

# EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 17411/PSD-TX-720-M2

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

### CASE I: Gas Firing with HRSG Unfired

E-1**	GE Frame 7 Turbine 90 MWe (Max) with 130 MMBtu/hr HRSG Unfired (4) (5)	VOC	0.9	3.9
		NO <sub>x</sub>	185.0	810.0
		SO <sub>2</sub>	22.6	99.0
		PM	2.5	11.0
		CO	22.0	99.4
E-2**	GE Frame 7 Turbine 90 MWe (Max) with 130 MMBtu/hr HRSG Unfired (4) (5)	VOC	0.9	3.9
		NO <sub>x</sub>	185.0	810.0
		SO <sub>2</sub>	22.6	99.0
		PM	2.5	11.0
		CO	22.0	99.4

### CASE II: Gas Firing with HRSG Firing

E-1	GE Frame 7 Turbine 90 MWe (Max) with 130 MMBtu/hr HRSG Firing (4) (5)	VOC	4.9	7.0
		NO <sub>x</sub>	198.0	384.0
		SO <sub>2</sub>	24.4	47.0
		PM	2.9	5.5
		CO	48.5	80.0
E-2	GE Frame 7 Turbine 90 MWe (Max) with 130 MMBtu/hr HRSG Firing (4) (5)	VOC	4.9	7.0
		NO <sub>x</sub>	198.0	384.0
		SO <sub>2</sub>	24.4	47.0
		PM	2.9	5.5
		CO	48.5	80.0

Permit No. 17411/PSD-TX-720-M2  
Page 2

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

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

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

## AIR CONTAMINANTS DATA

Emission *	Source	Air Contaminant	Emission Rates	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY
CASE III: Jet A Fuel Firing				
E-1**	GE Frame 7 Turbine 90 MWe (Max) with 130 MMBtu/hr HRSG Unfired (4) (5)	VOC	7.0	5.0
		NO <sub>x</sub>	245.0	176.0
		SO <sub>2</sub>	36.7	26.4
		PM	10.0	7.2
		CO	22.0	15.8
E-2**	GE Frame 7 Turbine 90 MWe (Max) with 130 MMBtu/hr HRSG Unfired (4) (5)	VOC	7.0	5.0
		NO <sub>x</sub>	245.0	176.0
		SO <sub>2</sub>	36.7	26.4
		PM	10.0	7.2
		CO	22.0	15.8
CASE IV: Turbines at Reduced Loads (6)				
E-1**	GE Frame 7 Turbine	VOC	14.6	---
		NO <sub>x</sub>	245.0	---
		SO <sub>2</sub>	36.7	---
		PM	10.0	---
		CO	325.0	---
E-2**	GE Frame 7 Turbine	VOC	14.6	---
		NO <sub>x</sub>	245.0	---
		SO <sub>2</sub>	36.7	---
		PM	10.0	---
		CO	325.0	---
Other Equipment				
E-3	Start-up and Emergency Electrical Generator 2,010 hp Diesel-Fired	VOC	1.3	1.0
		NO <sub>x</sub>	54.5	40.0
		SO <sub>2</sub>	0.5	0.4
		PM	0.5	0.4
		CO	10.7	8.0

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

- | Fugitive | Piping Fugitives  | VOC | 0.8   | 3.6 |
|----------|---|-----|---|-----|
| (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 General Rule 101.1                   |     |
|          | NO <sub>x</sub>   | -   | total oxides of nitrogen  |     |
|          | SO <sub>2</sub>   | -   | sulfur dioxide  |     |
|          | PM  | -   | particulate matter, suspended in the atmosphere, including PM <sub>10</sub> . |     |
|          | PM <sub>10</sub>  | -   | particulate matter 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   |     |
| (4)      | Maximum electric output and emissions occur at 10°F ambient temperature.  |     |   |     |
| (5)      | HRSG  | -   | Heat Recovery Steam Generator.  |     |
| (6)      | Reduced loads for the turbines shall be defined as periods of electrical output of less than 45 MW that last not more than six hours. |     |   |     |

\* Emission rates are based on and the facilities are limited by the following maximum operating schedule:

Gas Turbines -	8,760	Hrs/year
HRSGs - 624,000 MMBtu/year for both duct burners combined		
Gas Turbines Firing Jet A Fuel	-	-
1,440 Hrs/year for each turbine		
Diesel-Fired Electrical Generator	-	-
1,440 Hrs/year		

\*\* Emissions may be vented through HRSG bypass stack.

Permit No. 17411/PSD-TX-720-M2  
Page 5

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Dated \_\_\_\_\_