

Metcalfe Energy Center, LLC

1 Blanchard Road
Coyote, CA 95013

January 23, 2024

Director of Compliance and Enforcement
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105-2097
Attn: Title V Reports

TV Tracking #: 842

1. RECEIVED IN ENFORCEMENT: 1/23/2024

Re: Metcalf Energy Center #B2183
Title V CEMS Semi-Annual Monitoring Report
Reporting Period: July 1, 2023 – December 31, 2023

To Whom It May Concern:

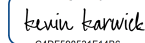
Enclosed is the Title V CEMS Semi-Annual Monitoring Report for the Metcalf Energy Center (“MEC”) for the reporting period from July 1, 2023 – December 31, 2023.

MEC is currently in compliance with the District CEMS regulations. MEC maintained intermittent compliance with the monitoring requirements listed in the Title V permit for MEC during this reporting period. Please refer to Appendix 1 for details.

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, apart from one event.

If you have any questions or require additional information, do not hesitate to contact Rosemary Silva, EHS Specialist, at (408) 361-4954.

Sincerely,

DocuSigned by:

C4DF598531F34B6
Kevin Karwick
General Manager and
Designated Representative/Responsible Official
Metcalf Energy Center, LLC.

Enclosures: Title V Semi-Annual Report

cc: Region 9

EPA

Metcalf Energy Center
Title V CEMS Semi-Annual Monitoring Report
July 1, 2023, to December 31, 2023

Table VII - A
Applicable Limits and Compliance Monitoring Requirements

S-1, GAS TURBINE #1

S-2, GAS TURBINE #2

Type of Limit	Citation of Limit	FE Y/N	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type	Compliance	
							Yes	No
NOx	BAAQMD 9-3-303	N	125 ppm	BAAQMD 1-520.1	C	CEM	X	
NOx	BAAQMD 9-9-301.1.3	N	9 ppmv @ 15% O2, dry	BAAQMD 9-9-501	C	CEM	X	
NOx	SIP 9-9-301.3	Y	9 ppmv @ 15% O2, dry	SIP 9-9-501	C	CEM	X	
NOx	BAAQMD 9-9-301.2	N	0.15 LB/MMBTU or 5 ppmv	BAAQMD 9- 9-501	C	CEM	X	
NOx	NSPS, 40 CFR 60.332 (a)(1)	Y	75 ppmv @ 15% O2, dry, 4- hour rolling average	NSPS 40 CFR 60.334(c.)	C	CEM	X	
		Y	None	40 CFR 75.10	C	CEM	X	
NOx	BAAQMD condition #18310, part 20a	Y	19.2 lb./hr. for each turbine/HRSG powertrain, except during turbine startup and shutdown	BAAQMD condition #18310, Part 27b	C	CEM	X	
NOx	BAAQMD condition #18310, part 20a	Y	19.2 lb./hr. for each turbine/HRSG powertrain, except during turbine startup and shutdown	BAAQMD condition #18310, Part 31	P/A	Source Test at maximum load	X	
NOx	BAAQMD condition #18310, part 20a	Y	0.00904 lb./MM BTU for each turbine/HRSG powertrain, except during turbine startup and shutdown	BAAQMD condition #18310, Part 27b	C	CEM	X	
NOx	BAAQMD condition #18310, part 20a	Y	0.00904 lb./MM BTU for each turbine/HRSG powertrain, except during turbine startup and shutdown	BAAQMD condition #18310, Part 31	P/A	Source Test at maximum load	X	

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Type of Limit	Citation of Limit	FE Y/N	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type	Compliance	
							Yes	No
NOx	BAAQMD condition #18310, part 20b	Y	2.5 ppmv, @ 15% O2, dry, for each turbine/HRSG powertrain, 1-hr average except during turbine startup and shutdown	BAAQMD condition #18310, Part 31	P/A	Source Test at maximum load	X	
NOx	BAAQMD condition #18310, part 20b	Y	2.5 ppmv, @ 15% O2, dry, for each turbine/HRSG powertrain, 1-hr average except during turbine startup and shutdown	BAAQMD condition #18310, Part 27b	C	CEM	X	
NOx	BAAQMD condition #18310, part 21	Y	240 lb./gas turbine start-up	BAAQMD condition #18310, Part 27b	C	CEM	X	
NOx	BAAQMD condition #18310, part 21	Y	480 lb./hr. during gas turbine cold start-up or combustor tuning period	BAAQMD condition #18310, Part 27b	C	CEM	X	
NOx	BAAQMD condition #18310, part 21	Y	80 lb./gas turbine shutdown	BAAQMD condition #18310, Part 27b	C	CEM	X	
NOx	BAAQMD condition #18310, part 24a	Y	1362.6 lb./day for S-1, S-3 Gas Turbines and S-2, S-4 HRSGs, combined	BAAQMD condition #18310, Part 27b	C	CEM	X	
NOx	BAAQMD condition #18310, part 25a	Y	123.4 ton/yr. for S-1, S-3 Gas Turbines and S-2, S-4 HRSGs, combined (including emissions from commissioning period)	BAAQMD condition #18310, Part 27b	C	CEM	X	
CO	BAAQMD condition #18310, part 20c	Y	18.7 lb./hr., for each turbine/HRSG powertrain, except during turbine startup and shutdown	BAAQMD condition #18310, Part 31	P/A	Source Test at maximum load and minimum load	X	
CO	BAAQMD condition #18310, part 20c	Y	18.7 lb./hr., for each turbine/HRSG powertrain, except during turbine startup and shutdown	BAAQMD condition #18310, Part 27b	C	CEM	X	

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Type of Limit	Citation of Limit	FE Y/N	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type	Compliance	
							Yes	No
CO	BAAQMD condition #18310, part 20d	Y	0.0088 lb/MM BTU for each turbine/HRSG powertrain, except during turbine startup and shutdown	BAAQMD condition #18310, Part 31	P/A	Source Test at maximum load and minimum load	X	
CO	BAAQMD condition #18310, part 20d	Y	0.0088 lb/MM BTU for each turbine/HRSG powertrain, except during turbine startup and shutdown	BAAQMD condition #18310, Part 27b	C	CEM	X	
CO	BAAQMD condition #18310, part 20d	Y	4 ppmv @ 15% O2, dry, for each turbine/HRSG powertrain, 3-hr average, except during turbine startup and shutdown	BAAQMD condition #18310, Part 31	P/A	Source Test at maximum load and minimum load	X	
CO	BAAQMD condition #18310, part 20d	Y	4 ppmv @ 15% O2, dry, for each turbine/HRSG powertrain, 3-hr average, except during turbine startup and shutdown	BAAQMD condition #18310, Part 27b	C	CEM	X	
CO	BAAQMD condition #18310, part 20d	Y	4 ppmv @ 15% O2, dry, for each turbine/HRSG powertrain, 3-hr average, except during turbine startup and shutdown	40 CFR 64.3 (b)(4)(ii)	At least 4 times per hour (CAM Plan)	CEM	X	
CO	BAAQMD condition #18310, part 21	Y	2,514 lb./gas turbine startup	BAAQMD condition #18310, Part 27b	C	CEM	X	
CO	BAAQMD condition #18310, part 21	Y	5028 lb/hr during gas turbine cold start-up or combustor tuning period	BAAQMD condition #18310, Part 27b	C	CEM	X	
CO	BAAQMD condition #18310, part 21	Y	902 lb/gas turbine shutdown	BAAQMD condition #18310, Part 27b	C	CEM	X	
CO	BAAQMD condition #18310, part 24b	Y	7,891.1 lb/day for S-1, S-3 gas turbines and S-2, S-4 HRSGs, combined	BAAQMD condition #18310, Part 27b	C	CEM	X	

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Type of Limit	Citation of Limit	FE Y/N	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type	Compliance	
							Yes	No
CO	BAAQMD condition #18310, part 25b	Y	588 ton/yr for S-1, S-3 gas turbines and S-2, S-4 HRSGs, combined (includes emissions from commissioning period)	BAAQMD condition #18310, Part 27b	C	CEM	X	
CO ₂		Y	None	40 CFR 75.10	C	fuel flow monitor and CO ₂ calculation	X	
SO ₂	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	
SO ₂	BAAQMD 9-1-302	Y	300 ppm (dry)		N		X	
SO ₂	NSPS 40 CFR 60.333(a)	Y	0.015% (vol.) @ 15% O ₂ (dry)	NSPS 40 CFR 60.334(h)	N		X	
SO ₂	NSPS 40 CFR 60.333(b)	Y	Total sulfur content of fuel not to exceed 0.8 percent by weight (8000 ppmw)	NSPS 40 CFR 60.334(h)(3)(i) and BAAQMD condition #18310, Part 45	P/M	Fuel sulfur content testing	X	
SO ₂		Y	None	40 CFR 75.11, 40 CFR 75, Appendix D, part 2.3	P/A	Fuel measurements , calculations	X	
SO ₂	BAAQMD condition #18310, part 20g	Y	1.28 lb/hr, for each turbine/HRSH powertrain	BAAQMD condition #18310, part 31	P/A	Source test at maximum load		X ¹
SO ₂	BAAQMD condition #18310, part 20g	Y	1.28 lb/hr, for each turbine/HRSH powertrain	BAAQMD condition #18310, part 28	P/D	Records, calculations		X ¹
SO ₂	BAAQMD condition #18310, part 20g	Y	0.0006lb/MM BTU, for each turbine/HRSG powertrain	BAAQMD condition #18310, part 31	P/A	Source test at maximum load		X ¹

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							Yes	No
SO2	BAAQMD condition #18310, part 20g	Y	0.0006lb/MM BTU, for each turbine/HRSG powertrain	BAAQMD condition #18310, part 28	P/D	Records, calculations		X ¹
SO2	BAAQMD condition #18310, part 24e	Y	57.9 lb/day for each turbine/HRSG powertrain	BAAQMD condition #18310, part 28	P/D	Records, calculations	X	
SO2	BAAQMD condition #18310, part 25e	Y	10.6 ton /yr for each turbine/HRSG powertrain (includes emissions from commissioning period)	BAAQMD condition #18310, part 28	P/D	Records, calculations	X	
Opacity	BAAQMD 6-1-301	N	> Ringelmann No. 1 for no more than 3 minutes in any hour		N		X	
Opacity	SIP 6-301	Y	> Ringelmann No. 1 for no more than 3 minutes in any hour		N		X	
FP	BAAQMD 6-1-310.3	N	0.15 grain/dscf @ 6% O2		N		X	
FP	SIP 6-310.3	Y	0.15 grain/dscf @ 6% O2		N		X	
PM ₁₀	BAAQMD condition #18310, part 20h	Y	9 lb/hr, for each turbine/HRSG powertrain	BAAQMD condition #18310, part 31	P/A	Source test at maximum load	X	
PM ₁₀	BAAQMD condition #18310, part 20h	Y	0.00452 lb/MM BTU, for each turbine/HRSG powertrain	BAAQMD condition #18310, part 31	P/A	Source test at maximum load	X	
PM ₁₀	BAAQMD condition #18310, part 24d	Y	510 lb/day for S-1, S-3 Gas turbines and S-2, S-4 HRSGs, combined	BAAQMD condition #18310, part 28	P/D	Records, calculations	X	

¹ During RATA/Source Testing in 2023 fuel gas samples indicated higher than normal sulfur content. The District was first notified on 9/11/2023. The facility is currently in compliance.

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							Yes	No
PM ₁₀	BAAQMD condition #18310, part 25d	Y	83.34 ton/yr for S-1, S-3 Gas turbines and S-2, S-4 HRSGs, combined (including emissions from commissioning period)	BAAQMD condition #18310, part 28	P/D	Records, calculations	X	
POC	BAAQMD condition #18310, part 20f	Y	2.7 lb/hr (as CH ₄) for each turbine/HRSG powertrain except during turbine startup and shut down	BAAQMD condition #18310, part 31	P/A	Source test at maximum load	X	
POC	BAAQMD condition #18310, part 20f	Y	0.00126 lb/MM BTU (as CH ₄) for each turbine/HRSG powertrain except during turbine startup and shut down	BAAQMD condition #18310, part 31	P/A	Source test at maximum load	X	
POC	BAAQMD condition #18310, part 21	Y	48 lb/gas turbine startup	BAAQMD condition #18310, part 28	P/D	Records, calculations	X	
POC	BAAQMD condition #18310, part 21	Y	16 lb/gas turbine shutdown	BAAQMD condition #18310, part 28	P/D	Records, calculations	X	
POC	BAAQMD condition #18310, part 21	Y	96 lb/hr during gas turbine cold start up or combustor tuning period	BAAQMD condition #18310, part 28	P/D	Records, calculations	X	
POC	BAAQMD condition #18310, part 24c	Y	230.2 lb/day (as CH ₄) for S-1, S-3 gas turbines and S-2, S-4 HRSGs, combined	BAAQMD condition #18310, part 28	P/D	Records, calculations	X	
POC	BAAQMD condition #18310, part 25c	Y	28 ton/yr) for S-1, S-3 gas turbines and S-2, S-4 HRSGs, combined (including emissions from commissioning period)	BAAQMD condition #18310, part 28	P/D	Records, calculations	X	

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							Yes	No
NH ₃	BAAQMD condition #18310, part 20e	N	5 ppmv, @ 15% O ₂ dry, averaged over 3 hrs for each turbine/HRSG powertrain, except during turbine startup and shutdown	BAAQMD condition #18310, part 27c	C	Ammonia injection rate monitor	X	
Formaldehyde	BAAQMD condition #18310, part 26a	N	3796 lb/yr for S-1, S-3 gas turbines and S-2, S-4 HRSGs, combined	BAAQMD condition #18310, part 29	P/D	Records, calculations	X	
Formaldehyde	BAAQMD condition #18310, part 26a	N	3796 lb/yr for S-1, S-3 gas turbines and S-2, S-4 HRSGs, combined	BAAQMD condition #18310, part 33	P/every two years on P-1 or P-2	Source Test	X	
Benzene	BAAQMD condition #18310, part 26b	N	480 lb/yr for S-1, S-3 gas turbines and S-2, S-4 HRSGs, combined	BAAQMD condition #18310, part 29	P/D	Records, calculations	X	
Benzene	BAAQMD condition #18310, part 26b	N	480 lb/yr for S-1, S-3 gas turbines and S-2, S-4 HRSGs, combined	BAAQMD condition #18310, part 33	P/every two years on P-1 or P-2	Source Test	X	
Specific PAH Compounds	BAAQMD condition #18310, part 26c	N	22.8 lb/yr for S-1, S-3 gas turbines and S-2, S-4 HRSGs, combined	BAAQMD condition #18310, part 29	P/D	Records, calculations	X	
Specific PAH Compounds	BAAQMD condition #18310, part 26c	N	22.8 lb/yr for S-1, S-3 gas turbines and S-2, S-4 HRSGs, combined	BAAQMD condition #18310, part 33	P/every two years on P-1 or P-2	Source Test	X	
Heat input limit	BAAQMD condition #18310, part 14	Y	2,124 MM BTU/hr (HHV), 3-hr average for each turbine/HRSG powertrain	BAAQMD condition #18310, part 27a	C	Fuel meter, firing monitor, calculations	X	
Heat input limit	BAAQMD condition #18310, part 15	Y	49,908 MM BTU/calendar day (HHV), for each turbine/HRSG powertrain	BAAQMD condition #18310, part 27a	C	Fuel meter, firing monitor, calculation ² s	X	

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Type of Limit	Citation of Limit	FE Y/N	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type	Compliance	
							Yes	No
Heat input limit	BAAQMD condition #18310, part 16	Y	35,274,060 MM BTU/yr (HHV) for S-1, S-3 gas turbines and S-2, S-4 HRSGs, combined	BAAQMD condition #18310, part 27a	C	Fuel meter, firing monitor, calculations	X	
Cold Start-Up, Combustor Tuning Firing Limit	BAAQMD condition #18310, part 48	Y	30 firing hours per year for S-1 and S-3 gas turbines, combined for purposes of cold start-up or combustor tuning	BAAQMD condition #18310, part 49	P/E	Recordkeeping	X	

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Table VII - B

Applicable Limits and Compliance Monitoring Requirements

S-3, HEAT RECOVERY STEAM GENERATOR #1

S-4, HEAT RECOVERY STEAM GENERATOR #2

Type of Limit	Citation of Limit	FE Y/N	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	C	CEM	X	
NOx	SIP 9-9-301.3	Y	9 ppmv @ 15% O2, dry	SIP 9-9-501	C	CEM	X	
NOx	BAAQMD 9-9-301.2	N	0.15 LB/MMBTU or 5 ppmv	BAAQMD 9-9-501	C	CEM	X	
NOx	NSPS, 40 CFR 60.44b (a)(4)(i)	Y	0.2 lb/ MM BTU except, during start-up, shutdown, or malfunction	NSPS 40 CFR 60.48b (b)(2) and BAAQMD Condition #18310, part 27b	C	CEM	X	
NOx	NSPS, 40 CFR 60.332 (a)(1)	Y	75 ppmv @ 15% O2, dry, 4-hour rolling average	NSPS 40 CFR 60.334(c.) and BAAQMD Condition #18310, part 27b	C	CEM	X	
NOx		Y	None	40 CFR 75.10	C	CEM	X	
NOx	BAAQMD condition #18310, part 20a	Y	19.2 lb/hr for each turbine/HRSG powertrain, except during turbine startup and shutdown	BAAQMD condition #18310, Part 27b	C	CEM	X	
NOx	BAAQMD condition #18310, part 20a	Y	19.2 lb/hr for each turbine/HRSG powertrain, except during turbine startup and shutdown	BAAQMD condition #18310, Part 31	P/A	Source Test at maximum load	X	
NOx	BAAQMD condition #18310, part 20a	Y	0.00904 lb/MM BTU for each turbine/HRSG powertrain, except during turbine startup and shutdown	BAAQMD condition #18310, Part 27b	C	CEM	X	

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Type of Limit	Citation of Limit	FE Y/N	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type	Compliance	
							Yes	No
NOx	BAAQMD condition #18310, part 20a	Y	0.00904 lb/MM BTU for each turbine/HRSG powertrain, except during turbine startup and shutdown	BAAQMD condition #18310, Part 31	P/A	Source Test at maximum load	X	
NOx	BAAQMD condition #18310, part 20b	Y	2.5 ppmv, @ 15% O2, dry, for each turbine/HRSG powertrain, 1-hr average except during turbine startup and shutdown	BAAQMD condition #18310, Part 31	P/A	Source Test at maximum load	X	
NOx	BAAQMD condition #18310, part 20b	Y	2.5 ppmv, @ 15% O2, dry, for each turbine/HRSG powertrain, 1-hr average except during turbine startup and shutdown	BAAQMD condition #18310, Part 27b	C	CEM	X	
NOx	BAAQMD condition #18310, part 24a	Y	1362.6 lb/day for S-1, S-3 Gas Turbines and S-2, S-4 HRSGs, combined	BAAQMD condition #18310, Part 27b	C	CEM	X	
NOx	BAAQMD condition #18310, part 25a	Y	123.4 ton/yr for S-1, S-3 Gas Turbines and S-2, S-4 HRSGs, combined (including emissions from commissioning period)	BAAQMD condition #18310, Part 27b	C	CEM	X	
CO	BAAQMD condition #18310, part 20c	Y	18.7 lb/hr, for each turbine/HRSG powertrain, except during turbine startup and shutdown	BAAQMD condition #18310, Part 31	P/A	Source Test at maximum load and minimum load	X	
CO	BAAQMD condition #18310, part 20c	Y	18.7 lb/hr, for each turbine/HRSG powertrain, except during turbine startup and shutdown	BAAQMD condition #18310, Part 27b	C	CEM	X	
CO	BAAQMD condition #18310, part 20d	Y	0.0088 lb/MM BTU for each turbine/HRSG powertrain, except during turbine startup and shutdown	BAAQMD condition #18310, Part 31	P/A	Source Test at maximum load and minimum load	X	

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Type of Limit	Citation of Limit	FE Y/N	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type	Compliance	
							Yes	No
CO	BAAQMD condition #18310, part 20d	Y	0.0088 lb/MM BTU for each turbine/HRSG powertrain, except during turbine startup and shutdown	BAAQMD condition #18310, Part 27b	C	CEM	X	
CO	BAAQMD condition #18310, part 20d	Y	4 ppmv @ 15% O ₂ , dry, for each turbine/HRSG powertrain, 3-hr average, except during turbine startup and shutdown	BAAQMD condition #18310, Part 31	P/A	Source Test at maximum load and minimum load	X	
CO	BAAQMD condition #18310, part 20d	Y	4 ppmv @ 15% O ₂ , dry, for each turbine/HRSG powertrain, 3-hr average, except during turbine startup and shutdown	BAAQMD condition #18310, Part 27b	C	CEM	X	
CO	BAAQMD condition #18310, part 24b	Y	7,891.1 lb/day for S-1, S-3 gas turbines and S-2, S-4 HRSGs, combined	BAAQMD condition #18310, Part 27b	C	CEM	X	
CO	BAAQMD condition #18310, part 25b	Y	588 ton/yr for S-1, S-3 gas turbines and S-2, S-4 HRSGs, combined (includes emissions from commissioning period)	BAAQMD condition #18310, Part 27b	C	CEM	X	
CO ₂		Y	None	40 CFR 75.10	C	fuel flow monitor and CO ₂ calculation	X	
SO ₂	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	
SO ₂	BAAQMD 9-1-302	Y	300 ppm (dry)		N		X	
SO ₂	NSPS 40 CFR 60.333(a)	Y	0.015% (vol.) @ 15% O ₂ (dry)	NSPS 40 CFR 60.334(h)	N		X	

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							Yes	No
SO ₂	NSPS 40 CFR 60.333(b)	Y	Total sulfur content of fuel not to exceed 0.8 percent by weight (8000 ppmw)	NSPS 40 CFR 60.334(h)(3)(ii) and BAAQMD condition #18310, Part 45	P/M	Fuel sulfur content testing	X	
SO ₂		Y	None	40 CFR 75.11, 40 CFR 75, Appendix D, part 2.3	P/A	Fuel measurements, calculations	X	
SO ₂	BAAQMD condition #18310, part 20g	Y	1.28 lb/hr, for each turbine/HRSH powertrain	BAAQMD condition #18310, part 31	P/A	Source test at maximum load		X ²
SO ₂	BAAQMD condition #18310, part 20g	Y	1.28 lb/hr, for each turbine/HRSH powertrain	BAAQMD condition #18310, part 28	P/D	Records, calculations		X ²
SO ₂	BAAQMD condition #18310, part 20g	Y	0.0006lb/MM BTU, for each turbine/HRSG powertrain	BAAQMD condition #18310, part 31	P/A	Source test at maximum load		X ²
SO ₂	BAAQMD condition #18310, part 20g	Y	0.0006lb/MM BTU, for each turbine/HRSG powertrain	BAAQMD condition #18310, part 28	P/D	Records, calculations		X ²
SO ₂	BAAQMD condition #18310, part 24e	Y	57.9 lb/day for each turbine/HRSG powertrain	BAAQMD condition #18310, part 28	P/D	Records, calculations	X	
SO ₂	BAAQMD condition #18310, part 25e	Y	10.6 ton /yr for each turbine/HRSG powertrain (includes emissions from commissioning period)	BAAQMD condition #18310, part 28	P/D	Records, calculations	X	
Opacity	BAAQMD 6-1-301	N	> Ringelmann No. 1 for no more than 3 minutes in any hour		N		X	

² During RATA/Source Testing in 2023 fuel gas samples indicated higher than normal sulfur content. The District was first notified on 9/11/2023. The facility is currently in compliance.

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Title V CEMS Semi-Annual Monitoring Report
July 1, 2023, to December 31, 2023

Type of Limit	Citation of Limit	FE Y/N	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type	Compliance	
							Yes	No
Opacity	SIP 6-301	Y	> Ringelmann No. 1 for no more than 3 minutes in any hour		N		X	
FP	BAAQMD 6-1-310.3	N	0.15 grain/dscf @ 6% O2		N		X	
FP	SIP 6-310.3	Y	0.15 grain/dscf @ 6% O2		N		X	
PM	NSPS 40 CFR 60.42a (b)	Y	< 20% opacity, 6-minute average, except one six-minute period/hr up to 27% opacity		N		X	
PM ₁₀	BAAQMD condition #18310, part 20h	Y	9 lb/hr, for each turbine/HRSG powertrain	BAAQMD condition #18310, part 31	P/A	Source test at maximum load	X	
PM ₁₀	BAAQMD condition #18310, part 20h	Y	0.00452 lb./MM BTU, for each turbine/HRSG powertrain	BAAQMD condition #18310, part 31	P/A	Source test at maximum load	X	
PM ₁₀	BAAQMD condition #18310, part 24d	Y	510 lb/day for S-1, S-3 Gas turbines and S-2, S-4 HRSGs, combined	BAAQMD condition #18310, part 24	P/D	Records, calculations	X	
PM ₁₀	BAAQMD condition #18310, part 25d	Y	83.34 ton/yr. for S-1, S-3 Gas turbines and S-2, S-4 HRSGs, combined (including emissions from commissioning period)	BAAQMD condition #18310, part 25	P/D	Records, calculations	X	
POC	BAAQMD condition #18310, part 20f	Y	2.7 lb/hr (as CH4) for each turbine/HRSG powertrain except during turbine startup and shut down	BAAQMD condition #18310, part 31	P/A	Source test at maximum load	X	
POC	BAAQMD condition #18310, part 20f	Y	0.00126 lb./MM BTU (as CH4) for each turbine/HRSG powertrain except during turbine startup and shut down	BAAQMD condition #18310, part 31	P/A	Source test at maximum load	X	

Metcalf Energy Center
Title V CEMS Semi-Annual Monitoring Report
July 1, 2023, to December 31, 2023

Type of Limit	Citation of Limit	FE Y/N	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type	Compliance	
							Yes	No
POC	BAAQMD condition #18310, part 24c	Y	230.2 lb/day (as CH4) for S-1, S-3 gas turbines and S-2, S-4 HRSGs, combined	BAAQMD condition #18310, part 28	P/D	Records, calculations	X	
POC	BAAQMD condition #18310, part 25c	Y	28 ton/yr) for S-1, S-3 gas turbines and S-2, S-4 HRSGs, combined (including emissions from commissioning period)	BAAQMD condition #18310, part 28	P/D	Records, calculations	X	
NH ₃	BAAQMD condition #18310, part 20e	N	5 ppmv, @ 15% O2 dry, averaged over 3 hrs for each turbine/HRSG powertrain, except during turbine startup and shutdown	BAAQMD condition #18310, part 27c	C	Ammonia injection rate monitor	X	
Formaldehyde	BAAQMD condition #18310, part 26a	N	3796 lb/yr for S-1, S-3 gas turbines and S-2, S-4 HRSGs, combined	BAAQMD condition #18310, part 29	P/D	Records, calculations	X	
Formaldehyde	BAAQMD condition #18310, part 26a	N	3796 lb/yr for S-1, S-3 gas turbines and S-2, S-4 HRSGs, combined	BAAQMD condition #18310, part 33	P/every two years on P-1 or P-2	Source Test	X	
Benzene	BAAQMD condition #18310, part 26b	N	480 lb/yr for S-1, S-3 gas turbines and S-2, S-4 HRSGs, combined	BAAQMD condition #18310, part 29	P/D	Records, calculations	X	
Benzene	BAAQMD condition #18310, part 26b	N	480 lb/yr for S-1, S-3 gas turbines and S-2, S-4 HRSGs, combined	BAAQMD condition #18310, part 33	P/every two years on P-1 or P-2	Source Test	X	
Specific PAH Compounds	BAAQMD condition #18310, part 26c	N	22.8 lb/yr for S-1, S-3 gas turbines and S-2, S-4 HRSGs, combined	BAAQMD condition #18310, part 29	P/D	Records, calculations	X	

Metcalf Energy Center
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Specific PAH Compounds	BAAQMD condition #18310, part 26c	N	22.8 lb./yr. for S-1, S-3 gas turbines and S-2, S-4 HRSGs, combined	BAAQMD condition #18310, part 33	P/every two years on P-1 or P-2	Source Test	X	
Heat input limit	BAAQMD condition #18310, part 14	Y	2,124 MM BTU/hr. (HHV), 3-hr average for each turbine/HRSG powertrain	BAAQMD condition #18310, part 27a	C	Fuel meter, firing monitor, calculations	X	
Heat input limit	BAAQMD condition #18310, part 15	Y	49,908 MM BTU/calendar day (HHV), for each turbine/HRSG powertrain	BAAQMD condition #18310, part 27a	C	Fuel meter, firing monitor, calculations	X	
Heat input limit	BAAQMD condition #18310, part 16	Y	35,274,060 MM BTU/yr. (HHV) for S-1, S-3 gas turbines and S-2, S-4 HRSGs, combined	BAAQMD condition #18310, part 27a	C	Fuel meter, firing monitor, calculations	X	
Prohibited firing	BAAQMD condition #18310, part 17	Y	Each HRSG duct burner may not be fired unless its associated gas turbine is being fired	BAAQMD condition #18310, part 27a	C	Fuel meter, firing monitor, calculations	X	

Metcalf Energy Center
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Table VII – C
Applicable Limits and Compliance Monitoring Requirements
S-5 COOLING TOWER

Type of Limit	Citation of Limit	FE Y/N	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type	Compliance	
							Yes	No
Opacity	BAAQMD 6-1-301	N	>Ringelmann No.1 for no more than 3 minutes in any hour		N		X	
FP	BAAQMD 6-1-310	N	0.15 gr/dscf		N		X	
Opacity	SIP 6-301	Y	>Ringelmann No.1 for no more than 3 minutes in any hour		N		X	
FP	SIP 6-310	Y	0.15 gr/dscf		N		X	
Drift Rate	BAAQMD Condition #18310, part 46	Y	0.0005%	BAAQMD Condition #18310, part 46	P	Initial Source Test	X	
Total Dissolved Solids	BAAQMD Condition #18310, part 46	Y	5438 ppmw (mg/l)	BAAQMD Condition #18310, part 46	P/D	Sampling and Testing of cooling tower water	X	

Metcalf Energy Center
Title V CEMS Semi-Annual Monitoring Report
July 1, 2023, to December 31, 2023

Table VII – D
Applicable Limits and Compliance Monitoring Requirements
S-6 STATIONARY STANDBY GENERATOR SET

Type of Limit	Citation of Limit	FE Y/N	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type	Compliance	
							Yes	No
Opacity	BAAQMD 6-1-301	N	>Ringelmann No.1 for no more than 3 minutes in any hour		N		SOURCE NOT COMMISSIONED	
Opacity	SIP 6-301	Y	>Ringelmann No.1 for no more than 3 minutes in any hour		N			
FP	BAAQMD 6-1-310.3	N	0.15 gr/dscf @ 6% O2		N			
FP	SIP 6-310.3	Y	0.15 gr/dscf @ 6% O2		N			
SO ₂	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			
SO ₂	BAAQMD 9-1-302	Y	300 ppm (dry)		N			
Heat Input Limit	BAAQMD Condition #22231-part 1	Y	14.1 MM BTU/hr.		N			
Reliability Related activities	BAAQMD Condition #22231-part 2	Y	100 hours per calendar year	BAAQMD Condition #22231-part 6	P/E	Recordkeeping		
NOx, CO and POC	BAAQMD Condition #22231-part 3	Y	1.0 g NOx/bhp-hr. 2.75 g CO/bhp-hr. 1.0 g POC/bhp-hr.		N			

Metcalf Energy Center
Title V CEMS Semi-Annual Monitoring Report
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Table VII – E
Applicable Limits and Compliance Monitoring Requirements
S-7 FIRE PUMP DIESEL ENGINE

Type of Limit	Citation of Limit	FE Y/N	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type	Compliance	
							Yes	No
Opacity	BAAQMD 6-1-301	N	>Ringelmann No.2 for no more than 3 minutes in any hour		N		X	
Opacity	SIP 6-301	Y	>Ringelmann No.2 for no more than 3 minutes in any hour		N		X	
FP	BAAQMD 6-1-310.3	N	0.15 gr/dscf @ 6% O2		N		X	
FP	SIP 6-310.3	Y	0.15 gr/dscf @ 6% O2		N		X	
SO ₂	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	
Fuel Sulfur Content	BAAQMD 9-1-304	Y	Sulfur Content ≤ 0.5% by weight		N		X	
SO ₂	BAAQMD Condition #19610, part 39	N	Sulfur content of fuel less than 0.05% by weight	BAAQMD Condition #19610, part 39	P/E		X	
Reliability Related activities	BAAQMD Condition #21917-part 1	Y	30 hours per calendar year	BAAQMD Condition #21917 part 2, 3	P/E	Totalizing Meter, record keeping	X	

APPENDIX 1

Metcalf Energy Center, LLC

1 Blanchard Road
Coyote, CA 95013

July 31, 2023

VIA EMAIL DELIVERY

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

**RE: Metcalf Energy Center, LLC., Permit No. 18136
30-Day Deviation Follow-Up Report - UPDATE**

Dear Mr. Gove,

In accordance with the Major Facility Review Permit (Title V Permit) for the Metcalf Energy Center (the "Facility"), this letter is updating a 30-day follow up report submitted on July 7, 2023.

Due to mechanical issues with one of the boiler feed pump motors on CT-1, the Facility was not able to conduct the required biennial testing for toxics at maximum allowable operating rates, per Title V Condition 33, as originally planned for the week of July 17, 2023.

Event Description

On May 7, 2023, the Facility experienced a mechanical issue with the steam turbine, which required an extended outage to repair.

On May 10, the Facility notified BAAQMD via email that the testing previously scheduled for the week of June 6, 2023 would need to be postponed and could not be completed until the steam turbine was returned to service. At that time, the Facility was unsure when operations would resume, but estimated a June 30, 2023 return to service and tentatively scheduled testing for mid-July.

Repair to the steam turbine were completed earlier than expected and the Facility returned to normal operations on June 23, 2023.

On July 17, 2023, the Facility began the RATA and Source Testing.

On July 20, 2023 the Facility experienced issues with one of the boiler feed pump motors. Upon further investigation, it was determined that the motor had failed rendering the pump non-operational. The facility is not able to operate at the maximum allowable operating rates on the Gas Turbine and associated Heat Recovery Steam Generator with only one boiler feed pump in service and, therefore, could not complete testing as required by Condition 33.

Corrective Actions

Repairs are in process and testing will be completed as soon as practicable after the unit has been returned to service.

Compliance Status

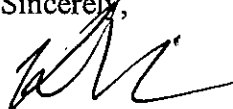
Until testing at maximum load can be completed, the facility remains out of compliance with Condition 33. The facility is currently in compliance with the remaining Title V Conditions.

Certification

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.

If you have any questions or require additional information, please contact Rosemary Silva at (408) 361-4954 or via email at silvaro@calpine.com.

Sincerely,



Kevin Karwick
General Manager
Metcalf Energy Center, LLC

Cc: Xuna Cai, BAAQMD
Anwar Ali, CEC
EHSWalnutCreek@calpine.com
CICS INC102410

Via email attachment
Via email attachment
Via email attachment

December 6, 2023

VIA EMAIL DELIVERY

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

**RE: Metcalf Energy Center, LLC., Permit No. 18136
Title-V Deviation Report – Update-2**

Dear Mr. Gove,

The Metcalf Energy Center, LLC (the “Facility”) previously reported a Major Facility Review Permit (“Title V Permit”) deviation for an exceedance of the 1.28 lb./hr. SO₂ limit during annual emissions testing performed the week of July 17, 2023. The Facility notified the District of the event on September 11, 2023 and submitted the 30-day follow-up report on October 6, 2023. The cause of the high SO₂ emissions was unusually high sulfur content of the fuel gas. As part of the ongoing investigation, the Facility obtained new information and submitted a follow-up letter on November 6, 2023. The Facility has now concluded the investigation and is submitting this letter as a final update.

In the October 6 report, the Facility noted that the preliminary results from the 2nd fuel gas test performed September 11, 2023 had also indicated higher than normal fuel gas sulfur content and that the calculated SO₂ emissions again exceeded the permit limit. The Facility subsequently performed a 3rd fuel gas test on October 23, 2023, and data from that test indicated significantly lower fuel gas sulfur content that resulted in calculated SO₂ emissions much less than the permit limit. The test report for the 3rd test was submitted to the District on December 7, 2023. the SO₂ emission factor in the Continuous Emissions Monitoring System (CEMS) Data Acquisition System (DAS) was updated accordingly.

During the October 23, 2023 sampling event, the Facility collected samples in triplicate and had them analyzed by three different laboratories to investigate the variability of laboratory data and the possibility of laboratory error. After reviewing this data along with the data collected during the July and September testing, the Facility has concluded that the fuel gas sulfur concentration variability was likely a function of the quantity of odorant analytes added to the gas by PGE.

The suppliers of pipeline natural gas are required to odorize the gas as a safety measure, so the presence of the gas can be readily detected. PG&E supplies the natural gas to the Facility and state on their webpage (Appendix A) that they odorize the gas with a 50/50 blend of Tetrahydrothiophene (THT) and Tertiary Butyl Mercaptan (TBM) and those compounds are typically present at approximately 1 PPMv each in the natural gas system.

However, based on the laboratory results from the samples taken in July and September that resulted in the exceedance of the hourly SO₂ facility emission rate limit, the levels of each of these analytes were well over 1 PPMv, and as high as 2.45 PPMv. The sulfur compound speciation for each gas sample taken during the three recent compliance tests at the Facility is presented in Appendix B.

The facility's current limit of 1.28 lb./hr. SO₂ is not achievable when the pipeline supplier adds odorant to the gas in concentrations greater than 2 PPMv (1 PPMv of each of the two odorants)., As shown in Appendix B, the Facility was able to meet the 1.28 lb/hr SO₂ emission limit once the odorant concentration were closer to the typical 1 PPMv.

In order to minimize the impact of the variability of natural gas sulfur content to permit compliance going forward, the Facility will seek an amendment with the District under separate cover to address the current SO₂ limit in the Title V permit.

Certification

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.

If you have any questions or require additional information, please contact Rosemary Silva at (408) 361-4954 or via email at silvaro@calpine.com.

Sincerely,



Kevin Karwick
General Manager
Metcalf Energy Center, LLC

Cc : Xuna Cai, BAAQMD
Anwar Ali, CEC
EHSWalnutCreek@calpine.com

Via email attachment
Via email attachment
Via email attachment

Appendix A

Sulfur Information

Much of the sulfur contained in the gas delivered by PG&E consists of compounds that naturally occur in the gas, but PG&E also adds sulfur compounds to odorize the gas. The gas is odorized as a safety measure so that leaks can be detected by consumers.

Common sulfur compounds that may be found in the gas supply are Tetrahydrothiophene (THT), Tertiary Butyl Mercaptan (TBM), Dimethyl Sulfide (DMS), and Hydrogen Sulfide (H₂S). A more comprehensive listing of typical sulfur compounds that may be found in the PG&E gas supply is shown at the end of this page. These compounds are harmless at low levels but can cause customer complaints due to excessive gas odor or in the case of Hydrogen Sulfide become dangerous at very high levels.

PG&E continuously monitors the gas stream for specific sulfur compounds at several points on its system as part of its program to ensure that the gas is properly odorized and that sulfur levels are within established limits. The monitoring equipment works well for the intended purpose but it does not provide comprehensive data on all potential sulfur compounds flowing in the gas supply.

To supplement the continuous monitoring equipment PG&E has started a program to collect and analyze samples from representative parts of the system to provide an estimate of the total sulfur contained in the PG&E gas supply expressed as parts per million by volume or grains per 100 Standard Cubic Feet.

PG&E's Gas Rule 21, Section C contains specifications on the quality of the gas received into the system and these specifications include limits for sulfur compounds as well as for other constituents contained in the natural gas. Gas Rule 21 can be found in the PGE.com [Web tariff book](#) and the sulfur limits are summarized below.

Rule 21, Section C

Section C of Gas Rule 21 provides quality specifications for gas delivered into the PG&E pipeline system from California gas wells and generally governs the gas quality received from interconnecting pipelines. However, gas quality specifications, contained in the interconnection agreement may supersede the Gas Rule 21 C specifications.

Total Sulfur: The gas shall contain no more than one grain (17 ppm) of total sulfur per one hundred standard cubic feet.

Mercaptan Sulfur: The gas shall contain no more than 0.5 grain (8 ppm) of mercaptan sulfur per one hundred standard cubic feet.

Hydrogen Sulfide: The gas shall contain no more than 0.25 grain (4 ppm) of hydrogen sulfide per one hundred standard cubic feet.

Pipeline Quality Gas

Many air quality compliance reporting requirements can be met by certifying that the fuel used in the process was "pipeline quality natural gas." The EPA criteria for pipeline quality natural gas from [40CFR72.2] is as follows:

"Pipeline natural gas means a naturally occurring fluid mixture of hydrocarbons (e.g., methane, ethane, or propane) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions, and which is provided by a supplier through a pipeline. Pipeline natural gas contains 0.5 grains or less of total sulfur per 100 standard cubic feet. Additionally, pipeline natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1100 Btu per standard cubic foot."

One criterion is that the total sulfur be less than 0.5 gr/100 scf which is a lower amount than in PG&E's tariff. To help customers understand PG&E gas quality in relation to their reporting requirements, the total sulfur measured in the gas stream as total sulfur is expressed as grains per 100 standard cubic feet (gr/100 scf). PG&E's gas supply typically qualifies as "pipeline quality natural gas" as shown in the Gas System Survey Results table below.

Gas System Sulfur Survey Results

PG&E has a program of periodically surveying representative locations on the system to determine the sulfur containing compound concentrations in the gas stream. PG&E tests for sulfur using ASTM D 5504 "Standard Test Method for Determination of Sulfur Compounds in Natural Gas and Gaseous Fuels by Gas Chromatography and Chemiluminescence." Our detection limit is approximately 10 PPBv for each compound. PG&E odorizes our gas with a 50/50 blend of Tetrahydrothiophene (THT) and Tertiary Butyl Mercaptan (TBM) and they are typically present at approximately 1 PPMv each in the natural gas on our system.

This table provides a representative sample of the [sulfur survey results](#) of gas flowing on the PG&E system.

Typical Sulfur Compounds Contained in Natural Gas

Compound	Molecular Weight (MW)
	Grams per mole
Tetrahydrothiophene (THT)	88.00
Tertiary Butyl Mercaptan (TBM)	90.00
Dimethyl Sulfide (DMS)	62.00
Hydrogen Sulfide (H ₂ S)	34.00
Methyl Mercaptan (MTM)	48.00
Ethyl Mercaptan (ETM)	62.00
Isopropyl Mercaptan (IPM)	76.00
Normal Propyl Mercaptan	76.00
Sulfur	32.00

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"PG&E" refers to Pacific Gas and Electric Company, a subsidiary of PG&E Corporation. © 2015 Pacific Gas and Electric Company. All rights reserved.

Appendix B

December 21, 2023

VIA EMAIL DELIVERY

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

**RE: Metcalf Energy Center, LLC., Permit No. B2183
Major Facility Review Permit (Title V Permit)
30-Day Title V Non-Compliance Report
RCA ID: 200029**

Dear Mr. Gove,

In accordance with the Major Facility Review Permit (“Title V Permit”) for Metcalf Energy Center, LLC (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 such non-compliance.

The Title V 10-day initial notification was submitted to the District on December 12, 2023.

Due to a failed calibration, the S-#2 Duct Burner fuel flowmeter became inoperative on November 17, 2023, and the Facility did not report the inoperative monitor in a timely manner. Pursuant to District Regulation 1-523.1, the inoperative monitor should have been reported to the District by November 19, 2023, however it was not reported until December 7, 2023.

Event Description

During the scheduled maintenance outage, the facility conducted the annual fuel flow meter calibrations on the S-#2 Duct Burner fuel flowmeter. The differential pressure, static pressure and temperature components of the transmitter were tested, and the temperature component did not pass the calibration.

Once the transmitter failed the calibration, the ICE Technician began the process of replacing the transmitter with a spare transmitter that was in stock, since the temperature component cannot be replaced. Due to technical issues with configuring the spare transmitter the Facility was not able to install and calibrate it until December 5, 2023.

EHS became aware of the failed calibration on December 5, 2023, during generation of a source test report that required inclusion of the fuel flow calibration reports. Upon investigation, the Facility determined that the failed calibration resulted in an inoperative monitor.

Corrective Actions

The corrective action for this event was the submittal of the Inoperative Monitor RCA to the District on December 7, 2023.

Investigation and Cause Determination

Based on our investigation, it has been determined that the technician did not understand that the fuel flowmeter was considered inoperative after the failed calibration, because the flow meter continued to record what appeared to be valid data. The data appeared valid because when the temperature component failed, the

transmitter calculated the fuel flow based on a constant 65°, which is typically with in the normal operating range at the Facility.

When the unit began operation on November 17, 2023, the fuel flow meter data appeared representative of typical fuel flow values and did not alert Operations to anything unusual.

Compliance Status

Although the fuel flow meter data is considered invalid due to the failed calibration, because the fuel flow was calculated based on a temperature of 65°, which is within the typical range of the actual fuel flow temperature, the Facility believes that the calculated emissions are accurate.

The Facility was in compliance with all permitted emission limits.

Preventative Actions

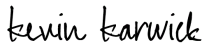
The procedure for the annual fuel flow meter calibrations have been updated to include a requirement to notify EHS and Facility management immediately when a calibration fails.

Certification

As the 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.

If you have any questions or require additional information, please contact Rosemary Silva, EHS Specialist, at 408-361-4954.

Sincerely,

DocuSigned by:

C4DF598531F14B6...

Kevin Karwick
General Manager and Designated Representative
Metcalf Energy Center, LLC

Cc:	Erin Phillips	BAAQMD	via email attachment
	Anwar Ali	CEC AQ-34	via email attachment
	Region 9	EPA	via email attachment