

Creed Energy Center, LLC

6150 Creed Road
Suisun City, CA 94585

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% O ₂ , 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% O ₂ , 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% O ₂ , dry	BAAQMD 9-9-501 and BAAQMD condition #19684, part 23c	C	CEM	X	
NOx	SIP 9-9-301.3	Y		9 ppmv @ 15% O ₂ , dry	BAAQMD 9-9-501 and BAAQMD condition #19684, part 23c	C	CEM	X	
	SIP 9-9-301.3	Y		9 ppmv @ 15% O ₂ , 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% O ₂ , 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% O ₂ , 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% O ₂ , 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 NO ₂)	BAAQMD condition #20136, part 23c	C	CEM	X	
NOx	BAAQMD condition #20136, part 21	Y		16.4 tons per calendar year (as NO ₂)	BAAQMD condition #20136, part 23c	C	CEM	X	

Facility Name: Creed Energy Center
Permit for Facility #: B4414

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 ₂ , 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 ₂ , 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 ₂		Y		None	40 CFR 75.10	C	CEM (CO ₂) or CEM (O ₂) or fuel flow monitor	X	
SO ₂	BAAQMD 9-1-301	N		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	N		300 ppm (dry)	BAAQMD condition #20136, part 23e	N		X	
SO ₂	SIP 9-1-301	Y		GLC ₁ of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours		N		X	
SO ₂	SIP 9-1-302	Y		300 ppm (dry)	BAAQMD condition #20136, part 23e	N		X	
SO ₂	NSPS 40 CFR Subpart GG 60.333(a)	Y		0.015% (vol.) @ 15% O ₂ (dry)	NSPS 40 CFR 60.334(h)(3)	N	None	X	
SO ₂	None	Y		None	40 CFR 75.11(d)(2), 40 CFR 75, Appendix D, part 2.3		Fuel measurements, calculations	X	
SO ₂	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 ₂	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	

Facility Name: Creed Energy Center
Permit for Facility #: B4414

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 ₂	BAAQMD condition #20136, part 21	Y		33 lb/calendar day	BAAQMD condition #20136, part 23e	P/Q	Total sulfur analysis	X	
SO ₂	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 ₁₀	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 ₁₀	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 ₁₀	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 ₂ , 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	

Facility Name: Creed Energy Center
Permit for Facility #: B4414

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 ₃	BAAQMD condition #20136, Part 18.2	N		10 ppmv @ 15% O ₂ , 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 ₃	BAAQMD condition #20136, Part 18.2	N		10 ppmv @ 15% O ₂ , 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 ₂	BAAQMD 9-1-301	N		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 9-1-304	N		Sulfur content of fuel <0.5% by weight		N		X	
SO ₂	SIP 9-1-301	Y		GLC ₁ of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours		N		X	
SO ₂	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

Envelope Id: 10C16D42675C4702B72398131FE08334

Status: Completed

Subject: DOCUSIGN REQUESTED: BAAQMD Semi-Annual Title V Monitoring Report for CD, LA, RP, WS- 1H 2023

Source Envelope:

Document Pages: 32

Signatures: 4

Envelope Originator:

Certificate Pages: 4

Initials: 28

Ehab Aqleem

AutoNav: Enabled

717 Texas Ave.

Envelope Stamping: Disabled

Houston, TX 77002

Time Zone: (UTC-06:00) Central Time (US & Canada)

Ehab.Aqleem@calpine.com

IP Address: 12.248.171.66

Record Tracking

Status: Original

Holder: Ehab Aqleem

Location: DocuSign

7/26/2023 7:24:38 PM

Ehab.Aqleem@calpine.com

Signer Events**Signature****Timestamp**

Andrew Gundershaug

andrew.gundershaug@calpine.com

Security Level: Email, Account Authentication
(None)

DocuSigned by:



5E549D8EAC8C4C3...

Sent: 7/27/2023 7:01:36 PM

Viewed: 7/28/2023 10:08:30 AM

Signed: 7/28/2023 10:09:46 AM

Signature Adoption: Pre-selected Style

Using IP Address: 12.251.190.26

Electronic Record and Signature Disclosure:

Accepted: 7/28/2023 10:08:30 AM

ID: 8883bd16-60c2-43c5-a388-8bd5d73d522e

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****Electronic Record and Signature Disclosure**