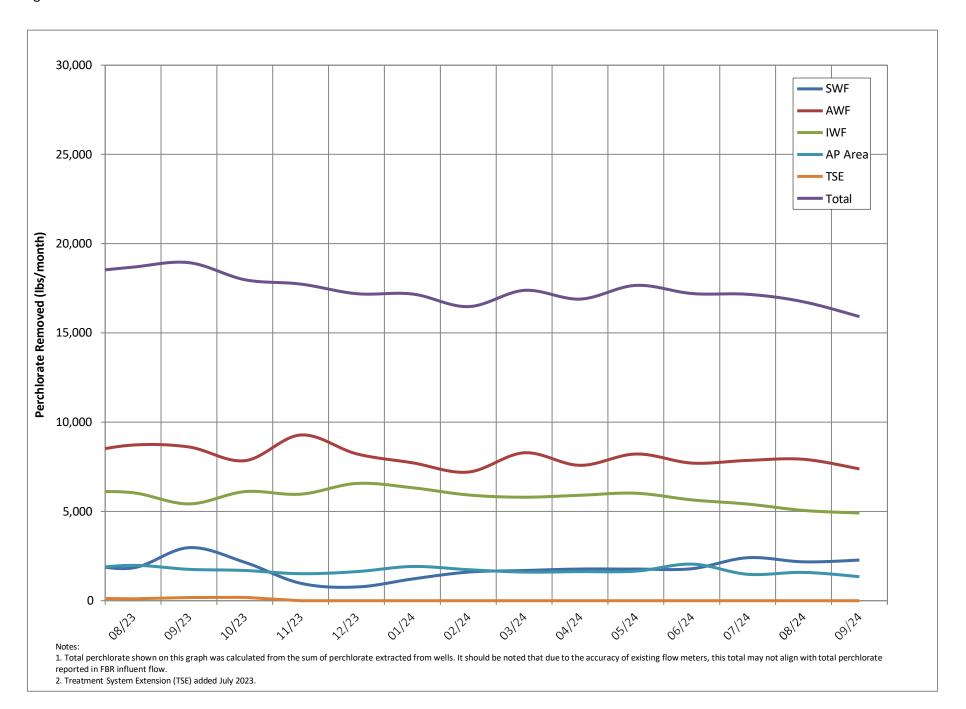


Figure 2 - Historical Perchlorate Mass Removed From Environment



Attachment A

NPDES Tracking Sheet (Prepared by Ramboll)

										Tre	ated Effluent at Ou	tfall 001							
	Cont	inuous	Daily Samples, cor	nposited weekly							Weekly Grab S	amples				Weekly,	collected sepa	arately	Quarte
	Flov	v Rate	Perchlo	orate		pН	Hexavalent Chromium	Total Chromium	Manganese	Total Iron	Total Inorganic Nitrogen (TIN)	Total Suspen (TSS		Total Ammonia as N	Total Phosphorus as P	вс	DD ₅ (inhibited)		Total Dissolv Solids (T
	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. (Ibs/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 Ma (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	8,00
4	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	-
24	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	3,90
	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	
	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	
	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	4,3
	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	
	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	
Į.	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	4,5
2024	1.45	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	
24 (month to date)	1.57	1.79	NA	NA	6.90	6.90	ND (<0.200)	8.5	450	440	0.73	16	50	2,5	2.0	ND (<5.0)	ND (<5.0)	26	N.

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	g/L	lbs/day	mg/l	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)	8.0	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	15	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)	8.0	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)	8.0	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)	8.0	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)	8.0	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)	8.0	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)	8.0	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)	8.0	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	93		
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	l	
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	· - /	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	0.008	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	NA	NA	NA	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		

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.

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).

 $^4\,\text{Original}$ 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]).

Last Updated: October 11, 2024

^{*} Additional samples were collected this week.

Attachment B

Equipment Tracking Form

Sub-P&ID Description Status1 Checked Criticality² System **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 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 Athens Road Well Field, 9 wells 2.01 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 Running 3.01 Influent Pipeline 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 IWF Well Field, 30 wells 4.01 Running 4.02 Ferrous Sulfate Feed System Running 4.03 Polymer Feed System Running 4.04 Running Clarifier 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 Standby 5.06 PID10A Raw Water Feed Pump - P102A 5.07 PID10A Raw Water Feed Pump - P102B Running 5.08 PID10A F-101 Filters Running 5.09 Offline PID10B Carbon Absorber - LGAC 201A

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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		3	FBR 2 ORP sensor replaced
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 pH Feed 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		3	FBR 3 valve controller replaced
7.02	PID01B	FBR	Running			
7.03	PID02B	First Stage Separator Tank - T2012	Running			
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	Running			
9.02	PID03B	FBR	Running			FBR 8 feed flow meter replaced
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			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	Filtrate 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		4	Level Control Replaced
24	PID07B	Polymer Systems - DAF	Running		4	Polymer pump electrical outlet was repaired.
25	PID09	Polymer System - Solids Dewatering (2 tanks, 2 centrifugal pumps, mixer, volumetric feeder)	Running			
		Utility System				
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			
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 Spares			
		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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