Gilroy Energy Center, LLC (for the Riverview Energy Center)

795 Minaker Road
Antioch, CA 94509

January 18, 2022

Director of Compliance and Enforcement
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105
Attn: Title V

TV Tracking #: 363

1. ☐ RECEIVED IN ENFORCEMENT: 01/20/2022

Subject: Gilroy Energy Center, LLC for the Riverview Energy Center
Title V Semi-Annual Monitoring Report
Facility # B4512
Reporting Period: July 1, 2021 through December 31, 2021

To Whom It May Concern:

Enclosed is the Title V CEMS Semi-Annual Monitoring Report for the Riverview Energy Center ("REC") for the reporting period from July 1, 2021 through December 31, 2021.

On September 11th, 2021, the facility experienced breakdown of its water injection system that resulted in exceedance of the Facility's NOx daily mass emission limit and of its 4-hour rolling NOx emission limit. A Reportable Compliance Activity (RCA) form was submitted to the District requesting breakdown relief (Report ID No. 08B71} regarding this event (Report ID No. 08B72) on September 13th, 2021. A detailed description of the event can be found in the attached Title V deviation letter.

By signing this report, I am certifying that based on information and belief formed after reasonable inquiry, the statements and information in the attached report are true, accurate, and complete.

If you have any questions or require additional information, please contact me at (707) 399-4395.

Sincerely,

Andrew Gundershaug
Plant Manager and Designated Representative/Responsible Official

Table VII – A
Applicable Limits and Compliance Monitoring Requirements
S-2 – COMBUSTION GAS TURBINE
July 1, 2021 through December 31, 2021

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type	Compliance	
								Yes	No
NOx	BAAQMD 9-9-301.1.3	N		9 ppmv @ 15% O2, dry	BAAQMD 9-9-501 and BAAQMD condition #20010, part 23c	C	CEM	X	
NOx	SIP 9-9-301.3	Y		9 ppmv @ 15% O2, dry	SIP 9-9-501 and BAAQMD condition #20010, part 23c	C	CEM	X	
NOx	BAAQMD 9-9-301.1.3	N		9 ppmv @ 15% O2, dry	BAAQMD condition #20010, part 4a	P/Once every 8,000 operating hours or three years, whichever comes first	Source test	X	
NOx	SIP Regulation 9-9-301.3	Y		9 ppmv @ 15% O2, dry	SIP Regulation condition #20010, part 24a	P/Once every 8,000 operating hours or three years, whichever comes first	Source test	X	
NOx	NSPS, 40 CFR 60.332 (a)(1)	Y		75 ppmv @ 15% O2, dry	NSPS 40 CFR 60.334(b)	C	CEM		X
NOx	None	Y		None	40 CFR 75.10	C	CEM	X	
NOx	BAAQMD condition #20010, part 18(a)	Y		2.5 ppmv @ 15% O2, dry, 3-hr average except during turbine startup or shutdown	BAAQMD condition #20010, part 18(a), 23c	C	CEM	X	
NOx	BAAQMD condition #20010, part 18(a)	Y		2.5 ppmv @ 15% O2, dry, 3-hr average except during turbine startup or shutdown	BAAQMD condition #20010, part 24a	P/Once every 8,000 operating hours or three years, whichever comes first	Source test	X	
NOx	BAAQMD condition #20010, part 21	Y		121 lb/ day (as NO2)	BAAQMD condition #20010, part 23c	C	CEM		X
NOx	BAAQMD condition #20010, part 21	Y		14.7 tons per year (as NO2)	BAAQMD condition #20010, part 23c	C	CEM	X	

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type	Compliance	
								Yes	No
CO	BAAQMD condition #20010, part 18(c)	Y		6 ppmv @ 15% O2, dry, 3-hr average except during turbine startup or shutdown	BAAQMD condition #20010, parts 18(c) and 23c	C	CEM	X	
CO	BAAQMD condition #20010, part 18(c)	Y		6 ppmv @ 15% O2, dry, 3-hr average except during turbine startup or shutdown	BAAQMD condition #20010, part 24c	P/ Once every 8,000 operating hours or three years, whichever comes first	Source test	X	
CO	BAAQMD condition #20010, part 21	Y		163 lb/ day	BAAQMD condition #20010, part 23c	C	CEM	X	
CO	BAAQMD condition #20010, part 21	Y		21.5 tons per year	BAAQMD condition #20010, part 23c	C	CEM	X	
CO2		Y		None	40 CFR 75.10	C	CEM (CO2) or CEM (O2) or fuel flow monitor	X	
SO2	BAAQMD 9-1-301	Y		GLC_1 of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours		N		X	
SO2	SIP 9-1-301	Y		GLC_1 of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours		N		X	
SO2	BAAQMD 9-1-302	Y		300 ppm (dry)	BAAQMD condition #20010, part 23e	P/Q	Fuel Gas Total sulfur content analysis	X	
SO2	SIP 9-1-302	Y		300 ppm (dry)	BAAQMD condition #20010, part 23e	P/Q	Fuel Gas Total sulfur content analysis	X	
SO2	NSPS 40 CFR 60.333(a)	Y		0.015% (vol.) @15% O_2 (dry)	NSPS 40 CFR 60.334(h)(3), 40 CFR 75.11, 40 CFR 75, Appendix D, part 2.3, and BAAQMD Condition 20010, Part 23e	P/Q	Fuel Gas Total sulfur content analysis, Fuel measure-ments, calculations	X	
SO2	None	Y		None	40 CFR 75.11, 40 CFR 75, Appendix D, part 2.3		Fuel measure-ments, calculations	X	

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type	Compliance	
								Yes	No
SO2	BAAQMD condition #20010, part 18(f)	Y		1.38 lb/hr	BAAQMD condition #20010, part 23e	P/Q	Fuel gas Total sulfur content analysis	X	
SO2	BAAQMD condition #20010, part 18(f)	Y		1.38 lb/hr	BAAQMD condition #20010, part 24f	P/Once every 8,000 operating hours or three years, whichever comes first	Source test	X	
SO2	BAAQMD condition #20010, part 21	Y		32 lb/ day	BAAQMD	P/Once every 8,000 operating hours or three years, whichever comes first	Source test	X	
					condition			X	
					#20010, part 24f			X	
SO2	BAAQMD condition #20010, part 21	Y		4.5 tons/year	BAAQMD	P/Once every 8,000 operating hours or three years, whichever comes first	Source test	X	
					condition			X	
					#20010, part 24f			X	
Opacity	BAAQMD 6-1-301	N		≥ Ringelmann No. 1 for no more than 3 minutes in any hour		N		X	
Opacity	SIP Regulation 6-301	Y		> Ringelmann No. 1 for no more than 3 minutes in any hour		N		X	
Opacity	BAAQMD condition #20010, part 18	Y		≥ Ringelmann No. 1 for no more than 3 minutes in any hour or equivalent 20% opacity		N		X	
FP	BAAQMD 6-1-310	N		0.15 grain/dscf		N		X	
FP	SIP Regulation 6-310	Y		0.15 grain/dscf		N		X	
PM10	BAAQMD condition #20010, part 18(e)	Y		3 lb/ hr	BAAQMD condition #20010, part 24e	P/Once every 8,000 operating hours or three years, whichever comes first	Source test	X	

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type	Compliance	
								Yes	No
PM10	BAAQMD condition #20010, part 21	Y		72 lb/day	BAAQMD condition #20010, parts 23d, 24e	P/Once every 8,000 operating hours or three years, whichever comes first	Source Test	X	
PM10	BAAQMD condition #20010, part 21	Y		9.8 tons/year	BAAQMD condition #20010, part 24e	P/Once every 8,000 operating hours or three years, whichever comes first	Source Test	X	
POC	BAAQMD condition #20010, part 18(d)	Y		2 ppmv @ 15% O2, dry, 1-hr average except during turbine startup or shutdown	BAAQMD condition #20010, part 24d	P/Once every 8,000 operating hours or three years, whichever comes first	Source test	X	
POC	BAAQMD condition #20010, part 18(d)	Y		2 ppmv @ 15% O2, dry, 1-hr average except during turbine startup or shutdown	BAAQMD condition #20010, part 24d	P/Once every 8,000 operating hours or three years, whichever comes first	Source test	X	
POC	BAAQMD condition #20010, part 21	Y		31 lb/calendar day	BAAQMD condition #20010, part 24d	P/Once every 8,000 operating hours or three years, whichever comes first	Source test	X	
POC	BAAQMD condition #20010, part 21	Y		4.1 ton/year	BAAQMD condition #20010, part 24d	P/Once every 8,000 operating hours or three years, whichever comes first	Source test	X	
NH3	BAAQMD condition #20010, Part 18(b)	N		10 ppmv @ 15% O2, dry, averaged over 1 hr except during turbine startup or shutdown	BAAQMD condition #20010, parts 18.2 and 23b	C	District approved correct ammonia slip calculation and correction factor determined by source test	X	

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type	Compliance	
								Yes	No
NH3	BAAQMD condition #20010, Part 18(b)	N		10 ppmv @ 15% O2, dry, averaged over 1 hr except during turbine startup or shutdown	BAAQMD condition #20010, part 24b	P/Once every 8,000 operating hours or three years, whichever comes first	Source test	X	
Heat input limit	BAAQMD condition #20010, part 22	Y		500 MM BTU/hr (HHV)	BAAQMD condition #20010, part 23d	C	Fuel meter, firing monitor	X	
Heat input limit	BAAQMD condition #20010, part 22	Y		500 MM BTU/hr (HHV)	BAAQMD condition #20010, part 23d	P/Q	Fuel composition analysis	X	
Heat input limit	BAAQMD condition #20010, part 22	Y		500 MM BTU/hr (HHV)	BAAQMD condition #20010, part 24g	P/Once every 8,000 operating hours or three years, whichever comes first	Source test	X	
Heat input limit	BAAQMD condition #20010, part 22	Y		12,000 MM BTU/day (HHV)	BAAQMD condition #20010, part 23d	C	fuel meter, firing monitor, calculations	X	
Heat input limit	BAAQMD condition #20010, part 22	Y		12,000 MM BTU/day (HHV)	BAAQMD condition #20010, part 23d	P/Q	Fuel composition analysis	X	
Heat input limit	BAAQMD condition #20010, part 22	Y		3,250,000 MM BTU/yr (HHV)	BAAQMD condition #20010, part 23d	C	fuel meter, firing monitor, calculations	X	
Heat input limit	BAAQMD condition #20010, part 22	Y		3,250,000 MM BTU/yr (HHV)	BAAQMD condition #20010, part 31g	P/Q	Fuel composition analysis	X	
MW				None	BAAQMD condition #20010, part 24h	P/Once every 8,000 operating hours or three years, whichever comes first	Source test	X	
Exhaust Gas tempe-rature				None	BAAQMD condition #20010, part 24j	P/Once every 8,000 operating hours or three years, whichever comes first	Source test	X	

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type	Compliance	
								Yes	No
Stack gas flow rate				None	BAAQMD condition #20010, part 24i	P/Once every 8,000 operating hours or three years, whichever comes first	Source test	X	
NH3 injection rate				None	BAAQMD condition #20010, part 24k	P/Once every 8,000 operating hours or three years, whichever comes first	Source test	X	
Start-up Period	BAAQMD condition #20010, part 19			60 minutes per start-up	BAAQMD condition #20010, part 29(b)	P/E	Records	X	
Shutdown Period	BAAQMD condition #20010, part 20			30 minutes per shutdown	BAAQMD condition #20010, part 29(b)	P/E	Records	X	
Fuel Sulfur Content	40 CFR 60.333(b)	Y		0.8 percent by weight (8000 ppmw) sulfur	40 CFR 60.334(h)(1)	P	Fuel Sulfur Content Testing	X	

Table VII - B
Applicable Limits and Compliance Monitoring Requirements
S-2 – COOLING TOWER

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type	Compliance	
								Yes	No
Opacity	BAAQMD Regulation 6-1-301	N		≥ Ringelmann 1 for no more than 3 min/hr		N		X	
Opacity	SIP Regulation 6-301	Y		> Ringelmann 1 for no more than 3 min/hr		N		X	
Particulate Weight	BAAQMD Regulation 6-1-310	N		0.15 grains per dscf		N		X	
Particulate Weight	SIP Regulation 6-310	Y		0.15 grains per dscf		N		X	
Particulate Weight	BAAQMD Regulation 6-1-311	Y		40 lb/hr	N	N		X	
Particulate Weight	SIP Regulation 6-311	Y		40 lb/hr	N	N		X	

795 Minaker Drive
Antioch, CA 94509

Via FedEx

October 12, 2021

Director, Enforcement and Compliance Division
Bay Area Air Quality Management District, Suite 600
375 Beale Street
San Francisco, CA 94105-2066
Attn: Jeff Gove
jgove@baaqmd.gov

Director, Air Division (Attn: AIR-5)
U.S. Environmental Protection Agency
75 Hawthorne St.
San Francisco, CA 94105
R9.aeo@epa.gov

BAAQMD Compliance and Enforcement Division, MAILSTOP: RCA 30-DAY REPOT
375 Beale Street, Suite 600
San Francisco, CA 94105

RE: Gilroy Energy Center, LLC for the Riverview Energy Center, Permit No. B4512
Breakdown 30 Day Follow-Up Report (RCA # 08B71)
Title V – 30 Day Deviation Follow-Up Report (RCA # 08B72)

Dear Mr. Gove,

In accordance with the Major Facility Review Permit (Title V Permit) for Gilroy Energy Center, LLC for Riverview Energy Center (the "Facility"), this letter is intended to satisfy the 30-day follow-up reporting requirement as required by Section I.F. of the Title V Permit, which requires the reporting of all non-compliance instances of the Title V Permit in writing within 30 days of discovery of the incident and the written breakdown report as required by BAAQMD Rule 1-432. The required Title V 10-day initial notification was submitted to the District on September 22, 2021.

On September 11th, the Facility experienced breakdown of the water injection system which resulted in an exceedance of the Facility's NO_X daily mass emission limit of 121 pounds, as stated in BAAQMD Condition #20010, part 21. The breakdown also caused an exceedance of the Facility's 40 CFR 60.334(a)(1) and (b) 4-hour rolling NO_x emission limit of 75 ppm NO_x corrected to 15% O2, as stated in Table VII-A of the Title V permit.

Based on the information presented herein, the Facility believes this event qualifies as an equipment breakdown as defined in BAAQMD Rule 1-208.

Event Description

At approximately 17:00, DAS time, the Facility, as well as six additional facilities operated from the same control room, were dispatched to meet the immediate demand of providing energy to the CAISO.

- At 17:20, the Control Room Operator (CRO) initiated startup of the unit.
- At 17:29, the CRO initiated automatic generation control (AGC) and allowed the unit to automatically increase its load.
- At 17:38, ammonia injection and the Facility's secondary abatement system, Selective Catalytic Reduction (SCR), began without issue. The NOx inlet concentration was measured to be 166.3 ppm.
- By 17:59, the CRO determined that the unit would not come into compliance with its emission limits and initiated shutdown. The unit never exited startup.
- At 18:07, the unit's shutdown completed.
    - The unit operated for 47-minutes over two clock hours and emitted 126.5 pounds of NOx, exceeding its daily mass emissions limit (Attachment A – Hourly Emissions Report).

Following the shutdown of the unit, the CRO dispatched an ICE technician to the Facility to troubleshoot the system. The ICE technician visually inspected the system and requested to watch the startup of the unit.

- At 20:31, the CRO initiated startup of the unit for a test run.
- At 20:44, ammonia flow initiated and the Facility's secondary abatement system, Selective Catalytic Reduction (SCR), began without issue. The NOx inlet concentration was measured to be 20.3 ppm.
- At 20:53, the CRO and ICE technician determined that the NOx concentration values were normal and within range. The ICE technician did not observe any abnormalities (Attachment B – ICE Technician Turnover) at the Facility so the CRO initiated shutdown of the unit.
- At 21:02, the unit's shutdown completed.
    - The unit operated for 31-minutes over 2 clock hours and emitted 8.1 pounds of NOx. This run caused the Facility to exceed its 4-hour rolling NO_x emission limit of 75 ppm NO_x corrected to 15% O2.

Corrective Actions

To prevent further mass emissions, the unit was shut down.

A technician was dispatched to the site immediately to visually inspect the NO_x water injection system. The technician observed a test run of the unit and could not determine the cause of the run's high NOx emissions.

Compliance Status

The Facility was in full compliance with its air permit as of 00:00 on September 12th, 2021 and remains in full compliance.

Investigation and Cause Determination

Further investigation of the NO_x control system determined that the primary cause of the excess was a breakdown of the NO_x water drain valve. When the valve, an Atkomatic Solenoid Valve, is operating properly, it automatically opens at the end of a run to drain extra water from the system. Once the system is empty, it will close. The Atkomatic Solenoid Valve is known to unthread itself over time, fail open, and drain the system of water meant to abate NOx emissions.

A deconstructed Atkomatic Solenoid Valve is shown in Attachment C – Atkomatic Solenoid Valve #6210. The plunger is located inside the valve casing. When the valve is assembled and installed, it is impossible to visually determine a breakdown has occurred.

Preventative Actions

Following the breakdown event on September 11th, the Atkomatic Solenoid valve was removed from service and a new one was installed (Attachment D – Maintenance Records).

The Facility acknowledges that this valve will fail without proper maintenance and has a preventative maintenance schedule. The valve was completely replaced in November 2020 and inspected in April 2021. No deficiencies were noted during the April 2021 inspection.

The Facility also reorganized its start-up checklist. In the past, CROs were instructed to initiate AGC before the unit came into compliance. The start-up checklist has been revised so that the unit will no longer be automatically ramped up to full load before the unit reaches compliance.

The Facility believes this event qualifies for Breakdown Relief pursuant to BAAQMD Regulation 1-208. As described above, this event:

- Is not the result of intent, neglect or disregard of BAAQMD regulations;
    - The facility has followed BAAQMD regulations and performs maintenance on the valve annually. The last maintenance activity was performed in April 2021.
- Is not the result of improper maintenance;
    - As demonstrated above, the facility has a robust maintenance program.
- Did not constitute a nuisance;
    - The facility took immediate action to correct the situation, shut down the equipment, and dispatched a maintenance technician to inspect the equipment.
- There has not be excessively recurrent breakdowns of this equipment.
    - There have been no recent instances of this equipment causing non-compliance at this Facility.

If you have any questions or require additional information, please contact Morgan Zellers, EHS Specialist, at 707-399-4395.

As a Responsible Official, I certify that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

Sincerely,

Andrew Gundershaug
Plant General Manager
Gilroy Energy Center, LLC for Riverview Energy Center

Cc:	McKenzie Bell	BAAQMD	via email attachment
	Jessica Grossman	Sr. Counsel, Calpine	via email attachment
	David Williams	EHS Manager, Calpine	via email attachment
	Chris Cullison	EHS Manager, Calpine	via email attachment

Attachments:

Attachment A – Hourly Emissions Report
Attachment B – ICE Technician Turnover
Attachment C – Atkomatic Solenoid valve #6210
Attachment D – Maintenance Record

Attachment A – Hourly Emissions Reports

Hours 17-18, 20-21

Solano Peakers

Solano Peakers

Riverview- Hourly Emissions Report

September 11, 2021 - Hour 17

1-Hr Emission Limits	3-Hr Rolling Emission Limits	
NH3 ppm @15% O2 - 10	NOx ppm @15% O2 - 2.5	CO ppm @15% O2 - 6

Minute	O2%	NOx ppm	NOx ppm @15% O2	NOx lb/mmBtu	NOx lb/hr	CO ppm	CO ppm @15% O2	CO lb/mmBtu	CO lb/hr	NH3 ppm @15% O2	Inlet NOx ppm	Process Status
00	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
01	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
02	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
03	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
04	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
05	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
06	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
07	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
08	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
09	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
10	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
11	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
12	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
13	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
14	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
15	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
16	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
17	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
18	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
19	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
20	19.80	3.12	9.69	0.03561	4.11	47.52	147.56	0.33018	38.1	**Down**	8.5	Startup
21	17.83	20.97	40.30	0.14814	16.37	7.23	13.89	0.03109	3.4	**Down**	37.5	Startup
22	17.77	32.37	61.02	0.22430	29.97	3.54	6.67	0.01493	2.0	**Down**	41.2	Startup
23	17.36	46.63	77.72	0.28568	61.60	2.58	4.30	0.00962	2.1	**Down**	51.2	Startup
24	16.59	55.48	75.95	0.27918	73.58	2.08	2.85	0.00637	1.7	**Down**	64.9	Startup
25	16.31	76.63	98.50	0.36208	95.21	1.80	2.31	0.00518	1.4	**Down**	85.1	Startup
26	16.33	78.66	101.55	0.37330	97.77	1.59	2.05	0.00459	1.2	**Down**	86.5	Startup
27	16.33	78.12	100.86	0.37074	97.29	1.46	1.88	0.00422	1.1	**Down**	86.4	Startup
28	16.33	78.41	101.23	0.37212	97.62	1.39	1.79	0.00402	1.1	**Down**	86.6	Startup
29	16.33	78.92	101.89	0.37454	95.36	1.34	1.73	0.00387	1.0	**Down**	86.8	Startup
30	16.44	75.25	99.55	0.36593	91.03	1.29	1.71	0.00382	1.0	**Down**	82.0	Startup
31	16.46	74.36	98.81	0.36323	90.21	1.27	1.69	0.00378	0.9	**Down**	81.2	Startup

Minute	O2%	NOx ppm	NOx ppm @15% O2	NOx lb/mmBtu	NOx lb/hr	CO ppm	CO ppm @15% O2	CO lb/mmBtu	CO lb/hr	NH3 ppm @15% O2	Inlet NOx ppm	Process Status
32	16.47	74.05	98.62	0.36253	92.98	1.27	1.69	0.00378	1.0	**Down**	80.7	Startup
33	16.30	82.41	105.70	0.38855	116.06	1.26	1.62	0.00362	1.1	**Down**	89.6	Startup
34	15.91	109.39	129.34	0.47544	161.19	1.31	1.55	0.00347	1.2	**Down**	117.7	Startup
35	15.63	139.04	155.66	0.57220	215.82	1.38	1.54	0.00346	1.3	**Down**	148.8	Startup
36	15.39	167.38	179.23	0.65883	264.56	1.45	1.55	0.00347	1.4	**Down**	177.0	Startup
37	15.49	174.24	190.02	0.69851	283.26	1.50	1.64	0.00366	1.5	**Down**	184.4	Startup
38	16.01	151.48	182.77	0.67184	275.53	1.50	1.81	0.00405	1.7	0.00	166.3	Startup
39	16.17	138.46	172.71	0.63487	264.33	1.48	1.85	0.00413	1.7	0.00	151.7	Shutdown
40	16.16	134.60	167.54	0.61587	255.59	1.48	1.84	0.00412	1.7	0.43	146.4	Shutdown
41	16.20	133.02	166.98	0.61382	254.35	1.50	1.88	0.00421	1.7	0.52	144.7	Shutdown
42	16.19	133.23	166.89	0.61348	254.53	1.50	1.88	0.00420	1.7	0.61	144.8	Shutdown
43	16.19	133.70	167.48	0.61565	255.95	1.51	1.89	0.00423	1.8	0.64	145.3	Shutdown
44	16.18	134.37	167.96	0.61742	257.33	1.50	1.88	0.00420	1.8	2.48	146.1	Shutdown
45	16.17	130.15	162.34	0.59677	249.53	1.49	1.86	0.00416	1.7	4.94	147.1	Shutdown
46	16.17	124.43	155.21	0.57054	237.67	1.50	1.87	0.00419	1.7	1.30	148.2	Shutdown
47	16.18	122.97	153.71	0.56504	235.26	1.52	1.90	0.00425	1.8	0.87	147.4	Shutdown
48	16.19	123.15	154.26	0.56707	236.40	1.50	1.88	0.00420	1.8	0.54	147.7	Shutdown
49	16.19	122.90	153.95	0.56592	235.86	1.50	1.88	0.00420	1.8	0.41	147.8	Shutdown
50	16.19	122.66	153.65	0.56481	235.46	1.50	1.88	0.00420	1.8	0.21	147.9	Shutdown
51	16.19	122.54	153.50	0.56426	235.11	1.49	1.87	0.00418	1.7	0.00	148.0	Shutdown
52	16.19	122.33	153.24	0.56329	234.59	1.49	1.87	0.00418	1.7	0.00	148.2	Shutdown
53	16.19	122.14	153.00	0.56242	234.46	1.50	1.88	0.00420	1.8	0.00	148.1	Shutdown
54	16.18	122.11	152.64	0.56109	233.97	1.50	1.88	0.00420	1.8	0.00	148.2	Shutdown
55	16.18	121.82	152.28	0.55976	233.53	1.50	1.88	0.00420	1.8	0.00	148.1	Shutdown
56	16.18	122.25	152.81	0.56173	234.47	1.52	1.90	0.00425	1.8	0.00	148.2	Shutdown
57	16.18	122.20	152.75	0.56150	234.43	1.53	1.91	0.00428	1.8	0.00	148.6	Shutdown
58	16.19	122.40	153.32	0.56362	235.14	1.51	1.89	0.00423	1.8	0.00	148.6	Shutdown
59	16.18	122.91	153.64	0.56476	232.79	1.52	1.90	0.00425	1.8	0.00	148.8	Shutdown
Average	16.4	106.3	139.4	0.51232	177.7	2.9	3.8	0.00851	3.0	4.97	121.6	Startup
Total					119.1				2.0			
3-Hr Rlng			0.0				0.0					

Solano Peakers

Solano Peakers

Riverview- Hourly Emissions Report

September 11, 2021 - Hour 18

1-Hr Emission Limits	3-Hr Rolling Emission Limits	
NH3 ppm @15% O2 - 10	NOx ppm @15% O2 - 2.5	CO ppm @15% O2 - 6

Minute	O2%	NOx ppm	NOx ppm @15% O2	NOx lb/mmBtu	NOx lb/hr	CO ppm	CO ppm @15% O2	CO lb/mmBtu	CO lb/hr	NH3 ppm @15% O2	Inlet NOx ppm	Process Status
00	16.31	114.65	147.37	0.54173	190.21	1.51	1.94	0.00434	1.5	0.81	142.0	Shutdown
01	16.81	88.03	126.99	0.46680	122.11	1.43	2.06	0.00462	1.2	0.09	118.4	Shutdown
02	17.62	37.63	67.69	0.24882	42.58	1.25	2.25	0.00503	0.9	0.00	70.0	Shutdown
03	18.36	13.80	32.06	0.11783	13.31	1.08	2.51	0.00561	0.6	**Down**	43.8	Shutdown
04	18.80	19.20	53.94	0.19829	21.84	1.05	2.95	0.00660	0.7	**Down**	33.5	Shutdown
05	18.75	30.27	83.07	0.30535	33.32	1.07	2.94	0.00657	0.7	**Down**	33.4	Shutdown
06	18.42	35.41	84.24	0.30967	33.92	1.09	2.59	0.00580	0.6	**Down**	37.9	Shutdown
07	17.90	42.27	83.13	0.30559	33.41	1.09	2.14	0.00480	0.5	**Down**	45.6	Shutdown
08	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Shutdown
09	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
10	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
11	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
12	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
13	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
14	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
15	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
16	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
17	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
18	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
19	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
20	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
21	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
22	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
23	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
24	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
25	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
26	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
27	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
28	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
29	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
30	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
31	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down

Minute	O2%	NOx ppm	NOx ppm @15% O2	NOx lb/mmBtu	NOx lb/hr	CO ppm	CO ppm @15% O2	CO lb/mmBtu	CO lb/hr	NH3 ppm @15% O2	Inlet NOx ppm	Process Status
32	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
33	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
34	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
35	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
36	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
37	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
38	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
39	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
40	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
41	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
42	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
43	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
44	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
45	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
46	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
47	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
48	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
49	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
50	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
51	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
52	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
53	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
54	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
55	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
56	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
57	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
58	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
59	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
Average	17.9	47.7	93.8	0.34484	57.5	1.2	2.4	0.00528	0.9	7.03	65.6	Shutdown
Total					7.5				0.1			
3-Hr Rlng			0.0				0.0					

Solano Peakers

Solano Peakers

Riverview- Hourly Emissions Report

September 11, 2021 - Hour 20

1-Hr Emission Limits	3-Hr Rolling Emission Limits	
NH3 ppm @15% O2 - 10	NOx ppm @15% O2 - 2.5	CO ppm @15% O2 - 6

Minute	O2%	NOx ppm	NOx ppm @15% O2	NOx lb/mmBtu	NOx lb/hr	CO ppm	CO ppm @15% O2	CO lb/mmBtu	CO lb/hr	NH3 ppm @15% O2	Inlet NOx ppm	Process Status
00	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
01	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
02	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
03	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
04	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
05	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
06	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
07	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
08	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
09	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
10	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
11	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
12	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
13	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
14	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
15	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
16	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
17	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
18	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
19	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
20	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
21	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
22	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
23	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
24	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
25	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
26	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
27	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
28	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
29	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
30	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
31	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Startup

Minute	O2%	NOx ppm	NOx ppm @15% O2	NOx lb/mmBtu	NOx lb/hr	CO ppm	CO ppm @15% O2	CO lb/mmBtu	CO lb/hr	NH3 ppm @15% O2	Inlet NOx ppm	Process Status
32	19.03	7.26	22.54	0.08287	9.23	20.43	63.44	0.14195	15.8	**Down**	19.7	Startup
33	17.84	25.41	48.99	0.18010	20.78	4.48	8.64	0.01933	2.2	**Down**	39.4	Startup
34	17.70	39.82	73.42	0.26988	45.06	2.82	5.20	0.01163	1.9	**Down**	42.7	Startup
35	16.97	55.02	82.60	0.30363	77.34	2.16	3.24	0.00726	1.8	**Down**	51.2	Startup
36	16.15	20.49	25.45	0.09356	25.66	2.24	2.78	0.00623	1.7	**Down**	20.1	Shutdown
37	16.06	20.43	24.90	0.09155	25.10	2.30	2.80	0.00627	1.7	**Down**	20.2	Shutdown
38	16.06	20.25	24.68	0.09074	24.81	2.26	2.75	0.00616	1.7	**Down**	20.1	Shutdown
39	16.07	20.10	24.55	0.09025	24.73	2.22	2.71	0.00607	1.7	**Down**	20.2	Shutdown
40	16.08	20.04	24.53	0.09017	24.61	2.16	2.64	0.00592	1.6	**Down**	20.2	Shutdown
41	16.09	19.90	24.41	0.08973	24.57	2.11	2.59	0.00579	1.6	**Down**	20.2	Shutdown
42	16.09	19.90	24.41	0.08973	24.54	2.08	2.55	0.00571	1.6	**Down**	20.3	Shutdown
43	16.09	19.90	24.41	0.08973	24.54	2.06	2.53	0.00565	1.5	**Down**	20.3	Shutdown
44	16.10	18.22	22.40	0.08232	22.57	2.03	2.50	0.00558	1.5	9.35	20.3	Shutdown
45	16.09	5.40	6.62	0.02435	6.69	2.01	2.47	0.00552	1.5	4.86	20.4	Shutdown
46	16.10	2.34	2.88	0.01057	2.89	2.01	2.47	0.00553	1.5	4.55	20.4	Shutdown
47	16.10	1.11	1.36	0.00502	1.37	1.99	2.45	0.00547	1.5	0.63	20.4	Shutdown
48	16.10	1.28	1.57	0.00578	1.58	1.94	2.38	0.00534	1.5	0.00	20.3	Shutdown
49	16.09	1.72	2.11	0.00776	2.12	1.91	2.34	0.00524	1.4	1.77	20.3	Shutdown
50	16.08	1.58	1.93	0.00711	1.94	1.90	2.33	0.00520	1.4	1.55	20.3	Shutdown
51	16.08	1.31	1.60	0.00589	1.61	1.91	2.34	0.00523	1.4	0.00	20.3	Shutdown
52	16.14	2.03	2.52	0.00925	2.54	1.91	2.37	0.00530	1.5	3.78	20.2	Shutdown
53	16.46	1.09	1.45	0.00532	1.45	1.91	2.54	0.00568	1.6	0.16	19.1	Shutdown
54	16.67	0.98	1.37	0.00502	1.38	1.95	2.72	0.00609	1.7	0.00	18.1	Shutdown
55	16.77	1.72	2.46	0.00903	2.48	1.96	2.80	0.00627	1.7	0.94	17.6	Shutdown
56	16.80	1.23	1.77	0.00651	1.65	1.97	2.83	0.00634	1.6	2.60	17.4	Shutdown
57	17.16	0.55	0.87	0.00319	0.55	2.00	3.16	0.00706	1.2	0.00	15.1	Shutdown
58	17.79	0.78	1.48	0.00544	0.61	1.91	3.62	0.00811	0.9	**Down**	18.4	Shutdown
59	18.01	10.13	20.68	0.07602	8.21	1.32	2.69	0.00603	0.7	**Down**	38.1	Shutdown
Average	16.6	12.1	16.6	0.06103	14.8	2.8	3.8	0.00860	2.1	5.10	22.9	Startup
Total					7.0				1.0			
3-Hr Rlng			0.0				0.0					

Solano Peakers

Solano Peakers

Riverview- Hourly Emissions Report

September 11, 2021 - Hour 21

1-Hr Emission Limits	3-Hr Rolling Emission Limits	
NH3 ppm @15% O2 - 10	NOx ppm @15% O2 - 2.5	CO ppm @15% O2 - 6

Minute	O2%	NOx ppm	NOx ppm @15% O2	NOx lb/mmBtu	NOx lb/hr	CO ppm	CO ppm @15% O2	CO lb/mmBtu	CO lb/hr	NH3 ppm @15% O2	Inlet NOx ppm	Process Status
00	17.81	22.00	42.01	0.15441	16.80	1.20	2.29	0.00513	0.6	**Down**	41.0	Shutdown
01	17.81	27.79	53.06	0.19505	21.04	1.15	2.20	0.00491	0.5	**Down**	41.0	Shutdown
02	17.81	34.19	65.28	0.23997	26.04	1.11	2.12	0.00474	0.5	**Down**	41.1	Shutdown
03	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Shutdown
04	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Shutdown
05	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Shutdown
06	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Shutdown
07	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Shutdown
08	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Shutdown
09	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Shutdown
10	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Shutdown
11	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Shutdown
12	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Shutdown
13	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Shutdown
14	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Shutdown
15	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Shutdown
16	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Shutdown
17	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Shutdown
18	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Shutdown
19	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Shutdown
20	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Shutdown
21	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Shutdown
22	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Shutdown
23	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Shutdown
24	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Shutdown
25	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Shutdown
26	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Shutdown
27	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Shutdown
28	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Shutdown
29	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Shutdown
30	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Shutdown
31	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down

Minute	O2%	NOx ppm	NOx ppm @15% O2	NOx lb/mmBtu	NOx lb/hr	CO ppm	CO ppm @15% O2	CO lb/mmBtu	CO lb/hr	NH3 ppm @15% O2	Inlet NOx ppm	Process Status
32	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
33	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
34	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
35	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
36	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
37	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
38	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
39	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
40	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
41	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
42	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
43	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
44	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
45	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
46	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
47	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
48	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
49	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
50	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
51	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
52	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
53	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
54	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
55	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
56	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
57	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
58	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
59	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	**Down**	Down
Average	17.8	28.0	53.3	0.19589	21.2	1.2	2.3	0.00511	0.6	**Down**	41.0	Shutdown
Total					1.1				0.0			
3-Hr Rlng			0.0				0.0					

Attachment B – ICE Technician Turnover

From: Melvin Timtim
To: NorCal Peakers Projects
Subject: 9/11/2021
Date: Saturday, September 11, 2021 11:19:27 PM

-At Riverview, visually checked turbine compartment/CEMS/MCC's/pumps most especially related to NOx water injection system for any abnormalities. Observed unit running normally as per test run.

Melvin Timtim
ICE Tech
Calpine Corp

Attachment C – Atkomatic Solenoid valve #6210

Attachment C – Aktomatic Solenoid Valve #6210

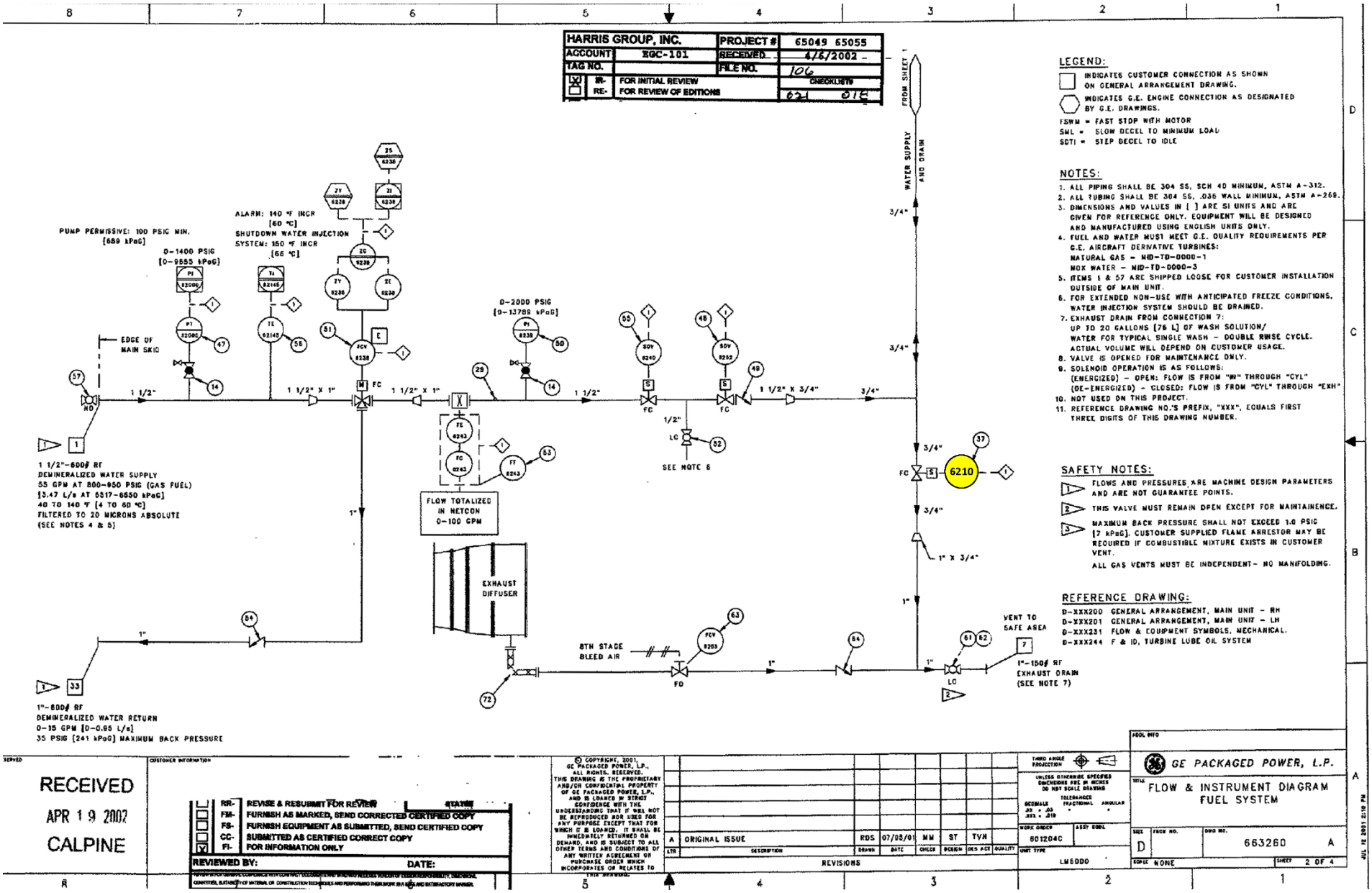

Figure 1: 6210 valve location within the NOx water injection system.

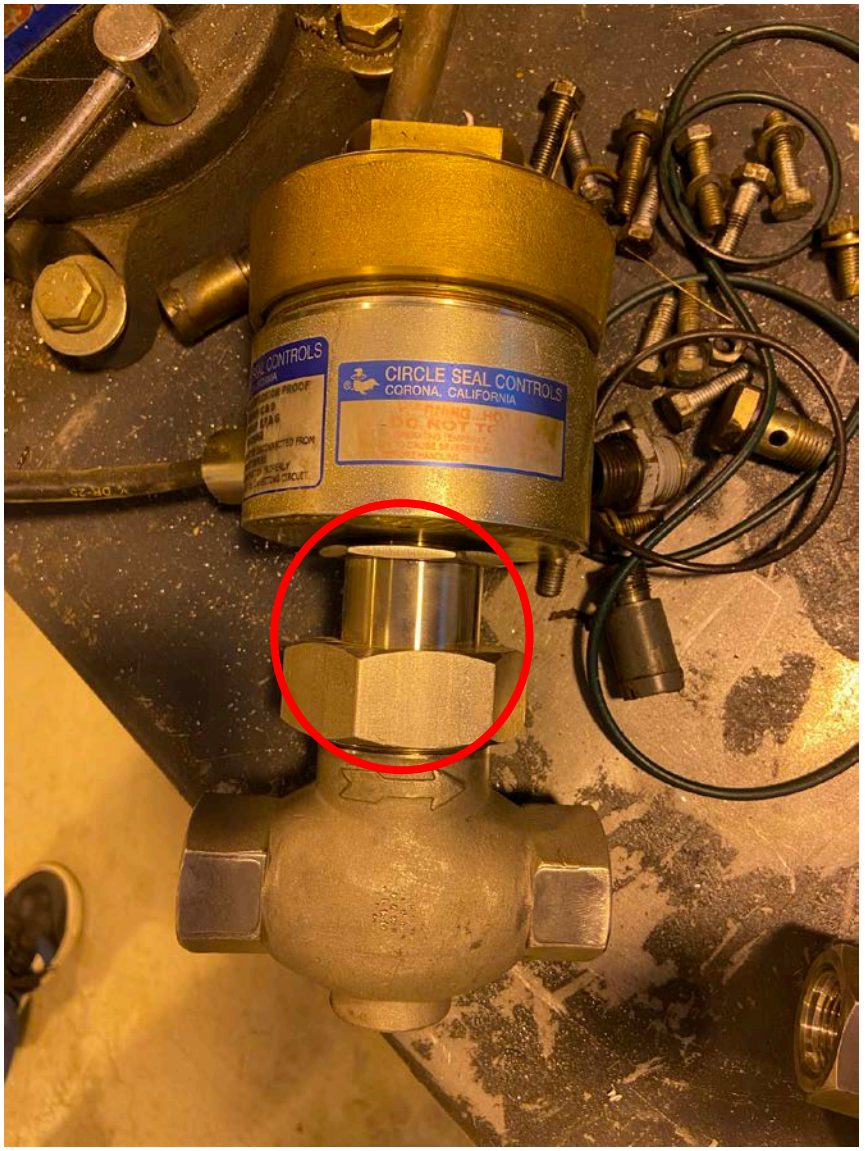

Figure 2: Fully assembled 6210 valve. The plunger that is known to unthread itself is located within the valve body circled in red.

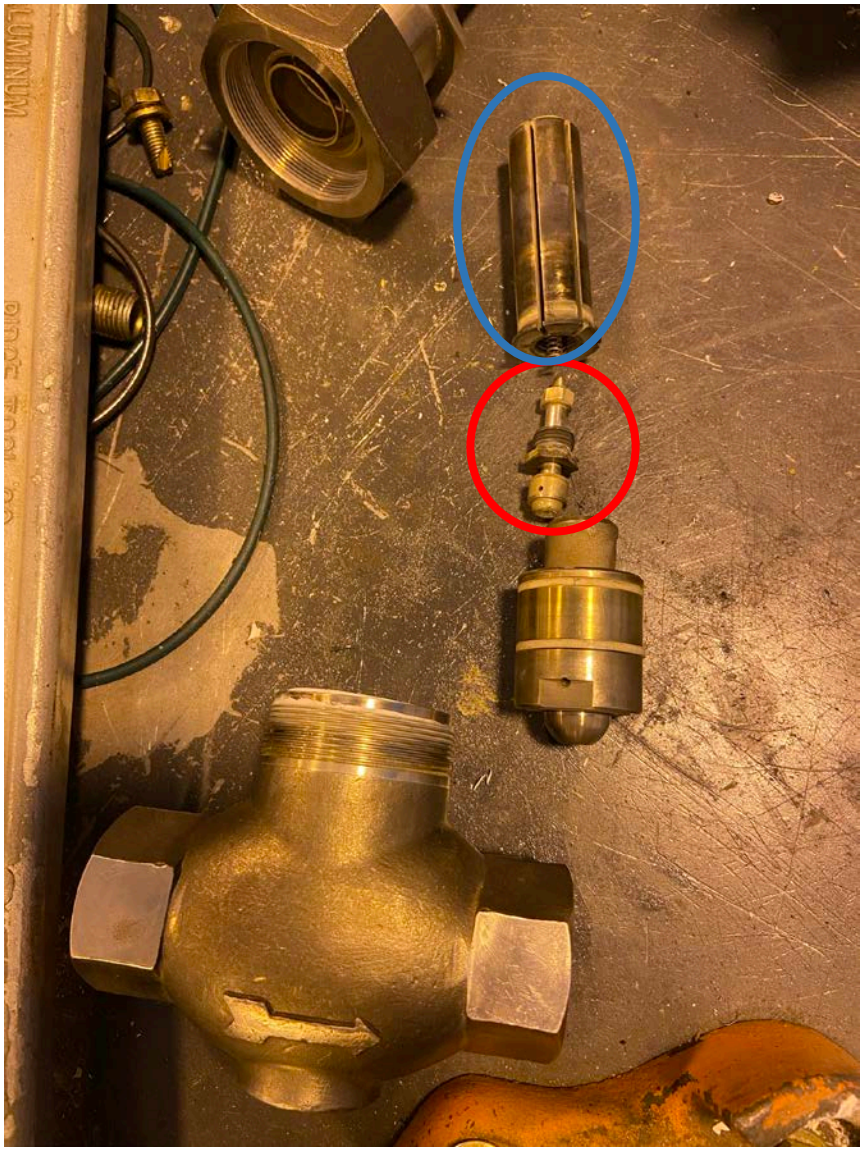

Figure 3: Deconstructed Aktomatic Solenoid Valve. The plunger, circled in red, periodically unthreads from the plunger housing, circled in blue. During annual preventative maintenance, the mechanic applies sealant to the plunger's threads.

Attachment D – Maintenance Records

Preventative Maintenance Task
Valve inspection and replacement work orders generated 2018 – 2021.

PM	Description	Location	Asset	PMEQ1	Estimated Next Due Date	Plant Condition	Work Group	Status	Program Category	Task Category
105249	RP-1Y INSPECT/REBUILD SOV-6210 AND SOV-62002 VALVES	RP-01-01-CTG		RP	3/15/22	OUTAGE	WS-MECH	ACTIVE	MAINTENANCE	

Number of Records: 1

Saved Query:

Dynamic Query: (pm.pmuid = 250514)

Work Order Details

26240032: RP-3Y Replace Drain Valve SOV-6210 in CTG Package

Asset:
Location: RP-01-01-CTG CTG COMBUSTION TURBINE AND GENERATOR SYSTEMS
CI:

Sched Start:	4/26/18	**Site:**	WS	**Job Plan:**	26482
Sched Finish:		**Priority:**	3	**Supervisor:**	
Target Start:	4/26/18	**Work Type:**	PM	**Lead:**	TW13380
Target Finish:		**Status:**	CLOSE	**Vendor:**	
Actual Start:	4/26/18	**Parent:**		**Owner:**	
Actual Finish:	4/26/18	**Failure Class:**		**Owner Group:**	
Report Date:	2/3/18	**Problem Code:**		**Service:**	
Reported By:	GWHITBECK			**Service Group:**	
		GL Account:	50300~623000~9020605~2901~S10030~OM000(	**Classification:**	

Task IDs

Task ID	Description	Status	Measurement Point	Value	Date	Observations
5	Refer to attachments for specific information on this workorder	CLOSE		0		
10	LOTO Gas Turbine Package, Demin Water supply and Fuel supply	CLOSE		0		
20	Remove and replace entire SOV-6210 valve assembly with a new valve	CLOSE		0		
30	Return systems to normal line up	CLOSE		0		
40	Test valve for proper operation during next available run	CLOSE		0		
50	Dispose of old valve assembly	CLOSE		0		

Actual Materials

Task ID	Item	Description	Storeroom	Qty	Unit Cost	Line Cost
	688204	VALVE,SOLENOID, 3/4 IN PIPE, NC, SS BDY, 8-11/16 IN X 4-5/8 IN	WS-MAIN	1	2004.94	2004.94
					Total Actual Materials:	2004.94

Work Order Details

28782348: RP-1Y INSPECT/REBUILD SOV-6210 AND SOV-62002 VALVES

Asset:
Location: RP-01-01-CTG CTG COMBUSTION TURBINE AND GENERATOR SYSTEMS
CI:

Sched Start:	11/9/20
Sched Finish:	11/10/20
Target Start:	11/9/20
Target Finish:	11/9/20
Actual Start:	11/9/20
Actual Finish:	11/9/20
Report Date:	8/26/20
Reported By:	JW13332

Site:	WS
Priority:	3
Work Type:	PM
Status:	CLOSE
Parent:	
Failure Class:	
Problem Code:	
GL Account:	50300~623000~9020605~2901~S10030~OM000(

Job Plan:	26482
Supervisor:	O&M MGR
Lead:	JG13462
Vendor:	
Owner:	
Owner Group:	
Service:	
Service Group:	
Classification:	

Task IDs

Task ID	Description	Status	Measurement Point	Value	Date	Observations
5	Refer to attachments for specific information on this workorder	CLOSE		0		
10	LOTO Gas Turbine Package, Demin Water supply and Fuel supply	CLOSE		0		
20	Remove and replace entire SOV-6210 valve assembly with a new valve	CLOSE		0		
30	Return systems to normal line up	CLOSE		0		
40	Test valve for proper operation during next available run	CLOSE		0		
50	Dispose of old valve assembly	CLOSE		0		

Log

Date	Class	Created By	Subject	Description	Long Description
11/9/20	WORKORDER	JG13462		Complete	

Work Order Details

29219427: RP-1Y INSPECT/REBUILD SOV-6210 AND SOV-62002 VALVES

Asset:
Location: RP-01-01-CTG CTG COMBUSTION TURBINE AND GENERATOR SYSTEMS
CI:

Sched Start:	4/15/21	**Site:**	WS	**Job Plan:**	26482
Sched Finish:	4/15/21	**Priority:**	3	**Supervisor:**	O&M MGR
Target Start:	4/22/21	**Work Type:**	PM	**Lead:**	JG13462
Target Finish:	4/22/21	**Status:**	CLOSE	**Vendor:**	
Actual Start:	4/14/21	**Parent:**		**Owner:**	
Actual Finish:	4/14/21	**Failure Class:**		**Owner Group:**	
Report Date:	2/1/21	**Problem Code:**		**Service:**	
Reported By:	JW13332			**Service Group:**	
		GL Account:	50300~623000~9020605~2901~S10030~OM000(	**Classification:**	

Task IDs

Task ID	Description	Status	Measurement Point	Value	Date	Observations
5	Refer to attachments for specific information on this workorder	CLOSE		0		
10	LOTO Gas Turbine Package, Demin Water supply and Fuel supply	CLOSE		0		
20	Remove and replace entire SOV-6210 valve assembly with a new valve	CLOSE		0		
30	Return systems to normal line up	CLOSE		0		
40	Test valve for proper operation during next available run	CLOSE		0		
50	Dispose of old valve assembly	CLOSE		0		

Log

Date	Class	Created By	Subject	Description	Long Description
4/14/21	WORKORDER	BUCHANANM		inspected no defects noted	

CALPINE

Work Order Details

29799840: Rp-Troubleshoot and repair nox excursion, 62002, 6210

Actual Materials

Item	Description	Storeroom	Qty	Unit Cost	Line Cost	Binnum
678441	COIL,ELECTRICAL, GT ATKOMATIC SOLENOID VALVE, 24 VDC	RP-01-01-CTG	1	2101.68	2101.68	WS-CON-H-03-01
				Total Actual Materials:		2101.00

Related Records

Ticket	Description	Class	Status	Relationship
INV101237	Unit NOx #/day exceedance	PROBLEM	WEHS	RELATED

Log

Date	Class	Created By	Subject	Description	Long Description
9/15/21	WORKORDER	BUCHANANM		removed and replaced the 6210 valve	
9/13/21		BUCHANANM	Work Order # 29799840	E-mail generated from Work Order # 29799840 Priority 4 Location RP-01-01-CTG Asset # Description Rp-Troubleshoot and repair nox excursion, 62002, 6210 Click here to open Work Order <!-- RICH TEXT -->	

Work Order Details

29799840: Rp-Troubleshoot and repair nox excursion, 62002, 6210

Asset:
Location: RP-01-01-CTG CTG COMBUSTION TURBINE AND GENERATOR SYSTEMS
CI:

Sched Start:	9/13/21
Sched Finish:	
Target Start:	
Target Finish:	
Actual Start:	9/15/21
Actual Finish:	9/15/21
Report Date:	9/13/21
Reported By:	BUCHANANM

Site:	WS
Priority:	4
Work Type:	CM
Status:	COMP
Parent:	
Failure Class:	
Problem Code:	
GL Account:	50300~623000~9020605~2901~S10030~OM000(

Job Plan:	
Supervisor:	
Lead:	JG13462
Vendor:	
Owner:	
Owner Group:	
Service:	
Service Group:	
Classification:	

Actual Materials

Task ID	Item	Description	Storeroom	Qty	Unit Cost	Line Cost
	678441	COIL,ELECTRICAL, GT ATKOMATIC SOLENOID VALVE, 24 VDC	WS-MAIN	1	2101.68	2101.68
					Total Actual Materials:	2101.68

Related Records

Ticket	Description	Class	Status	Relationship
INV101237	Unit NOx #/day exceedance	PROBLEM	WEHS	RELATED

Log

Date	Class	Created By	Subject	Description	Long Description
9/15/21	WORKORDER	BUCHANANM		removed and replaced the 6210 valve	
9/13/21	Work Order # 29799840	BUCHANANM		E-mail generated from Work Order # 29799840 Priority 4 Location RP-01-01-CTG Asset # Description Rp-Troubleshoot and repair nox excursion, 62002, 6210	

Click here to open Work Order

Work Order Details

29799840: Rp-Troubleshoot and repair nox excursion, 62002, 6210

Log

Date	Class	Created By	Subject	Description	Long Description