

Applicable Emission Limits & Compliance Monitoring Requirements

This section has been included only to summarize the applicable emission limits contained in Section IV, Source-Specific Applicable Requirements, of this permit. The following tables show the relationship between each emission limit and the associated compliance monitoring provisions, if any. The monitoring frequency indicates whether periodic (P) or continuous (C) monitoring is required. For periodic monitoring, the frequency of the monitoring has also been shown, using the following codes: annual (A), quarterly (Q), monthly (M), weekly (W), daily (D), or on an event basis (E). No monitoring (N) has been required if the current applicable rule or regulation does not require monitoring, and the operation is unlikely to deviate from the applicable emission limit based upon the nature of the operation.

**Table VII-A
S-1, S-2, S-3, S-4, Boilers**

Type of limit	Emission Limit Citation	FE Y/N	Compliance Status	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Oxides of Nitrogen	BAAQMD 9-7-301.1	Y	Continuous	30 ppmv @3%O ₂ , dry		N	
	BAAQMD 9-7-302.1	Y	Continuous	40 ppmv @3% O ₂ , dry		N	
	BAAQMD 9-7-303	Y	Continuous	Weighted average of 9-7-301.1 and 9-7-302.1	BAAQMD 9-7-501	C	Non-resettable fuel meters
	BAAQMD 9-7-305.1	Y	Continuous	150 ppmv @3% O ₂ , dry		N	
	BAAQMD 9-7-306.1	Y	Continuous	150 ppmv @3% O ₂ , dry		N	
	BAAQMD Permit Condition 2878 part 1f	Y	Continuous	25 ppmv @3% O ₂ , dry, averaged over 3 hours		N	
	PSD permit part IX, C, 2	Y	Continuous	25 ppm @ 3% O ₂ , 3-hr rolling average		N	

Applicable Emission Limits & Compliance Monitoring Requirements

Table VII-A (continued)
S-1, S-2, S-3, S-4, Boilers

Type of limit	Emission Limit Citation	FE Y/N	Compliance Status	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Carbon Monoxide	BAAQMD 9-7-301.2	Y	Continuous	400 ppmv @3%O ₂ , dry		N	
	BAAQMD 9-7-302.2	Y	Continuous	400 ppmv @3%O ₂ , dry		N	
	BAAQMD 9-7-303	Y	Continuous	400 ppmv @3%O ₂ , dry		N	
	BAAQMD 9-7-305.2	Y	Continuous	400 ppmv @3%O ₂ , dry		N	
	BAAQMD 9-7-306.2	Y	Continuous	400 ppmv @3%O ₂ , dry		N	
	BAAQMD Permit Condition 2878 part 1f	Y	Continuous	200 ppmv @3% O ₂ , dry, averaged over 3 hours		N	
Hours of operation	BAAQMD Permit Condition Number 2878 part 1b	Y	Continuous	Maximum of 1000 hrs/years @ 292 MM BTU/hr for all 4 boilers total when the Gas Turbine and Duct Burners are operable but the Gas Turbine is limited in power output due to a power curtailment order	None	P/E	Records
	BAAQMD Permit Condition Number 2878 part 1f	Y	Continuous	1 hr/mo for all 4 boilers total when operating as fuel delivery test units	None	P/E	Records

Applicable Emission Limits & Compliance Monitoring Requirements

Table VII-A (continued)
 S-1, S-2, S-3, S-4, Boilers

Type of limit	Emission Limit Citation	FE Y/N	Compliance Status	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Hours of operation	BAAQMD Permit Condition Number 2878 part 1g	Y	Continuous	Normal operability tests: up to 2 hrs/test, one boiler at a time, each boiler once per rolling 30 day period with natural gas, each boiler twice in rolling 12 months for No. 2 Fuel Oil	None	P/E	Records
	BAAQMD Permit Condition Number 2878 part 1h	Y	Continuous	Operability tests after maintenance: one boiler at a time	None	P/E	Records
SO ₂	BAAQMD 9-1-301	N	Continuous	GLC ¹ of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours		N	
	BAAQMD 9-1-302	Y	Continuous	300 ppm (dry)		N	
Fuel Sulfur Content	BAAQMD 9-1-304	Y	Continuous	Sulfur content of fuel <0.5% by weight	BAAQMD Permit Condition Number 2878 part 18	P/E	Fuel analysis or certification

Applicable Emission Limits & Compliance Monitoring Requirements

Table VII-A (continued)
 S-1, S-2, S-3, S-4, Boilers

Type of limit	Emission Limit Citation	FE Y/N	Compliance Status	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Fuel usage	BAAQMD Permit Condition Number 2878 part 1b	Y	Continuous	Up to 124.3 MM BTU/HR for all 4 boilers total when Duct Burners are not operating due to maintenance or repair	BAAQMD Permit Condition Number 2878 part 11	C	Non-resettable fuel meters, records
	BAAQMD Permit Condition Number 2878 part 1c	Y	Continuous	Up to 146 MM BTU/HR for all 4 boilers total when Duct Burners are not operating due to natural gas curtailment	BAAQMD Permit Condition Number 2878 part 11	C	Non-resettable fuel meters, records
	BAAQMD Permit Condition Number 2878 part 1d	Y	Continuous	Up to 292 mmbtu/hr for all 4 boilers total for up to 1000 hrs/year when the Gas Turbine and Duct Burners are operable but the Gas Turbine is limited in power output due to a power curtailment order	BAAQMD Permit Condition Number 2878 part 11	C	Non-resettable fuel meters, records
	BAAQMD Permit Condition Number 2878 part 1e & 1f	Y	Continuous	1,980,000 therms per rolling 12 months for all 4 boilers total when operating as a peaking unit or fuel delivery test unit	BAAQMD Permit Condition Number 2878 part 11	C	Non-resettable fuel meters, records

Applicable Emission Limits & Compliance Monitoring Requirements

Table VII-A (continued)
S-1, S-2, S-3, S-4, Boilers

Type of limit	Emission Limit Citation	FE Y/N	Compliance Status	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Fuel usage	BAAQMD Permit Condition Number 2878 part 1g	Y	Continuous	Operability tests: up to 30 mmbtu/hr for 2 hrs	BAAQMD Permit Condition Number 2878 part 11	C	Non-resettable fuel meters, records
	BAAQMD Permit Condition Number 2878 part 1h	Y	Continuous	Operability tests: after maintenance, 1 boiler at a time	BAAQMD Permit Condition Number 2878 part 11	C	Non-resettable fuel meters, records
	BAAQMD Permit Condition Number 2878 part 7	Y	Continuous	520 MM cf combined fuel usage for duct burners and boilers (when operating per condition #2878, part 1b) per year	BAAQMD Permit Condition Number 2878 part 11	C	Non-resettable fuel meters, records
	PSD permit part IX, F, 2	Y	Continuous	1,980,000 therms per rolling 12 months for all 4 boilers total	PSD permit part IX, G, 5	C	Non-resettable fuel meters, records
Opacity	BAAQMD 6-301	N	Continuous	> Ringelmann No. 1 for no more than 3 minutes in any one hour		N	
FP	BAAQMD 6-310.3	Y	Continuous	0.15 grain/dscf @ 6% O ₂		N	

¹ Ground Level Concentration

Applicable Emission Limits & Compliance Monitoring Requirements

**Table VII-B
 S-6, Turbine**

Type of limit	Emission Limit Citation	FE Y/N	Compliance Status	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
NO _x	SIP BAAQMD 9-9-301.2	Y	Continuous	Natural Gas <16.9ppmv @ 15% O ₂ dry (limit includes 9-9-401 efficiency adjustment)	BAAQMD 9-9-501; BAAQMD Permit Condition 2878 part 4b	C	CEM
	BAAQMD 9-9-301.2	N	Continuous	Natural Gas NO _x Emissions Rate ≤ 0.43 lb/MWhr @ 15% O ₂ dry, averaged over any consecutive 3 hours	BAAQMD 9-9-501; BAAQMD Permit Condition 2878 part 4b	C	CEM
	BAAQMD Permit Condition 2878 part 3a	Y	Continuous	≤ 42 ppmv @ 15% O ₂ dry, averaged over 3 hours in combined Gas Turbine/Duct Burner exhaust	BAAQMD Permit Condition 2878 part 4	C	CEM
	BAAQMD Permit Condition 2878 part 3b	N	Continuous	≤ 14.6 ppmv @ 15% O ₂ dry, averaged over 3 hours in Gas Turbine exhaust	BAAQMD Permit Condition 2878 part 4b	C	CEM
	BAAQMD Permit Condition 2878 part 3b	N	Continuous	≤ 16.9 ppmv @ 15% O ₂ dry, averaged over 24 hours in Gas Turbine exhaust @ less than 80% baseload	BAAQMD Permit Condition 2878 part 4b	C	CEM

Applicable Emission Limits & Compliance Monitoring Requirements

Table VII-B (continued)
 S-6, Turbine

Type of limit	Emission Limit Citation	FE Y/N	Compliance Status	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
	NSPS Subpart GG 60.332(a)(1)	Y	Continuous	≤108 ppmv @ 15% O ₂ dry	NSPS Subpart GG, 60.334©	C	CEM
NO _x	PSD permit part IX, C	Y	Continuous	42 ppm @ 15% O ₂ combined limits (turbine/duct burner) averaged over 24 hours when burning natural gas	PSD permit part IX, E	C	CEM
Carbon Monoxide	BAAQMD Permit Condition Number 2878 part 5	Y	Continuous	< 150 tons per year from turbine and duct burner combined	BAAQMD Permit Condition Number 2878 part 14	C	CEM
Hours of operation	BAAQMD Permit Condition Number 2878, part 2	Y	Continuous	< 1000 hrs/rolling 12 months of operation @ < 80% baseload	BAAQMD Condition #2878, Part 16	P/E	records
SO ₂	BAAQMD 9-1-301	N	Continuous	GLC1 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	Continuous	300 ppm (dry)		N	
Fuel Sulfur Content	NSPS 40 CFR 60.33(b)	Y	Continuous	Fuel Sulfur content of 0.8 percent by weight	40 CFR 60.33(h)(1)	N	

Facility Name: Cardinal Cogen
 Permit for Facility #A1629
 Expiration Date: 12/20/17
 ID: BFC

Six Month Report
 For Period July 1, 2012 to December 31, 2012

Applicable Emission Limits & Compliance Monitoring Requirements

Table VII-B (continued)
 S-6, Turbine

Type of limit	Emission Limit Citation	FE Y/N	Compliance Status	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Opacity	BAAQMD 6-301	Y	Continuous	> Ringelmann No. 1 for no more than 3 minutes in any one hour		N	
FP	BAAQMD 6-310	Y	Continuous	0.15 grain/dscf		N	
Fuel usage	PSD permit part IX, G, 2	Y	Continuous	3,850 million cf natural gas in any calendar year	PSD permit part IX, G, 4	C	Fuel meter, records

Applicable Emission Limits & Compliance Monitoring Requirements

**Table VII-C
 S-8, Duct Burner**

Type of limit	Emission Limit Citation	FE Y/N	Compliance Status	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
NO _x	40 CFR 60.44b(a)	Y	Continuous	0.2 lb NO ₂ /MMBTU burned	(Exempt from monitoring per 40 CFR 60.48b(h))	N	
	BAAQMD Permit Condition Number 2878 part 3a	Y	Continuous	≤ 42 ppmv @ 15% O ₂ dry, averaged over 3 hours in combined Gas Turbine/Duct Burner exhaust	BAAQMD Permit Condition 2878 part 4	C	CEM
	PSD permit part IX, C,1	Y	Continuous	42 ppm @ 15% O ₂ averaged over 24 hours when burning natural gas	PSD permit part IX, E	C	CEM
Carbon Monoxide	BAAQMD Permit Condition Number 2878 part 5	Y	Continuous	< Or equal to 150 tons per year from turbine and duct burner combined	BAAQMD Permit Condition Number 2878 part 13	C	CEM
Fuel usage	BAAQMD Permit Condition Number 2878 part 7	Y	Continuous	520 MM cf combined fuel usage for duct burners and boilers (when operating per condition #2878, part 1b) per year	PSD permit part IX, G, 4	C	Fuel meter, records
	PSD permit part IX, G, 3	Y	Continuous	520 MM cf natural gas in any calendar year	PSD permit part IX, G, 4	C	Fuel meter, records
Opacity	BAAQMD 6-301	Y	Continuous	> Ringelmann No. 1 for no more than 3 min in any hour		N	

Applicable Emission Limits & Compliance Monitoring Requirements

Table VII-C (continued)
S-8, Duct Burner

Type of limit	Emission Limit Citation	FE Y/N	Compliance Status	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N/)	Monitoring Type
FP	BAAQMD 6-310.3	Y	Continuous	0.15 grain/dscf		N	
SO ₂	BAAQMD 9-1-301	N	Continuous	GLC ¹ of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours		N	
	BAAQMD 9-1-302	Y	Continuous	300 ppm (dry)		N	

¹ Ground Level Concentration

Applicable Emission Limits & Compliance Monitoring Requirements

Table VII-D
S-9, Turbine Starting Engine

Type of limit	Emission Limit Citation	FE Y/N	Compliance Status	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N/M)	Monitoring Type
Opacity	BAAQMD 6-303.1	Y	Continuous	>Ringelmann No. 2 for no more than 3 minutes in any hour.		N	
FP	BAAQMD 6-310	Y	Continuous	0.15 grain/dscf		N	
	BAAQMD 6-310.3	Y	Continuous	0.15 grain/dscf @ 6% O ₂		N	
SO ₂	BAAQMD 9-1-301	Y	Continuous	GLC ¹ of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours		N	
Fuel Sulfur Content	BAAQMD 9-1-304	Y	Continuous	Fuel sulfur content limit of 0.5% by weight	BAAQMD condition #21844 part 5	P	Fuel Certification
Hours of Operation	BAAQMD condition #21844 part 2	Y	Continuous	200 hours per year	BAAQMD condition #21844 part 3	C	Totalizing Counter

Applicable Emission Limits & Compliance Monitoring Requirements

**Table VII-E
 S-10 and S-11 Standby Generator Diesel Engines**

Type of limit	Emission Limit Citation	FE Y/N	Compliance Status	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N/M)	Monitoring Type
Opacity	BAAQMD 6-303.1	Y	Continuous	> Ringelmann No. 2 for no more than 3 minutes in any hour		N	
FP	BAAQMD 6-310	Y	Continuous	0.15 grain/dscf		N	
	BAAQMD 6-310.3	Y	Continuous	0.15 grain/dscf @ 6% O ₂		N	
SO ₂	BAAQMD 9-1-301	Y	Continuous	GLC ¹ of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours		N	
Fuel Sulfur Content	BAAQMD 9-1-304	Y	Continuous	Fuel sulfur content limit of 0.5% by weight	BAAQMD condition #19698 part 5	P	Fuel Certification
Hours of Operation	BAAQMD condition #19698 part 2	Y	Continuous	100 hours per year discretionary operation	BAAQMD condition #19698 part 6	C	Totalizing Counter