

July 29, 2021

Mr. Jeff Gove, Director of Compliance and Enforcement
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105
Attn. Title V Reports
Transmitted by e-mail to compliance@baaqmd.gov

TV Tracking #: 276

1. RECEIVED IN ENFORCEMENT: 07/29/2021

Dear Mr. Gove:

RE: Semiannual Major Facility Review (Title V) Monitoring Report for the East Bay
Municipal Utility District (EBMUD) Main Wastewater Treatment Plant
(Facility #A0591)

Attached is the semiannual monitoring report for the EBMUD Main Wastewater Treatment Plant (Facility #A0591) as required under Section I.F of the facilities Major Facility Review Permit issued November 7, 2019. The report covers the period from January 1, 2021 – June 30, 2021. Three issues of non-compliance were identified and are described below.

1. On April 24, 2021, approximately 283,000 cubic feet of digester gas was released from Digester 3 after the membrane cover failed. The new membrane cover was undergoing operational testing by the contractor after installation at the time of the failure. The failure point appears to be at the anchorage of the cover to the concrete wall of the digester although the investigation into the cause has not been completed yet. The digester was valved out of service and remained out of service during the rest of the reporting period. A Reportable Compliance Activity form was filed with BAAQMD on April 24, 2021, for this incident.
2. On May 18, 2021, approximately 91,343 cubic feet of digester gas was released from a sample port on the roof of Digester 6. The sample port lid opened when the digester was being returned to service, possibly because it was not properly secured prior to returning gas to the digester. The lid was secured shortly after the release was discovered and several procedural steps such as improving a Standard Operating Procedure and Pre-Startup Checklist have been made to prevent a reoccurrence. BAAQMD issued Notice of Violation A59816 for this gas release.
3. On June 15, 2021, a minor digester gas leak (1 cubic foot per minute) was discovered on a cracked plexiglass lid of a view port on Digester 8. A new gasket and cover were fabricated and installed over the cracked plexiglass to stop the leak on June 18, 2021. Approximately 4,300 cubic feet of digester gas is believed to have been released over a

Jeff Gove, Director of Compliance and Enforcement

July 29, 2021

Page 2

four-day period from this leak. A Reportable Compliance Activity form was filed with BAAQMD on June 18, 2021, regarding this leak.

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in this report are true, accurate and complete.

If you have any questions about this report, please call Chris Dembiczak at (510) 287-0509.

Sincerely,



Eileen M. White, P.E.
Director of Wastewater

EMW:CD:bmy

Attachment

O:\WTD - Admin\Regulatory Compliance\BAAQMD\Transmittal letter January-June 2021.docx

**Major Facility Review (Title V)
Semi-Annual Monitoring Report**

for

**East Bay Municipal Utility District
Main Wastewater Treatment Plant
Facility #A0591**

Reporting Period: January 1, 2021 –June 30, 2021

Source	Monitoring Requirement	Limit	Monitoring Results
S-55 Boiler	Condition 20651 2. Shall not operate S-55 boiler when more than two of the three cogen engines S-37, S-38, or S-39 are operating 3. Boiler gross heat input 5a. NOx emission from boiler 5b. CO emission from boiler 18. Daily records of hours of operation, fuel consumption 19. Annual performance test for emission limits in 5	 20.41 MMBtu/hr 30ppm 50ppm	Condition met. See Attachment 1 for boiler and engine data. Condition met. See Attachment 2. Heat input ranged from 8.3-13.5 MMBtu/hr. See 19 for test results if annual tests run in monitoring period See Attachment 1 for hours and gas consumption. Condition met. Annual performance test completed on 12/9/20 (in last monitoring period).
S-37, S-38, S-39 Cogeneration Engines	Condition 20651 Emission limits – 6. NOx emissions from S-38 7. POC emissions from S-38 8. CO emissions from S-38 9. Filterable particulate emissions from S-38 10. NOx emissions from S-37 & S-39 11. CO emissions from S-37 & S-39 13. Thermal throughput per engine 14. Combined hours of operation for S-37, S-38, and S-39 15. Combined diesel consumption for S-37, S-38, and S-39	 1.25 g/hp-hr 0.6 g/hp-hr 3.0 g/hp-hr 0.085 g/hp-hr 70 ppmvd 2000 ppmvd 25 MMBtu/hr 25,316 hours in any rolling 365 day period 150,000 gallons in any rolling 365 day period	 For items 6-11 see 19 for test results if annual tests run in monitoring period Condition met. Values ranged from 19.0-25.0 MMBtu/hr. See Attachment 2. Condition met. 11,021 hours in last year. See Attachment 2. Jan-Jun 2021: 4,250 hours Jul-Dec 2020: 6,771 hours Condition met. 21,715 gallons in last year. See Attachment 2. Jan-Jun 2021: 9,512 gallons Jul-Dec 2020: 12,203 gallons

Source	Monitoring Requirement	Limit	Monitoring Results
S-37, S-38, S-39 Cogeneration Engines (continued)	18. Daily records of hours of operation, fuel consumption 19. Annual performance test for emission limits in 6-11		Condition met. See Attachment 1 for records. Condition met. Annual performance tests completed 9/24/2020 for engine #2 and #3 (in last monitoring period).
S-48 Gasoline Dispensing Facility	Condition 25723 The Static Pressure Performance Test (CARB TP 201.3B) shall be successfully conducted at least once in each 12-month period.		Condition met. Completed on 9/22/20 (in last monitoring period).
	Condition 21663 Annual gasoline throughput	334,000 gal per year	Condition met. 27,479 gal in last year. See Attachment 4. Jan-June 2021: 13,606 gal July-Dec 2020: 13,873 gal
S-50 Diesel Engine Back-up Generator	Condition 22830 1. Hours of operation	30 hours/year reliability-related hours	Condition met. Generator ran 3.9 hours in last 12 months. Refer to Attachment 5.
S-51 Diesel Engine Back-up Generator	Condition 22850 1. Hours of operation	50 hours/year reliability-related hours	Condition met. Generator ran 9.2 hours in last 12 months. Refer to Attachment 5.
S-53 Diesel Engine Back-up Generator	Condition 22830 1. Hours of operation	30 hours/year reliability-related hours	Condition met. Generator ran 17.3 hours in last 12 months. Refer to Attachment 5.
S-54 Diesel Engine Back-up Generator	Condition 22850 1. Hours of operation	50 hours/year reliability-related hours	Condition met. Generator did not run in last 12 months. Refer to Attachment 5.

Source	Monitoring Requirement	Limit	Monitoring Results
S-56 Turbine	Condition 24050 2. Total combined heat input 3. NOx emission limits 4. CO emission limit and monitoring 5. Daily monitoring of H2S to demonstrate compliance with SO2 limits 5. SO2 emission limit 7. Annual turbine source test 8. Monthly NOx and CO test	389,820 MMBtu in any 12-month period 23 ppm (15-min) 34,400 lb (12-mo) 100 ppm (15-min) 92,200 lb (12-mo) Daily monitoring per 40 CFR 60.4370 150 ppmv	Condition met. 337,455 MMBtu in last 12 months. Refer to Attachment 2. Jan-Jun 2021: 171,503 MMBtu Jul-Dec 2020: 165,952 MMBtu Emission limits met. Refer to Attachments 2 and 6. Annual mass emission: 7,125 lb Emission limits met. Refer to Attachments 2 and 6. Annual mass emission: 2,486 lb See Attachment 11 for readings. Emission limit met. Refer to Attachments 2 and 6. Condition met. Last annual test was 12/9/2020 (in previous monitoring period). Condition met. Monthly test results are located in Attachment 6.
S-58 Diesel Engine Back-up Generator	Condition 22850 1. Hours of operation	50 hours/year reliability-related hours	Condition met. Generator ran 2.7 hours in last 12 months. Refer to Attachment 5.
S-100 Municipal Wastewater Treatment Plant	Condition 21759 1. Total wastewater flow	120 MGD monthly dry weather average 325 MGD monthly wet weather average	Condition met. Maximum wet weather monthly flow in period was 58 MGD influent. Maximum dry weather monthly flow was 49 MGD. See Attachment 7.

Source	Monitoring Requirement	Limit	Monitoring Results
<p>S-110 Headworks</p> <p>A-462 Carbon Scrubber</p> <p>A-463/A-464 Biotrickling Filters/Carbon Scrubbers</p>	<p>Condition 17335</p> <p>3. Inlet and outlet H2S concentrations of carbon beds, as well as any other appropriate operating parameters shall be continuously monitored and reviewed on a daily basis to determine when carbon adsorption bed breakthrough is imminent or has been reached.</p>		<p>Monitoring results for inlet and outlet H2S and any noted outages are in Attachment 8.</p> <p>Maintenance records for scrubber are in Attachment 9.</p>
<p>S-170 Sludge handling</p> <p>A-7/A-8 Atomized Mist Scrubbers</p>	<p>Condition 18006</p> <p>1. Monitor and record on a daily basis the activated sewage sludge throughput through S-170.</p>		<p>Sludge throughput is recorded in Attachment 10.</p> <p>Maintenance records for the scrubber are in Attachment 9.</p>
<p>S-172 Pre-Digestion Blend Tanks</p> <p>A-9 Iron Oxide</p> <p>A-10 Biofilter</p> <p>A-11 Activated Carbon</p>	<p>Condition 25919</p> <p>1. Throughput of waste shall not exceed 2,100,000 gallons during any day.</p> <p>4. POC emissions shall not exceed 2.02 lb/calendar day and 20.3 ppm total carbon on a daily basis.</p> <p>6. Quarterly POC readings at outlet of A11</p>		<p>Condition met. See Attachment 11 for record of daily throughput.</p> <p>See item 6 for test results.</p> <p>Condition met. POC readings in this reporting period were less than 1ppm.</p>

Source	Monitoring Requirement	Limit	Monitoring Results
<p>S-180 Anaerobic Digesters</p> <p>Note: A-194, A-195 are enclosed flares</p> <p>A-190, A-191, A-192, and A- 193 are older “candlestick” flares</p>	<p>Condition 18860</p> <p>2. Monthly inspection of digesters and gas management/venting prevention</p> <p>3. Sulfur content of digester gas</p> <p>4. Combined digester gas flow rate to combustion sources</p> <p>5. Combustion zone temperature monitoring to A-194, A-195</p> <p>6. Gas flow to A-194, A-195</p> <p>7. Source testing of A-194, A-195 (every 8,760 hours of use or 5 years)</p> <p>Emission limits for A-194, A-195</p> <p>9. NO_x limit 10. CO limit 11. H₂S limit</p> <p>12. Weekly sampling and testing of digester gas for H₂S</p> <p>13. Hours of flaring per day</p>	<p><200 ppmv annual average</p> <p><3,400 scfm annual average</p> <p>>1,200F, after 15-min start-up</p> <p><3,000 cfm, 1-hr average</p> <p>0.12 lb/MMBtu 0.20 lb/MMBtu 0.032 lb/hour</p>	<p>Inspections conducted by Operations on daily rounds. Three gas releases identified and reported. See cover letter for details.</p> <p>Condition met. Refer to Attachment 12 for the H₂S gas sampling records.</p> <p>Condition met. See Attachment 13 for combined digester gas flow rates.</p> <p>Condition met.</p> <p>Condition met.</p> <p>Condition met. Source test conducted 11/7/19.</p> <p>Conditions met. Source test conducted 11/7/19.</p> <p>Refer to Attachment 11.</p> <p>Refer to Attachment 1 for the hours of flaring per day.</p>

Attachment Index:

1	Combustion Source Air Permit Data
2	Combustion Summaries – Boiler, Engines, Turbine, Flares
3	Reserved (Annual Source Test Results, none conducted in this monitoring period)
4	Gasoline Facility Throughput
5	Hours of Operation for Stand-by Emergency Generators
6	Turbine Monthly Test Results
7	Monthly Wastewater Summary
8	IPS Carbon Bed Inlet/Outlet H ₂ S Readings
9	Odor Scrubber Maintenance Records for S-170 and S-110
10	Activated Sludge Throughput for S-170
11	Blend Tank Throughput Records
12	Digester Gas H ₂ S Sampling
13	Combined Digester Gas Combustion Volumes

ATTACHMENT 1

COMBUSTION SOURCE AIR PERMIT DATA

(engines, turbine, boiler, flares)

**DAILY REPORTS
JANUARY-JULY 2021**



January - 2021

Daily Data for Air Permit

Elmer E. Ross Power Station

Date	Run Time, Hours				KiloWatt Hours Generated				Fuel Oil Used, gal				Gas, FCI Meter, cu ft			
	Eng 1	Eng 2	Eng 3	Total	Gen. 1	Gen 2	Gen 3	Total	Eng. 1	Eng. 2	Eng. 3	Total	Eng. 1	Eng. 2	Eng. 3	Total
1st	0	3	24	27	0	3,248	48,528	51,777	0	6	37	43	0	56,912	850,196	907,107
2nd	0	0	24	24	0	0	49,907	49,907	0	0	29	29	0	0	895,497	895,497
3rd	0	0	6	6	0	0	8,341	8,341	0	0	12	12	0	0	157,040	157,040
4th	0	13	10	23	0	28,186	20,529	48,715	0	31	27	58	0	505,433	368,124	873,557
5th	0	24	23	47	0	48,975	49,872	98,847	0	46	37	83	0	838,620	853,991	1,692,611
6th	0	24	24	48	0	51,416	52,408	103,825	0	45	40	85	0	853,471	869,930	1,723,400
7th	0	24	24	48	0	48,640	49,626	98,266	0	38	37	75	0	827,170	843,931	1,671,100
8th	0	24	24	48	0	48,912	49,844	98,756	0	41	36	77	0	830,668	846,499	1,677,167
9th	0	23	24	47	0	41,830	45,883	87,713	0	42	38	80	0	726,865	797,303	1,524,167
10th	0	0	2	2	0	0	2,354	2,354	0	0	7	7	0	0	39,512	39,512
11th	0	11	14	25	0	22,177	33,374	55,551	0	46	39	85	0	396,788	597,104	993,892
12th	0	9	11	20	0	19,157	19,532	38,689	0	17	20	37	0	329,762	336,212	665,974
13th	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14th	0	12	15	27	0	25,525	32,409	57,935	0	36	26	63	0	432,966	549,736	982,702
15th	0	24	24	48	0	50,591	51,670	102,260	0	44	34	78	0	852,965	871,157	1,724,123
16th	0	11	24	35	0	16,808	47,163	63,971	0	18	29	47	0	297,543	834,897	1,132,440
17th	0	0	24	24	0	0	38,096	38,096	0	0	43	43	0	0	726,295	726,295
18th	0	14	24	38	0	24,369	42,308	66,677	0	78	34	112	0	449,178	779,846	1,229,023
19th	0	23	24	47	0	47,960	49,046	97,006	0	36	43	79	0	823,917	842,581	1,666,498
20th	0	24	9	33	0	51,399	18,067	69,466	0	22	33	54	0	859,250	302,029	1,161,279
21st	0	24	24	48	0	50,748	51,748	102,496	0	37	40	78	0	856,824	873,707	1,730,531
22nd	0	24	24	48	0	50,714	51,707	102,421	0	32	39	70	0	854,444	871,188	1,725,631
23rd	0	12	24	36	0	18,015	47,037	65,052	0	28	42	70	0	319,713	834,759	1,154,472
24th	0	0	24	24	0	0	46,275	46,275	0	0	38	38	0	0	844,629	844,629
25th	0	11	1.0	12	0	19,567	4	19,571	0	25	0	25	0	344,139	75	344,214
26th	0	24	18	42	0	47,043	37,203	84,245	0	34	43	77	0	833,254	658,958	1,492,211
27th	0	24	24	48	0	43,260	44,231	87,491	0	43	37	81	0	778,559	796,044	1,574,603
28th	0	24	24	48	0	50,321	51,320	101,641	0	36	39	75	0	866,153	883,337	1,749,490
29th	0	24	24	48	0	51,838	52,902	104,740	0	35	36	72	0	872,800	890,710	1,763,510
30th	0	24	24	48	0	40,627	41,659	82,286	0	42	37	79	0	724,863	743,268	1,468,130
31st	0	3	24	27	0	3,130	42,207	45,336	0	7	36	43	0	58,023	782,438	840,460
Totals	0	457	589	1,046	0	904,456	1,175,250	2,079,706	0	866	988	1,854	0	15,590,277	20,540,991	36,131,268
	Sum of Engines			1,046	Sum of Engines			2,079,706	Sum of Engines			1,854	Sum of Engines			36,131,268



January - 2021

Daily Data for Air Permit

SD1 Flare Burners, Turbine, and Boiler

Date	Flares A-190,191,192,193		Flares A-194,195			Turbine			Boiler		Run Time Check	
	Run Time Hrs	Gas cu ft	Run Time Hrs	Gas cu ft	Peak 1-hr Flow, SCFM	Run Time Hrs	Power KWh	Gas cu ft	Run Time Hrs	Gas cu ft	Engine Hrs	Eng + Boiler Hrs
1st	0	0	0	0	0	24	80,771	1,379,771	6	70,934	27	33
2nd	0.2	2,310	0	0	0	24	75,475	1,320,554	10	91,871	24	34
3rd	0	0	0.02	0.2	3	24	88,549	1,514,662	24	326,231	6	30
4th	3	39,249	0.1	1,990	23	24	92,793	1,609,168	10	167,821	23	33
5th	13	400,512	0	0	0	24	94,883	1,591,043	1.2	19,699	47	48
6th	14	302,667	0	0	0	24	91,966	1,498,043	0	0	48	48
7th	14	469,634	0	0	0	24	89,975	1,501,004	0	0	48	48
8th	0.2	3,388	0	0	0	24	90,279	1,490,162	0	0	48	48
9th	0.5	7,285	0	0	0	24	82,313	1,365,472	0	0	47	47
10th	0	0	0	0	0	24	95,217	1,561,695	23	379,474	2	25
11th	4	92,209	0.2	2,790	15	24	91,520	1,563,500	8	123,871	25	33
12th	17	1,065,097	0	0	0	24	98,038	1,617,382	14	210,869	20	34
13th	24	1,689,105	0	0	0	24	94,787	1,574,745	24	364,962	0	24
14th	24	1,159,993	0	0	0	24	86,770	1,447,237	12	191,398	27	39
15th	17	397,546	0	0	0	24	92,756	1,526,019	0	0	48	48
16th	0.5	6,242	0	0	0	24	89,876	1,504,721	9	91,440	35	44
17th	0	0	0	0	0	24	71,403	1,277,795	24	213,638	24	48
18th	0.4	3,420	0	0	0	24	83,835	1,511,634	9	66,332	38	47
19th	0.6	5,329	0	0	0	24	90,918	1,538,381	0	0	47	47
20th	16	358,685	0	0	0	24	96,285	1,618,078	15	148,628	33	48
21st	5	77,254	0	0	0	24	96,019	1,608,358	0	0	48	48
22nd	0	0	0	0	0	24	90,379	1,531,091	0	0	48	48
23rd	0	0	0	0	0	24	87,331	1,459,150	0	0	36	36
24th	0	0	0	0	0	24	82,618	1,414,422	0	0	24	24
25th	0.7	10,484	0	0	0	24	86,561	1,495,016	20	270,664	12	32
26th	1.0	17,273	0	0	0	24	91,645	1,560,605	5	65,743	42	47
27th	0	0	0	0	0	24	84,192	1,438,452	0	0	48	48
28th	10	212,806	0	0	0	24	90,870	1,547,727	0	0	48	48
29th	21	684,084	0	0	0	24	94,023	1,549,344	0	0	48	48
30th	0	0	0	0	0	24	83,275	1,392,193	0	0	48	48
31st	0	0	0	0	0	24	74,877	1,319,296	22	223,820	27	49
Totals	187	7,004,572	0.3	4,780		744	2,740,196	46,326,721	237	3,027,394	1,046	1,283
					Maximum 23						Maximum 49	



February - 2021

Daily Data for Air Permit

Elmer E. Ross Power Station

Date	Run Time, Hours				KiloWatt Hours Generated				Fuel Oil Used, gal				Gas, FCI Meter, cu ft			
	Eng 1	Eng 2	Eng 3	Total	Gen. 1	Gen 2	Gen 3	Total	Eng. 1	Eng. 2	Eng. 3	Total	Eng. 1	Eng. 2	Eng. 3	Total
1st	0	6	24	30	0	13,662	40,984	54,647	0	16	27	43	0	253,456	760,327	1,013,783
2nd	0	24	24	48	0	51,777	52,777	104,554	0	43	44	86	0	910,615	928,210	1,838,825
3rd	0	24	24	48	0	51,773	52,826	104,600	0	34	33	67	0	905,492	923,910	1,829,402
4th	0	24	24	48	0	51,757	52,792	104,549	0	46	44	90	0	883,812	901,491	1,785,303
5th	0	24	24	48	0	51,837	52,903	104,740	0	34	36	71	0	891,453	909,770	1,801,223
6th	0	24	24	48	0	50,755	51,829	102,584	0	55	50	105	0	875,278	893,803	1,769,081
7th	0	19	18	37	0	36,627	35,883	72,510	0	49	39	88	0	648,758	635,594	1,284,352
8th	0	24	8	32	0	47,428	15,622	63,049	0	43	25	68	0	835,263	275,118	1,110,381
9th	0	24	24	48	0	46,744	45,725	92,469	0	37	56	93	0	819,179	801,315	1,620,494
10th	0	24	24	48	0	51,765	52,762	104,527	0	41	39	80	0	882,654	899,645	1,782,299
11th	0	24	24	48	0	50,308	51,276	101,584	0	38	38	76	0	855,719	872,176	1,727,895
12th	0	24	24	48	0	44,941	45,914	90,855	0	41	38	79	0	786,622	803,656	1,590,277
13th	0	24	23	47	0	49,987	50,968	100,955	0	40	42	81	0	862,626	879,562	1,742,188
14th	0	24	2	26	0	48,579	842	49,421	0	37	0	37	0	805,434	13,963	819,397
15th	0	24	0	24	0	46,211	0	46,211	0	44	0	44	0	788,946	0	788,946
16th	0	16	8	24	0	33,275	18,682	51,957	0	37	35	72	0	571,659	320,951	892,609
17th	0	24	24	48	0	51,761	52,706	104,468	0	46	39	85	0	878,730	894,780	1,773,510
18th	0	23	22	45	0	45,083	46,124	91,207	0	48	45	92	0	768,896	786,661	1,555,557
19th	0	23	23	46	0	49,872	50,726	100,598	0	56	49	104	0	839,341	853,719	1,693,060
20th	0	24	21	45	0	43,766	35,719	79,484	0	37	45	82	0	760,891	620,992	1,381,883
21st	0	24	9	33	0	39,597	16,034	55,631	0	47	19	65	0	702,551	284,481	987,032
22nd	0	4	24	28	0	7,987	48,443	56,430	0	22	35	56	0	141,333	857,220	998,553
23rd	0	22	22	44	0	42,813	47,946	90,759	0	76	66	142	0	730,218	817,767	1,547,985
24th	0	24	24	48	0	48,830	49,839	98,669	0	43	40	83	0	840,456	857,830	1,698,285
25th	0	24	24	48	0	51,770	52,770	104,539	0	37	40	77	0	873,854	890,729	1,764,583
26th	0	24	24	48	0	51,778	52,718	104,496	0	41	37	78	0	865,503	881,201	1,746,704
27th	0	24	21	45	0	46,791	37,245	84,036	0	40	43	83	0	808,205	643,327	1,451,531
28th	0	24	0	24	0	49,567	0	49,567	0	39	0	39	0	809,001	0	809,001
Totals	0	617	537	1,154	0	1,257,040	1,112,055	2,369,095	0	1,165	1,004	2,169	0	21,595,943	19,208,196	40,804,139
	Sum of Engines		1,154		Sum of Engines		2,369,095		Sum of Engines		2,169		Sum of Engines		40,804,139	



March - 2021

Daily Data for Air Permit

Elmer E. Ross Power Station

Date	Run Time, Hours				KiloWatt Hours Generated				Fuel Oil Used, gal				Gas, FCI Meter, cu ft			
	Eng 1	Eng 2	Eng 3	Total	Gen. 1	Gen 2	Gen 3	Total	Eng. 1	Eng. 2	Eng. 3	Total	Eng. 1	Eng. 2	Eng. 3	Total
1st	0	24	14	38	0	51,654	34,218	85,872	0	44	43	86	0	889,333	589,131	1,478,465
2nd	0	24	24	48	0	50,336	51,372	101,709	0	38	42	79	0	871,296	889,227	1,760,523
3rd	0	17	24	41	0	37,214	52,792	90,006	0	50	43	94	0	634,216	899,719	1,533,935
4th	0	24	24	48	0	50,200	51,266	101,466	0	37	41	77	0	863,959	882,309	1,746,269
5th	0	24	24	48	0	50,027	51,072	101,099	0	44	43	87	0	865,235	883,318	1,748,553
6th	0	24	24	48	0	43,006	44,094	87,100	0	40	41	81	0	768,229	787,659	1,555,888
7th	0	6	24	30	0	6,795	43,586	50,381	0	12	39	51	0	122,437	785,329	907,766
8th	0	9	17	26	0	21,131	33,151	54,282	0	43	43	86	0	373,879	586,561	960,441
9th	0	24	24	48	0	51,794	52,837	104,632	0	37	38	76	0	892,011	909,974	1,801,985
10th	1.0	24	24	49	0	51,798	52,912	104,711	41	42	43	125	0	886,368	905,431	1,791,799
11th	6	23	24	53	8,995	49,784	52,782	111,561	136	63	40	239	142,663	789,572	837,115	1,769,350
12th	0	24	24	48	0	50,529	51,503	102,032	0	43	43	85	0	873,185	890,023	1,763,209
13th	0	24	24	48	0	49,713	50,683	100,396	0	42	39	81	0	854,197	870,868	1,725,065
14th	0	21	1	22	0	34,911	215	35,127	0	37	4	41	0	587,508	3,620	591,128
15th	0.5	7	13	21	0	13,492	25,601	39,093	11	17	30	58	0	250,964	476,218	727,182
16th	0	17	24	41	0	33,974	49,933	83,907	0	48	36	84	0	601,112	883,470	1,484,583
17th	0.3	24	24	48	0	51,851	52,811	104,661	5	37	44	86	0	890,190	906,672	1,796,861
18th	15	24	9	48	34,679	50,939	16,306	101,924	42	44	19	105	568,506	835,061	267,309	1,670,875
19th	24	24	0	48	51,393	51,693	0	103,086	44	41	0	85	821,150	825,934	0	1,647,084
20th	22	18	0	40	43,113	47,161	0	90,273	63	29	0	92	584,950	639,869	0	1,224,819
21st	13	11	0	24	21,634	21,669	0	43,303	47	52	0	98	328,161	328,685	0	656,846
22nd	0.5	9	0	10	525	20,176	0	20,702	40	29	0	69	8,661	332,618	0	341,278
23rd	0	24	0	24	0	51,735	0	51,735	0	48	0	48	0	848,965	0	848,965
24th	0	24	0	24	0	51,793	0	51,793	0	43	0	43	0	847,185	0	847,185
25th	0	24	0	24	0	51,769	0	51,769	0	52	0	52	0	846,621	0	846,621
26th	0	24	0	24	0	51,708	0	51,708	0	49	0	49	0	839,866	0	839,866
27th	0	24	0	24	0	51,736	0	51,736	0	44	0	44	0	845,930	0	845,930
28th	0	24	0	24	0	49,673	0	49,673	0	40	0	40	0	820,169	0	820,169
29th	0	24	0	24	0	50,791	0	50,791	0	47	0	47	0	843,232	0	843,232
30th	1.0	24	0	25	494	51,745	0	52,239	24	38	0	63	8,011	838,934	0	846,945
31st	17	24	0	41	30,484	51,623	0	82,107	152	42	0	193	479,146	811,397	0	1,290,543
Totals	100	642	366	1,108	191,319	1,352,420	767,135	2,310,874	606	1,270	669	2,544	2,941,247	22,518,159	13,253,953	38,713,360

Sum of Engines 1,108

Sum of Engines 2,310,874

Sum of Engines 2,544

Sum of Engines 38,713,360



March - 2021

Daily Data for Air Permit

SD1 Flare Burners, Turbine, and Boiler

Date	Flares A-190,191,192,193		Flares A-194,195			Turbine			Boiler		Run Time Check	
	Run Time Hrs	Gas cu ft	Run Time Hrs	Gas cu ft	Peak 1-hr Flow, SCFM	Run Time Hrs	Power KWh	Gas cu ft	Run Time Hrs	Gas cu ft	Engine Hrs	Eng + Boiler Hrs
1st	0	0	8	198,958	609	24	98,453	1,631,705	9	105,285	38	47
2nd	0	0	13	302,729	682	24	94,637	1,558,907	0	0	48	48
3rd	0.1	1,648	18	557,379	976	24	96,905	1,597,208	3	43,278	41	44
4th	0	0	12	223,869	483	24	99,249	1,612,933	0	0	48	48
5th	0.2	7,668	15	621,559	1,051	24	97,418	1,612,892	0	0	48	48
6th	0	0	1.4	14,727	196	24	95,264	1,574,060	0	0	48	48
7th	0	0	0	2,940	42	24	78,869	1,375,072	19	230,501	30	49
8th	0.2	9,599	11	282,478	617	24	89,818	1,528,601	14	258,329	26	40
9th	0	0	20	520,292	671	24	98,338	1,628,811	0	0	48	48
10th	0	0	24	1,358,832	1,247	24	99,482	1,617,812	0	0	49	49
11th	0	0	24	1,251,670	1,214	24	100,158	1,615,151	0	0	53	53
12th	0	0	16	657,985	1,137	24	96,649	1,577,655	0	0	48	48
13th	0	0	9	350,822	1,053	24	89,765	1,481,960	0	1,252	48	48
14th	0	0	0	0	0	23	71,965	1,223,155	23	306,893	22	45
15th	0	0	2	27,175	200	24	90,084	1,550,454	16	289,438	21	36
16th	0	0	8	168,085	508	24	91,134	1,558,130	7	88,130	41	48
17th	0	0	20	709,761	1,052	24	99,663	1,630,606	0	0	48	48
18th	6	305,058	17	602,784	975	24	97,233	1,605,538	0	0	48	48
19th	0	0	19	402,365	520	24	96,806	1,591,247	0	0	48	48
20th	0	0	6	185,744	895	24	93,763	1,568,827	4	59,716	40	44
21st	0	0	1.1	18,369	116	24	85,053	1,462,780	23	333,023	24	47
22nd	0	0	4	104,949	559	24	94,711	1,599,344	20	391,943	10	29
23rd	0	0	12	435,786	755	24	95,778	1,604,627	24	314,955	24	48
24th	0	0	24	1,184,928	1,316	24	95,819	1,585,811	24	333,255	24	48
25th	0	0	23	1,039,516	1,273	24	96,265	1,595,532	24	329,791	24	48
26th	0	0	23	1,098,058	1,401	24	95,935	1,598,331	24	311,784	24	48
27th	0	0	14	315,804	576	24	92,397	1,542,657	24	302,403	24	48
28th	0	0	14	331,529	557	24	92,400	1,535,228	24	294,820	24	48
29th	0	0	19	424,922	579	24	93,349	1,555,053	24	246,275	24	48
30th	0	0	24	700,632	730	24	93,918	1,559,947	24	253,191	25	49
31st	0	0	23	721,016	1,006	24	92,247	1,547,333	10	98,170	41	51
Totals	6	323,973	424	14,815,663		743	2,903,526	48,327,370	339	4,592,431	1,108	1,448
				Maximum	1,401	Minimum					Maximum	53



April - 2021

Daily Data for Air Permit

Elmer E. Ross Power Station

Date	Run Time, Hours				KiloWatt Hours Generated				Fuel Oil Used, gal				Gas, FCI Meter, cu ft			
	Eng 1	Eng 2	Eng 3	Total	Gen. 1	Gen 2	Gen 3	Total	Eng. 1	Eng. 2	Eng. 3	Total	Eng. 1	Eng. 2	Eng. 3	Total
1st	21	20	9	50	37,214	41,689	17,706	96,609	93	68	68	228	603,760	676,374	287,264	1,567,398
2nd	5	20	23	48	7,472	42,228	52,055	101,755	34	62	57	153	125,240	707,769	872,486	1,705,495
3rd	0	24	24	48	0	39,816	43,824	83,640	0	66	60	126	0	710,427	781,950	1,492,377
4th	0	0	11	11	0	0	19,744	19,744	0	0	23	23	0	0	339,191	339,191
5th	0	5	14	19	0	10,420	29,677	40,097	0	18	63	81	0	185,593	528,561	714,154
6th	5	24	22	51	5,877	48,395	44,687	98,959	92	67	79	239	99,481	819,176	756,415	1,675,073
7th	5	24	24	53	7,961	40,242	44,988	93,190	77	80	58	215	132,702	670,791	749,904	1,553,396
8th	0	18	15	33	0	29,731	23,902	53,633	0	58	57	114	0	514,756	413,821	928,578
9th	1.0	12	0	13	1,901	27,430	0	29,332	105	40	0	145	31,013	447,391	0	478,404
10th	0	24	4	28	0	47,357	6,396	53,753	0	57	30	86	0	801,813	108,299	910,112
11th	0	24	0	24	0	47,799	0	47,799	0	69	0	69	0	794,226	0	794,226
12th	0	6	0	6	0	7,844	0	7,844	0	15	0	15	0	516,475	0	516,475
13th	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14th	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15th	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16th	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17th	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18th	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19th	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20th	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21st	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22nd	0.003	0	0.003	0.007	0	0	0	0	7	0	4	11	0	0	0	0
23rd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24th	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25th	0.003	0	0.003	0.007	0	0	0	0	12	0	4	16	0	0	0	0
26th	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27th	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28th	0.003	0	0.003	0.007	0	0	0	0	7	0	11	18	0	0	0	0
29th	0	0.003	0	0.003	0	0	0	0	0	5	0	5	0	0	0	0
30th	0	0	0.003	0.003	0	0	0	0	0	0	4	4	0	0	0	0
Totals	37	201	146	384	60,425	382,952	282,979	726,356	427	606	516	1,549	992,197	6,844,792	4,837,891	12,674,880

Sum of Engines 384

Sum of Engines 726,356

Sum of Engines 1,549

Sum of Engines 12,674,880



April - 2021

Daily Data for Air Permit

SD1 Flare Burners, Turbine, and Boiler

Date	Flares A-190,191,192,193		Flares A-194,195			Turbine			Boiler		Run Time Check	
	Run Time Hrs	Gas cu ft	Run Time Hrs	Gas cu ft	Peak 1-hr Flow, SCFM	Run Time Hrs	Power KWh	Gas cu ft	Run Time Hrs	Gas cu ft	Engine Hrs	Eng + Boiler Hrs
1st	0	0	24	1,146,548	1,104	24	92,314	1,520,465	0	0	50	50
2nd	0.2	6,940	11	235,636	578	24	96,902	1,563,085	0	0	48	48
3rd	0	0	0	0	0	24	74,745	1,261,828	1.5	19,982	48	49
4th	0	0	6	64,312	198	24	90,681	1,507,518	24	400,382	11	35
5th	0	0	3	32,855	193	24	93,345	1,526,002	13	255,755	19	32
6th	0.7	33,443	9	263,658	727	24	90,909	1,514,951	0	0	51	51
7th	0	0	7	112,881	401	24	82,235	1,372,683	0	0	53	53
8th	0.04	1,041	16	321,866	450	24	83,519	1,396,186	9	138,178	33	42
9th	0.2	6,720	18	451,245	726	24	96,210	1,595,117	24	505,842	13	37
10th	12	232,121	5	89,961	399	24	87,112	1,448,713	20	233,086	28	48
11th	4	45,455	0	0	0	24	86,999	1,457,466	24	299,726	24	48
12th	17	766,295	0.2	4,479	62	24	90,513	1,541,124	24	410,050	6	30
13th	10	517,955	16	663,082	848	24	95,537	1,602,634	24	487,810	0	24
14th	5	196,833	24	1,023,529	858	24	95,769	1,600,968	24	484,330	0	24
15th	15	696,087	24	771,845	827	24	96,211	1,605,256	24	532,815	0	24
16th	20	1,096,157	24	783,032	825	24	97,424	1,603,302	24	547,216	0	24
17th	10	461,100	24	881,665	790	24	96,615	1,611,183	24	549,219	0	24
18th	13	457,700	8	346,916	812	23	78,792	1,348,915	24	472,722	0	24
19th	24	1,636,436	0	0	0	18	65,108	1,103,438	24	658,516	0	24
20th	16	929,278	12	549,234	1,028	24	94,140	1,578,366	24	478,154	0	24
21st	11	589,662	24	1,537,015	1,851	6	22,380	371,040	24	774,097	0	24
22nd	2	120,145	24	1,689,726	1,823	13	50,924	855,941	24	694,187	0.007	24
23rd	0	0	24	1,411,701	1,331	24	96,017	1,607,442	24	443,487	0	24
24th	0	0	24	1,025,001	894	24	95,527	1,588,902	24	460,831	0	24
25th	2	30,424	16	360,335	531	24	95,942	1,606,907	24	440,346	0.007	24
26th	0	0	23	843,740	1,038	24	97,039	1,635,753	24	451,762	0	24
27th	0	0	24	1,861,046	1,581	24	95,179	1,586,015	24	490,912	0	24
28th	0	0	24	2,019,374	1,667	24	94,179	1,550,036	24	512,800	0.007	24
29th	0	0	24	2,128,996	1,664	24	96,397	1,569,326	24	502,959	0.003	24
30th	0	0	24	1,684,549	1,617	24	95,792	1,559,767	24	488,820	0.003	24
Totals	165	7,823,793	462	22,304,225		683	2,624,459	43,690,329	572	11,733,984	384	956
				Maximum	1,851	Minimum					Maximum	53



May - 2021

Daily Data for Air Permit

Elmer E. Ross Power Station

Date	Run Time, Hours				KiloWatt Hours Generated				Fuel Oil Used, gal				Gas, FCI Meter, cu ft			
	Eng 1	Eng 2	Eng 3	Total	Gen. 1	Gen 2	Gen 3	Total	Eng. 1	Eng. 2	Eng. 3	Total	Eng. 1	Eng. 2	Eng. 3	Total
1st	0.003	0	0	0.003	0	0	0	0	10	0	0	10	0	0	0	0
2nd	0	0.003	0	0.003	0	0	0	0	0	5	0	5	0	0	0	0
3rd	0	0	0.003	0.003	0	0	0	0	0	0	5	5	0	0	0	0
4th	0.003	0	0	0.003	0	0	0	0	5	0	0	5	0	0	0	0
5th	0	0.003	0	0.003	0	0	0	0	0	7	0	7	0	0	0	0
6th	0	0	0.003	0.003	0	0	0	0	0	0	7	7	0	0	0	0
7th	0.003	0	0	0.003	0	0	0	0	7	0	0	7	0	0	0	0
8th	0	0.003	0	0.003	0	0	0	0	0	5	0	5	0	0	0	0
9th	0	0	0.003	0.003	0	0	0	0	0	0	4	4	0	0	0	0
10th	0.003	0	0	0.003	0	0	0	0	7	0	0	7	0	0	0	0
11th	0	0.003	0	0.003	0	0	0	0	0	5	0	5	0	0	0	0
12th	0	0	0.003	0.003	0	0	0	0	0	0	5	5	0	0	0	0
13th	0.003	0	0	0.003	0	0	0	0	4	0	0	4	0	0	0	0
14th	0	0.003	0	0.003	0	0	0	0	0	5	0	5	0	0	0	0
15th	0	0	0.003	0.003	0	0	0	0	0	0	7	7	0	0	0	0
16th	0.003	0	0	0.003	0	0	0	0	4	0	0	4	0	0	0	0
17th	0	0.003	0	0.003	0	0	0	0	0	5	0	5	0	0	0	0
18th	0	0	0.003	0.003	0	0	0	0	0	0	5	5	0	0	0	0
19th	0.003	0	0	0.003	0	0	0	0	7	0	0	7	0	0	0	0
20th	2	0.003	0	2	1,132	0	0	1,132	58	5	0	63	0	0	0	0
21st	0	0	0.003	0.003	0	0	0	0	0	0	5	5	0	0	0	0
22nd	0	0.003	0	0.003	0	0	0	0	0	7	0	7	0	0	0	0
23rd	0	0	0.003	0.003	0	0	0	0	0	0	5	5	0	0	0	0
24th	0	0.003	0	0.003	0	0	0	0	0	11	0	11	0	0	0	0
25th	2	0	0.003	2	1,184	0	0	1,184	94	0	10	104	0	0	0	0
26th	0	0.003	0	0.003	0	0	0	0	0	10	0	10	0	0	0	0
27th	0.003	0	0	0.003	0	0	0	0	6	0	0	6	0	0	0	0
28th	0	0.003	0	0.003	0	0	0	0	0	12	0	12	0	0	0	0
29th	0.003	0	0	0.003	0	0	0	0	5	0	0	5	0	0	0	0
30th	0	0.003	0	0.003	0	0	0	0	0	5	0	5	0	0	0	0
31st	0.003	0	0	0.003	0	0	0	0	5	0	0	5	0	0	0	0
Totals	4	0.042	0.031	4	2,316	0	0	2,316	211	82	52	345	0	0	0	0

Sum of Engines 4

Sum of Engines 2,316

Sum of Engines 345

Sum of Engines 0



May - 2021

Daily Data for Air Permit
SD1 Flare Burners, Turbine, and Boiler

Date	Flares A-190,191,192,193		Flares A-194,195			Turbine			Boiler		Run Time Check	
	Run Time Hrs	Gas cu ft	Run Time Hrs	Gas cu ft	Peak 1-hr Flow, SCFM	Run Time Hrs	Power KWh	Gas cu ft	Run Time Hrs	Gas cu ft	Engine Hrs	Eng + Boiler Hrs
1st	0	0	24	1,701,478	1,735	24	95,003	1,568,690	24	476,621	0.003	24
2nd	0	0	19	853,874	923	24	92,455	1,534,641	24	459,389	0.003	24
3rd	0	0	16	667,036	1,234	24	91,933	1,590,153	24	438,023	0.003	24
4th	0	0	24	1,959,944	1,800	24	92,284	1,542,053	24	436,015	0.003	24
5th	0	0	24	1,352,625	1,276	24	94,416	1,561,976	24	591,772	0.003	24
6th	0	0	24	1,507,472	1,476	24	96,217	1,589,524	24	700,188	0.003	24
7th	2	93,907	24	1,515,264	1,455	22	86,433	1,417,062	24	625,125	0.003	24
8th	0	0	24	1,222,393	1,220	24	90,927	1,541,512	24	522,055	0.003	24
9th	0	0	24	832,597	962	24	90,782	1,530,402	24	489,381	0.003	24
10th	0	0	22	631,150	918	24	91,760	1,570,239	24	459,302	0.003	24
11th	2	84,063	24	1,443,167	1,281	24	95,463	1,591,449	24	464,819	0.003	24
12th	0	0	24	1,282,030	1,232	24	96,528	1,594,357	24	480,428	0.003	24
13th	0	0	24	1,794,814	1,656	24	96,530	1,588,541	24	473,973	0.003	24
14th	0.7	33,630	24	1,248,215	1,318	24	92,746	1,530,734	24	499,992	0.003	24
15th	0	0	24	1,276,274	1,416	24	94,842	1,595,352	24	472,000	0.003	24
16th	0.1	5,921	19	458,095	1,002	23	89,971	1,504,068	24	474,457	0.003	24
17th	0	0	24	1,529,832	1,566	8	30,308	523,449	24	721,027	0.003	24
18th	1.4	77,968	23	1,014,709	1,054	23	86,959	1,477,478	24	433,604	0.003	24
19th	0	0	24	1,453,117	1,304	24	95,165	1,596,150	24	394,664	0.003	24
20th	0	0	24	1,512,867	1,169	24	95,288	1,598,298	24	431,368	2	26
21st	7	404,455	24	1,696,957	1,860	24	94,587	1,597,583	24	470,562	0.003	24
22nd	17	825,717	24	1,247,557	1,220	24	95,497	1,571,971	24	463,300	0.003	24
23rd	0	0	18	647,272	885	24	95,082	1,583,084	24	452,789	0.003	24
24th	8	390,594	19	593,417	980	24	94,990	1,632,955	24	448,229	0.003	24
25th	14	560,580	24	903,298	941	24	92,855	1,586,728	24	473,096	2	26
26th	7	285,170	24	1,371,676	1,429	24	94,018	1,607,206	24	442,598	0.003	24
27th	18	798,921	24	1,036,307	1,063	24	93,334	1,572,514	24	444,820	0.003	24
28th	13	647,936	24	1,490,174	1,784	24	94,058	1,580,323	24	430,893	0.003	24
29th	0.3	12,846	24	1,554,523	1,475	24	93,904	1,550,506	24	423,671	0.003	24
30th	0	0	20	702,796	844	24	93,213	1,584,629	24	401,982	0.003	24
31st	0	0	20	610,909	873	24	93,090	1,613,633	24	321,085	0.003	24
Totals	90	4,221,709	703	37,111,840		723	2,830,640	47,527,259	744	14,817,231	4	748
					Maximum	1,860	Minimum				Maximum	26



June - 2021

Daily Data for Air Permit

Elmer E. Ross Power Station

Date	Run Time, Hours				KiloWatt Hours Generated				Fuel Oil Used, gal				Gas, FCI Meter, cu ft			
	Eng 1	Eng 2	Eng 3	Total	Gen. 1	Gen 2	Gen 3	Total	Eng. 1	Eng. 2	Eng. 3	Total	Eng. 1	Eng. 2	Eng. 3	Total
1st	0	0.003	0	0.003	0	0	0	0	0	2	0	2	0	0	0	0
2nd	0	0	0.003	0.003	0	0	0	0	0	0	2	2	0	0	0	0
3rd	0.003	0	0	0.003	0	0	0	0	2	0	0	2	0	0	0	0
4th	0	0.003	0	0.003	0	0	0	0	0	3	0	3	0	0	0	0
5th	0	0	0.003	0.003	0	0	0	0	0	0	6	6	0	0	0	0
6th	0.003	0	0	0.003	0	0	0	0	2	0	0	2	0	0	0	0
7th	0	0.003	0	0.003	0	0	0	0	0	2	0	2	0	0	0	0
8th	0	0	0.003	0.003	0	0	0	0	0	0	2	2	0	0	0	0
9th	0.003	0	0	0.003	0	0	0	0	4	0	0	4	0	0	0	0
10th	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11th	0	0.003	0	0.003	0	0	0	0	0	3	0	3	0	0	0	0
12th	0	0	0.003	0.003	0	0	0	0	0	0	2	2	0	0	0	0
13th	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14th	0.003	0	0	0.003	0	0	0	0	2	0	0	2	0	0	0	0
15th	0	0.003	0	0.003	0	0	0	0	0	3	0	3	0	0	0	0
16th	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17th	0	0	0.003	0.003	0	0	0	0	0	0	2	2	0	0	0	0
18th	0	6	7	13	0	15,058	15,940	30,998	0	18	19	37	0	268,422	284,147	552,570
19th	0	24	24	48	0	50,174	51,317	101,491	0	31	37	67	0	860,761	880,357	1,741,118
20th	0	24	24	48	0	43,590	47,725	91,315	0	37	33	70	0	766,621	839,353	1,605,974
21st	4	8	24	36	5,804	15,017	47,796	68,617	14	22	66	101	106,289	275,017	875,319	1,256,625
22nd	0	24	24	48	0	48,999	50,053	99,053	0	31	30	61	0	869,543	888,246	1,757,789
23rd	0	22	24	46	0	45,912	49,053	94,965	0	40	89	129	0	794,547	848,910	1,643,457
24th	6	24	20	50	12,341	49,486	41,782	103,609	36	46	76	158	205,966	825,930	697,355	1,729,251
25th	0	23	23	46	0	51,633	52,676	104,308	0	31	35	66	0	888,930	906,892	1,795,822
26th	0	24	24	48	0	51,775	52,807	104,582	0	31	28	59	0	890,931	908,691	1,799,622
27th	0	23	24	47	0	45,796	50,081	95,877	0	41	37	78	0	804,565	879,837	1,684,401
28th	0	5	24	29	0	9,130	49,243	58,373	0	26	29	55	0	164,594	887,743	1,052,337
29th	0	24	23	47	0	49,209	49,151	98,361	0	36	35	71	0	881,340	880,303	1,761,644
30th	0	24	24	48	0	51,850	52,843	104,694	0	31	30	61	0	913,463	930,962	1,844,425
Totals	10	255	289	554	18,144	527,629	610,468	1,156,242	60	434	557	1,051	312,255	9,204,666	10,708,115	20,225,036

Sum of Engines 554

Sum of Engines 1,156,242

Sum of Engines 1,051

Sum of Engines 20,225,036



June - 2021

Daily Data for Air Permit

SD1 Flare Burners, Turbine, and Boiler

Date	Flares A-190,191,192,193		Flares A-194,195			Turbine			Boiler		Run Time Check	
	Run Time Hrs	Gas cu ft	Run Time Hrs	Gas cu ft	Peak 1-hr Flow, SCFM	Run Time Hrs	Power KWh	Gas cu ft	Run Time Hrs	Gas cu ft	Engine Hrs	Eng + Boiler Hrs
1st	0	0	24	1,071,739	1,322	24	95,096	1,628,489	24	241,907	0.003	24
2nd	17	797,904	24	838,345	966	24	94,525	1,595,484	24	267,248	0.003	24
3rd	20	1,155,351	24	919,010	1,013	24	93,118	1,564,245	24	273,183	0.003	24
4th	24	1,394,277	24	876,662	693	24	93,379	1,553,550	24	299,546	0.003	24
5th	19	880,534	24	737,811	658	24	91,569	1,544,766	24	296,282	0.003	24
6th	0	0	24	652,687	666	24	91,593	1,576,201	24	296,923	0.003	24
7th	1	19,965	22	692,888	979	24	93,243	1,614,043	24	302,514	0.003	24
8th	0	0	24	1,477,317	1,355	24	95,235	1,626,369	24	301,443	0.003	24
9th	0	0	24	1,590,434	1,350	24	95,498	1,594,527	24	312,997	0.003	24
10th	20	1,020,787	24	921,977	975	24	94,584	1,593,699	24	323,316	0.000	24
11th	24	1,165,113	24	1,166,623	1,171	24	92,831	1,562,306	24	332,114	0.003	24
12th	24	1,008,702	24	1,251,597	1,017	24	90,105	1,521,838	24	311,278	0.003	24
13th	10	467,032	24	1,019,596	1,051	16	59,832	1,028,588	24	395,878	0.000	24
14th	6	192,439	21	1,074,563	1,239	24	90,676	1,580,764	24	290,703	0.003	24
15th	0	0	24	1,880,596	1,824	24	90,058	1,548,651	24	289,249	0.003	24
16th	12	524,316	24	1,818,664	1,779	24	87,947	1,499,291	24	284,132	0.000	24
17th	24	1,305,180	24	1,658,392	1,337	21	76,047	1,297,385	24	335,574	0.003	24
18th	18	1,124,626	19	776,625	1,049	11	34,316	633,499	17	356,447	13	30
19th	18	301,682	0	0	0	24	90,627	1,554,691	0	0	48	48
20th	10	127,644	0	0	0	24	85,076	1,467,030	1	13,623	48	49
21st	0	0	0	9,579	73	24	82,004	1,443,088	12	109,617	36	48
22nd	5	56,070	8	239,066	625	24	87,341	1,529,166	0	0	48	48
23rd	12	351,393	12	480,832	868	24	90,666	1,554,309	0	1,845	46	46
24th	0	0	24	842,186	913	24	91,052	1,545,195	0	0	50	50
25th	0	0	20	494,766	690	24	91,606	1,550,511	0	0	46	46
26th	6	84,662	17	735,960	963	24	90,457	1,546,944	0	0	48	48
27th	4	43,255	2	19,996	112	24	85,839	1,473,586	2	14,559	47	49
28th	0	0	2	36,278	283	24	80,527	1,411,202	7	63,916	29	36
29th	0	0	9	130,252	320	24	85,369	1,529,633	0	0	47	47
30th	0	0	18	639,423	1,012	24	91,046	1,574,663	0	0	48	48
Totals	274	12,020,933	532	24,053,863		696	2,611,262	44,743,713	447	5,714,293	554	1,001
				Maximum	1,824	Minimum					Maximum	50

Engine Thermal Throughput - Thermal Mass Meter, Common Engine Digester Gas Line

Turbine Operation			Data Source	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Semi-annual Totals	Limits
Run Time	Total	hrs	metered	744	538	743	683	723	696	4,128	
Digester Gas	Total	cu ft	metered	46,326,721	33,671,069	48,327,370	43,690,329	47,527,259	44,743,713	264,286,462	
Thermal Throughput ³	Total	MMBTU		29,911	22,780	29,840	28,715	30,399	29,858	171,503	389,820 MMBTU HHV per 12-Month period
Nitrogen Oxide ⁴	Max	ppm	sampled	4.3	4.6	4.5	4.9	4.3	5.7	x	23 ppm at any time
Carbon Monoxide ⁴	Max	ppm	sampled	1.3	3.3	2.4	1.4	3.2	2.6	x	100
Sulfur Dioxide ⁴	Max	ppm	sampled	3.4	2.6	1.1	2.8	4.4	3.2	x	150
Nitrogen Oxide	Total	lbs	calc'd	Based on last annual source test mass load rate (0.86 lbs/hr) x run time (4,157+4,128hrs)-->						7,125	34,400 lbs per 12-Month period
Carbon Monoxide	Total	lbs	calc'd	Based on last annual source test mass flow rate (0.3 lbs/hr) x run time (4,157+4,128hrs)---->						2,486	92,200
Engine Operation											
Run Time	Eng #1	hrs	metered	-	-	100	37	4.0	10	151	25,316 hr/365 days
	Eng #2	hrs	metered	457	617	642	201	0.04	255	2,172	
	Eng #3	hrs	metered	589	537	366	146	0.03	289	1,927	
	Total	hrs	sum	1,046	1,154	1,108	384	4.1	554	4,250	
Diesel Fuel ¹	Eng #1	gal	calc'd	-	-	606	427	211	60	1,304	150,000 gal/365 days
	Eng #2	gal	calc'd	866	1,165	1,270	606	82	434	4,422	
	Eng #3	gal	calc'd	988	1,004	669	516	52	557	3,786	
	Total	gal	sum	1,854	2,169	2,544	1,549	345	1,051	9,512	
Digester Gas ²	Eng #1	cu ft	metered	-	-	2,941,247	992,197	-	312,255	4,245,699	25 MMBTU/hr 25 MMBTU/hr 25 MMBTU/hr
	Eng #2	cu ft	metered	15,590,277	21,595,943	22,518,159	6,844,792	-	9,204,666	75,753,837	
	Eng #3	cu ft	metered	20,540,991	19,208,196	13,253,953	4,837,891	-	10,708,115	68,549,147	
	Total	cu ft	sum	36,131,268	40,804,139	38,713,360	12,674,880	-	20,225,036	148,548,683	
Thermal Throughput ³	Eng #1	MMBTU/hr		-	-	19.0	19.2	7.3	21.6	x	25 MMBTU/hr
	Eng #2	MMBTU/hr		22.3	23.9	21.9	22.8	271.7	24.3	x	25 MMBTU/hr
	Eng #3	MMBTU/hr		22.7	24.5	22.6	22.3	237.5	25.0	x	25 MMBTU/hr
Natural Gas	Total	cu ft	metered	-	-	-	-	-	-	-	
Boiler Operation											
Run Time	Boiler	hrs	metered	237	289	339	572	744	447	2,627	
Digester Gas	Boiler	cu ft	metered	3,027,394	3,623,023	4,592,431	11,733,984	14,817,231	5,714,293	43,508,355	
Thermal Thruput ³	Boiler	MMBTU/hr		8.3	8.5	8.4	13.5	12.7	8.5	x	20.41 MMBTU/hr
Flare Operation (A-190,191,192,193)											
Run Time	Flares	hrs	metered	187	262	6	165	90	274	984	
Digester Gas	Flares	cu ft	metered	7,004,572	10,059,221	323,973	7,823,793	4,221,709	12,020,933	41,454,202	
Thermal Thruput ³	Flares	MMBTU/hr		24.2	25.9	31.3	31.3	30.0	29.3	x	
Flare Operation (A-194,195)											
Run Time	Flares	hrs	metered	0	51	424	462	703	532	2,173	
Digester Gas	Flares	cu ft	metered	4,780	1,956,573	14,815,663	22,304,225	37,111,840	24,053,863	100,246,945	
Thermal Thruput ³	Flares	MMBTU/hr		9.3	25.8	21.6	31.7	33.8	30.2	x	
Max Total Flow	Flares	scfm	metered	23	1,507	1,401	1,851	1,860	1,824	x	
Digester Gas HHV	Grab	BTU/scf	sampled	646	677	617	657	640	667	x	

Engines 2 and 3 only ran for 1-3 minutes on diesel this month so this number is not representative.

(1) Diesel use per engine (gal) = diesel withdrawn from common storage tank daily (gal) x ratio of fuel used per engine (single day tank level / sum of all day tanks)

(2) Digester gas usage (cf) = DCS/PI flow data from common engine line meter (scfm) x minutes of gas flow x (engine hours/sum of engine hours)

(3) Thermal Throughput calculations use High Heat Value of the monthly Digester Gas Sample combined with Diesel High Heat Value of 138,690 BTU/gal or Natural Gas HHV of 1020 BTU/scf as applicable.

(4) Monthly turbine exhaust check - ppm corrected to 15% O2

ATTACHMENT 3

ANNUAL SOURCE TEST RESULTS

- Section Reserved
- No annual source tests were conducted in this monitoring period

Attachment 4
Gasoline Facility Throughput (S-48)

MAIN WASTEWATER TREATMENT PLANT
GASOLINE DISPENSING FACILITY
Maintenance Center (3,000 gallon gasoline compartment)
Year: 2021
As of June 30, 2021

MONTH	GALLONS RECEIVED*	RECEIVED YR-TO-DATE*	GALLONS ISSUED	ISSUED YR-TO-DATE	COMMENTS
JAN	1900	1900	2149	2149	
FEB	2450	4350	2134	4283	
MAR	1100	5450	2251	6534	
APR	3681	9131	2740	9274	
MAY	1750	10881	2175	11449	
JUN	2725	13606	2333	13782	
JUL					
AUG					
SEP					
OCT					
NOV					
DEC					
Total					

*Use gasoline received for throughput estimations.

ATTACHMENT 5

Hours of Operation for Stand-by Emergency Generators

January 1, 2021 – June 30, 2021

Source	Location	Hours Meter Begin	Hours Meter End	Emergency Use Hours	Reliability-related Hours	Limit on reliability-related Hours
S-50	North of PGS	140.5	142.9	0	2.4	30
S-51	Dechlorination	730.0	734.7	0.9	3.8	50
S-53	West of Admin Bldg	117.7	126.9	8.7	0.5	30
S-54	East Bayshore RWP	36	36	0	0	50
S-58	North of Maintenance	19.8	20.2	0	0.4	50

July 1, 2020 – December 31, 2020

Source	Location	Hours Meter Begin	Hours Meter End	Emergency Use Hours	Reliability-related Hours	Limit on reliability-related Hours
S-50	North of PGS	139.0	140.5	0	1.5	30
S-51	Dechlorination	725.5	730.0	0	4.5	50
S-53	West of Admin Bldg	109.6	117.7	5.0	3.1	30
S-54	East Bayshore RWP	36	36	0	0	50
S-58	North of Maintenance	17.5	19.8	2.3	0	50

July 1, 2020 – June 30, 2021 (last 12 months total)

Source	Location	Hours Meter Begin	Hours Meter End	Emergency Use Hours	Reliability-related Hours	Limit on reliability-related Hours
S-50	North of PGS	139.0	142.9	0	3.9	30
S-51	Dechlorination	725.5	734.7	0.9	8.3	50
S-53	West of Admin Bldg	109.6	126.9	13.7	3.6	30
S-54	East Bayshore RWP	36	36	0	0	50
S-58	North of Maintenance	17.5	20.2	2.3	0.4	50

ATTACHMENT 6

TURBINE MONTHLY TEST RESULTS

TABLE # 1

**EBMUD-JAN-2021
DG TURBINE #1 (S-56)
3703 kW**

RUN	1	LIMITS
Test Date	1/18/21	
Test Time	1718-1732	
PGS-2 Turbine kW	3,703	
PGS-2 Fuel Flow Rate, DSCFM	1,098	
Oxygen, O ₂ , %	16.5	
NO _x , ppm	3.2	
NO_x, ppm @ 15% O₂	4.3	23
CO, ppm	0.9	
CO, ppm @ 15% O₂	1.3	100
SO ₂ , ppm	2.5	
SO₂, ppm @ 15% O₂	3.4	150

WHERE,

ppm = Parts Per Million Concentration
 NO_x = Oxides of Nitrogen as NO₂ (MW = 46)
 CO = Carbon Monoxide (MW = 28)
 SO₂ = Sulfur Dioxide (MW= 64)

CALCULATIONS,

PPM @ 15% O₂ = ppm * 5.9 / (20.9 - %O₂)

TABLE # 1

**EBMUD-FEB-2021
DG TURBINE #1 (S-56)
4061 kW**

RUN	1	LIMITS
Test Date	2/19/21	
Test Time	1457-1512	
PGS-2 Turbine kW	4,061	
PGS-2 Fuel Flow Rate, DSCFM	1,087	
Oxygen, O ₂ , %	16.7	
NO _x , ppm	3.3	
NO_x, ppm @ 15% O₂	4.6	23
CO, ppm	2.4	
CO, ppm @ 15% O₂	3.3	100
SO ₂ , ppm	1.8	
SO₂, ppm @ 15% O₂	2.6	150

WHERE,

ppm = Parts Per Million Concentration
 NO_x = Oxides of Nitrogen as NO₂ (MW = 46)
 CO = Carbon Monoxide (MW = 28)
 SO₂ = Sulfur Dioxide (MW= 64)

CALCULATIONS,

PPM @ 15% O₂ = ppm * 5.9 / (20.9 - %O₂)

TABLE # 1

**EBMUD-MAR-2021
DG TURBINE #1 (S-56)
3857 kW**

RUN	1	LIMITS
Test Date	3/24/21	
Test Time	1328-1343	
PGS-2 Turbine kW	3,857	
PGS-2 Fuel Flow Rate, DSCFM	1,081	
Oxygen, O ₂ , %	16.6	
NO _x , ppm	3.3	
NO_x, ppm @ 15% O₂	4.5	23
CO, ppm	1.8	
CO, ppm @ 15% O₂	2.4	100
SO ₂ , ppm	0.8	
SO₂, ppm @ 15% O₂	1.1	150

WHERE,

ppm = Parts Per Million Concentration
 NO_x = Oxides of Nitrogen as NO₂ (MW = 46)
 CO = Carbon Monoxide (MW = 28)
 SO₂ = Sulfur Dioxide (MW= 64)

CALCULATIONS,

$$\text{PPM @ 15\% O}_2 = \text{ppm} * 5.9 / (20.9 - \%O_2)$$

TABLE # 1

**EBMUD-APR-2021
 DG TURBINE #1 (S-56)
 3969 kW**

RUN	1	LIMITS
Test Date	4/26/21	
Test Time	1503-1518	
PGS-2 Turbine kW	3,969	
PGS-2 Fuel Flow Rate, DSCFM	1,114	
Oxygen, O ₂ , %	16.7	
NO _x , ppm	3.5	
NO_x, ppm @ 15% O₂	4.9	23
CO, ppm	1.0	
CO, ppm @ 15% O₂	1.4	100
SO ₂ , ppm	2.0	
SO₂, ppm @ 15% O₂	2.8	150

WHERE,

ppm = Parts Per Million Concentration
 NO_x = Oxides of Nitrogen as NO₂ (MW = 46)
 CO = Carbon Monoxide (MW = 28)
 SO₂ = Sulfur Dioxide (MW= 64)

CALCULATIONS,

$$\text{PPM @ 15\% O}_2 = \text{ppm} * 5.9 / (20.9 - \%O_2)$$

TABLE # 1

**EBMUD-MAY-2021
 DG TURBINE #1 (S-56)
 3818 kW**

RUN	1	LIMITS
Test Date	5/21/21	
Test Time	1449-1504	
PGS-2 Turbine kW	3,818	
PGS-2 Fuel Flow Rate, DSCFM	1,090	
Oxygen, O ₂ , %	16.8	
NO _x , ppm	3.0	
NO_x, ppm @ 15% O₂	4.3	23
CO, ppm	2.3	
CO, ppm @ 15% O₂	3.2	100
SO ₂ , ppm	3.1	
SO₂, ppm @ 15% O₂	4.4	150

WHERE,

ppm = Parts Per Million Concentration
 NO_x = Oxides of Nitrogen as NO₂ (MW = 46)
 CO = Carbon Monoxide (MW = 28)
 SO₂ = Sulfur Dioxide (MW= 64)

CALCULATIONS,

$$\text{PPM @ 15\% O}_2 = \text{ppm} * 5.9 / (20.9 - \%O_2)$$

TABLE # 1

**EBMUD-JUN-2021
DG TURBINE #1 (S-56)
3521 kW**

RUN	1	LIMITS
Test Date	6/17/21	
Test Time	1638-1653	
PGS-2 Turbine kW	3,521	
PGS-2 Fuel Flow Rate, DSCFM	1,008	
Oxygen, O ₂ , %	16.9	
NO _x , ppm	3.8	
NO_x, ppm @ 15% O₂	5.7	23
CO, ppm	1.8	
CO, ppm @ 15% O₂	2.6	100
SO ₂ , ppm	2.2	
SO₂, ppm @ 15% O₂	3.2	150

WHERE,

ppm = Parts Per Million Concentration

NO_x = Oxides of Nitrogen as NO₂ (MW = 46)

CO = Carbon Monoxide (MW = 28)

SO₂ = Sulfur Dioxide (MW= 64)

CALCULATIONS,

$$\text{PPM @ 15\% O}_2 = \text{ppm} * 5.9 / (20.9 - \%O_2)$$

ATTACHMENT 7

MAIN WASTEWATER TREATMENT PLANT FLOWS

East Bay Municipal Utility District

MONTHLY WASTEWATER MONITORING SUMMARY JUNE 2021

STATION: WWTP INFLUENT - INF-001
 STATION: WWTP EFFLUENT - EFF-001
 FLOWS & CONVENTIONAL POLLUTANTS (R2-2020-0024)

INF (MGD)				EFF (MGD)			CBOD					TSS					Oil and Grease					
3-mo				Max	Min	Daily	Inf (INF-001)	Eff mg/L	mg/L	# excs/ # of Analyses	% Removal	Inf mg/L	Eff mg/L	Eff mg/L	# excs/ # of Analyses	% Removal	Eff mg/L	Eff mg/L				
Mo. Avg	Daily Avg	Daily Avg	Month Avg																Month Avg	Week Avg	Mo. Avg	Week Avg
Limits:				120			25		40		Min 85		30		45		Min 85		10		20	
Jan	55	90	46	49	85	41	768	6	8	0/ 1	0/ 5	99%	1061	11	14	0/ 1	0/ 5	99%	4x/year			
Feb	58	100	47	53	98	45	313	5	7	0/ 1	0/ 4	98%	461	8	9	0/ 1	0/ 4	98%				
Mar	56	82	48	51	76	45	328	6	7	0/ 1	0/ 4	98%	394	7	8	0/ 1	0/ 4	98%	< 1.3	< 1.3		
Apr	49	54	46	45	48	43	330	8	9	0/ 1	0/ 4	98%	424	11	11	0/ 1	0/ 4	98%				
May	49	52	44	44	47	41	342	8	10	0/ 1	0/ 5	98%	421	12	13	0/ 1	0/ 5	97%	1.8	1.8		
Jun	47	50	40	42	48	37	336	10	11	0/ 1	0/ 4	97%	454	15	17	0/ 1	0/ 4	97%				
Jul																						
Aug																						
Sep																						
Oct																						
Nov																						
Dec																						
Avg	52	71	45	47	67	42	403	7	9			98%	536	11	12			98%	1.6	1.6		
Max	58	100	48	53	98	45	768	10	11			99%	1061	15	17			99%	1.8	1.8		
Min	47	50	40	42	47	37	313	5	7			97%	394	7	8			97%	< 1.3	< 1.3		
Exc/Analyses									0/ 6	0/ 26	0/6					0/6	0/6	0/6	0/2	0/2		

Exc / Analyses = number of exceedances / number of analyses

ATTACHMENT 8 -- IPS Scrubber Inlet and Outlet H2S Readings, ppm

(A-462 is Fine Screen Room Scrubber, A-463,A-464 are Course Screen Room/IPS Scrubbers)

	Coarse Scrubber		Fine Scrubber		Coarse Scrubber		Fine Scrubber	
	Inlet Avg	Outlet Avg	Inlet Avg	Outlet Avg	Inlet Max	Outlet Max	Inlet Max	Outlet Max
01-Jan-21	2.9	0.0	0.0	0.0	7.7	0.0	0.0	0.0
02-Jan-21	1.6	0.0	0.0	0.0	6.5	0.0	0.0	0.0
03-Jan-21	4.1	0.0	0.0	0.0	7.3	0.0	0.0	0.0
04-Jan-21	3.0	0.0	0.0	0.0	8.6	0.0	0.0	0.0
05-Jan-21	0.2	0.0	0.0	0.0	2.6	0.0	0.0	0.0
06-Jan-21	0.3	0.0	0.0	0.0	1.7	0.0	0.0	0.0
07-Jan-21	0.3	0.0	0.0	0.0	1.7	0.0	0.0	0.0
08-Jan-21	0.6	0.0	0.0	0.0	3.1	0.0	0.0	0.0
09-Jan-21	0.4	0.0	0.0	0.0	2.7	0.0	0.0	0.0
10-Jan-21	0.3	0.0	0.0	0.0	2.2	0.0	0.0	0.0
11-Jan-21	0.8	0.0	0.0	0.0	3.7	0.0	0.0	0.0
12-Jan-21	0.8	0.0	0.0	0.0	7.2	0.0	0.0	0.0
13-Jan-21	0.9	0.0	0.0	0.0	5.7	0.0	0.0	0.0
14-Jan-21	0.9	0.0	0.0	0.0	4.4	0.0	0.0	0.0
15-Jan-21	1.5	0.0	0.0	0.0	7.6	0.0	5.5	0.0
16-Jan-21	1.8	0.0	0.0	0.0	15.8	0.0	0.0	0.0
17-Jan-21	1.5	0.0	0.0	0.0	4.1	0.0	0.0	0.0
18-Jan-21	0.7	0.0	0.0	0.0	3.8	0.0	0.0	0.0
19-Jan-21	1.6	0.0	0.0	0.0	11.4	0.0	0.0	0.0
20-Jan-21	0.7	0.0	0.0	0.0	4.6	0.0	0.0	0.0
21-Jan-21	1.2	0.0	0.0	0.0	6.3	0.0	0.0	0.0
22-Jan-21	1.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0
23-Jan-21	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0
24-Jan-21	0.8	0.0	0.0	0.0	2.3	0.0	0.0	0.0
25-Jan-21	0.1	0.0	0.0	0.0	3.9	0.0	3.7	0.0
26-Jan-21	1.7	0.0	0.0	0.0	10.8	0.0	0.0	0.0
27-Jan-21	0.2	0.0	0.0	0.0	3.3	0.0	0.0	0.0
28-Jan-21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29-Jan-21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30-Jan-21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31-Jan-21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Monthly Avg 1.0 0.0 0.0 0.0
 Monthly Max 15.8 0.0 5.5 0.0

	Coarse Scrubber		Fine Scrubber		Coarse Scrubber		Fine Scrubber	
	Inlet Avg	Outlet Avg	Inlet Avg	Outlet Avg	Inlet Max	Outlet Max	Inlet Max	Outlet Max
01-Feb-21	0.1	0.0	0.0	0.0	1.6	0.0	0.0	0.0
02-Feb-21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
03-Feb-21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
04-Feb-21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
05-Feb-21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
06-Feb-21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
07-Feb-21	0.1	0.0	0.0	0.0	1.7	0.0	0.0	0.0
08-Feb-21	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0
09-Feb-21	0.2	0.0	0.0	0.0	3.5	0.0	0.0	0.0
10-Feb-21	0.1	0.0	0.0	0.0	1.6	0.0	0.0	0.0
11-Feb-21	0.3	0.0	0.0	0.0	3.0	0.0	0.0	0.0
12-Feb-21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13-Feb-21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14-Feb-21	0.2	0.0	0.0	0.0	1.6	0.0	0.0	0.0
15-Feb-21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16-Feb-21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17-Feb-21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18-Feb-21	0.1	0.0	0.0	0.0	1.7	0.0	0.0	0.0
19-Feb-21	0.1	0.0	0.0	0.0	1.8	0.0	0.0	0.0
20-Feb-21	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
21-Feb-21	0.1	0.0	0.0	0.0	2.1	0.0	0.0	0.0
22-Feb-21	0.2	0.0	0.0	0.0	1.8	0.0	0.0	0.0
23-Feb-21	0.2	0.0	0.0	0.0	1.6	0.0	0.0	0.0
24-Feb-21	0.2	0.0	0.0	0.0	1.7	0.0	0.0	0.0
25-Feb-21	0.6	0.0	0.0	0.0	14.9	0.0	13.2	0.3
26-Feb-21	0.4	0.0	0.0	0.0	3.4	0.0	0.0	0.0
27-Feb-21	0.5	0.0	0.0	0.0	4.2	0.0	0.0	0.0
28-Feb-21	0.2	0.0	0.0	0.0	1.7	0.0	0.0	0.0

Monthly Avg 0.1 0.0 0.0 0.0
 Monthly Max 14.9 0.0 13.2 0.3

ATTACHMENT 8 -- IPS Scrubber Inlet and Outlet H2S Readings, ppm

	Coarse Scrubber		Fine Scrubber		Coarse Scrubber		Fine Scrubber			Coarse Scrubber		Fine Scrubber		Coarse Scrubber		Fine Scrubber	
	Inlet Avg	Outlet Avg	Inlet Avg	Outlet Avg	Inlet Max	Outlet Max	Inlet Max	Outlet Max		Inlet Avg	Outlet Avg	Inlet Max	Outlet Max	Inlet Max	Outlet Max	Inlet Max	Outlet Max
01-Mar-21	0.1	0.0	0.0	0.0	1.6	0.0	1.4	0.0	01-Apr-21	1.2	0.0	0.0	0.0	3.0	0.0	0.0	4.8
02-Mar-21	0.2	0.0	0.0	0.0	2.1	0.0	0.0	0.0	02-Apr-21	1.6	0.0	0.0	0.0	3.1	0.0	0.0	0.0
03-Mar-21	0.9	0.0	0.0	0.0	4.1	0.0	0.0	0.0	03-Apr-21	1.4	0.0	0.0	0.0	3.0	0.0	0.0	0.0
04-Mar-21	1.4	0.0	0.0	0.0	5.0	0.0	0.0	0.0	04-Apr-21	0.5	0.0	0.0	0.0	2.2	0.0	0.0	0.0
05-Mar-21	1.1	0.0	0.0	0.0	3.5	0.0	0.0	0.0	05-Apr-21	0.6	0.0	0.0	0.0	2.7	0.0	0.0	0.0
06-Mar-21	0.3	0.0	0.0	0.0	5.4	0.0	13.9	0.3	06-Apr-21	1.2	0.0	0.0	0.0	4.7	0.0	4.5	0.0
07-Mar-21	0.3	0.0	0.0	0.0	2.8	0.0	0.0	0.0	07-Apr-21	1.6	0.0	0.0	0.0	7.9	0.0	0.0	0.0
08-Mar-21	0.5	0.0	0.0	0.0	4.1	0.0	0.0	0.0	08-Apr-21	1.5	0.0	0.0	0.0	7.7	0.0	4.7	0.0
09-Mar-21	1.7	0.0	0.0	0.0	4.1	0.0	0.0	0.0	09-Apr-21	1.5	0.0	0.0	0.0	4.2	0.0	0.0	0.0
10-Mar-21	0.1	0.0	0.0	0.0	1.7	0.0	0.0	0.0	10-Apr-21	2.3	0.0	0.0	0.0	22.8	0.0	1.6	0.0
11-Mar-21	0.1	0.0	0.0	0.0	1.5	0.0	0.0	0.0	11-Apr-21	1.3	0.0	0.0	0.0	14.4	0.0	0.0	0.0
12-Mar-21	0.1	0.0	0.0	0.0	2.3	0.0	0.0	0.0	12-Apr-21	0.9	0.0	0.0	0.0	2.8	0.0	0.0	0.0
13-Mar-21	0.2	0.0	0.0	0.0	1.6	0.0	0.0	0.0	13-Apr-21	1.9	0.0	0.0	0.0	4.7	0.0	0.0	0.0
14-Mar-21	1.3	0.0	0.0	0.0	3.7	0.0	0.0	0.0	14-Apr-21	1.9	0.0	0.0	0.0	8.0	0.0	0.0	0.0
15-Mar-21	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	15-Apr-21	1.4	0.0	0.0	0.0	4.1	0.0	0.0	0.0
16-Mar-21	0.3	0.0	0.0	0.0	2.5	0.0	0.0	0.0	16-Apr-21	1.8	0.0	0.0	0.0	5.5	0.0	0.0	0.0
17-Mar-21	0.2	0.0	0.0	0.0	2.6	0.0	0.0	0.0	17-Apr-21	1.7	0.0	0.0	0.0	6.8	0.0	0.0	0.0
18-Mar-21	1.4	0.0	0.0	0.0	4.3	0.0	0.0	0.0	18-Apr-21	2.5	0.0	0.0	0.0	6.7	0.0	0.0	0.0
19-Mar-21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19-Apr-21	2.1	0.0	0.0	0.0	6.8	0.0	0.0	0.0
20-Mar-21	0.1	0.0	0.0	0.0	1.6	0.0	0.0	0.0	20-Apr-21	2.2	0.0	0.0	0.0	8.2	0.0	0.0	0.0
21-Mar-21	0.3	0.0	0.0	0.0	2.2	0.0	0.0	0.0	21-Apr-21	2.0	0.0	0.0	0.0	14.6	0.0	8.9	0.0
22-Mar-21	0.3	0.0	0.0	0.0	4.1	0.0	0.0	0.0	22-Apr-21	2.3	0.0	0.0	0.0	7.5	0.0	0.0	0.0
23-Mar-21	0.6	0.0	0.0	0.0	16.0	0.0	1.5	0.0	23-Apr-21	2.6	0.0	0.0	0.0	9.1	0.0	0.0	0.0
24-Mar-21	1.8	0.0	0.0	0.0	6.8	0.0	0.0	0.0	24-Apr-21	1.6	0.0	0.0	0.0	7.4	0.0	0.0	0.0
25-Mar-21	0.6	0.0	0.0	0.0	3.7	0.0	2.3	0.0	25-Apr-21	2.4	0.0	0.0	0.0	8.2	0.0	0.0	0.0
26-Mar-21	0.3	0.0	0.0	0.0	2.9	0.0	0.0	0.0	26-Apr-21	1.2	0.0	0.0	0.0	4.1	0.0	0.0	0.0
27-Mar-21	0.3	0.0	0.0	0.0	7.0	0.0	0.0	0.0	27-Apr-21	1.6	0.0	0.0	0.0	5.9	0.0	0.0	0.0
28-Mar-21	0.1	0.0	0.0	0.0	2.1	0.0	0.0	0.0	28-Apr-21	3.1	0.0	0.0	0.0	7.8	0.0	0.0	0.0
29-Mar-21	0.3	0.0	0.0	0.0	2.9	0.0	0.0	0.0	29-Apr-21	2.8	0.0	0.0	0.0	11.5	0.0	0.0	0.0
30-Mar-21	0.4	0.0	0.0	0.0	3.3	0.0	0.0	0.0	30-Apr-21	4.8	0.0	0.0	0.0	11.3	0.0	0.0	0.0
31-Mar-21	0.7	0.0	0.0	0.0	4.2	0.0	0.0	0.0									
Monthly Avg	0.5	0.0	0.0	0.0					Monthly Avg	1.8	0.0	0.0	0.0				
Monthly Max					16.0	0.0	13.9	0.3	Monthly Max					22.8	0.0	8.9	4.8
<45 second excursion. Not believed to be real as no inlet spike measured.																	

ATTACHMENT 8 -- IPS Scrubber Inlet and Outlet H2S Readings, ppm

	Coarse Scrubber		Fine Scrubber		Coarse Scrubber		Fine Scrubber	
	Inlet Avg	Outlet Avg	Inlet Avg	Outlet Avg	Inlet Max	Outlet Max	Inlet Max	Outlet Max
01-May-21	3.3	0.0	0.0	0.0	15.2	0.0	0.0	0.0
02-May-21	1.4	0.0	0.0	0.0	4.0	0.0	0.0	0.0
03-May-21	3.1	0.0	0.0	0.0	7.4	0.0	0.0	0.0
04-May-21	3.1	0.0	0.0	0.0	11.1	0.0	0.0	0.0
05-May-21	2.2	0.0	0.0	0.0	8.2	0.0	0.0	0.0
06-May-21	3.0	0.0	0.0	0.0	7.5	0.0	0.0	0.0
07-May-21	4.4	0.0	0.0	0.0	46.6	0.0	2.1	0.0
08-May-21	3.0	0.0	0.0	0.0	9.0	0.0	0.0	0.0
09-May-21	3.4	0.0	0.0	0.0	9.6	0.0	0.0	0.0
10-May-21	2.3	0.0	0.0	0.0	6.3	0.0	0.0	0.0
11-May-21	1.7	0.0	0.0	0.0	5.7	0.0	0.0	0.0
12-May-21	1.4	0.0	0.0	0.0	7.5	0.0	0.0	0.0
13-May-21	1.4	0.0	0.0	0.0	5.2	0.0	0.0	0.0
14-May-21	2.6	0.0	0.0	0.0	15.3	0.0	2.3	0.0
15-May-21	3.1	0.0	0.0	0.0	12.5	0.0	0.0	0.0
16-May-21	1.9	0.0	0.0	0.0	5.3	0.0	0.0	0.0
17-May-21	3.6	0.0	0.0	0.0	10.6	0.0	0.0	0.0
18-May-21	4.2	0.0	0.0	0.0	12.7	0.0	0.0	0.0
19-May-21	2.1	0.0	0.0	0.0	9.6	0.0	0.0	0.0
20-May-21	1.3	0.0	0.0	0.0	3.4	0.0	0.0	0.0
21-May-21	3.1	0.0	0.0	0.0	7.9	0.0	0.0	0.0
22-May-21	3.8	0.0	0.0	0.0	12.0	0.0	0.0	0.0
23-May-21	2.3	0.0	0.0	0.0	8.3	0.0	0.0	0.0
24-May-21	2.5	0.0	0.0	0.0	10.1	0.0	0.0	0.0
25-May-21	2.0	0.0	0.0	0.0	6.6	0.0	0.0	0.0
26-May-21	2.9	0.0	0.0	0.0	10.8	0.0	0.0	0.0
27-May-21	2.8	0.0	0.0	0.0	6.3	0.0	0.0	0.0
28-May-21	4.3	0.0	0.0	0.0	14.6	0.0	0.0	0.0
29-May-21	5.2	0.0	0.0	0.0	12.6	0.0	0.0	0.0
30-May-21	2.7	0.0	0.0	0.0	6.1	0.0	0.0	0.0
31-May-21	2.4	0.0	0.0	0.0	7.2	0.0	0.0	0.0

Monthly Avg 2.8 0.0 0.0 0.0
 Monthly Max 46.6 0.0 2.3 0.0

	Coarse Scrubber		Fine Scrubber		Coarse Scrubber		Fine Scrubber	
	Inlet Avg	Outlet Avg	Inlet Avg	Outlet Avg	Inlet Max	Outlet Max	Inlet Max	Outlet Max
01-Jun-21	2.9	0.0	0.0	0.0	6.1	0.0	0.0	0.0
02-Jun-21	4.6	0.0	0.0	0.0	16.8	0.0	0.0	0.0
03-Jun-21	3.4	0.0	0.0	0.0	10.1	0.0	0.0	0.0
04-Jun-21	4.4	0.0	0.0	0.0	10.0	0.0	0.0	0.0
05-Jun-21	3.6	0.0	0.0	0.0	8.5	0.0	0.0	0.0
06-Jun-21	3.3	0.0	0.0	0.0	9.0	0.0	0.0	0.0
07-Jun-21	3.3	0.0	0.0	0.0	7.2	0.0	0.0	0.0
08-Jun-21	2.9	0.0	0.0	0.0	8.4	0.0	0.0	0.0
09-Jun-21	2.1	0.0	0.0	0.0	10.3	0.0	0.0	0.0
10-Jun-21	2.4	0.0	0.0	0.0	6.5	0.0	0.0	0.0
11-Jun-21	4.0	0.0	0.0	0.0	17.8	0.0	1.9	0.0
12-Jun-21	1.8	0.0	0.0	0.0	7.1	0.0	0.0	0.0
13-Jun-21	2.3	0.0	0.0	0.0	13.6	0.0	0.0	0.0
14-Jun-21	2.7	0.0	0.0	0.0	6.1	0.0	14.9	0.3
15-Jun-21	2.6	0.0	0.0	0.0	7.1	0.0	1.5	0.0
16-Jun-21	3.5	0.0	0.0	0.0	14.1	0.0	1.5	0.0
17-Jun-21	4.5	0.0	0.0	0.0	21.9	0.0	2.7	0.0
18-Jun-21	2.1	0.0	0.0	0.0	15.9	0.0	0.0	0.0
19-Jun-21	2.5	0.0	0.0	0.0	9.1	0.0	0.0	0.0
20-Jun-21	1.4	0.0	0.0	0.0	7.8	0.0	0.0	0.0
21-Jun-21	2.0	0.0	0.0	0.0	11.4	0.0	0.0	0.0
22-Jun-21	2.5	0.0	0.0	0.0	9.3	0.0	0.0	0.0
23-Jun-21	2.9	0.0	0.0	0.0	9.0	0.0	0.0	0.0
24-Jun-21	3.0	0.0	0.0	0.0	18.8	0.0	0.0	0.0
25-Jun-21	3.6	0.0	0.0	0.0	13.9	0.0	0.0	0.0
26-Jun-21	4.8	0.0	0.0	0.0	13.3	0.0	0.0	0.0
27-Jun-21	5.7	0.0	0.0	0.0	40.3	0.0	6.1	0.0
28-Jun-21	8.0	0.0	0.0	0.0	20.8	0.0	3.2	0.0
29-Jun-21	9.8	0.0	0.0	0.0	23.3	0.0	0.0	0.0
30-Jun-21	7.5	0.0	0.0	0.0	21.7	0.0	0.0	0.0

Monthly Avg 3.7 0.0 0.0 0.0
 Monthly Max 40.3 0.0 14.9 0.3

ATTACHMENT 8 -- IPS Scrubber Inlet and Outlet H2S Readings - Related Outages

Influent Pump Station Odor Scrubber Outage Table

Start	Finish	Duration	Reason
07-Jan-21 07:58	07-Jan-21 10:12	2:14	Coarse scrubber PM, grease/mist eliminator service for A642
23-Feb-21 10:57	23-Feb-21 11:10	0:13	Power failure multiple locations at IPS including A642
03-Mar-21 13:26	03-Mar-21 13:35	0:09	Maintenance(?) A462 (EF-10)
18-Mar-21 08:58	18-Mar-21 09:00	0:02	Not logged, Power glitch A462
27-Apr-21 13:57	27-Apr-21 14:00	0:03	Not logged, Power glitch A462
29-Apr-21 07:48	29-Apr-21 07:59	0:11	Maintenance A462 (EF-09)
07-May-21 18:16	07-May-21 19:14	0:58	Power failure multiple locations at IPS including A463/A464
01-Jun-21 00:01	01-Jun-21 17:48	17:47	Power failure multiple locations at IPS including A463/A464
13-Jun-21 06:51	13-Jun-21 08:12	1:21	Power failure multiple locations at IPS including A462, A463/A464
13-Jun-21 08:38	13-Jun-21 08:50	0:12	Power failure multiple locations at IPS including A462, A463/A464
13-Jun-21 08:50	13-Jun-21 09:20	0:30	Power failure multiple locations at IPS including A462, A463/A464
	Total Down Time	<u>23:40</u>	

ATTACHMENT 9 - ODOR SCRUBBER MAINTENANCE RECORDS - S-170, S-110

Headworks Odor Scrubber Maintenance Work Orders Jan - Jun 2021

Area	Wonum	Description	Assetnum	Dept	Status	Type	Report Date	Reported By
W-12	2021067862	Fan #11 on roof. Belt tensioner seems to have come loose or broke. Repair as necessary	W-12-MISC-000-00	PO	CLOSE	CM	1/19/2021	MSCHMITZ
W-12	2021210970	Exhaust fan #9 will not run. Even after reset the breaker.	W-12-MSL-OCS-01	PO	CLOSE	CM	2/23/2021	HTON
W-12	2021245707	Exhausted Fan #9 can't clear the trip on DCS. Need instrumentation.	W-12-FA-EF-102	PO	CLOSE	CM	3/3/2021	HTON
W-12	2021553028	Exhaust fan EF-9 on IPS roof does not turn on.	W-12-FAN-EF-9	PO	INPRG	CM	4/24/2021	DGARCIA
W-12	2021553049	Supply fan SF-12 on IPS roof not working.	W-12-FAN-SF4-01	PO	COMP	CM	4/24/2021	DGARCIA
W-12	2021590997	Motor room supply fan near hydrolic manifold (need to access it with ladder) not worki.has no belt.	W-12-FAN-SF5-00	PO	COMP	CM	4/28/2021	DGARCIA
W-12	2021638351	EF-9 damper valve shows trip on DCS and won't reset. Can't start fan. duplicated work order 2019027160 - mistakenly cancelled the work order when it should have been updated to COMPLETE EF-10 in operation during EF-9 outages, throughput not affected.	W-12-MISC-000-00	PO	CLOSE	CM	5/6/2021	BYEE

Thickening/Dewatering Odor Scrubber Maintenance Work Orders Jan - Jun 2021

Area	Wonum	Description	Assetnum	Dept	Status	Type	Report Date	Reported By
W-30	2021093203	DWB Odor Scrubber Fan #1 shaft is rubbing and belts are worn	W-30-FAN-CEF-01	PO	COMP	CM	1/25/2021	JMHERRER
W-25	2021130581	#1 Odor scrubber blower cover running hot belts squeaking #1 Odor scrubber blower cover, belts squeaking running hot	W-25-MISC-000-00	PO	COMP	CM	2/2/2021	TKELLY
W-30	2021136647	Fan belts are broken, were replaced on 2/4	W-30-FAN-CEF-01	PO	COMP	BD	2/8/2021	SZUBRZYC
W-25	2021596413	Hypo line leak near dewatering building odor scrubbers needs repair	W-25-MISC-000-00	PO	COMP	CM	4/29/2021	TKELLY
W-30	2021768041	fan belt enclosure falling off on air supply fan on thickening building roof top. fan belt enclosure falling off on air supply fan on thickening building roof top. located inside the enclosure room on rooftop.	W-30-FAN-MSF-01	PO	INPRG	CM	5/29/2021	VWAGNER

ATTACHMENT 10 -- S-170 Waste Activated Sludge Throughput

2021 January - June Gravity Belt Thickener Summary Flow Table

Note: Kgal=1,000 gallons

Daily Flows	January	February	March	April	May	June
	Kgal	Kgal	Kgal	Kgal	Kgal	Kgal
1st	1,138	1,664	1,116	1,355	1,138	793
2nd	1,234	1,100	1,075	1,250	1,218	735
3rd	1,219	1,236	1,138	1,319	1,157	852
4th	1,101	1,399	1,208	1,363	1,079	937
5th	1,191	1,160	1,233	1,378	1,093	921
6th	1,242	1,056	1,240	1,414	1,085	877
7th	1,223	1,190	1,748	1,400	1,101	862
8th	1,188	1,128	1,415	1,393	1,265	1,098
9th	974	1,154	973	1,399	1,156	991
10th	858	1,229	1,013	1,418	1,129	882
11th	869	1,159	966	1,497	1,292	976
12th	773	1,237	1,022	1,457	1,183	980
13th	804	1,239	1,061	1,443	1,041	946
14th	917	1,240	1,023	1,591	961	935
15th	1,015	1,168	951	1,417	876	832
16th	896	901	1,045	1,450	901	737
17th	1,006	1,400	1,029	1,539	700	611
18th	965	1,289	1,321	1,178	922	349
19th	942	1,069	1,296	1,611	965	748
20th	927	1,050	1,386	1,163	909	793
21st	875	1,267	1,597	1,396	894	712
22nd	943	1,228	1,479	1,379	1,053	719
23rd	1,397	1,300	1,346	1,529	1,023	756
24th	1,502	1,548	1,379	1,480	847	675
25th	1,554	1,264	1,279	1,981	811	657
26th	1,612	1,209	1,219	1,171	723	612
27th	1,715	1,422	1,295	1,079	731	655
28th	1,694	1,355	1,259	1,136	803	804
29th	1,490		1,293	1,093	886	817
30th	1,541		1,277	1,131	791	899
31st	1,535		1,288		809	
Monthly Total	36,339	34,659	37,971	41,409	30,540	24,158
Semi-Annual Total	205,076					

Gravity Belt Thickener and Dewatering Centrifuge Odor Scrubber Outage Table

Start	Finish	Duration	Reason
25-Jan-21 08:35	25-Jan-21 13:10	4:35	DWB scrubber off-line to investigate burning smell
04-Feb-21 06:55	04-Feb-21 07:24	0:29	DWB scrubber off-line, belts replaced
08-Feb-21 02:00	08-Feb-21 12:00	10:00	DWB scrubber off-line, broken belts, x-over open, temp belt installed
09-Feb-21 07:20	09-Feb-21 07:40	0:20	DWB scrubber off-line, new belts installed, x-over closed
Total Down Time, DWB		<u>15:24</u>	
Total Down Time, THK		<u>0:00</u>	

ATTACHMENT 11

2021 January - June Blend Tank Summary Flow Table

(Sum of 1st Stage Digester feed substituted due to questionable Blend meter)

	January	February	March	April	May	June
Daily Flows	Kgal	Kgal	Kgal	Kgal	Kgal	Kgal
1st	623	795	824	822	769	631
2nd	592	787	753	730	637	700
3rd	575	671	781	674	678	719
4th	781	809	824	641	831	763
5th	727	845	798	785	807	674
6th	697	717	742	815	854	614
7th	767	645	644	790	827	648
8th	706	798	766	805	726	762
9th	667	817	922	774	660	772
10th	552	756	785	826	667	836
11th	692	740	828	796	845	748
12th	758	802	759	819	862	703
13th	776	743	746	779	841	641
14th	742	648	633	758	810	692
15th	734	645	730	941	746	746
16th	695	767	895	888	574	753
17th	559	829	854	825	656	817
18th	717	871	959	493	844	517
19th	744	772	792	820	893	709
20th	771	725	716	761	866	668
21st	723	717	629	811	765	700
22nd	736	868	718	863	755	772
23rd	632	818	807	852	701	799
24th	613	912	900	809	814	777
25th	637	892	895	833	829	743
26th	771	784	948	832	694	674
27th	796	765	753	918	776	608
28th	829	704	792	852	707	743
29th	742		976	838	717	852
30th	666		812	807	586	816
31st	613		731		614	
Monthly Total	21,634	21,640	24,713	23,958	23,349	21,598
Semi-Annual Total	136,892					

ATTACHMENT 12 - DIGESTER GAS SAMPLING DATA

EBMUD Biogas H2S
January - June 2021

2021	Cogen Feed H2S (ppm)	365 Day Avg H2S (ppm)
1/1/2021	158	160
1/2/2021	124	160
1/3/2021	110	160
1/4/2021	106	159
1/5/2021	114	159
1/6/2021	118	159
1/7/2021	128	159
1/8/2021	114	159
1/9/2021	108	158
1/10/2021	86	158
1/11/2021	86	158
1/12/2021	112	157
1/13/2021	118	157
1/14/2021	156	157
1/15/2021	164	157
1/16/2021	194	157
1/17/2021	220	158
1/18/2021	174	158
1/19/2021	110	158
1/20/2021	152	158
1/21/2021	240	158
1/22/2021	206	158
1/23/2021	150	158
1/24/2021	118	158
1/25/2021	128	158
1/26/2021	138	158
1/27/2021	128	158
1/28/2021	144	158
1/29/2021	134	158
1/30/2021	164	157
1/31/2021	192	157
2/1/2021	154	157
2/2/2021	120	157
2/3/2021	128	157
2/4/2021	130	157
2/5/2021	130	157
2/6/2021	160	157
2/7/2021	120	156
2/8/2021	130	156
2/9/2021	146	156
2/10/2021	118	156
2/11/2021	128	156
2/12/2021	116	156
2/13/2021	128	156
2/14/2021	102	156
2/15/2021	104	156
2/16/2021	120	156
2/17/2021	114	156
2/18/2021	86	156
2/19/2021	108	156
2/20/2021	90	156
2/21/2021	107	155
2/22/2021	102	155
2/23/2021	104	155
2/24/2021	88	155
2/25/2021	158	154
2/26/2021	165	154
2/27/2021	174	154
2/28/2021	84	153

Carbon vessels swapped on 3/24
so 3/25 reading is zero breakthrough.

2021	Cogen Feed H2S (ppm)	365 Day Avg H2S (ppm)
3/1/2021	86	153
3/2/2021	78	153
3/3/2021	73	152
3/4/2021	95	152
3/5/2021	109	152
3/6/2021	85	151
3/7/2021	72	151
3/8/2021	97	151
3/9/2021	96	151
3/10/2021	158	150
3/11/2021	127	150
3/12/2021	120	149
3/13/2021	115	149
3/14/2021	121	149
3/15/2021	138	148
3/16/2021	120	148
3/17/2021	126	148
3/18/2021	98	148
3/19/2021	169	147
3/20/2021	160	147
3/21/2021	138	147
3/22/2021	125	147
3/23/2021	140	147
3/24/2021	104	146
3/25/2021	0	146
3/26/2021	90	146
3/27/2021	98	146
3/28/2021	125	146
3/29/2021	107	145
3/30/2021	102	145
3/31/2021	66	145
4/1/2021	124	145
4/2/2021	86	145
4/3/2021	88	145
4/4/2021	79	144
4/5/2021	98	144
4/6/2021	102	144
4/7/2021	111	144
4/8/2021	114	144
4/9/2021	122	144
4/10/2021	123	144
4/11/2021	133	144
4/12/2021	123	144
4/13/2021	136	144
4/14/2021	100	144
4/15/2021	89	144
4/16/2021	112	145
4/17/2021	114	145
4/18/2021	108	145
4/19/2021	121	145
4/20/2021	118	145
4/21/2021	88	145
4/22/2021	85	145
4/23/2021	116	145
4/24/2021	112	144
4/25/2021	105	144
4/26/2021	86	144
4/27/2021	114	144
4/28/2021	139	144
4/29/2021	160	144
4/30/2021	152	144

2021	Cogen Feed H2S (ppm)	365 Day Avg H2S (ppm)
5/1/2021	159	144
5/2/2021	162	144
5/3/2021	103	144
5/4/2021	131	144
5/5/2021	100	143
5/6/2021	134	143
5/7/2021	164	143
5/8/2021	166	143
5/9/2021	101	143
5/10/2021	123	143
5/11/2021	92	143
5/12/2021	110	143
5/13/2021	130	143
5/14/2021	107	143
5/15/2021	115	143
5/16/2021	81	142
5/17/2021	89	142
5/18/2021	89	142
5/19/2021	108	142
5/20/2021	108	142
5/21/2021	154	141
5/22/2021	111	141
5/23/2021	96	141
5/24/2021	110	141
5/25/2021	90	141
5/26/2021	111	141
5/27/2021	112	141
5/28/2021	89	141
5/29/2021	82	141
5/30/2021	102	141
5/31/2021	119	141
6/1/2021	81	141
6/2/2021	85	141
6/3/2021	80	141
6/4/2021	100	141
6/5/2021	94	141
6/6/2021	74	141
6/7/2021	57	141
6/8/2021	44	141
6/9/2021	60	141
6/10/2021	60	141
6/11/2021	67	141
6/12/2021	66	141
6/13/2021	52	141
6/14/2021	61	141
6/15/2021	73	141
6/16/2021	59	141
6/17/2021	79	141
6/18/2021	81	141
6/19/2021	111	141
6/20/2021	108	141
6/21/2021	99	140
6/22/2021	120	140
6/23/2021	109	140
6/24/2021	108	140
6/25/2021	111	140
6/26/2021	222	140
6/27/2021	154	140
6/28/2021	110	140
6/29/2021	109	139
6/30/2021	113	139

ATTACHMENT 13 - TOTAL DIGESTER GAS COMBUSTION

EBMUD Biogas to Combustion Devices

January - June 2021

2021	Total Combustion, SCFM		
	Daily Max	Daily Avg	365-Day Avg
1/1/2021	1,932	1,638	2,244
1/2/2021	2,072	1,604	2,243
1/3/2021	1,722	1,388	2,241
1/4/2021	2,662	1,869	2,240
1/5/2021	3,164	2,572	2,242
1/6/2021	3,038	2,447	2,245
1/7/2021	3,435	2,529	2,246
1/8/2021	2,641	2,202	2,243
1/9/2021	2,916	2,012	2,241
1/10/2021	1,941	1,376	2,237
1/11/2021	3,212	1,928	2,236
1/12/2021	3,758	2,472	2,237
1/13/2021	3,322	2,520	2,238
1/14/2021	3,327	2,626	2,238
1/15/2021	3,023	2,533	2,239
1/16/2021	2,244	1,899	2,237
1/17/2021	1,774	1,540	2,234
1/18/2021	2,354	1,952	2,234
1/19/2021	2,559	2,229	2,237
1/20/2021	2,822	2,282	2,238
1/21/2021	2,712	2,372	2,237
1/22/2021	2,324	2,262	2,234
1/23/2021	2,042	1,816	2,230
1/24/2021	1,712	1,569	2,224
1/25/2021	2,147	1,473	2,220
1/26/2021	2,630	2,178	2,222
1/27/2021	2,335	2,092	2,221
1/28/2021	3,190	2,438	2,222
1/29/2021	3,144	2,776	2,225
1/30/2021	2,267	1,986	2,226
1/31/2021	2,311	1,656	2,224
2/1/2021	2,398	1,793	2,222
2/2/2021	3,337	2,189	2,223
2/3/2021	3,161	2,234	2,223
2/4/2021	2,999	2,438	2,223
2/5/2021	3,173	2,481	2,220
2/6/2021	2,752	2,102	2,218
2/7/2021	2,422	1,478	2,212
2/8/2021	2,629	1,955	2,210
2/9/2021	3,092	2,290	2,212
2/10/2021	3,094	2,618	2,212
2/11/2021	2,956	2,513	2,211
2/12/2021	2,607	2,093	2,210
2/13/2021	2,712	2,359	2,209
2/14/2021	2,438	1,733	2,204
2/15/2021	2,137	1,707	2,202
2/16/2021	2,998	2,075	2,202
2/17/2021	3,228	2,870	2,205
2/18/2021	3,497	2,446	2,205
2/19/2021	3,911	2,932	2,205
2/20/2021	2,300	1,929	2,202
2/21/2021	2,516	1,711	2,198
2/22/2021	2,460	1,845	2,196
2/23/2021	3,371	2,624	2,198
2/24/2021	3,001	2,387	2,198
2/25/2021	3,980	3,221	2,198
2/26/2021	3,018	2,680	2,197
2/27/2021	2,523	2,122	2,194
2/28/2021	2,265	1,756	2,191
2/29/2021	0	0	0

3,400 Annual Average Limit

2021	Total Combustion, SCFM		
	Daily Max	Daily Avg	365-Day Avg
3/1/2021	3,148	2,371	2,191
3/2/2021	3,216	2,515	2,192
3/3/2021	3,356	2,593	2,193
3/4/2021	3,037	2,488	2,191
3/5/2021	3,514	2,771	2,190
3/6/2021	2,716	2,184	2,188
3/7/2021	2,174	1,747	2,185
3/8/2021	3,824	2,111	2,184
3/9/2021	3,210	2,744	2,186
3/10/2021	3,873	3,311	2,189
3/11/2021	3,796	3,220	2,192
3/12/2021	3,774	2,777	2,192
3/13/2021	3,528	2,472	2,191
3/14/2021	0	1,537	2,188
3/15/2021	2,554	1,802	2,185
3/16/2021	3,062	2,291	2,185
3/17/2021	3,671	2,873	2,187
3/18/2021	3,892	2,906	2,185
3/19/2021	2,874	2,528	2,184
3/20/2021	2,393	2,111	2,180
3/21/2021	2,321	1,716	2,177
3/22/2021	2,427	1,693	2,175
3/23/2021	2,872	2,225	2,175
3/24/2021	3,470	2,744	2,177
3/25/2021	3,402	2,647	2,177
3/26/2021	3,498	2,672	2,178
3/27/2021	2,686	2,088	2,175
3/28/2021	2,721	2,071	2,174
3/29/2021	2,624	2,132	2,175
3/30/2021	2,719	2,334	2,178
3/31/2021	3,365	2,540	2,179
4/1/2021	3,392	2,941	2,182
4/2/2021	3,536	2,438	2,183
4/3/2021	2,350	1,927	2,181
4/4/2021	2,040	1,605	2,178
4/5/2021	2,293	1,756	2,176
4/6/2021	3,980	2,422	2,179
4/7/2021	2,779	2,110	2,180
4/8/2021	3,303	1,935	2,179
4/9/2021	3,647	2,109	2,179
4/10/2021	2,498	2,024	2,179
4/11/2021	2,453	1,803	2,178
4/12/2021	4,990	2,249	2,178
4/13/2021	3,303	2,272	2,180
4/14/2021	3,594	2,296	2,180
4/15/2021	3,384	2,504	2,181
4/16/2021	3,455	2,798	2,182
4/17/2021	3,273	2,433	2,182
4/18/2021	3,090	1,824	2,181
4/19/2021	3,245	2,360	2,181
4/20/2021	3,340	2,455	2,184
4/21/2021	3,518	2,272	2,185
4/22/2021	2,859	2,333	2,185
4/23/2021	3,031	2,405	2,186
4/24/2021	2,648	2,136	2,185
4/25/2021	2,173	1,693	2,184
4/26/2021	2,661	2,036	2,183
4/27/2021	3,191	2,735	2,186
4/28/2021	3,272	2,835	2,188
4/29/2021	3,338	2,918	2,190
4/30/2021	3,206	2,592	2,191

2021	Total Combustion, SCFM		
	Daily Max	Daily Avg	365-Day Avg
5/1/2021	3,323	2,602	2,192
5/2/2021	2,547	1,978	2,191
5/3/2021	2,809	1,872	2,191
5/4/2021	3,337	2,735	2,195
5/5/2021	3,091	2,435	2,197
5/6/2021	3,183	2,637	2,198
5/7/2021	3,582	2,536	2,198
5/8/2021	2,829	2,282	2,196
5/9/2021	2,536	1,981	2,194
5/10/2021	2,487	1,848	2,194
5/11/2021	2,874	2,489	2,196
5/12/2021	2,840	2,331	2,197
5/13/2021	3,266	2,679	2,197
5/14/2021	3,356	2,300	2,196
5/15/2021	3,030	2,322	2,196
5/16/2021	2,714	1,696	2,194
5/17/2021	2,443	1,927	2,192
5/18/2021	3,071	2,086	2,193
5/19/2021	2,860	2,392	2,194
5/20/2021	2,812	2,460	2,196
5/21/2021	3,841	2,896	2,198
5/22/2021	3,647	2,853	2,200
5/23/2021	2,462	1,863	2,198
5/24/2021	3,205	2,129	2,198
5/25/2021	2,947	2,447	2,199
5/26/2021	3,102	2,574	2,201
5/27/2021	3,643	2,675	2,204
5/28/2021	3,867	2,881	2,207
5/29/2021	3,099	2,459	2,205
5/30/2021	2,374	1,868	2,203
5/31/2021	2,382	1,768	2,201
6/1/2021	2,790	2,043	2,201
6/2/2021	3,035	2,430	2,202
6/3/2021	3,617	2,717	2,204
6/4/2021	3,302	2,864	2,205
6/5/2021	2,908	2,402	2,206
6/6/2021	2,157	1,754	2,203
6/7/2021	2,513	1,826	2,202
6/8/2021	2,873	2,365	2,204
6/9/2021	2,823	2,429	2,206
6/10/2021	3,321	2,680	2,208
6/11/2021	3,563	2,935	2,211
6/12/2021	3,325	2,843	2,214
6/13/2021	3,401	2,022	2,214
6/14/2021	2,742	2,179	2,214
6/15/2021	3,234	2,582	2,217
6/16/2021	3,537	2,866	2,220
6/17/2021	3,684	3,192	2,224
6/18/2021	3,490	2,392	2,224
6/19/2021	2,836	2,498	2,225
6/20/2021	2,767	2,232	2,226
6/21/2021	2,398	1,958	2,225
6/22/2021	3,043	2,488	2,227
6/23/2021	3,857	2,800	2,231
6/24/2021	3,313	2,859	2,233
6/25/2021	3,144	2,667	2,235
6/26/2021	3,359	2,894	2,237
6/27/2021	2,697	2,247	2,238
6/28/2021	2,379	1,780	2,239
6/29/2021	2,823	2,376	2,241
6/30/2021	3,439	2,818	2,244