

Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 40040 and PSDTX923

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
STACK1	Combustion Turbine Model ABB GT24 Natural Gas Firing Normal, Hold Point 2, and Transient Operation	NO _x	34	--
		CO	254	--
		VOC	17.6	--
		SO ₂	4.2	--
		PM ₁₀	20	--
		NH ₃	25.2	--
	ABB GT24 Natural Gas Firing Steam Injection Mode	NO _x	34	--
		CO	105	--
		VOC	10	--
		SO ₂	5.2	--
		PM ₁₀	24.3	--
		NH ₃	24.7	--
	ABB GT24 Fuel Oil Firing	NO _x	77	--
		CO	310	--
		VOC	18	--
		SO ₂	111	--
		PM ₁₀	112	--
		NH ₃	31.1	--
	ABB GT24 Startup and Shutdown Operation (5)(6)	NO _x	990	--
		CO	2,100	--
		VOC	132	--
	ABB GT24 Maintenance/CT Tuning (5)(6)	CO	3,500	--
STACK2	Combustion Turbine Model ABB GT24 Natural Gas Firing Normal, Hold Point 2, and Transient Operation	NO _x	34	--
		CO	254	--
		VOC	17.6	--
		SO ₂	4.2	--
		PM ₁₀	20	--
		NH ₃	25.2	--
	ABB GT24	NO _x	34	--

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		CO	105	--
		VOC	10	--
		SO ₂	5.2	--
		PM ₁₀	24.3	--
		NH ₃	24.7	--
	ABB GT24	NO _x	77	--
	Fuel Oil Firing	CO	310	--
		VOC	18	--
		SO ₂	111	--
		PM ₁₀	112	--
		NH ₃	31.1	--
	ABB GT24 Startup and Shutdown Operation (5)(6)	NO _x	990	--
		CO	2,100	--
		VOC	132	--
	ABB GT24 Maintenance/CT Tuning (5)(6)	CO	3,500	--
STACK3	Combustion Turbine Model ABB GT24	NO _x	34	--
		CO	254	--
	Natural Gas Firing	VOC	17.6	--
		SO ₂	4.2	--
	Normal, Hold Point 2, and Transient Operation	PM ₁₀	20	--
		NH ₃	25.2	--
STACK3	ABB GT24	NO _x	34	--
		CO	105	--
	Natural Gas Firing	VOC	10	--
		SO ₂	5.2	--
	Steam Injection Mode	PM ₁₀	24.3	--
		NH ₃	24.7	--
		NO _x	77	--
	ABB GT24 Fuel Oil Firing	CO	310	--
		VOC	18	--
		SO ₂	111	--
		PM ₁₀	112	--
		NH ₃	31.1	--
	ABB GT24 Startup and Shutdown Operation (5)(6)	NO _x	990	--
		CO	2,100	--
		VOC	132	--

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	ABB GT24 Maintenance/CT Tuning (5)(6)	CO	3,500	--
STACK4	Combustion Turbine Model ABB GT24	NO _x	34	--
		CO	254	--
		VOC	17.6	--
		SO ₂	4.2	--
		PM ₁₀	20	--
		NH ₃	25.2	--
	ABB GT24 Natural Gas Firing Steam Injection Mode	NO _x	34	--
		CO	105	--
		VOC	10	--
		SO ₂	5.2	--
		PM ₁₀	24.3	--
		NH ₃	24.7	--
STACK4	ABB GT24 Fuel Oil Firing	NO _x	77	--
		CO	310	--
		VOC	18	--
		SO ₂	111	--
		PM ₁₀	112	--
		NH ₃	31.1	--
	ABB GT24 Startup and Shutdown Operation (5)(6)	NO _x	990	--
		CO	2,100	--
		VOC	132	--
	ABB GT24 Maintenance/CT Tuning (5)(6)	CO	3,500	--
STACK1 STACK2 STACK3 STACK4	ABB GT24 Annual Emissions Includes all four CTs combined and all modes of operation.	NO _x	--	611.2
		CO	--	865.9
		VOC	--	132.4
		SO ₂	--	213.2
		PM ₁₀	--	478.4
		NH ₃	--	418.8
FUG	Site Fugitives (7)	VOC	0.29	1.27
		NH ₄ OH	0.15	0.65
Vent No. 1	Lube Oil Reservoir Vapor Extractor	VOC	0.003	0.01
Vent No. 2	Lube Oil Reservoir Vapor Extractor	VOC	0.003	0.01
Vent No. 3	Lube Oil Reservoir Vapor Extractor	VOC	0.003	0.01
Vent No. 4	Lube Oil Reservoir Vapor Extractor	VOC	0.003	0.01
MSS FUG	Inherently Low-Emitting Maintenance Activities (7)	NO _x	<0.01	<0.01

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	CO	0.04	0.01
	VOC	21	1.1
	PM	4.5	0.1
	PM ₁₀	4.5	0.1
	PM _{2.5}	4.5	0.1
	NH ₃	6.6	0.1

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
- (2) Specific point source name. For fugitive sources, use area name or fugitive source name.
- (3) NO_x - total oxides of nitrogen
CO - carbon monoxide
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
SO₂ - sulfur dioxide
PM - total particulate matter, suspended in the atmosphere, including PM₁₀ and PM_{2.5}
PM₁₀ - total particulate matter equal to or less than 10 microns in diameter, including PM_{2.5}
PM_{2.5} - particulate matter equal to or less than 2.5 microns in diameter
NH₃ - ammonia
NH₄OH - ammonium hydroxide
- (4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.
- (5) Hourly emissions shown are the only emissions that are higher than emissions during normal operations. Normal operations emission limits apply to pollutants not shown that are emitted during CT maintenance, startup, and shutdown (MSS).
- (6) For CT MSS, CO emissions may exceed 2,100 lbs/hr no more than 50 hours per year for all turbines combined, but must never exceed 3,500 lbs/hr.
- (7) Emission rate is an estimate and is enforceable through compliance with the applicable special conditions and permit application representations.

Date: May 22, 2013