

# EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 32881/PSD-TX-875

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

### SIMPLE CYCLE MODE

BYPASS-1	Combustion Turbine	NO <sub>x</sub>	100.6 (325.3)	521.5
	201.7 MW	CO	158.1 (187.5)	703.1
	ABB GT24	SO <sub>2</sub>	28.0 (101.4)	149.1
		VOC	27.2 (96.6)	144.1
		PM <sub>10</sub>	19.7 (61.8)	101.4
	OR			
	Combustion Turbine	NO <sub>x</sub>	104.5 (291.3)	525.0
	187.5 MW	CO	153.1 (228.1)	697.6
	Westinghouse 501FC	SO <sub>2</sub>	29.1 (90.9)	149.7
		VOC	17.0 (20.9)	75.9
	PM <sub>10</sub>	12.7 (60.3)	72.8	
OR				
	Combustion Turbine	NO <sub>x</sub>	57.9 (308.5)	343.8
	172.4 MW	CO	53.2 (95.9)	248.4
	General Electric Frame	SO <sub>2</sub>	26.7 (96.3)	
	142.0			
	7FA	VOC	12.7 (12.9)	55.7
		PM <sub>10</sub>	13.4 (17.5)	60.2
BYPASS-2	Combustion Turbine	NO <sub>x</sub>	100.6 (325.3)	521.5
	201.7 MW	CO	158.1 (187.5)	703.1
	ABB GT24	SO <sub>2</sub>	28.0 (101.4)	149.1

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
		VOC	27.2 (96.6)	144.1
		PM <sub>10</sub>	19.7 (61.8)	101.4
	OR			
	Combustion Turbine	NO <sub>x</sub>	104.5 (291.3)	525.0
	187.5 MW	CO	153.1 (228.1)	697.6
	Westinghouse 501FC	SO <sub>2</sub>	29.1 (90.9)	149.7
		VOC	17.0 (20.9)	75.9
		PM <sub>10</sub>	12.7 (60.3)	72.8
	OR			
	Combustion Turbine	NO <sub>x</sub>	57.9 (308.5)	343.8
	172.4 MW	CO	53.2 (95.9)	248.4
	General Electric Frame	7FA	SO <sub>2</sub> 26.7	(96.3)
	142.0	VOC	12.7 (12.9)	55.7
		PM <sub>10</sub>	13.4 (17.5)	60.2

## COMBINED CYCLE MODE

HRSG-1	Combustion Turbine	NO <sub>x</sub>	133.1 (352.8)	662.1
	201.7 MW	CO	158.1 (187.5)	703.1
	ABB GT24	SO <sub>2</sub>	32.8 (104.7)	169.5
	and	VOC	40.9 (99.7)	200.3
	Heat Recovery Steam	PM <sub>10</sub>	23.8 (65.9)	119.4
	Generator 325.0 MMBtu/hr			
	OR			
	Combustion Turbine	NO <sub>x</sub>	138.0 (324.1)	671.4
	187.5 MW	CO	153.1 (228.1)	697.6
	Westinghouse 501FC	SO <sub>2</sub>	34.2 (95.9)	172.0

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
	and Heat Recovery Steam Generator 325.0 MMBtu/hr	VOC PM <sub>10</sub>	34.3 (39.9) 16.8 (61.5)	152.3 89.7
	OR			
	Combustion Turbine 172.4 MW General Electric Frame 7FA 164.3	NO <sub>x</sub> CO SO <sub>2</sub>	91.4 (342.0) 68.6 (136.1) 31.8 (101.4)	490.5 324.8 (101.4)
	and Heat Recovery Steam Generator 325.0 MMBtu/hr	VOC PM <sub>10</sub>	32.8 (33.0) 17.5 (21.6)	143.7 78.1
HRSG-2	Combustion Turbine 201.7 MW ABB GT24 and Heat Recovery Steam Generator 325.0 MMBtu/hr	NO <sub>x</sub> CO SO <sub>2</sub> VOC PM <sub>10</sub>	133.1 (352.8) 158.1 (187.5) 32.8 (104.7) 40.9 (99.7) 23.8 (65.9)	662.1 703.1 169.5 200.3 119.4
	OR			
	Combustion Turbine 187.5 MW Westinghouse 501FC and Heat Recovery Steam Generator 325.0 MMBtu/hr	NO <sub>x</sub> CO SO <sub>2</sub> VOC PM <sub>10</sub>	138.0 (324.1) 153.1 (228.1) 34.2 (95.9) 34.3 (39.9) 16.8 (61.5)	671.4 697.6 172.0 152.3 89.7
	OR			
	Combustion Turbine	NO <sub>x</sub>	91.4 (342.0)	490.5

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
	172.4 MW General Electric Frame 7FA	CO	68.6 (136.1)	324.8
	164.3 and Heat Recovery Steam Generator 325.0 MMBtu/hr	SO <sub>2</sub>	31.8 (101.4)	
		VOC	32.8 (33.0)	143.7
		PM <sub>10</sub>	17.5 (21.6)	78.1

## OTHER EQUIPMENT

STEAM-1	Emergency Steam Generator 1.31 19.9 MMBtu/hr	NO <sub>x</sub>	5.97	
		CO	0.80	0.18
		SO <sub>2</sub>	1.12	0.25
		THC	0.23	0.05
		PM <sub>10</sub>	0.30	0.07
GEN-1	Emergency Electric Generator 3.45 Diesel-Fired 750 kW	NO <sub>x</sub>	15.75	
		CO	1.88	0.41
		SO <sub>2</sub>	0.40	0.09
		THC	0.41	0.09
		PM <sub>10</sub>	0.34	0.07
GEN-2	Emergency Electric Generator 3.45 Diesel-Fired 750 kW	NO <sub>x</sub>	15.75	
		CO	1.88	0.41
		SO <sub>2</sub>	0.40	0.09
		THC	0.41	0.09
		PM <sub>10</sub>	0.34	0.07
TANK-1	Distillate Fuel Oil Storage Tank 0.25 650,000 gallon capacity	VOC	3.27	

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- (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)  $\text{NO}_x$  - total oxides of nitrogen  
CO - carbon monoxide  
 $\text{SO}_2$  - sulfur dioxide  
VOC - volatile organic compounds as defined in General Rule 101.1  
THC - total hydrocarbons  
 $\text{PM}_{10}$  - particulate matter less than 10 microns. It shall be assumed that no particulate matter greater than 10 microns in diameter is emitted.
- (4) The allowable emission rates for the heat recovery steam generator duct burners (i.e. the HRSG duct burner contribution to total combined-cycle allowables) shall be computed by multiplying the maximum heat input capacity for each unit (325 MMBtu/hr) times the emission factors listed in Special Condition No. 7.

\* 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

Hourly limits in parentheses are only in effect during periods when the turbines are fired with distillate fuel oil. Distillate fuel oil firing is limited to 720 hours per rolling 12-month period.

Dated \_\_\_\_\_