

**VIA EMAIL and FEDEX**

Thursday, July 27, 2023

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

TV Tracking #: 764

1.  RECEIVED IN  
ENFORCEMENT: 07/29/2023

**Re:** Creed Energy Center, LLC  
Semi-Annual Title V Monitoring and Excess Emissions Report  
Facility #B4414  
Reporting Period: January 1, 2023 through June 30, 2023.

To Whom It May Concern:

Enclosed is the Title V CEMS Semi-Annual Monitoring Report for the Creed Energy Center, LLC (CEC) for the reporting period of January 1, 2023 through June 30, 2023.

CEC is currently in compliance with the District CEMS regulations. CEC maintained compliance with the monitoring requirements listed in the Title V permit for CEC during this reporting period.

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

If you have any questions or require additional information, please contact me at (707) 399-4393 or Ehab Aqleem, EHS Specialist, at (707) 399-4395.

Sincerely,

DocuSigned by:  
*Andrew Gundershaug*  
5E549D8EAC8C4C3...

Andrew Gundershaug  
Plant Manager and Responsible Official

- |     |                    |                  |                     |
|-----|--------------------|------------------|---------------------|
| cc: | Sadegh Sadeghipour | Permit Engineer  | BAAQMD              |
|     | Ben Siemens        | Permit Inspector | BAAQMD              |
|     | David Williams     | EHS Manager      | Calpine Corporation |
|     | Chris Cullison     | EHS Manager      | Calpine Corporation |
|     | Jaron Bergin       | EHS Director     | Calpine Corporation |
|     | Jamie Wright       | O&M Manager      | Calpine Corporation |
|     | Jessica Grossman   | Sr. Counsel      | Calpine Corporation |

**Table VII – A**  
**Applicable Limits and Compliance Monitoring Requirements**  
**S-1 – COMBUSTION GAS TURBINE**  
**January 1, 2023 through June 30, 2023**

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type	Compliance	
								Yes	No
NOx	BAAQMD 9-9-301.1.3	N		9 ppmv @ 15% O2, dry	BAAQMD 9-9-501 and BAAQMD condition #20136, part 23c	C	CEM	X	
NOx	BAAQMD 9-9-301.1.3	N		9 ppmv @ 15% O2, dry	BAAQMD condition #20136, part 24a	P/8,000 hrs. or every 3 yrs., whichever comes first	Source test	X	
NOx	BAAQMD 9-9-301.2	N		0.43 lbs/MWhr or 9 ppmv @ 15% O2, dry	BAAQMD 9-9-501 and BAAQMD condition #19684, part 23c	C	CEM	X	
NOx	SIP 9-9-301.3	Y		9 ppmv @ 15% O2, dry	BAAQMD 9-9-501 and BAAQMD condition #19684, part 23c	C	CEM	X	
	SIP 9-9-301.3	Y		9 ppmv @ 15% O2, dry	BAAQMD condition #19684, part 24a	P/8,000 hrs. or every 3 yrs., whichever comes first	Source test	X	
NOx	NSPS, Subpart GG 40 CFR 60.334 (a)(1) and (b)	Y		75 ppmv @ 15% O2, dry	NSPS 40 CFR 60.334 (b)	C	CEM	X	
NOx	None	Y		None	40 CFR 75.10	C	CEM	X	
NOx	BAAQMD condition #20136, part 18.1	Y		2.5 ppmv @ 15% O2, dry, 3-hr rolling average except during turbine startup or shutdown	BAAQMD condition #20136, part 18.1	C	CEM	X	
NOx	BAAQMD condition #20136, part 18.1	Y		2.5 ppmv @ 15% O2, dry, 3-hr average except during turbine startup or shutdown	BAAQMD condition #20136, part 24a	P/8,000 hrs. or every 3 yrs., whichever comes first	Source test	X	
NOx	BAAQMD condition #20136, part 21	Y		121 lb/calendar day (as NO2)	BAAQMD condition #20136, part 23c	C	CEM	X	
NOx	BAAQMD condition #20136, part 21	Y		16.4 tons per calendar year (as NO2)	BAAQMD condition #20136, part 23c	C	CEM	X	

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type	Compliance	
								Yes	No
CO	BAAQMD condition #20136, part 18.3	Y		6 ppmv @ 15% O <sub>2</sub> , dry, 3-hr average except during turbine startup or shutdown	BAAQMD condition #20136, parts 18.3 and 23c	C	CEM	X	
CO	BAAQMD condition #20136, part 18.3	Y		6 ppmv @ 15% O <sub>2</sub> , dry, 3-hr average except during turbine startup or shutdown	BAAQMD condition #20136, part 24c	P/8,000 hrs. or every 3 yrs., whichever comes first	Source test	X	
CO	BAAQMD condition #20136, part 21	Y		163 lb/calendar day	BAAQMD condition #20136, part 23c	C	CEM	X	
CO	BAAQMD condition #20136, part 21	Y		29.1 tons per calendar year	BAAQMD condition #20136, part 23c	C	CEM	X	
CO <sub>2</sub>		Y		None	40 CFR 75.10	C	CEM (CO <sub>2</sub> ) or CEM (O <sub>2</sub> ) or fuel flow monitor	X	
SO <sub>2</sub>	BAAQMD 9-1-301	N		GLC <sub>1</sub> of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours		N		X	
SO <sub>2</sub>	BAAQMD 9-1-302	N		300 ppm (dry)	BAAQMD condition #20136, part 23e	N		X	
SO <sub>2</sub>	SIP 9-1-301	Y		GLC <sub>1</sub> of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours		N		X	
SO <sub>2</sub>	SIP 9-1-302	Y		300 ppm (dry)	BAAQMD condition #20136, part 23e	N		X	
SO <sub>2</sub>	NSPS 40 CFR Subpart GG 60.333(a)	Y		0.015% (vol.) @15% O <sub>2</sub> (dry)	NSPS 40 CFR 60.334(h)(3)	N	None	X	
SO <sub>2</sub>	None	Y		None	40 CFR 75.11(d)(2), 40 CFR 75, Appendix D, part 2.3		Fuel measurements, calculations	X	
SO <sub>2</sub>	BAAQMD condition #20136, part 18.6	Y		1.39 lb/ hr excluding startup and shutdown of turbines	BAAQMD condition #20136, part 23e	P/Q	Total sulfur analysis	X	
SO <sub>2</sub>	BAAQMD condition #20136, part 18.6	Y		1.39 lb/ hr excluding startup and shutdown of turbines	BAAQMD condition #20136, part 24f	P/8,000 hrs. or every 3 yrs., whichever comes first	Source test	X	

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type	Compliance	
								Yes	No
SO <sub>2</sub>	BAAQMD condition #20136, part 21	Y		33 lb/calendar day	BAAQMD condition #20136, part 23e	P/Q	Total sulfur analysis	X	
SO <sub>2</sub>	BAAQMD condition #20136, part 21	Y		6.0 tons/calendar year	BAAQMD condition #20136, part 23e	P/Q	Total sulfur analysis	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	
Opacity	BAAQMD condition #20136, part 17	Y		> Ringelmann No. 1 for no more than 3 minutes in any hour or equivalent 20% opacity		N		X	
Filterable	BAAQMD 6-1-310	Y		0.15 grain/dscf		N		X	
Particulate								X	
FP	SIP 6-310	Y		0.15 grain/dscf		N		X	
PM <sub>10</sub>	BAAQMD condition #20136, part 18.5	Y		3.0 lb/ hr for S-1	BAAQMD condition #20136, part 24e	P/8,000 hrs. or every 3 yrs., whichever comes first	Source test	X	
PM <sub>10</sub>	BAAQMD condition #20136, part 21	Y		72 lb/calendar day	BAAQMD condition #20136, part 24e	P/8,000 hrs. or every 3 yrs., whichever comes first	Source Test	X	
PM <sub>10</sub>	BAAQMD condition #20136, part 21	Y		13.1 tons/calendar year	BAAQMD condition #20136, part 24e	P/8,000 hrs. or every 3 yrs., whichever comes first	Source Test	X	
POC	BAAQMD condition #20136, part 18.4	Y		2 ppmv @ 15% O <sub>2</sub> , dry, except during turbine startup or shutdown	BAAQMD condition #20136, part 24d	P/8,000 hrs. or every 3 yrs., whichever comes first	Source test	X	
POC	BAAQMD condition #20136, part 21	Y		30.0 lb/calendar day	BAAQMD condition #20136, part 24d	P/8,000 hrs. or every 3 yrs., whichever comes first	Source test	X	
POC	BAAQMD condition #20136, part 21	Y		4.9 ton/calendar year	BAAQMD condition #20136, part 24d	P/8,000 hrs. or every 3 yrs., whichever comes first	Source test	X	

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type	Compliance	
								Yes	No
NH <sub>3</sub>	BAAQMD condition #20136, Part 18.2	N		10 ppmv @ 15% O <sub>2</sub> , dry, except during turbine startup or shutdown	BAAQMD condition #20136, parts 18.2 and 23b	P	District approved ammonia slip calculation and correction factor determined by source test	X	
NH <sub>3</sub>	BAAQMD condition #20136, Part 18.2	N		10 ppmv @ 15% O <sub>2</sub> , dry, except during turbine startup or shutdown	BAAQMD condition #20136, part 24b	P/8,000 hrs. or every 3 yrs., whichever comes first	Source test	X	
Heat input limit	BAAQMD condition #20136, part 22	Y		500 MM BTU/ hr (HHV), 3-hr average	BAAQMD condition #20136, part 23d	C	Fuel meter	X	
Heat input limit	BAAQMD condition #20136, part 22	Y		500 MM BTU/ hr (HHV), 3-hr average	BAAQMD condition #20136, part 23d	P/M	Fuel composition analysis	X	
Heat input limit	BAAQMD condition #20136, part 22	Y		500 MM BTU/ hr (HHV), 3-hr average	BAAQMD condition #20136, part 24g	P/8,000 hrs. or every 3 yrs., whichever comes first	Source test	X	
Heat input limit	BAAQMD condition #20136, part 22(a)(i)	Y		12,000 MM BTU/day (HHV)	BAAQMD condition #20136, part 23d	C	fuel meter, calculations	X	
Heat input limit	BAAQMD condition #20136, part 22(a)(ii)	Y		12,000 MM BTU/day (HHV)	BAAQMD condition #20136, part 31g	P/Q	Fuel composition analysis	X	
Heat input limit	BAAQMD condition #20136, part 22(a)(iii)	Y		4,380,000 MM BTU/yr	BAAQMD condition #20136, part 23d	C	fuel meter, calculations	X	
Heat input limit	BAAQMD condition #20136, part 22	Y		4,380,000 MM BTU/yr	BAAQMD condition #20136, part 31g	P/Q	Fuel composition analysis	X	
MW	N/A			None	BAAQMD condition #20136, part 24h	P/8,000 hrs. or every 3 yrs., whichever comes first	Source test	X	
Exhaust Gas Temp.	N/A			None	BAAQMD condition #20136, part 24j	P/8,000 hrs. or every 3 yrs., whichever comes first	Source test	X	
Stack gas flow	N/A			None	BAAQMD condition #20136, part 24i	P/8,000 hrs. or every 3 yrs., whichever comes first	Source test	X	

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type	Compliance	
								Yes	No
NH3 injection rate	N/A			None	BAAQMD condition #20136, part 24k	P/8,000 hrs. or every 3 yrs., whichever comes first	Source test	X	
Start-up Period	BAAQMD condition #20136, part 19			60 minutes per start-up	BAAQMD condition # 20136, part 31(b)	P/E	Records	X	
Shut- down Period	BAAQMD condition #20136, part 20			30 minutes per shutdown	BAAQMD condition # 20136, part 31(b)	P/E	Records	X	
Fuel Sulfur Content	40 CFR 60.333(b)	Y		0.8 percent by weight (8000 ppmw) sulfur	440 CFR 60.334(h)(3)	N		X	

**Table VII - B**  
**Applicable Limits and Compliance Monitoring Requirements**  
**S-2 – DIESEL FIREWATER PUMP**

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type	Compliance	
								Yes	No
SO <sub>2</sub>	BAAQMD 9-1-301	N		GLC <sub>1</sub> of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours		N		X	
SO <sub>2</sub>	BAAQMD 9-1-304	N		Sulfur content of fuel <0.5% by weight		N		X	
SO <sub>2</sub>	SIP 9-1-301	Y		GLC <sub>1</sub> of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours		N		X	
SO <sub>2</sub>	SIP 9-1-304	Y		Sulfur content of fuel <0.5% by weight		N		X	
Opacity	SIP Regulation 6-302	Y		< Ringelmann No 2 for more than 3 min/hr		N		X	
Opacity	BAAQMD Regulation 6-1-302	N		< Ringelmann No. 2 for more than 3 min/hr		N		X	
FP	SIP 6-310	Y		0.15 grain/dscf		N		X	
FP	BAAQMD 6-1-310	N		0.15 grain/dscf		N		X	
Hours of operation	BAAQMD 9-8-330.1 BAAQMD Condition# 22850 Part 1	Y		Emergency use for an unlimited number of hours	BAAQMD 9-8-530 BAAQMD Condition #22850 Part 3	C P/E	Hour meter, recordkeeping	X	
Hours of operation	BAAQMD 9-8-330.2 BAAQMD Condition #22850 Part 1	Y		Reliability-related activities not to exceed 50 hours in any consecutive 12-month period	BAAQMD 9-8-530 BAAQMD Condition #22850 Part 3	C P/E	Hour meter, recordkeeping	X	

**Table VII - C**  
**Applicable Limits and Compliance Monitoring Requirements**  
**S-3 – COOLING TOWER**

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

**Certificate Of Completion**

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Andrew Gundershaug  
 andrew.gundershaug@calpine.com  
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In Person Signer Events	Signature	Timestamp
Editor Delivery Events	Status	Timestamp
Agent Delivery Events	Status	Timestamp
Intermediary Delivery Events	Status	Timestamp
Certified Delivery Events	Status	Timestamp
Carbon Copy Events	Status	Timestamp
Witness Events	Signature	Timestamp
Notary Events	Signature	Timestamp
Envelope Summary Events	Status	Timestamps
Envelope Sent	Hashed/Encrypted	7/27/2023 7:01:36 PM
Certified Delivered	Security Checked	7/28/2023 10:08:30 AM
Signing Complete	Security Checked	7/28/2023 10:09:46 AM
Completed	Security Checked	7/28/2023 10:09:46 AM

Payment Events	Status	Timestamps
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**Electronic Record and Signature Disclosure**