

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Nos. 41166 and PSD-TX-939

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 (4)	TPY

Hourly Allowables - Normal Operation

E-ST 1	G-Frame with SCR Technology and Natural Gas-Fired 243.3 million Btu/hour HRSG	NO _x	91.9	
		CO	143.4	
		VOC	12.3	
		PM ₁₀	30.1	
		SO ₂	41.8	
		H ₂ SO ₄	5.1	
		NH ₃	37.8	
E-ST 2	G-Frame with SCR Technology and Natural Gas-Fired 243.3 million Btu/hour HRSG	NO _x	91.9	
		CO		143.4
		VOC	12.3	
		PM ₁₀	30.1	
		SO ₂	41.8	
		H ₂ SO ₄	5.1	
		NH ₃	37.8	

Hourly Allowables - Reduced Load Operation

One of two 254 MW_e CTs at 35 percent to 74 percent Load

E-ST 1, and E-ST 2,	G-Frame with SCR Technology without Natural Gas-Fired 243.3 million Btu/hour HRSG	NO _x	386.9	
		CO	3028.9	
		VOC	333.4	
		PM ₁₀	24.3	
		SO ₂	18.2	
		H ₂ SO ₄	2.2	
		NH ₃	20.5	

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>	
			lb/hr (4)	TPY

Annual Allowables - Normal or Reduced Load Operation (5)Two 254 MW_e CTs -

E-ST 1, and E-ST 2,	G-Frame with SCR Technology and with Natural Gas-Fired 243.3 million Btu/hour HRSG	NO _x	708.7	
		CO	1128.6	
		VOC	103.0	
		PM ₁₀	230.9	
		SO ₂	161.6	
		H ₂ SO ₄	19.8	
		NH ₃	291.5	
E-CTOWERW		PM ₁₀	0.0020	0.0086
E-CTOWERE		PM ₁₀	0.0020	0.0086
E-GEN	310-KW Emergency Generator	NO _x	17.14	0.700
		CO	1.12	0.05
		VOC	0.2	0.008
		PM ₁₀	0.16	0.007
		SO ₂	0.0022	0.0001
E-PUMP	250-Horsepower Emergency Firewater Pump	NO _x	2.4	0.096
		CO	1.053	0.042
		VOC	0.28	0.011
		PM ₁₀	0.14	0.0055
		SO ₂	0.84	0.034
E-TANK7	300-Gallon Diesel Storage Tank	VOC	0.0080	0.0001
E-TANK1	15,000-Gallon Ammonia (30 percent) 0.0273 Storage Tank	NH ₄ OH		0.2937

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr (4)	TPY
E-TANK2	250-Gallon Ammonia (5 percent) Storage Tank	NH ₄ OH	0.0393	0.0025
E-TANK3	3,000-Gallon Sulfuric Acid (93 percent) 0.0001 Storage Tank	H ₂ SO ₄		0.0003
E-TANK4	1,000-Gallon Sodium Hypochlorite 0.0047 (7 - 16 percent) Storage Tank	NaOCl		0.375
E-TANK5	Hydrazine (35 percent) Storage Tank	N ₂ H ₄	0.0089	0.0007
E-TANK6	Hydrazine (35 percent) Storage Tank	N ₂ H ₄	0.0089	0.0007
E-PIPFUG	Piping Fugitive Area	VOC	0.11	0.5
		NH ₃	0.322	1.41

(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) VOC - volatile organic compounds as defined in 30 Texas Administrative Code Section 101.1

NO_x - total oxides of nitrogen

SO₂ - sulfur dioxide

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

CO - carbon monoxide

NH₃ - ammonia

H₂SO₄ - sulfuric acid

NaOCl - sodium hypochlorite

N₂H₄ - solution of up to 35 percent hydrazine in water

NH₄OH - ammonium hydroxide

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- (4) The concentration limits for the gas turbines listed in the permit conditions apply and may be a more stringent requirement than the mass emission rate limits listed in this table.
- (5) These emissions are permitted under PSD.

* Annual emission rates are based on and the facilities are limited by the following maximum operating schedule:

24 Hrs/day 7 Days/week 52 Weeks/year or 8,760 Hrs/year

Dated August 10, 2000