

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
NO _x	BAAQMD 9-7-112.2	N	Continuous	30 ppmvd @ 3% O ₂	None	N	None
NO _x	BAAQMD 9-7-113.2	N	Continuous	Non-gaseous fuel: 150 ppmvd @ 3% O ₂	None	N	None
NO _x	SIP 9-7-301.1	Y	Continuous	30 ppmv @ 3%O ₂ , dry	None	N	None
NO _x	SIP 9-7-302.1	Y	Continuous	40 ppmv @ 3% O ₂ , dry	None	N	None
NO _x	SIP 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
NO _x	SIP 9-7-305.1	Y	Continuous	150 ppmv @ 3% O ₂ , dry	None	N	None
NO _x	SIP 9-7-306.1	Y	Continuous	150 ppmv @ 3% O ₂ , dry	None	N	None
NO _x	BAAQMD condition #2878 part 1e & 1f	Y	Continuous	25 ppmv @ 3% O ₂ , dry, averaged over 3 hours	BAAQMD condition #2878 part 10	P/A	Source Test

Facility Name: Cardinal Cogen

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For Period January 1, 2013 to June 30, 2013

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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
NO _x	PSD permit part IX, C, 2	Y	Continuous	25 ppm @ 3% O ₂ , 3-hr rolling average	None	N	None
CO	BAAQMD 9-7-112.2	N	Continuous	400 ppmvd @ 3% O ₂	None	N	None
CO	SIP 9-7-301.2	Y	Continuous	400 ppmv @3%O ₂ , dry	None	N	None
CO	SIP 9-7-302.2	Y	Continuous	400 ppmv @3%O ₂ , dry	None	N	None
CO	SIP 9-7-303	Y	Continuous	400 ppmv @3%O ₂ , dry	None	N	None
CO	SIP 9-7-305.2	Y	Continuous	400 ppmv @3%O ₂ , dry	None	N	None
CO	SIP 9-7-306.2	Y	Continuous	400 ppmv @3%O ₂ , dry	None	N	None
CO	BAAQMD condition #2878 part 1e & 1f	Y	Continuous	200 ppmv @3% O ₂ , dry, averaged over 3 hours	BAAQMD condition #2878 part 10	N	Source Test
Hours of operation	BAAQMD 9-7-113.1	N	Continuous	Natural gas curtailment and testing non-gaseous fuel operation no more than 168 hrs per consecutive 12-mo period plus 48 hrs per consecutive 12-mo period for oil-burn readiness testing and required performance testing	BAAQMD 9-7-503.2 & 9-7-503.3	P/E	Records

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**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 condition #2878 part 1d	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	BAAQMD condition #2878 part 12	P/E	Records
Hours of operation	BAAQMD condition #2878 part 1f	Y	Continuous	1 hr/mo for all 4 boilers total when operating as fuel delivery test units	BAAQMD condition #2878 part 12	P/E	Records
Hours of operation	BAAQMD condition #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	BAAQMD condition #2878 part 12	P/E	Records
Hours of operation	BAAQMD condition #2878 part 1h	Y	Continuous	Operability tests after maintenance: one boiler at a time	BAAQMD condition #2878 part 12	P/E	Records
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	None	N	None
SO ₂	BAAQMD 9-1-302	Y	Continuous	300 ppm (dry)	None	N	None

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 Sulfur Content	BAAQMD 9-1-304; 40 CFR 60.42c(d)	Y	Continuous	Sulfur content of fuel <0.5% by weight	BAAQMD condition #2878 part 18; 40 CFR 60.44c(g) & (h)	P/E	Fuel analysis or certification
Fuel usage	BAAQMD condition #2878 part 1	Y	Continuous	99 MM BTU/hr limit for each boiler	BAAQMD condition #2878 parts 11 & 12	C	Non-resettable fuel meters, records
Fuel usage	BAAQMD condition #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 condition #2878 parts 11 & 12	C	Non-resettable fuel meters, records
Fuel usage	BAAQMD condition #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 condition #2878 parts 11 & 12	C	Non-resettable fuel meters, records
Fuel usage	BAAQMD condition #2878 part 1d	Y	Continuous	Up to 292 MM BTU/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 condition #2878 parts 11 & 12	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 condition #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 condition #2878 parts 11 & 12	C	Non-resettable fuel meters, records
Fuel usage	BAAQMD condition #2878 part 1g	Y	Continuous	Operability tests: up to 30 MM BTU/hr for 2 hrs	BAAQMD condition #2878 parts 11 & 12	C	Non-resettable fuel meters, records
Fuel usage	BAAQMD condition #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 condition #2878 parts 11 & 12	C	Non-resettable fuel meters, records
Fuel usage	BAAQMD condition #25233 parts 1, 2, 3 & 4; BAAQMD 9-7-112.2	Y	Continuous	867,000 terms per rolling 12 months for each boiler	BAAQMD condition #25233 parts 5 & 6	C	Non-resettable fuel meters, records
Fuel usage	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 6-1-301	N	Continuous	> Ringelmann No. 1 for no more than 3 minutes in any one hour	None	N	None

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
Opacity	SIP 6-301	Y	Continuous	> Ringelmann No. 1 for no more than 3 minutes in any one hour	None	N	None
Opacity	40 CFR 60.43c(c) & (d)	Y	Continuous	< 20% opacity (6-min average) except one 6-min period per hour up to 27% opacity, not including periods of startup, shutdown, and malfunction	40 CFR 60.45c(a)	P/when requested	Source Test, Visual Inspection by Certified Observer
FP	BAAQMD 6-1-310.3	N	Continuous	0.15 grain/dscf @ 6% O ₂	None	N	None
FP	SIP 6-310.3	Y	Continuous	0.15 grain/dscf @ 6% O ₂	None	N	None

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	BAAQMD 9-9-301.2	N	Continuous	0.43 lb/MWhr or 9 ppmv @ 15% O ₂ , dry	BAAQMD 9-9-501; BAAQMD condition #2878 part 4b	C	CEM
NO _x	SIP 9-9-301.2	Y	Continuous	Natural Gas ≤ 16.9 ppmv @ 15% O ₂ dry (limit includes 9-9-401 efficiency adjustment)	SIP 9-9-501	C	CEM
NO _x	BAAQMD condition #2878 part 3a	Y	Continuous	≤ 42 ppmv @ 15% O ₂ , dry, averaged over 3 hours in combined Gas Turbine/Duct Burner exhaust	BAAQMD condition #2878 part 4a	C	CEM
NO _x	BAAQMD condition #2878 part 3b	N	Continuous	≤ 14.6 ppmv @ 15% O ₂ , dry, averaged over 3 hours in Gas Turbine exhaust	BAAQMD condition #2878 part 4b	C	CEM
NO _x	BAAQMD condition #2878 part 3b	N	Continuous	≤ 16.9 ppmv @ 15% O ₂ dry, averaged over any 24 hours in Gas Turbine exhaust @ less than 80% baseload	BAAQMD 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
NO _x	NSPS Subpart GG 60.332(a) (1)	Y	Continuous	≤108 ppmv @ 15% O ₂ dry	NSPS Subpart GG, 60.334(c)	C	CEM
NO _x	PSD permit part IX, C.1	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.1.a	C	CEM
CO	BAAQMD condition #2878 part 5	Y	Continuous	< 150 tons per year from turbine and duct burner combined	BAAQMD condition #2878 part 14	C	CEM
Hours of operation	BAAQMD condition #2878, part 2b	Y	Continuous	< 1000 hrs/rolling 12 months of operation @ < 80% baseload	BAAQMD Condition #2878, Part 16a	P/E	Records
SO ₂	BAAQMD 9-1-301	Y	Continuous	GLC1 of 0.5 ppm for 3 min or 0.25 ppm for 60 min or 0.05 ppm for 24 hours	None	N	None
SO ₂	BAAQMD 9-1-302	Y	Continuous	300 ppm (dry)	None	N	None
Fuel Sulfur Content	NSPS 40 CFR 60.333(b)	Y	Continuous	Fuel sulfur content of 0.8 percent by weight	40 CFR 60.334(h)(1)	N	None
Opacity	BAAQMD 6-1-301	N	Continuous	> Ringelmann No. 1 for no more than 3 minutes in any one hour	None	N	None

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	SIP 6-301	Y	Continuous	> Ringelmann No. 1 for no more than 3 minutes in any one hour	None	N	None
FP	BAAQMD 6-1-310	N	Continuous	0.15 grain/dscf	None	N	None
FP	SIP 6-310	Y	Continuous	0.15 grain/dscf	None	N	None
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

Facility Name: Cardinal Cogen

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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)(4) (i)	Y	Continuous	0.2 lb NO ₂ /MMBTU burned	None (Exempt from CEM monitoring per 40 CFR 60.48b(h))	N	None
NO _x	BAAQMD condition #2878 part 3a	Y	Continuous	≤ 42 ppmv @ 15% O ₂ dry, averaged over 3 hours in combined Gas Turbine/Duct Burner exhaust	BAAQMD condition #2878 part 4a	C	CEM
NO _x	PSD permit part IX, C.1	Y	Continuous	42 ppm @ 15% O ₂ averaged over rolling 24 hours when burning natural gas	PSD permit part IX, E.1.a	C	CEM
NO _x	BAAQMD 9-9-301.2	N	Continuous	0.43 lb/MWhr	BAAQMD 9-9-501	C	CEM
CO	BAAQMD condition #2878 part 5	Y	Continuous	< or equal to 150 tons per year from turbine and duct burner combined	BAAQMD condition #2878 part 14	C	CEM
Fuel usage	BAAQMD condition #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 condition #2878 part 16	C	Fuel meter, records
Fuel usage	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

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
Opacity	BAAQMD 6-1-301	N	Continuous	> Ringelmann No. 1 for no more than 3 min in any hour	None	N	None
Opacity	SIP 6-301	Y	Continuous	> Ringelmann No. 1 for no more than 3 min in any hour	None	N	None
FP	BAAQMD 6-1-310.3	N	Continuous	0.15 grain/dscf @ 6% O ₂	None	N	None
FP	SIP 6-310.3	Y	Continuous	0.15 grain/dscf @ 6% O ₂	None	N	None
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	None	N	None
SO ₂	BAAQMD 9-1-302	Y	Continuous	300 ppm (dry)	None	N	None

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 6-1-303.1	N	Continuous	>Ringelmann No. 2 for no more than 3 minutes in any hour.	None	N	None
Opacity	SIP 6-303.1	Y	Continuous	>Ringelmann No. 2 for no more than 3 minutes in any hour.	None	N	None
Visible Particles	BAAQMD 6-1-305	N	Continuous	Prohibition of nuisance	None	N	None
Visible Particles	SIP 6-305	Y	Continuous	Prohibition of nuisance	None	N	None
FP	BAAQMD 6-1-310	N	Continuous	0.15 grain/dscf	None	N	None
FP	SIP 6-310	Y	Continuous	0.15 grain/dscf	None	N	None
FP	BAAQMD 6-1-310.3	N	Continuous	0.15 grain/dscf @ 6% O ₂	None	N	None
FP	SIP 6-310.3	Y	Continuous	0.15 grain/dscf @ 6% O ₂	None	N	None
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	None	N	None
SO ₂	BAAQMD 9-1-304; BAAQMD condition #21844 part 4	Y	Continuous	Fuel sulfur content limit of 0.5% by weight	BAAQMD condition #21844 part 5	P	Fuel Certification

¹ Ground Level Concentration

Applicable Emission Limits & Compliance Monitoring Requirements

Table VII-D (continued)
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
Hours of Operation	BAAQMD condition #21844 part 2	Y	Continuous	100 hours per year	BAAQMD condition #21844 part 3	C	Totalizing Counter
Hours of Operation	BAAQMD condition #25295 part 1	Y	Continuous	55 hours per year operation	BAAQMD condition #25295 part 5	C	Totalizing Counter, Records
Operation and Maintenance	40 CFR 63 Subpart ZZZZ Table 6 Part 9	Y	Continuous	Operation and Maintenance according to manufacturer's instructions	40 CFR 63.6655(d)	C	Records
Maintenance Requirements	40 CFR 63 Subpart ZZZZ Table 2d	Y	Continuous	Oil and filter change; air filter inspection; hose and belt inspection	40 CFR 63.6655(e)(3)	P	Records

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 6-1-303.1	N	Continuous	> Ringelmann No. 2 for no more than 3 minutes in any hour	None	N	None
Opacity	SIP 6-303.1	Y	Continuous	> Ringelmann No. 2 for no more than 3 minutes in any hour	None	N	None
Visible Particles	BAAQMD 6-1-305	N	Continuous	Prohibition of nuisance	None	N	None
Visible Particles	SIP 6-305	Y	Continuous	Prohibition of nuisance	None	N	None
FP	BAAQMD 6-1-310	N	Continuous	0.15 grain/dscf	None	N	None
FP	SIP 6-310	Y	Continuous	0.15 grain/dscf	None	N	None
FP	BAAQMD 6-1-310.3	N	Continuous	0.15 grain/dscf @ 6% O ₂	None	N	None
FP	SIP 6-310.3	Y	Continuous	0.15 grain/dscf @ 6% O ₂	None	N	None
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	None	N	None
Fuel Sulfur Content	BAAQMD 9-1-304; BAAQMD condition #19698 part 4	Y	Continuous	Fuel sulfur content limit of 0.5% by weight	BAAQMD condition #19698 part 5	P	Fuel Certification

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**Table VII-E (continued)
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
Hours of Operation	BAAQMD condition #19698 part 2	Y	Continuous	50 hours per year discretionary operation	BAAQMD condition #19698 part 6	C	Totalizing Counter
Hours of Operation S-10	BAAQMD condition #22820 part 1	Y	Continuous	20 hours per year discretionary operation	BAAQMD condition #22820 parts 3 & 4	C	Totalizing Counter; Records
Hours of Operation S-11	BAAQMD condition #22830 part 1	Y	Continuous	30 hours per year discretionary operation	BAAQMD condition #22830 parts 3 & 4	C	Totalizing Counter; Records
Operation and Maintenance	40 CFR 63 Subpart ZZZZ Table 6 Part 9	Y	Continuous	Operation and Maintenance according to manufacturer's instructions	40 CFR 63.6655(d)	C	Records
Maintenance Requirements	40 CFR 63 Subpart ZZZZ Table 2d	Y	Continuous	Oil and filter change; air filter inspection; hose and belt inspection	40 CFR 63.6655(e)(3)	P	Records