Metcalf Energy Center, LLC

1 Blanchard Road
Coyote, CA 95013

January 20, 2026

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
Email: compliance@baaqmd.gov

TV Tracking #1276 (Semi-Annual)

1. ☐ RECEIVED IN ENFORCEMENT: 01/22/2026

Re: Metcalf Energy Center #B2183
Title V CEMS Semi-Annual Monitoring Report
Reporting Period: July 1, 2025 – December 31, 2025

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, 2025 – December 31, 2025.

As previously reported, during Quarter 2, due to mechanical issues, the Facility was unable to conduct the following: (i) biennial toxics testing at maximum load with Power Augmentation (PAG) as required by Title V Permit Condition 33, and (ii) Combustion Turbine No. 2 Relative Accuracy Test Audit (RATA) required every fourth calendar quarter following the previous RATA in accordance with 40 CFR Part 60. All remaining required testing was subsequently completed during Quarter 3. Additional information and supporting details are provided in Appendix A. All remaining required testing was subsequently completed during Quarter 3. Additional information and supporting details are provided in Appendix A.

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 Project Manager III, at (408) 361-4954.

Sincerely,

DS JG

Signed by:
Christopher Schneider
47AE6295ADBE467...

Christopher Schneider
Plant 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, 2025, to December 31, 2025

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	

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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 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 CO2 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)(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	
SO2	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	
SO2	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	

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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 31	P/A	Source test at maximum load	X	
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	
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	

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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 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**	
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 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**	

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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
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[3]
Formal-dehyde	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	
Formal-dehyde	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[1,2]
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[1]
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[1]
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	

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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	

[1] As previously reported, during Quarter 2, due to mechanical issues, the Facility was unable to conduct the following: (i) biennial toxics testing at maximum load with Power Augmentation (PAG) as required by Title V Permit Condition 33, and (ii) Combustion Turbine No. 2 Relative Accuracy Test Audit (RATA) required every fourth calendar quarter following the previous RATA in accordance with 40 CFR Part 60.. All remaining required testing was subsequently completed during Quarter 3. Additional information and supporting details are provided in Appendix A.

2 On September 10th, 2025, the Facility was notified by Montrose Environmental (the source test contractor) that the formaldehyde laboratory results from one of the samples taken for the third sample runs had an abnormally high result, most likely from contamination and not representative of actual emissions. Additional information and supporting details are provided in Appendix B.

3 On July 13, 2025, the facility experienced a calculated excess of the ammonia (NH3) concentration emission limit of 5 ppm corrected to 15% O2, averaged over any rolling 3-hour period, as stated in Condition 20 (e) of the Title V permit on Combustion Turbine #1 (CT-1). Additional information and supporting details are provided in Appendix C.

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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% 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 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 CO2 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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Type of Limit	Citation of Limit	FE Y/N	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type	Compliance	
							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	
SO2	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	
SO2	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	
SO2	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	
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	
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	

Metcalf Energy Center
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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
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	
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	

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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
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[3]**
Formalde-hyde	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**	
Formalde-hyde	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[1,2]**
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[1]**
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[1]**
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	

[1] As previously reported, during Quarter 2, due to mechanical issues, the Facility was unable to conduct the following: (i) biennial toxics testing at maximum load with Power Augmentation (PAG) as required by Title V Permit Condition 33, and (ii) Combustion Turbine No. 2 Relative Accuracy Test Audit (RATA) required every fourth calendar quarter following the previous RATA in accordance with 40 CFR Part 60.. All remaining required testing was subsequently completed during Quarter 3. Additional information and supporting details are provided in Appendix A.

2 On September 10th, 2025, the Facility was notified by Montrose Environmental (the source test contractor) that the formaldehyde laboratory results from one of the samples taken for the third sample runs had an abnormally high result, most likely from contamination and not representative of actual emissions. Additional information and supporting details are provided in Appendix B.

3 On July 13, 2025, the facility experienced a calculated excess of the ammonia (NH3) concentration emission limit of 5 ppm corrected to 15% O2, averaged over any rolling 3-hour period, as stated in Condition 20 (e) of the Title V permit on Combustion Turbine #1 (CT-1). Additional information and supporting details are provided in Appendix C.

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**	

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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
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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 A

Metcalf Energy Center, LLC

1 Blanchard Road
Coyote, CA 95013

July 2, 2025

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
Attn: R9.aeo@epa.gov

RE: Metcalf Energy Center, LLC., Permit No. 18136
Title V– 10- and 30-Day Deviation Follow-Up Report

Dear Mr. Gove,

In accordance with the Major Facility Review Permit (Title V Permit) for the Metcalf Energy Center (the "Facility"), this letter is to advise you of an instance of potential non-compliance as required by Section I. F. Monitoring Reports, of the Title V Permit, which requires the reporting of all non-compliance instances of the Title V Permit in writing within 10 days. This letter also satisfies the 30-day follow-up reporting requirement as required by Section I.F. of the Title V Permit.

As of June 30, 2025 the Facility was unable conduct the testing for toxics at maximum load with power augmentation (PAG) required biennially per Title V Condition 33 or the Relative Accuracy Test Audit (RATA) required every four (4) calendar quarters by 40 CFR Part 60.

Event Description

On May 26, 2025, during routine maintenance on the CT-1 the Facility noted a crack on the exhaust bearing strut and began an investigation to determine the severity of the crack. On May 30, 2025, it was determined that there were multiple cracks on the struts and that the unit would need to go into an extended outage for repairs.

The Facility notified BAAQMD via email on June 2, 2025 (attached) that the testing previously scheduled for the week of June 9, 2025, would need to be postponed and could not be completed until CT-1 was returned to service.

Corrective Actions

Repairs to the CT-1 exhaust bearing strut are now complete. Source testing and RATA has been rescheduled for the week of August 4, 2025.

Compliance Status

The facility is currently out of compliance with permit conditions as described above. The Facility expects to return to compliance on or about August 8, 2025.

The Facility is in compliance with all 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,

Signed by:
Chr Schneider
BFFA23815E88434...
Christopher Schneider
Plant Manager
Metcalf Energy Center, LLC

Cc: Anwar Ali, CEC via email attachment
EHSWalnutCreek@calpine.com via email attachment
CICS INC104028

Attachment: June 2, 2025, email communication to BAAQMD

Appendix A

From: Rosemary Silva
To: Marie Miller; Marco Hernandez; Sourcetest
Cc: Anwar Ali (Anwar.Ali@energy.ca.gov); EPA; Erin Phillips; Kevin Crosby; Christopher Wymore
Subject: UPDATE: 2025 CEMS RATA and Source Test Plan and 30-Day Test Notification at Metcalf Energy Center Plant No. 12183
Date: Friday, May 30, 2025 9:01:00 AM
Attachments: image001.png
image002.png

Morning Everyone,
I just wanted to send an email to update everyone on the status of the upcoming testing at Metcalf Energy Center. We have recently confirmed that we have an unforeseen mechanical issue on CT-1, that requires the unit be down for repairs. Due to these repairs, the unit will not be available for RATA/Source Testing the week of June 9th as we originally scheduled.

We will proceed with testing on CT-2, to the extent possible, as originally scheduled.

We are currently working with our testing contractor, Montrose, to reschedule CT-1 and any other testing that cannot be completed while the unit is being repaired, as soon as their availability permits.

We will continue to keep everyone updated as the situation develops. If you have any questions or concerns, please let me know.

Thank you for your time!

Rosemary Silva
EHS Project Manager
OLS Energy-Agnews, Metcalf Energy Center,
and Los Esteros Critical Energy Facility
Phone: 408-361-4954 | **Mobile:** 408-386-3151
Email: silvaro@calpine.com
1 Blanchard Road, Coyote, CA 95013
CALPINE

From: Marie Miller <mmiller@baaqmd.gov>
Sent: Thursday, May 1, 2025 4:49 PM
To: Rosemary Silva <rosemary.silva@calpine.com>; Marco Hernandez <MHernandez@baaqmd.gov>; Sourcetest <Sourcetest@baaqmd.gov>
Cc: Anwar Ali (Anwar.Ali@energy.ca.gov) <Anwar.Ali@energy.ca.gov>; EPA <r9.aeo@epa.gov>; Erin Phillips <ephillips@baaqmd.gov>
Subject: RE: 2025 CEMS RATA and Source Test Plan and 30-Day Test Notification at Metcalf Energy Center Plant No. 12183

NST-10422 to 10425 have been assigned. Please see table below for details. NST-10422 to 10423 are for the source tests and NST-10424 to 10425 are for the RATAs.

NST#	Site_ID	Facility_Name	TitleV_Status	Facility_Type	Source#	Source_Descri...	Source_Categ...	Pollutants_Me...	Notice_Rec_Date
10422	B2183	Metcalf Energy Center	Title V	Power Plant	S-1/2	Turbine 1/HRSG		CO, NOx, POC, PM, PAHs, Formaldehyde, Benzene	5/1/2025
10423	B2183	Metcalf Energy Center	Title V	Power Plant	S-3/4	Turbine 2/HRSG		CO, NOx, POC, PM, PAHs, Formaldehyde, Benzene	5/1/2025
10424	B2183	Metcalf Energy Center	Title V	Power Plant	S-1/2	Turbine 1/HRSG		CO, NOx	5/1/2025
10425	B2183	Metcalf Energy Center	Title V	Power Plant	S-3/4	Turbine 2/HRSG		CO, NOx	5/1/2025

Also, we've introduced a new, supplemental form to be included when reports are submitted. It's just a sheet intended to help us with processing reports and prioritizing report review. The intention of the email is not to request additional testing. Please complete and submit the attached **"Contractor ST Supplemental Form"** with the final test report.

NST number(s) that are assigned for each source test notifications are for inner-office tracking purposes only, not an approval of the test plan. (For source testing methodologies please review permit conditions, BAAQMD Regulations and CFR, accordingly). Future notifications and report submittals should be made to **Sourcetest@baaqmd.gov**,and **cc: MHernandez@baaqmd.gov**

If you have other questions, please contact Marco Hernandez at mhernandez@baaqmd.gov.

Thank you,

Marie

From: Rosemary Silva <rosemary.silva@calpine.com>
Sent: Thursday, May 1, 2025 4:12 PM
To: Marco Hernandez <MHernandez@baaqmd.gov>; Sourcetest <Sourcetest@baaqmd.gov>; Marie Miller <mmiller@baaqmd.gov>
Cc: Anwar Ali (Anwar.Ali@energy.ca.gov) <Anwar.Ali@energy.ca.gov>; EPA <r9.aeo@epa.gov>; Erin Phillips <ephillips@baaqmd.gov>
Subject: 2025 CEMS RATA and Source Test Plan and 30-Day Test Notification at Metcalf Energy Center Plant No. 12183

Re: 2025 CEMS RATA and Source Test Plan and 30-Day Test Notification at Metcalf Energy Center Plant No. 12183

All,
In compliance with 40 CFR Part 60 and 40 CFR Part 75 and permit to operate #B2183, attached you will find an electronic copy of the test plan for the annual CEMS RATA and Source Test to be performed at the Metcalf Energy Center Plant, Inc, located in San Jose, California for your review.

The testing will begin on June 9, 2024, and finish on June 13, 2024, barring any unforeseen issues or delays.

Unless otherwise notified by BAAQMD or CEC, the facility assumes that the attached test protocol is approved.

If you have any questions or comments, please do not hesitate to contact me.

Thanks!

Rosemary Silva
EHS Project Manager
OLS Energy-Agnews, Los Esteros Critical Energy Facility,
Metcalf Energy Center, Calpine Gilroy Cogen and Gilroy Energy Center
Phone: 408-361-4954 | **Mobile:** 408-386-3151
Email: silvaro@calpine.com
1 Blanchard Road, Coyote, CA 95013
CALPINE

Appendix B

Metcalf Energy Center, LLC.

1 Blanchard Road
Coyote, CA 95013

VIA EMAIL

October 6, 2025

Director, Enforcement and Compliance Division
Bay Area Air District
375 Beale Street, Suite 600
San Francisco, CA 94105
compliance@baaqmd.gov

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

To Whom It May Concern:

In accordance with the Major Facility Review Permit (Title V Permit) for the Metcalf Energy Center (the "Facility"), this letter presents the 30-day follow-up report of a permit deviation as required by Section I.F. of the Title V Permit.

The Title V 10-day deviation notification, as required by Section I. F. of the Title V Permit, was submitted on September 12, 2025.

Event Description

On August 6, 2025, a source test was conducted on the S-3 Combustion Gas Turbine, which included the biennial testing for formaldehyde, as required in Condition 33 of the Title V Permit.

On September 10th, 2025, the Facility was notified by Montrose Environmental (the source test contractor) that the formaldehyde laboratory results from one of the samples taken for the third sample runs had an abnormally high result, most likely from contamination and not representative of actual emissions.

Compliance Status

There was no deviation from Title V permit conditions. The facility is currently in compliance with the conditions of the Title V air permit.

The Facility has submitted the final source test report to Bay Area Air District's Source Test Division on October 2, 2025. In the final report, the results of the third run were excluded in the calculation of the average results presented in Table 1-4, Formaldehyde Summary. The results of each of the three runs are presented in Table 4-4, Formaldehyde Results Summary, with the third run being excluded for the purposes of test series average. A copy of Table 1-4, Formaldehyde Summary and Table 4-4, Formaldehyde Results Summary, are included as Attachment A and B for reference.

Investigation and Cause Determination

As shown below, sample 3B-FROM-MAX from the third run had an abnormally high value for formaldehyde as compared to all other values. Montrose Environmental excluded run 3 from the emissions calculations consistent with Montrose Environmental's reporting protocols.

CARB Method 430

Client	: Montrose AQS	Sampling Date :	08/05-06/2025
Client Project Name	: Calpine MEC	Receiving Date :	08/12/2025
AAC Project No.	: 252019 Rev 1	Extraction Date :	08/13/2025
Analyst	: RS	Analysis Date :	08/20/2025
Units	: ug/sample	Reporting Date :	09/11/2025

Client Sample ID	AAC Sample ID	Formaldehyde (ug/sample)	SRL (ug/sample)
1FB-FROM-MAX	252019-79150	<SRL	0.100
1A-FROM-MAX	252019-79151	0.450	0.100
1B-FROM-MAX	252019-79152	0.396	0.100
2A-FROM-MAX	252019-79153	0.600	0.100
2B-FROM-MAX	252019-79154	0.242	0.100
2FB-FROM-MAX	252019-79155	<SRL	0.250
3A-Vial1-FROM-MAX	252019-79156	0.476	0.100
3A-Vial2-FROM-MAX	252019-79157	0.206	0.100
3B-FROM-MAX	252019-79158	22.0	0.100
3FB-FROM-MAX	252019-79159	<SRL	0.250
AAC Trip Blank		<SRL	0.100
AAC Trip Spike		103 % Recovery	0.250

<SRL-compound was analyzed for but not detected at or above the SRL (Sample Reporting Limit)
SRL (ug/sample) = MRL (0.025ug/mL) x Sample Volume (mL) x Analysis Dilution Factor x Method Dilution Factor
All samples were blank corrected for Formaldehyde using the method blank value.

Montrose Environmental provided the following explanation in their source test report:

> *Since there is no evidence of breakthrough, the first impinger in a series' pollutant level being lower than that of the second impinger, it is reasonable to assume that the high results of the third sample, were likely caused by contamination in either the pre-test preparation or post-test recovery stage of the third run. The lack of evidence of breakthrough makes it highly unlikely that the results of the third run are representative of stack conditions during the testing.*

Preventative Actions

The Facility will continue to work with our testing contractors to ensure that all testing and sampling protocols are properly implemented and followed.

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 Project Manager III, at 408-361-4954 or silvaro@calpine.com.

DS JG

Initial CG

Sincerely,

Signed by:
Chri Schneider
BFFA23815E88434...
Christopher Schneider
Designated Representative and Plant Manager
Metcalf Energy Center, LLC

Attachments: Attachment A: Table 1-4, Formaldehyde Summary
Attachment B: Table 4-4, Formaldehyde Results Summary

CC: Region IX, EPA via email attachment
Anwar Ali, CEC AQ-34 via email attachment
Erin Phillips, BAAD via email attachment
EHSWalnutCreek@calpine.com
CICS – INC104143

Attachment A: Table 1-4, Formaldehyde Summary

Calpine Corporation – Metcalf Energy Center
2025 Compliance and RATA Source Test Report

TABLE 1-4
PAH SUMMARY
CALPINE METCALF ENERGY CENTER
TURBINE 2 MAXIMUM LOAD WITH PAG
AUGUST 5-6, 2025

Test Run:	Unit #2	Limit
Unit Operation Data:		
Gas turbine gross load, MW	281	--
Fuel heat content, Btu/scf	1,037	--
CT fuel flow rate, scfh	1,756,730	--
CT heat input, MMBtu/hr	1,791.6	--
DB fuel flow rate, scfh	1,626.6	--
DB heat input, MMBtu/hr	165.9	--
Total fuel flow rate, scfh	1,919,390	--
Total heat input, MMBtu/hr	1,957.8	2,124
Steam injection rate, lb/hr	61,478.6	--
Ammonia injection rate, lb/hr	180.87	--
Fuel sulfur, gr/100 scf	0.144	--
Stack Gas Data:		
O_2, % volume dry	13.8	--
CO_2, % volume dry	4.2	--
Stack gas moisture, % vol	10.9	--
Stack gas flow rate, dscfm	753,752	--
Total PAHs		
lb/hr	2E-06	--
lb/MMBtu	1E-09	--
lb/yr	0.045	22.8

Notes: Stack gas flow rate, in terms of dscfm, was calculated stoichiometrically using the HHV and Fd values from fuel sampling. Values found to be below the detection limit of the analytical method are reported here at the detection limit ± the detection limit. Emissions in units of lb/year is calculated based on the combined annual heat input rate of both turbines (35,274,060 MMBtu/year).

Attachment B: Table 4-4, Formaldehyde Results Summary

Calpine Corporation – Metcalf Energy Center
2025 Compliance and RATA Source Test Report

TABLE 4-4
FORMALDEHYDE RESULTS SUMMARY
CALPINE METCALF ENERGY CENTER
TURBINE 2, MAXIMUM LOAD WITH PAG

Test Run:	1-FORM-CT2-MAX	2-FORM-CT2-MAX	3-FORM-CT2-MAX	Average
Date:	8/5/25	8/5/25	8/6/25	--
Time:	0824-1224	1312-1512	0807-1207	--
Unit Operation Data:				
Gas turbine gross load, MW	280	282	281	281
Fuel heat content, Btu/scf	1,037	1,037	1,037	1,037
CT fuel flow rate, scfh	1,730,930	1,769,510	1,769,750	1,756,730
CT heat input, MMBtu/hr	1,765.6	1804.0	1805.1	1,791.6
DB fuel flow rate, scfh	1,630.7	1,545.9	1,703.2	1,626.6
DB heat input, MMBtu/hr	166.3	157.7	173.7	165.9
Total fuel flow rate, scfh	1,894,000	1,924,100	1,940,070	1,919,390
Total heat input, MMBtu/hr	1,931.9	1,962.60	1,978.90	1,957.8
Steam injection rate, lb/hr	59,463.6	64,969.2	60,003.0	61,478.6
Ammonia injection rate, lb/hr	163.05	180.93	198.62	180.87
Sampling Data				
Gas meter calibration factor, Y	1.0064	1.0064	1.0064	1.0064
Gas meter sample vol., liters	240.055	240.018	241.196	240.423
Avg Meter temp, F	80.4	86.4	83.4	83.4
Barometric Temperature, F	29.93	29.93	29.65	29.84
Total fuel flow rate, scfh	749,257	758,961	753,037	753,752
Testing Calculations:				
Stack gas molecular weight	29.22	29.21	29.24	29.22
Sample vol, liters	240.06	240.02	241.20	240.42
Sample vol, standard liters	237.02	234.38	234.62	235.34
Sample vol dscm	0.2370	0.2344	0.2346	0.2353
Formaldehyde:				
mg/dscm	0.004	0.004	0.097	0.004*
ppm	0.003	0.003	0.078	0.003*
ppb	2.9	2.9	77.8	2.880*
lb/hr	1.0E-02	1.1E-02	3.4E-01	1.2E-01*
lb/MMbtu	5.4E-06	5.5E-06	1.8E-04	5.44E-06*
lb/year	--	--	--	192*

Notes: * The results from Run 3 have been excluded from the averages because probable contamination and were not likely representative of actual stack conditions. Result averages are only from Runs 1 and 2 only. See Section 4.1, Field Test Deviations and Exceptions for detailed explanation.

Appendix C

Metcalf Energy Center, LLC

1 Blanchard Road
Coyote, CA 95013

August 12, 2025

VIA EMAIL DELIVERY

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

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

RE: Metcalf Energy Center, LLC., Permit No. B2183
Major Facility Review Permit (Title V Permit)
Title V 30-Day Deviation Follow-Up Report
RCA ID: 201789

In accordance with the Major Facility Review Permit (Title V Permit) for the Metcalf Energy Center (the "Facility"), this letter presents the 30-day follow-up report of a permit deviation as required by Section I.F. of the Title V Permit.

The Reportable Compliance Activity (RCA) notification was submitted to the District on July 16, 2025 and a 10-day deviation notification was submitted on July 22, 2025.

On July 13, 2025, the facility experienced a calculated excess of the ammonia (NH_3) concentration emission limit of 5 ppm corrected to 15% O_2, averaged over any rolling 3-hour period, as stated in Condition 20 (e) of the Title V permit on Combustion Turbine #1 (CT-1).

Event Description

While operating under normal conditions on July 13, 2025 at 06:15 DAHS time, the Control Room Operator (CRO) received an alarm on the distributed control system (DCS) that stated, "*Aqueous Ammonia Flow – Leak Detection*" and took action to identify the cause of the alarm. The CRO noted that the DAHS did not indicate any excess emissions. While troubleshooting the situation, the CRO observed that the ammonia flow and stack NO_X were outside of their normal ranges and decided to emergency stop CT-1 at 06:35 DAHS time. The CRO reviewed the DAHS reports and there was no indication of any excess emissions from the event.

As described below, the SCR NO_X analyzer failed, causing the DAHS to invalidate CEMS data. The Facility performed routine data substitution for the SCR NO_X data, using a value of 22.4 ppm, which is within normal operating range. For hour 06:00, the calculated data indicates emissions of 12.8 ppm corrected to 15% O_2 on a rolling 3-hour basis. The permitted limit is 5-ppm corrected to 15% O_2, averaged over any rolling 3-hour period.

Ammonia emission formula and calculations are presented as Attachment A.

Corrective Actions

The combustion turbine was shut down using the emergency shut down process (an "e-stop") at 06:35 (DAHS time).

Compliance Status

The Facility returned to compliance with ammonia slip emissions at 08:00 Pacific Daylight Time and is currently in full compliance with the conditions of Title V air permit.

Investigation and Cause Determination

The Facility determined that the SCR NO_X analyzer sample cooler failed, causing the analyzer to transmit a false raw NO_X value to the DCS.

The DCS is programmed to automatically control ammonia flow based on either the raw NO_X emissions coming from the combustion turbine (as measured by the SCR NO_X analyzer) or the controlled NO_X emissions at the stack (as measured by the CEMS NO_X analyzer) depending on which indication has the highest ammonia demand. Automatic ammonia flow control allows the Facility to effectively and efficiently control stack NO_X emissions based on fluctuating operational conditions.

As shown in Attachment B, at 05:57 (DAHS time), raw NO_X emissions ("SCR NO_X ppm 1-Min") are measured at 23 ppm, which is an expected value while in normal operations. When the SCR NO_X analyzer sample cooler failed, it caused a false indication of increasing raw NO_X (ultimately increasing to 197.9 ppm). In response, the DCS increased ammonia flow ("NH_3 flow 1-MIN lb/hr") to a rate over 500 lbs./hr, even after driving stack NO_X emissions to 0 ("NO_X ppm @ 15% O_2 1-Min").

Preventative Actions

The Facility is currently in the process of updating the PLC for the DAHS, which will give the Facility more opportunity to add additional alarms of analyzer status. The Facility will be adding an alarm to the DAHS that stack NO_X is low alerting the CRO that there could be a potential issue with over-feeding ammonia.

The Facility performs, and will continue to perform, routine maintenance on the SCR NO_X analyzer sample cooler according to the manufacturer's recommendations.

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 me at 408-361-4920 or Rosemary Silva, EHS Program Manager, at 408-361-4954.

Sincerely,

DS
Signed by:
Chr Schneider
BFFA23815E88434...

Initial
CG

Christopher Schneider
Plant Manager
Metcalf Energy Center, LLC

Attachments: Attachment A: Ammonia Slip Formula and Calculations
Attachment B: Process and Emissions Data

Cc: Erin Phillips BAAQMD via email attachment
Anwar Ali CEC AQ-34 via email attachment
EHSWalnutCreek@calpine.com via email attachment
CICS INC104058

Attachment A: Ammonia Emission Formula and Calculations

NH3 Slip – ppmvd for Metcalf

NH3 Slip (ppmvd @15% O2)

$$NH_{3slip} = ((NH_{3Inlet} - (NOx_{in} - NOx_{out}))* ((20.9-15)/(20.9-\%O_2)))*b$$

$$NH_{3Inlet} = ((NH_{3inj} * a)/Q * F_d * 4.4096x10^{-8})) * ((20.9-\%O_2)/20.9)$$

- NH_{3Inlet} in ppmvd
- Nox_{in} = SCR NOx ppm
- NOxout=Stack NOx in ppm
- $\%O_2$ = Measured O_2%
- NH_{3Inj}=NH3 Flow Rate in lb/hr
- Q = Heat Input in mmBtu/hr
- F_d =Fuel Factor 8710 scf/mmBtu
- a = NH_3 Concentration %/wt%
- b = Source Testing correction factor

Reference: Provided by Calpine for Metcalf
Units: ppmvd

CeDAR 1-Hour Data

Data for 7/13/2025 12 AM thru 7/13/2025 23 PM

PROPRIETARY AND CONFIDENTIAL

Timestamp	(Turbine-1) Process Code 1-Hr	(Turbine-1) BAAQMD-NOx ppm 1-Hr	(Turbine-1) SCR NOx ppm 1-Hr	ESTIMATED SCR NOx PPM	(Turbine-1) NH3 Slip Correction Factor 1-Hr	(Turbine-1) NH3 ppm @15% O2 1-Hr	(Turbine-1) NH3 Slip ppm @15% O2 3-Hr Rolling	(Turbine-1) 75 O2% 1-Hr	(Turbine-1) 40CFR75-Total Heat Input mmBtu 1-Hr Total	(Turbine-1) Megawatts 1-Hr	(Turbine-1) NH3 Flow 1-Hr lb/hr	RE-CALCULATED NH3 INLET	RE-CALCULATED NH3 SLIP	RE-CALCULATED NH3 SLIP 3-HR ROLLING
7/13/2025 0:00	8	1.9	23.0 <74>	**22.4**	0.35	3.4 <74>	3.4 <74>	14	1897	173	253	32.58	3.6	**3.4**
7/13/2025 1:00	8	1.9	22.8 <74>	**22.4**	0.35	3.4 <74>	3.4 <74>	14	1899	173	252	32.38	3.5	**3.4**
7/13/2025 2:00	8	1.9	22.4 <74>	**22.4**	0.35	3.3 <74>	3.4 <74>	14	1896	173	247	31.85	3.4	**3.5**
7/13/2025 3:00	8	1.9	22.9 <74>	**22.4**	0.35	3.5 <74>	3.4 <74>	14	1886	175	255	32.51	3.6	**3.5**
7/13/2025 4:00	8	1.9	22.4 <74>	**22.4**	0.35	3.5 <74>	3.4 <74>	14	1893	176	252	32.05	3.5	**3.5**
7/13/2025 5:00	8	1.9	20.9 <74>	**22.4**	0.37	3.0 <74>	3.3 <74>	14	1826	166	219	28.92	2.7	**3.2**
7/13/2025 6:00	4	0.0	118.1 <74>	**22.4**	0.43	0.4 <74>	0.00 <74>	14	905	135	411	107.60	31.8	**12.8**
7/13/2025 7:00	13	0.0 <13>	197.9 <13>	-	0.46	0.0 <13>	0.00 <13>	20.9 <13>	0.0 <13>	0.0 <13>	0.0 <13>	-	-	-
7/13/2025 8:00	13	0.0 <13>	112.9 <13>	-	0.46	0.0 <13>	0.00 <13>	20.9 <13>	0.0 <13>	0.0 <13>	0.0 <13>	-	-	-
7/13/2025 9:00	13	10.8 <29>	53.6 <29>	-	0.46	0.0 <29>	0.00 <13>	15.8 <29>	0.0 <13>	0.0 <13>	0.0 <13>	-	-	-
7/13/2025 10:00	3	1.8	22.4	-	0.46	7.9	0.00 <34>	17	373	35	64	-	-	-
7/13/2025 11:00	3	1.9	23.2	-	0.46	2	0.40 <34>	14.5	1302	108	146	-	-	-
7/13/2025 12:00	8	1.9	20.1	-	0.43	2.6	1.1	14.2	1506	133	163	-	-	-
7/13/2025 13:00	8	1.9	22.7	-	0.35	2.5	2.0	13.7	1846	162	218	-	-	-
7/13/2025 14:00	8	2.0	21.7	-	0.35	2.1	2.4	13.6	1886	161	201	-	-	-
7/13/2025 15:00	8	2.1	21.7	-	0.35	2.1	2.2	13.6	1907	164	203	-	-	-
7/13/2025 16:00	8	2.1	21.5	-	0.35	2	2.1	13.6	1910	163	198	-	-	-
7/13/2025 17:00	8	2.1	22.2	-	0.35	2.2	2.1	13.3	1993	167	212	-	-	-
7/13/2025 18:00	8	2.2	22.9	-	0.35	2.3	2.2	13.3	2006	168	221	-	-	-
7/13/2025 19:00	8	2.1	23.2	-	0.35	2.4	2.3	13.3	2016	170	229	-	-	-
7/13/2025 20:00	8	2.1	23.1	-	0.35	2.4	2.4	13.4	2035	172	230	-	-	-
7/13/2025 21:00	8	2.0	22.2	-	0.35	2.2	2.3	13.4	1971	166	212	-	-	-
7/13/2025 22:00	8	2.1	23.2	-	0.35	2.5	2.4	13.6	1932	167	229	-	-	-
7/13/2025 23:00	8	1.9	23.1	-	0.35	2.5	2.4	13.8	1928	171	232	-	-	-

Attachment B: Process and Emissions Data

SCR NO_X reading normal, begins increasing with increasing load

DAHS alarms high NH_3 flow

DCS alarms NH_3 leak

CT1 e-stopped

Timestamp	(Turbine-1) Process Code 1-Min	(Turbine-1) CT Gas Flow klb/hr 1-Min	(Turbine-1) Megawatts 1-Min	(Turbine-1) SCR NOx ppm 1-Min	(Turbine-1) NH3 Flow 1-Min lb/hr	(Turbine-1) NOx ppm @15% O2 1-Min	(Turbine-1) NH3 Slip ppm 1-Min
7/13/2025 5:57	8	62.1	124.6	23.0 <74>	173.86	1.43	3.19 <74>
7/13/2025 5:58	8	64.1	127.8	23.9 <74>	179.86	1.42	3.02 <74>
7/13/2025 5:59	8	66.2	133.3	25.1 <74>	192.96	1.41	2.88 <74>
7/13/2025 6:00	8	68.4	139.7	27.3 <74>	213.66	1.4	2.72 <74>
7/13/2025 6:01	8	70.7	145.6	28.0 <74>	226.88	1.34	2.08 <74>
7/13/2025 6:02	8	73.1	151.7	29.3 <74>	244.71	1.31	2.11 <74>
7/13/2025 6:03	8	75.4	157.2	30.8 <74>	261.15	1.27	2.04 <74>
7/13/2025 6:04	8	77.5	162.8	33.1 <74>	278.14	1.19	1.80 <74>
7/13/2025 6:05	8	79.5	168.1	36.5 <74>	305.08	1.07	1.59 <74>
7/13/2025 6:06	8	81.5	172.6	39.7 <74>	332.01	0.97	1.34 <74>
7/13/2025 6:07	8	82.6	175.7	43.8 <74>	360.47	0.83	0.88 <74>
7/13/2025 6:08	8	82.5	175.1	47.8 <74>	387.2	0.79	0.89 <74>
7/13/2025 6:09	8	82	174.2	51.8 <74>	413.57	0.66	0.64 <74>
7/13/2025 6:10	8	79.9	168.8	55.8 <74>	433.68	0.52	0.35 <74>
7/13/2025 6:11	8	77.3	162.7	57.5 <74>	433.51	0.35	0.00 <74>
7/13/2025 6:12	8	75.2	157	62.5 <74>	456.91	0.28	0.00 <74>
7/13/2025 6:13	8	72.8	151	65.9 <74>	472.4	0.2	0.12 <74>
7/13/2025 6:14	8	70.5	145	68.6 <74>	482	0.12	0.22 <74>
7/13/2025 6:15	8	68.2	139.1	70.4 <74>	478.49	0.08	0.58 <74>
7/13/2025 6:16	8	66	133	90.3 <74>	526	0.04	0.00 <74>
7/13/2025 6:17	8	63.8	126.7	102.9 <74>	542.53	0.01	0.00 <74>
7/13/2025 6:18	8	62.1	122	120.5 <74>	547.75	0	0.00 <74>
7/13/2025 6:19	8	60.6	117.4	142.5 <74>	549.4	0	0.00 <74>
7/13/2025 6:20	8	59.5	114.7	164.9 <74>	549.4	0	0.00 <74>
7/13/2025 6:21	8	58.8	112.7	191.3 <74>	548.67	0	0.00 <74>
7/13/2025 6:22	8	58.7	112	197.9 <74>	542.46	0	0.00 <74>
7/13/2025 6:23	8	58.7	112	197.9 <74>	533.95	0	0.00 <74>
7/13/2025 6:24	8	58.6	111.9	197.8 <74>	527.12	0	0.00 <74>
7/13/2025 6:25	8	58.6	111.9	197.8 <74>	517.84	0	0.00 <74>
7/13/2025 6:26	8	58.7	112.1	197.9 <74>	509.97	0	0.00 <74>
7/13/2025 6:27	8	58.7	111.8	197.9 <74>	504.34	0	0.00 <74>
7/13/2025 6:28	8	58.7	111.9	197.8 <74>	495.25	0	0.00 <74>
7/13/2025 6:29	8	58.6	111.8	197.8 <74>	487.62	0	0.00 <74>
7/13/2025 6:30	8	58.7	112	197.8 <74>	478.17	0	0.00 <74>
7/13/2025 6:31	8	58.6	112	197.8 <74>	386.53	0	0.00 <74>
7/13/2025 6:32	8	58.5	111.8	197.8 <74>	120.24	0	0.00 <74>
7/13/2025 6:33	8	58.7	111.9	197.8 <74>	112.28	0	0.00 <74>
7/13/2025 6:34	8	58.7	112	197.8 <74>	111.03	0.02	0.00 <74>
7/13/2025 6:35	4	11.2 <13>	18.7 <13>	197.8 <13>	59.75 <13>	0.06 <13>	0.00 <13>
7/13/2025 6:36	13	0.1 <13>	0.0 <13>	197.8 <13>	0.00 <13>	0.03 <13>	0.00 <13>