

United States Environmental Protection Agency Region 4
Enforcement and Compliance Assurance Division
Water Enforcement Branch
61 Forsyth Street, SW
Atlanta, Georgia 30303



Compliance Evaluation Inspection Report
Project No. CV-KY0025755 -10252022

Benham Sewage Treatment Plant
531 Railroad Street

NPDES Permit Number: KY0025755

Date of Inspection: October 25, 2022

Title and Approval Sheet

Title: Compliance Evaluation Inspection City of Benham, KY, Benham STP

Approving Official:

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COMPLIANCE EVALUATION INSPECTION REPORT
Benham STP, Project # CV-KY0025755-10252022

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1. Introduction

On October 25, 2022, representatives of the United States Environmental Protection Agency, Region 4 and the Kentucky Department for Environmental Protection (KyDEP) conducted a Compliance Evaluation Inspection (CEI) on the Benham Sewage Treatment Plant (STP), owned and operated by the City of Benham (City). The inspection was conducted under the authority of Section 308 of the Clean Water Act (CWA), as amended. This report provides a summary of the inspection findings.

2. Participants

Name	Position	Number
Dennis Sayre	EPA Inspector	404-562-9756
William Joyner	EPA Inspector	404-562-8795
Robert Miller	KyDEP London Regional Office Manager	606-330-2080
Ryan Wilson	KyDEP Environmental Scientist IV	606-330-2080
Howard White	Mayor, City of Benham	606-589-2106
Jeremy Shepherd	STP Operator	606-589-2106

3. Facility Description

The STP is an activated sludge wastewater treatment system with an average design flow of 0.250 million gallons per day (MGD), Figure 1. Treatment units on site include a package plant with aeration basin and clarifier chambers, a commutator and coarse bar screen, Parshall flume, ultrasonic flow meter, and a grit removal system at the headworks, UV disinfection system, sludge digester tank, and sludge drying beds.



Figure 1: Aerial Display of the STP

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4. Inspection Procedures

The overall objective of this CEI was to evaluate the condition and operational performance of the STP and the City's self-monitoring program and to offer compliance assistance as needed. Specific tasks included conducting an opening conference, interviews with STP staff, reviewing Discharge Monitoring Reports (DMRs) and other STP records, conducting a site visit throughout the STP, and a closing conference.

5. Findings & Conclusions

The City has been in Significant Non-Compliance (SNC) for 12 of the past 12 calendar quarters, due to various National Pollutant Discharge Elimination System (NPDES) permit effluent limit exceedances, to include Ammonia [as Nitrogen] (NH₃-N), Carbonaceous Biochemical Oxygen Demand [5-day] (CBOD₅), and Total Suspended Solids (TSS). The City is also in SNC due to noncompliance with a KyDEP Agreed Order, No. KY-DOW 150087 (AO), issued to the City by the Commonwealth on April 21, 2015 and amended on November 15, 2018. The City has also been in non-compliance with several other permit effluent limits as noted Appendix 1, for TSS [Percent Removal], TSS loading [lb/day], CBOD₅ [Percent Removal], NH₃- N loading [lb/day], Suspended Solids (SS) [Percent Removal], E. coli, and Dissolved Oxygen (DO).

A. Permit Review

The City's NPDES permit has an effective date of August 1, 2021 and expires on July 31, 2026. The permit has report-only requirements for flow, Total Nitrogen (TN), and Total Phosphorus (TP) and sets forth limits on the allowable levels of TSS, SS, CBOD₅, NH₃-N, DO, E. coli, Total Residual Chlorine (TRC), and pH. Influent and effluent flow requires continuous monitoring.

B. Records and Reports

Appendix 1 includes a list of effluent exceedances from October 2019 through September 2022. ICIS data can be reviewed on the EPA's Compliance History Online (ECHO)¹ public website. Review of sampling and Chain of Custody (COC) sheets are discussed below.

C. Flow Measurement

A Parshall flume and ultrasonic flow meter is used to measure influent flow rates. The effluent flow is measured using an ultrasonic flow meter with a 90-degree V-notch weir. Effluent flow measured 55.754 gallons per minute (instantaneous) or approximately 0.08 MGD at the time of inspection. No calibration dates were available for the ultrasonic flow meters. Email exchanged with the operator after the inspection indicates that calibration was scheduled for both flow meters by CITCO Water representatives on December 15, 2022.

¹ <https://echo.epa.gov>

D. Sampling

Both the influent and effluent composite samplers were in a state of disrepair. Functionality could not be tested due to severely deteriorated and broken suction tubes, Figures 2 and 3.



Figure 2: Influent composite sampler. The photo on the right is the suction line from the sampler.



Figure 3: Effluent composite sampler.

The operator has been providing grab samples for analysis of CBOD₅, TSS, Nitrate/Nitrites, TN and TP, and for NH₃-N.

The EPA reviewed the sampling COC sheet and subsequent lab report from Pace Analytical for samples collected on September 8, 2022. Effluent analytes tested included CBOD₅, TSS, TN and

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TP, NH₃-N, DO, pH, and temperature; NH₃-N and DO exceeds the permit effluent limit. The COC sheet confirmed that all analytes were collected as grab samples.

E. Site Visit (Operation and Maintenance)

(Refer to Attachment 2 for cited photographs)

The commutator at the headworks was nonoperational and has been nonoperational for several years (Photo 1). The grit collection box was missing from the cyclone grit removal system (Photo 2). One of two aeration pumps for the package plant was nonoperational.

Influent flow observed in the influent box at the aeration chamber appeared very dilute (low in CBOD₅, see Photo 3). The Mixed Liquor Suspended Solids (MLSS) in the aeration chamber also appeared to be diluted (Photo 4). Black clumps of solids were observed at the surface of one of the aeration chambers that was not being aerated, which is indicative of septic sludge conditions (Photo 5). Excessive solids were observed floating in the clarifier chambers (Photo 6).

The Waste Activated Sludge (WAS) line was clogged and nonoperational. Work had begun to correct the WAS line issue. As of December 14, 2022, the WAS line was replaced and routed from the package plant to a sludge wet well (Photos 7 and 8). The operator stated that the plan is to pump the sludge from the sludge wet well to a structure that will be used as a sludge digester/thickener. The structure was previously used as a clarifier that was decommissioned after the most recent plant reconfiguration in the 1990's.

The exterior sidewall of the package plant at the inflow pipe is experiencing excessive corrosion along the metal weld joints (Photos 9 and 10).

G. Sludge Handling

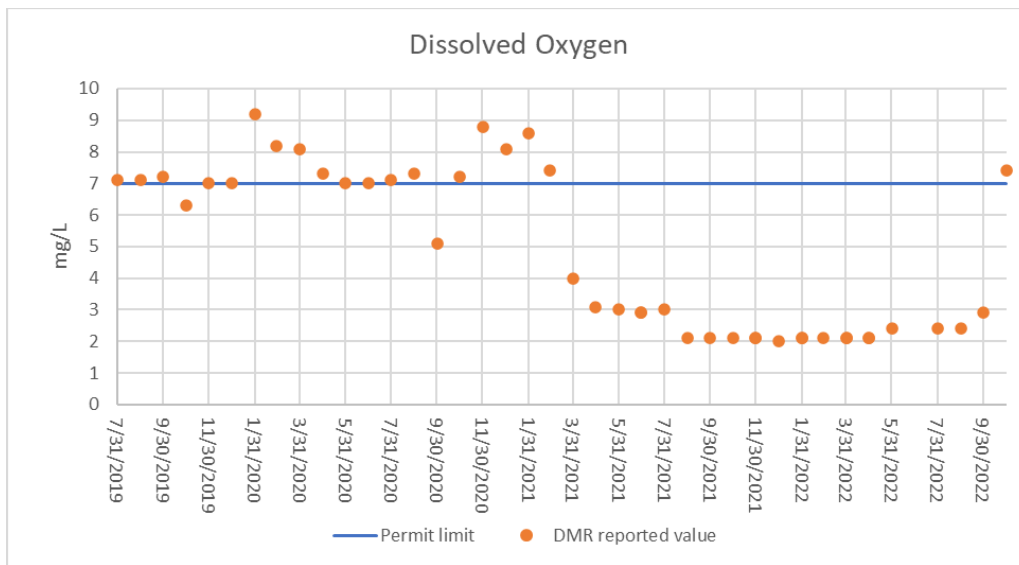
The STP operator is currently reconfiguring the STP sludge handling process to include adding a digester as discussed above. There was no sludge hauling records onsite and the current operator did not know when the sludge beds were last used.

6. Discussion

The City currently employs one STP operator, and the EPA recognizes that the current STP operator was hired by the City about one month prior to the inspection. The STP effluent has been experiencing chronically low DO (below permit limits of a minimum of 7 mg/L) since March 2021. Figure 1 is a chart showing DO values reported from July 2019 through October 2022 that shows 18 consecutive months of DO permit effluent permit violations.

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Appendix A. List of effluent violations.

Monitoring Period End Date	Parameter	Permit limit	DMR Reported Value	Units	Reporting Frequency	% Over Limit	Violation Severity
1/31/2020	TSS	63	89	lb/d	MO AVG	41	Noncompliance Effluent Violation
2/29/2020	TSS	63	68	lb/d	MO AVG	8	Noncompliance Effluent Violation
10/31/2020	TSS	63	367	lb/d	MO AVG	483	Significant Noncompliance
11/30/2020	TSS	63	69	lb/d	MO AVG	10	Noncompliance Effluent Violation
12/31/2020	TSS	63	78	lb/d	MO AVG	24	Noncompliance Effluent Violation
7/31/2022	TSS	63	87.2	lb/d	MO AVG	38	Noncompliance Effluent Violation
1/31/2020	TSS	94.5	169.5	lb/d	MX WK AV	79	Noncompliance Effluent Violation
2/29/2020	TSS	94.5	179.7	lb/d	MX WK AV	90	Noncompliance Effluent Violation
10/31/2020	TSS	94.5	1313.2	lb/d	MX WK AV	1290	Noncompliance Effluent Violation
11/30/2020	TSS	94.5	109.8	lb/d	MX WK AV	16	Noncompliance Effluent Violation
12/31/2020	TSS	94.5	252.9	lb/d	MX WK AV	168	Noncompliance Effluent Violation
4/30/2021	TSS	94.5	167.9	lb/d	MX WK AV	78	Noncompliance Effluent Violation
2/28/2022	TSS	94.5	113.7	lb/d	MX WK AV	20	Noncompliance Effluent Violation
7/31/2022	TSS	94.5	223.1	lb/d	MX WK AV	136	Noncompliance Effluent Violation
9/30/2020	TSS	30	36	mg/L	MO AVG	20	Noncompliance Effluent Violation
10/31/2020	TSS	30	284	mg/L	MO AVG	847	Significant Noncompliance
11/30/2020	TSS	30	46	mg/L	MO AVG	53	Significant Noncompliance
12/31/2020	TSS	30	58	mg/L	MO AVG	93	Significant Noncompliance
5/31/2021	TSS	30	36	mg/L	MO AVG	20	Noncompliance Effluent Violation
6/30/2021	TSS	30	40	mg/L	MO AVG	33	Noncompliance Effluent Violation
7/31/2021	TSS	30	55	mg/L	MO AVG	83	Significant Noncompliance
8/31/2021	TSS	30	48	mg/L	MO AVG	60	Significant Noncompliance
4/30/2022	TSS	30	51	mg/L	MO AVG	70	Significant Noncompliance
5/31/2022	TSS	30	63	mg/L	MO AVG	110	Significant Noncompliance
7/31/2022	TSS	30	107	mg/L	MO AVG	257	Significant Noncompliance
8/31/2022	TSS	30	100	mg/L	MO AVG	233	Significant Noncompliance
9/30/2020	TSS	45	51	mg/L	MX WK AV	13	Noncompliance Effluent Violation
10/31/2020	TSS	45	966	mg/L	MX WK AV	2047	Noncompliance Effluent Violation
11/30/2020	TSS	45	58	mg/L	MX WK AV	29	Noncompliance Effluent Violation
12/31/2020	TSS	45	114	mg/L	MX WK AV	153	Noncompliance Effluent Violation
5/31/2021	TSS	45	57	mg/L	MX WK AV	27	Noncompliance Effluent Violation
6/30/2021	TSS	45	58	mg/L	MX WK AV	29	Noncompliance Effluent Violation
8/31/2021	TSS	45	73	mg/L	MX WK AV	62	Noncompliance Effluent Violation
4/30/2022	TSS	45	81	mg/L	MX WK AV	80	Noncompliance Effluent Violation
5/31/2022	TSS	45	123	mg/L	MX WK AV	173	Noncompliance Effluent Violation
7/31/2022	TSS	45	304	mg/L	MX WK AV	576	Noncompliance Effluent Violation
8/31/2022	TSS	45	250	mg/L	MX WK AV	456	Noncompliance Effluent Violation
Monitoring Period End Date	Parameter	Permit limit	DMR Reported Value	Units	Reporting Frequency	% Over Limit	Violation Severity

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1/31/2020	SS	85	30	% Removal	MO AV MN	367	Noncompliance Effluent Violation
2/29/2020	SS	85	73	% Removal	MO AV MN	80	Noncompliance Effluent Violation
5/31/2020	SS	85	79	% Removal	MO AV MN	40	Noncompliance Effluent Violation
6/30/2020	SS	85	78	% Removal	MO AV MN	47	Noncompliance Effluent Violation
7/31/2020	SS	85	84	% Removal	MO AV MN	7	Noncompliance Effluent Violation
8/31/2020	SS	85	78	% Removal	MO AV MN	47	Noncompliance Effluent Violation
9/30/2020	SS	85	77	% Removal	MO AV MN	53	Noncompliance Effluent Violation
10/31/2020	SS	85	0	% Removal	MO AV MN	567	Noncompliance Effluent Violation
11/30/2020	SS	85	40	% Removal	MO AV MN	300	Noncompliance Effluent Violation
12/31/2020	SS	85	0	% Removal	MO AV MN	567	Noncompliance Effluent Violation
1/31/2021	SS	85	78	% Removal	MO AV MN	47	Noncompliance Effluent Violation
2/28/2021	SS	85	72	% Removal	MO AV MN	87	Noncompliance Effluent Violation
4/30/2021	SS	85	72	% Removal	MO AV MN	87	Noncompliance Effluent Violation
5/31/2021	SS	85	35	% Removal	MO AV MN	333	Noncompliance Effluent Violation
7/31/2021	SS	85	71	% Removal	MO AV MN	93	Noncompliance Effluent Violation
8/31/2021	SS	85	80	% Removal	MO AV MN	33	Noncompliance Effluent Violation
1/31/2022	SS	85	78	% Removal	MO AV MN	47	Noncompliance Effluent Violation
3/31/2022	SS	85	82	% Removal	MO AV MN	20	Noncompliance Effluent Violation
4/30/2022	SS	85	78	% Removal	MO AV MN	47	Noncompliance Effluent Violation
5/31/2022	SS	85	63	% Removal	MO AV MN	147	Noncompliance Effluent Violation
7/31/2022	SS	85	0	% Removal	MO AV MN		Noncompliance Effluent Violation
8/31/2022	SS	85	64	% Removal	MO AV MN	140	Noncompliance Effluent Violation
9/30/2022	SS	85	72	% Removal	MO AV MN	87	Noncompliance Effluent Violation
12/31/2020	pH	6	2.61	SU	MINIMUM		Noncompliance Effluent Violation
9/30/2020	NH3-N	8.34	22.54	lb/d	MO AVG	170	Significant Noncompliance
10/31/2020	NH3-N	8.34	11.2	lb/d	MO AVG	34	Noncompliance Effluent Violation
6/30/2021	NH3-N	8.34	10.25	lb/d	MO AVG	23	Noncompliance Effluent Violation
7/31/2021	NH3-N	8.34	12.27	lb/d	MO AVG	47	Significant Noncompliance
8/31/2021	NH3-N	8.3	15.03	lb/d	MO AVG	81	Significant Noncompliance
9/30/2021	NH3-N	8.3	12.06	lb/d	MO AVG	45	Significant Noncompliance
10/31/2021	NH3-N	8.3	11.81	lb/d	MO AVG	42	Significant Noncompliance
5/31/2022	NH3-N	8.3	9.73	lb/d	MO AVG	17	Noncompliance Effluent Violation
9/30/2020	NH3-N	12.5	29.58	lb/d	MX WK AV	137	Noncompliance Effluent Violation
10/31/2020	NH3-N	12.5	18.1	lb/d	MX WK AV	45	Noncompliance Effluent Violation
4/30/2021	NH3-N	31.4	32.8	lb/d	MX WK AV	4	Noncompliance Effluent Violation
6/30/2021	NH3-N	12.5	19.2	lb/d	MX WK AV	54	Noncompliance Effluent Violation

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Monitoring Period End Date	Parameter	Permit limit	DMR Reported Value	Units	Reporting Frequency	% Over Limit	Violation Severity
7/31/2021	NH3-N	12.5	18.6	lb/d	MX WK AV	49	Noncompliance Effluent Violation
8/31/2021	NH3-N	12.5	22.84	lb/d	MX WK AV	83	Noncompliance Effluent Violation
9/30/2021	NH3-N	12.5	16.66	lb/d	MX WK AV	33	Noncompliance Effluent Violation
10/31/2021	NH3-N	12.5	16.95	lb/d	MX WK AV	36	Noncompliance Effluent Violation
5/31/2022	NH3-N	12.5	14.3	lb/d	MX WK AV	14	Noncompliance Effluent Violation
7/31/2022	NH3-N	12.5	12.77	lb/d	MX WK AV	2	Noncompliance Effluent Violation
6/30/2020	NH3-N	6	12.4	mg/L	DAILY MX	107	Noncompliance Effluent Violation
7/31/2020	NH3-N	6	9.5	mg/L	DAILY MX	58	Noncompliance Effluent Violation
8/31/2020	NH3-N	6	8.4	mg/L	DAILY MX	40	Significant Noncompliance
9/30/2020	NH3-N	6	25.7	mg/L	DAILY MX	328	Noncompliance Effluent Violation
10/31/2020	NH3-N	6	12.2	mg/L	DAILY MX	103	Noncompliance Effluent Violation
5/31/2021	NH3-N	6	9	mg/L	DAILY MX	50	Noncompliance Effluent Violation
6/30/2021	NH3-N	6	17.7	mg/L	DAILY MX	195	Noncompliance Effluent Violation
7/31/2021	NH3-N	6	34.3	mg/L	DAILY MX	472	Noncompliance Effluent Violation
8/31/2021	NH3-N	6	22.9	mg/L	DAILY MX	282	Noncompliance Effluent Violation
9/30/2021	NH3-N	6	23.9	mg/L	DAILY MX	298	Noncompliance Effluent Violation
10/31/2021	NH3-N	6	20.8	mg/L	DAILY MX	247	Noncompliance Effluent Violation
11/30/2021	NH3-N	15	19.6	mg/L	DAILY MX	31	Noncompliance Effluent Violation
12/31/2021	NH3-N	15	17.9	mg/L	DAILY MX	19	Noncompliance Effluent Violation
2/28/2022	NH3-N	15	19.5	mg/L	DAILY MX	30	Noncompliance Effluent Violation
4/30/2022	NH3-N	15	18.2	mg/L	DAILY MX	21	Noncompliance Effluent Violation
5/31/2022	NH3-N	6	19.3	mg/L	DAILY MX	222	Noncompliance Effluent Violation
7/31/2022	NH3-N	6	17.4	mg/L	DAILY MX	190	Noncompliance Effluent Violation
8/31/2022	NH3-N	6	12.9	mg/L	DAILY MX	115	Noncompliance Effluent Violation
9/30/2022	NH3-N	6	19.5	mg/L	DAILY MX	225	Noncompliance Effluent Violation
6/30/2020	NH3-N	4	6.5	mg/L	MO AVG	63	Significant Noncompliance
7/31/2020	NH3-N	4	5.9	mg/L	MO AVG	48	Significant Noncompliance
8/31/2020	NH3-N	4	4.2	mg/L	MO AVG	5	Noncompliance Effluent Violation
9/30/2020	NH3-N	4	16.9	mg/L	MO AVG	323	Significant Noncompliance
10/31/2020	NH3-N	4	10	mg/L	MO AVG	150	Significant Noncompliance
5/31/2021	NH3-N	4	5.7	mg/L	MO AVG	43	Significant Noncompliance
6/30/2021	NH3-N	4	13.4	mg/L	MO AVG	235	Significant Noncompliance
7/31/2021	NH3-N	4	21.7	mg/L	MO AVG	443	Significant Noncompliance
8/31/2021	NH3-N	4	18.1	mg/L	MO AVG	353	Significant Noncompliance
9/30/2021	NH3-N	4	17.7	mg/L	MO AVG	343	Significant Noncompliance
10/31/2021	NH3-N	4	16.3	mg/L	MO AVG	308	Significant Noncompliance

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11/30/2021	NH3-N	10	14.6	mg/L	MO AVG	46	Significant Noncompliance
12/31/2021	NH3-N	10	11.9	mg/L	MO AVG	19	Significant Noncompliance
2/28/2022	NH3-N	10	10.3	mg/L	MO AVG	3	Noncompliance Effluent Violation
4/30/2022	NH3-N	10	13.3	mg/L	MO AVG	33	Noncompliance Effluent Violation
5/31/2022	NH3-N	4	11.5	mg/L	MO AVG	188	Significant Noncompliance
7/31/2022	NH3-N	4	10.5	mg/L	MO AVG	163	Significant Noncompliance
8/31/2022	NH3-N	4	8.4	mg/L	MO AVG	110	Significant Noncompliance
9/30/2022	NH3-N	4	14.1	mg/L	MO AVG	253	Significant Noncompliance
3/31/2020	E. coli	130	132	#/100mL	30DA GEO	2	Noncompliance Effluent Violation
4/30/2020	E. coli	130	200	#/100mL	30DA GEO	54	Noncompliance Effluent Violation
9/30/2020	E. coli	130	60000	#/100mL	30DA GEO	46054	Noncompliance Effluent Violation
10/31/2020	E. coli	130	60000	#/100mL	30DA GEO	46054	Noncompliance Effluent Violation
11/30/2020	E. coli	130	21617	#/100mL	30DA GEO	16528	Noncompliance Effluent Violation
12/31/2020	E. coli	130	60000	#/100mL	30DA GEO	46054	Noncompliance Effluent Violation
1/31/2021	E. coli	130	60000	#/100mL	30DA GEO	46054	Noncompliance Effluent Violation
2/28/2021	E. coli	130	60000	#/100mL	30DA GEO	46054	Noncompliance Effluent Violation
3/31/2021	E. coli	130	60000	#/100mL	30DA GEO	46054	Noncompliance Effluent Violation
4/30/2021	E. coli	130	2420	#/100mL	30DA GEO		Noncompliance Effluent Violation
5/31/2021	E. coli	130	60000	#/100mL	30DA GEO	46054	Noncompliance Effluent Violation
6/30/2021	E. coli	130	60000	#/100mL	30DA GEO	46054	Noncompliance Effluent Violation
7/31/2021	E. coli	130	60000	#/100mL	30DA GEO	46054	Noncompliance Effluent Violation
8/31/2021	E. coli	130	60000	#/100mL	30DA GEO	46054	Noncompliance Effluent Violation
9/30/2021	E. coli	130	60000	#/100mL	30DA GEO	46054	Noncompliance Effluent Violation
10/31/2021	E. coli	130	60000	#/100mL	30DA GEO	46054	Noncompliance Effluent Violation
11/30/2021	E. coli	130	60000	#/100mL	30DA GEO	46054	Noncompliance Effluent Violation
12/31/2021	E. coli	130	60000	#/100mL	30DA GEO	46054	Noncompliance Effluent Violation
1/31/2022	E. coli	130	60000	#/100mL	30DA GEO	46054	Noncompliance Effluent Violation
2/28/2022	E. coli	130	60000	#/100mL	30DA GEO	46054	Noncompliance Effluent Violation
3/31/2022	E. coli	130	60000	#/100mL	30DA GEO	46054	Noncompliance Effluent Violation
4/30/2022	E. coli	130	60000	#/100mL	30DA GEO	46054	Noncompliance Effluent Violation
5/31/2022	E. coli	130	60000	#/100mL	30DA GEO	46054	Noncompliance Effluent Violation
7/31/2022	E. coli	130	60000	#/100mL	30DA GEO	46054	Noncompliance Effluent Violation
8/31/2022	E. coli	130	60000	#/100mL	30DA GEO	46054	Noncompliance Effluent Violation
9/30/2022	E. coli	130	9921	#/100mL	30DA GEO	7532	Noncompliance Effluent Violation
10/31/2019	E. coli	240	727	#/100mL	7 DA GEO	203	Noncompliance Effluent Violation
12/31/2019	E. coli	240	60000	#/100mL	7 DA GEO	24900	Noncompliance Effluent Violation

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1/31/2020	E. coli	240	2420	#/100mL	7 DA GEO	908	Noncompliance Effluent Violation
2/29/2020	E. coli	240	60000	#/100mL	7 DA GEO	24900	Noncompliance Effluent Violation
3/31/2020	E. coli	240	60000	#/100mL	7 DA GEO	24900	Noncompliance Effluent Violation
4/30/2020	E. coli	240	60000	#/100mL	7 DA GEO	24900	Noncompliance Effluent Violation
5/31/2020	E. coli	240	361	#/100mL	7 DA GEO	50	Noncompliance Effluent Violation
7/31/2020	E. coli	240	60000	#/100mL	7 DA GEO	24900	Noncompliance Effluent Violation
9/30/2020	E. coli	240	60000	#/100mL	7 DA GEO	24900	Noncompliance Effluent Violation
10/31/2020	E. coli	240	60000	#/100mL	7 DA GEO	24900	Noncompliance Effluent Violation
11/30/2020	E. coli	240	60000	#/100mL	7 DA GEO	24900	Noncompliance Effluent Violation
12/31/2020	E. coli	240	60000	#/100mL	7 DA GEO	24900	Noncompliance Effluent Violation
1/31/2021	E. coli	240	60000	#/100mL	7 DA GEO	24900	Noncompliance Effluent Violation
2/28/2021	E. coli	240	60000	#/100mL	7 DA GEO		Noncompliance Effluent Violation
3/31/2021	E. coli	240	60000	#/100mL	7 DA GEO	24900	Noncompliance Effluent Violation
4/30/2021	E. coli	240	2420	#/100mL	7 DA GEO		Noncompliance Effluent Violation
5/31/2021	E. coli	240	60000	#/100mL	7 DA GEO	24900	Noncompliance Effluent Violation
6/30/2021	E. coli	240	60000	#/100mL	7 DA GEO	24900	Noncompliance Effluent Violation
7/31/2021	E. coli	240	60000	#/100mL	7 DA GEO	24900	Noncompliance Effluent Violation
8/31/2021	E. coli	240	60000	#/100mL	7 DA GEO	24900	Noncompliance Effluent Violation
9/30/2021	E. coli	240	60000	#/100mL	7 DA GEO	24900	Noncompliance Effluent Violation
10/31/2021	E. coli	240	60000	#/100mL	7 DA GEO	24900	Noncompliance Effluent Violation
11/30/2021	E. coli	240	60000	#/100mL	7 DA GEO	24900	Noncompliance Effluent Violation
12/31/2021	E. coli	240	60000	#/100mL	7 DA GEO	24900	Noncompliance Effluent Violation
1/31/2022	E. coli	240	60000	#/100mL	7 DA GEO	24900	Noncompliance Effluent Violation
2/28/2022	E. coli	240	60000	#/100mL	7 DA GEO	24900	Noncompliance Effluent Violation
3/31/2022	E. coli	240	60000	#/100mL	7 DA GEO	24900	Noncompliance Effluent Violation
4/30/2022	E. coli	240	60000	#/100mL	7 DA GEO	24900	Noncompliance Effluent Violation
5/31/2022	E. coli	240	60000	#/100mL	7 DA GEO	24900	Noncompliance Effluent Violation
8/31/2022	E. coli	240	60000	#/100mL	7 DA GEO	24900	Noncompliance Effluent Violation
9/30/2022	E. coli	240	60000	#/100mL	7 DA GEO	24900	Noncompliance Effluent Violation
10/31/2019	DO	7	6.3	mg/L	INST MIN	10	Noncompliance Effluent Violation
9/30/2020	DO	7	5.1	mg/L	INST MIN	27	Noncompliance Effluent Violation
3/31/2021	DO	7	4	mg/L	INST MIN	43	Noncompliance Effluent Violation
4/30/2021	DO	7	3.1	mg/L	INST MIN	56	Noncompliance Effluent Violation
5/31/2021	DO	7	3	mg/L	INST MIN	57	Noncompliance Effluent Violation
6/30/2021	DO	7	2.9	mg/L	INST MIN	59	Noncompliance Effluent Violation
7/31/2021	DO	7	3	mg/L	INST MIN	57	Noncompliance Effluent Violation
8/31/2021	DO	7	2.1	mg/L	INST MIN	70	Noncompliance Effluent Violation

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Monitoring Period End Date	Parameter	Permit limit	DMR Reported Value	Units	Reporting Frequency	% Over Limit	Violation Severity
9/30/2021	DO	7	2.1	mg/L	INST MIN	70	Noncompliance Effluent Violation
10/31/2021	DO	7	2.1	mg/L	INST MIN	70	Noncompliance Effluent Violation
11/30/2021	DO	7	2.1	mg/L	INST MIN	70	Noncompliance Effluent Violation
12/31/2021	DO	7	2	mg/L	INST MIN	71	Noncompliance Effluent Violation
1/31/2022	DO	7	2.1	mg/L	INST MIN	70	Noncompliance Effluent Violation
2/28/2022	DO	7	2.1	mg/L	INST MIN	70	Noncompliance Effluent Violation
3/31/2022	DO	7	2.1	mg/L	INST MIN	70	Noncompliance Effluent Violation
4/30/2022	DO	7	2.1	mg/L	INST MIN	70	Noncompliance Effluent Violation
5/31/2022	DO	7	2.4	mg/L	INST MIN	66	Noncompliance Effluent Violation
7/31/2022	DO	7	2.4	mg/L	INST MIN	66	Noncompliance Effluent Violation
8/31/2022	DO	7	2.4	mg/L	INST MIN	66	Noncompliance Effluent Violation
9/30/2022	DO	7	2.9	mg/L	INST MIN	59	Noncompliance Effluent Violation
2/28/2021	CBOD5	85	82	% Removal	MO AV MN	20	Noncompliance Effluent Violation
3/31/2021	CBOD5	85	84	% Removal	MO AV MN	7	Noncompliance Effluent Violation
5/31/2021	CBOD5	85	62	% Removal	MO AV MN	153	Noncompliance Effluent Violation
6/30/2021	CBOD5	85	83	% Removal	MO AV MN	13	Noncompliance Effluent Violation
7/31/2021	CBOD5	85	81	% Removal	MO AV MN	27	Noncompliance Effluent Violation
2/28/2022	CBOD5	85	72	% Removal	MO AV MN	87	Noncompliance Effluent Violation
3/31/2022	CBOD5	85	84	% Removal	MO AV MN	7	Noncompliance Effluent Violation
8/31/2022	CBOD5	85	61	% Removal	MO AV MN	160	Noncompliance Effluent Violation
2/28/2022	CBOD5	78.3	90	lb/d	MX WK AV	15	Noncompliance Effluent Violation
8/31/2022	CBOD5	78.3	87	lb/d	MX WK AV	11	Noncompliance Effluent Violation
5/31/2021	CBOD5	25	48	mg/L	MO AVG	92	Significant Noncompliance
6/30/2021	CBOD5	25	40	mg/L	MO AVG	60	Significant Noncompliance
7/31/2021	CBOD5	25	55	mg/L	MO AVG	120	Significant Noncompliance
12/31/2021	CBOD5	25	27	mg/L	MO AVG	8	Noncompliance Effluent Violation
2/28/2022	CBOD5	25	27	mg/L	MO AVG	8	Noncompliance Effluent Violation
5/31/2022	CBOD5	25	38	mg/L	MO AVG	52	Significant Noncompliance
8/31/2022	CBOD5	25	90	mg/L	MO AVG	260	Significant Noncompliance
10/31/2020	CBOD5	37.5	43	mg/L	MX WK AV	15	Noncompliance Effluent Violation
5/31/2021	CBOD5	37.5	90	mg/L	MX WK AV	140	Noncompliance Effluent Violation
6/30/2021	CBOD5	37.5	53	mg/L	MX WK AV	41	Noncompliance Effluent Violation
7/31/2021	CBOD5	37.5	76	mg/L	MX WK AV	103	Noncompliance Effluent Violation
8/31/2021	CBOD5	37.5	38	mg/L	MX WK AV	1	Noncompliance Effluent Violation
12/31/2021	CBOD5	37.5	42	mg/L	MX WK AV	12	Noncompliance Effluent Violation
2/28/2022	CBOD5	37.5	43	mg/L	MX WK AV	15	Noncompliance Effluent Violation
5/31/2022	CBOD5	37.5	67	mg/L	MX WK AV	79	Noncompliance Effluent Violation
8/31/2022	CBOD5	37.5	237	mg/L	MX WK AV	532	Noncompliance Effluent Violation

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Photo 3. Influent box discharges into the aeration basin.



Photo 4. Aeration basin MLSS appears very dilute.

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Photo 5. Aeration chamber. Black clumps of solids floating at the surface.



Photo 6. Clarifier chamber. Solids and vegetative growth observed.

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Photo 7. Trench used to replace WAS line.



Photo 8. After WAS line replacement.

Note: Photos 7 and 8 provided by the STP operator on November 1, 2022.



Photos 9 and 10. Exterior side wall of the package plant. Presence of corrosion.