

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Numbers 42179, PSDTX955M1, and N021M1

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. 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 *	
			lb/hr	TPY
Turbine and Duct Burner (Hourly Limits)				
GTG/HRSG-1	Turbine/HRSG No. 1 (Combustion Turbine with 475 MMBtu/hr Duct Burner) (Normal Operation)	NO _x	32.1	
		CO	346.0	
		PM ₁₀	29.4	
		VOC	26.9	
		SO ₂	31.4	
		NH ₃	28.0	
		H ₂ SO ₄	4.8	
GTG/HRSG 2	Turbine/HRSG No. 2 (Combustion Turbine with 475 MMBtu/hr Duct Burner) [Normal Operation]	NO _x	32.1	
		CO	346.0	
		PM ₁₀	29.4	
		VOC	26.9	
		SO ₂	31.4	
		NH ₃	28.0	
		H ₂ SO ₄	4.8	
GTG/HRSG 3	Turbine/HRSG No. 3 (Combustion Turbine with 475 MMBtu/hr Duct Burner) [Normal Operation]	NO _x	32.1	
		CO	346.0	
		PM ₁₀	29.4	
		VOC	26.9	
		SO ₂	31.4	
		NH ₃	20.0	
		H ₂ SO ₄	4.8	

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY

Auxiliary Boilers (Hourly Limits)

AUXBOIL1-2	Auxiliary Steam Boiler No. 1 or 2 (Rated at 430 MMBtu/hr) (The emission rates shown apply only when one of the units are in operation) [Normal Operation]	NO _x	22.8
		CO	26.2
		PM ₁₀	7.6
		VOC	7.6
		SO ₂	6.23
		H ₂ SO ₄	0.95
AUXBOIL1-2	Auxiliary Steam Boiler Nos. 1 and 2 (The emission rates shown apply only when both units are in operation) [Normal Operations] (4)	NO _x	45.6
		CO	52.4
		PM ₁₀	15.2
		VOC	15.2
		SO ₂	12.5
		H ₂ SO ₄	1.9
AUXBOIL3	Auxiliary Steam Boiler No. 3 (Rated at 430 MMBtu/hr) [Normal Operations]	NO _x	22.8
		CO	26.2
		PM ₁₀	7.6
		VOC	7.6
		SO ₂	6.23
		H ₂ SO ₄	0.95

Turbines, Duct Burners, and Auxiliary Boilers (Combined Annual Limits)

GTG/HRSG1 - 3 and AUXBOIL1 - 3	Turbine/HRSG1 through 3 and Auxiliary Boilers 1 through 3	NO _x **	372.0
		CO**	1377.0
		PM ₁₀ **	263.0
		VOC**	145.1
		SO ₂	31.4
		NH ₃	298.8
		H ₂ SO ₄	4.8

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
Turbines, Duct Burners, and Auxiliary Boilers (Maintenance, Start-up and Shutdown Operations)				
GTG/HRSG 1	Turbine/HRSG No. 1 (Combustion Turbine with 475 MMBtu/hr Duct Burner) (3-Hour Average Limit During Maintenance, Start-up, and Shutdown Operations) (5)	NO _x	1286.2	
		CO	698.0	
		PM ₁₀	29.4	
		VOC	26.9	
		SO ₂	31.4	
		NH ₃	28.0	
		H ₂ SO ₄	4.8	
GTG/HRSG 2	Turbine/HRSG No. 2 (Combustion Turbine with 475 MMBtu/hr Duct Burner) (3-Hour Average Limit During Maintenance, Start-up, and Shutdown Operations) (5)	NO _x	1286.2	
		CO	698.0	
		PM ₁₀	29.4	
		VOC	26.9	
		SO ₂	31.4	
		NH ₃	28.0	
		H ₂ SO ₄	4.8	
GTG/HRSG 3	Turbine/HRSG No. 3 (Combustion Turbine with 475 MMBtu/hr Duct Burner) [3-Hour Average Limit During Maintenance, Start-up, and Shutdown Operations] (5)	NO _x	1286.2	
		CO	698.0	
		PM ₁₀	29.4	
		VOC	26.9	
		SO ₂	31.4	
		NH ₃	20.0	
		H ₂ SO ₄	4.8	
AUXBOIL1-2	Auxiliary Steam Boiler No. 1 or 2 (Rated at 430 MMBtu/hr) [3-Hour Average Limit during Maintenance, Start-up, and Shutdown Operations] (5)	NO _x	93.8	
		CO	26.2	
		PM ₁₀	7.6	
		VOC	7.6	
		SO ₂	6.23	
		H ₂ SO ₄	0.95	

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
AUXBOIL1-2	Auxiliary Steam Boiler No. 1 and 2 [Each Rated at 430 MMBtu/hr (The emission rates shown apply only when both units are operating.) 3-Hour Average Limit during Planned Maintenance, Start and Shutdown Operations] (5)	NO _x	197.6	
		CO	52.4	
		PM ₁₀	15.2	
		VOC	15.2	
		SO ₂	12.46	
		H ₂ SO ₄	1.90	
AUXBOIL3	Auxiliary Steam Boiler No. 3 (Rated at 430 MMBtu/hr) [3-Hour Average Limit during Maintenance, Start-up, and Shutdown Operations] (5)	NO _x	93.8	
		CO	26.2	
		PM ₁₀	7.6	
		VOC	7.6	
		SO ₂	6.23	
		H ₂ SO ₄	0.95	
COOLTWR1	Cooling Tower 1	PM ₁₀	1.22	3.13
LUBEOILFUG	Lubricating Oil System Fugitives (6)	VOC	0.101	0.44
FUELGASFUG	Fuel Gas System (6)	VOC	0.18	0.79
NH3FUG	Ammonia Fugitives (6)	NH ₃	0.011	0.05
OILDEMIST	Oil Mist Eliminator (All turbines)	VOC	0.024	0.12

(1) Emission point identification - either specific equipment designation or emission point number from a plot plan.

(2) Specific point source names. For fugitive sources use area name or fugitive source name.

(3) NO_x - total oxides of nitrogen

CO - carbon monoxide

PM₁₀ - particulate matter (PM) equal to or less than 10 microns in diameter. Where PM is not listed, it shall be assumed that no

PM greater than 10 microns is emitted.

VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1

SO₂ - sulfur dioxide

NH₃ - ammonia

H₂SO₄ - sulfuric acid mist

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(4) The combined emission rates for Auxiliary Boilers 1 and 2 are only applicable when both units are operational.

(5) Planned Maintenance, Start-up, and Shutdown (MSS) emissions do not affect annual limits.

(6) Fugitive emissions are an estimate only

* The maximum lb/hr NO_x emission rate is based upon a rolling three-hour average concentration. The lb/hr NO_x emission rate listed above represents a maximum three-hour average pound per hour emission rate.

** The NO_x, CO, and PM₁₀ emissions regulated under PSD-TX-955 permit authorization.

The NO_x and VOC emissions regulated under N021 permit authorization.

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