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. Only one of the three options specified (Options 1.A., 1.B. or 1.C.) is authorized by this permit

		AIR CONTAMINANTS DATA		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr (4)	TPY
Option 1.A. Hourly Allowables (5) for each of four 177.9 MW_e CTs - Normal Operation				
EA-ST 1, EA-ST 2, EA-ST 3, and EA-ST 4	F-Frame with DLN Technology and without HRSG duct burner	NO_x	63.1	
		CO	31.2	
		VOC	2.9	
		PM_{10}	21.3	
		SO_2	26.2	
		H_2SO_4	3.2	
EA-ST 1, EA-ST 2, EA-ST 3, and EA-ST 4	F-Frame with DLN Technology and with natural gas-fired 143.5 million Btu/hour HRSG	NO_x	76.2	
		CO	45.7	
		VOC	7.3	
		PM_{10}	22.6	
		SO_2	28.2	
		H_2SO_4	3.5	
Option 1.A. Hourly Allowables for only one of four 177.9 MW_e CTs at a time Reduced Load Operation at 35 to 49 Percent Load				
EA-ST 1, EA-ST 2, EA-ST 3, and EA-ST 4	F-Frame with DLN Technology and without HRSG duct burner	NO_x	237.5	
		CO	175.0	
		VOC	9.9	
		PM_{10}	22.6	
		SO_2	13.8	
		H_2SO_4	1.7	

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AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr (4)	TPY
Option 1.A. Combined Annual Allowables (5) for all four 177.9 MW_e CTs - Normal Operation and Reduced Load Operation				
EA-ST 1, EA-ST 2, EA-ST 3, and EA-ST 4	F-Frame with DLN Technology and with natural gas-fired 143.5 million Btu/hour HRSG	NO_x		1126.4
		CO		612.5
		VOC		89.4
		PM_{10}		353.3
		SO_2		218.7
		H_2SO_4	26.8	
Option 1.B. Hourly Allowables (5) for each of four 173.5 MW_e CTs - Normal Operation				
EB-ST 1, EB-ST 2, EB-ST 3, and EB-ST 4	F-Frame SCR Technology and natural gas-fired 143.5 million Btu/hour HRSG	NO_x	69.7	
		CO	102.5	
		VOC	7.4	
		PM_{10}	22.2	
		SO_2	30.1	
		H_2SO_4	3.7	
		NH_3	28.7	
Option 1.B. Hourly Allowables for only one of four 173.5 MW_e CTs at a time Reduced Load Operation at 35 to 74 Percent Load				
EB-ST 1, EB-ST 2, EB-ST 3, and EB-ST 4	F-Frame with SCR Technology and without natural gas-fired 143.5 million Btu/hour HRSG	NO_x	137.6	
		CO	1683.7	
		VOC	185.3	
		PM_{10}	18.2	
		SO_2	12.3	
		H_2SO_4	1.5	
		NH_3	11.4	

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr (4)	TPY
Option 1.B. Combined Annual Allowables (5) for all four 173.5 MW_e CTs - Normal Operation and Reduced Load Operation				
EB-ST 1, EB-ST 2, EB-ST 3, and EB-ST 4	F-Frame with SCR Technology and with natural gas-fired 143.5 million Btu/hour HRSG	NO_x		1103.5
		CO		1633.6
		VOC		122.9
		PM_{10}		341.0
		SO_2		237.7
		H_2SO_4	29.1	
		NH_3		453.9
Option 1.C. Hourly Allowables (5) for each of two 236.3 MW_e CTs - Normal Operation				
EC-ST 1, and EC-ST 2,	G-Frame with SCR Technology and natural gas-fired 275.8 million Btu/hour HRSG	NO_x	91.9	
		CO	143.4	
		VOC	12.3	
		PM_{10}	30.1	
		SO_2	41.8	
		H_2SO_4	5.1	
		NH_3	37.8	
Option 1.C. Hourly Allowables for only one of two 236.3 MW_e CTs at a time Reduced Load Operation at 35 to 74 percent Load				
EC-ST 1, and EC-ST 2,	G-Frame with SCR Technology without natural gas-fired 275.8 million Btu/hour HRSG	NO_x	386.9	
		CO	3028.9	
		VOC	333.4	
		PM_{10}	24.3	
		SO_2	18.2	
		H_2SO_4	2.2	
		NH_3	20.5	

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr (4)	TPY
Option 1.C. Combined Annual Allowables (5) for two 236.3 MW_e CTs - Normal Operation and Reduced Load Operation				
EC-ST 1, and EC-ST 2,	G-Frame with SCR Technology and with natural gas-fired 275.8 million Btu/hour HRSG	NO_x		708.7
		CO		1128.6
		VOC		103.0
		PM_{10}		230.9
		SO_2		161.6
		H_2SO_4	19.8	
		NH_3		291.5
For each of two Cooling Towers				
E-CTOWERW and E-CTOWERE		PM_{10}	0.0020	0.0086
For each of two 755 Horsepower Emergency Generators				
E-DGENW and E-DGENE		NO_x	17.50	0.700
		CO	2.11	0.085
		VOC	0.33	0.013
		PM_{10}	0.20	0.008
		SO_2	2.55	0.102
Allowables for each of two 182 Horsepower Emergency Firewater Pumps				
E-DPUMBW and E-DPUMPE		NO_x	1.98	0.080
		CO	0.53	0.021
		VOC	0.31	0.012
		PM_{10}	0.10	0.004
		SO_2	0.65	0.026

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr (4)	TPY
For each of two 1,000 gallon Diesel Storage Tanks				
E-TANK6, E and W		VOC	0.0258	0.0005
For each of two 300 gallon Diesel Storage Tanks				
E-TANK7, E and W		VOC	0.0080	0.0001
For each of two 15,000 gallon Ammonia (30 percent) Storage Tanks				
E-TANK1, E and W		NH_4OH	0.2937	0.0273
For each of two 250 gallon Ammonia (5 percent) Storage Tanks				
E-TANK2, E and W		NH_4OH	0.0393	0.0025
For each of two 3,000 gallon Sulfuric Acid (93 percent) Storage Tanks				
E-TANK3, E and W		H_2SO_4	0.0003	0.0001
For each of two 1,000 gallon Sodium Hypochlorite (7-16 percent) Storage Tanks				
E-TANK4, E and W		NaOCl	0.375	0.0047
For each of two Hydrazine (35 percent) Storage Tanks				
E-TANK5, E and W		N_2H_4	0.0089	0.0007
For each of two Heaters and Piping Fugitive Areas				
E-EFUGW and E-EFUGE		NO_x	0.0001	0.0004
		CO	0.0001	0.0004
		VOC	0.0965	0.4221
		PM_{10}	0.0001	0.0001
		SO_2	0.0001	0.0001
	NH_3	0.322	1.41	

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

(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
SO_2 - sulfur dioxide
PM_{10} - 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
NH_3 - ammonia
H_2SO_4 - sulfuric acid
NaOC1 - sodium hypochlorite
N_2H_4 - solution of up to 35 percent hydrazine in water
NH_4OH - ammonium hydroxide
(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_____