

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Nos. 42774 and PSD-TX-960

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

#### HOURLY STACK EMISSION LIMITS AFTER SCR CATALYST

Case I: Natural Gas Firing - without power augmentation

STACK1 or STACK2	Gas Turbine ABB GT 24		Base Load
		NO <sub>x</sub> (4)	27.2 (29.8)
		CO (4)	16.6 (221.7)
		VOC	2.1 (2.4)
		SO <sub>2</sub>	3.4 (3.7)
		PM <sub>10</sub>	15.9 (17.5)
		NH <sub>3</sub>	14.1 (15.5)

Case II: Natural Gas Firing - with power augmentation using steam injection

STACK1 or STACK2	Gas Turbine ABB GT 24		Base Load
		NO <sub>x</sub> (4)	31.1
		CO (4)	94.9
		VOC	18.0
		SO <sub>2</sub>	3.9
		PM <sub>10</sub>	18.2
		NH <sub>3</sub>	16.1

ANNUAL STACK EMISSION LIMITS AFTER SCR CATALYST - Natural Gas Firing - Base Load for 6,860 hrs and 1,900 hrs of power augmentation with steam injection within ambient temperature range of operations

STACK1	Gas Turbine ABB GT 24	NO <sub>x</sub> (4)	122.8
		CO (4)	227.0**
		VOC	24.3
		SO <sub>2</sub>	15.4
		PM <sub>10</sub> (front half only)	42.0
		PM <sub>10</sub> (front and back half)	

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>	
			<u>lb/hr</u>	<u>TPY</u>
	71.8			
STACK2	Gas Turbine ABB GT 24	NH <sub>3</sub>		63.7
		NO <sub>x</sub> (4)		122.8
		CO (4)		227.0**
		VOC		24.3
		SO <sub>2</sub>		15.4
		PM <sub>10</sub> (front half only)		42.0
		PM <sub>10</sub> (front and back half)		71.8
		NH <sub>3</sub>		63.7
AUXILIARY EQUIPMENT EMISSIONS:				
EMGEN1	Emergency Generator 1	NO <sub>x</sub>	12.4	3.1
		CO	2.7	0.67
		VOC	1.0	0.25
		SO <sub>2</sub>	0.8	0.2
		PM <sub>10</sub>	0.9	0.2
EMGEN2	Emergency Generator 2	NO <sub>x</sub>	12.4	3.1
		CO	2.7	0.67
		VOC	1.0	0.25
		SO <sub>2</sub>	0.8	0.2
		PM <sub>10</sub>	0.9	0.2
LUBEOIL 1	Lube Oil	VOC	<0.001	<0.001
EMTANK1	EMTank	VOC	<0.001	<0.001
EMTANK2	EMTank	VOC	<0.001	<0.001
PARTWASH1	Partwash1	VOC	0.32	0.33
PUMP1	Emergency Fire Water Pump	NO <sub>x</sub>	10.4	2.6
		CO	2.2	0.6
		VOC	0.8	0.2

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			lb/hr	TPY
		SO <sub>2</sub> 0.7	0.2	
		PM <sub>10</sub> 0.7	0.2	
PUMP TANK	Pump Tank	VOC	<0.001	<0.001

- (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<sub>x</sub> - total oxides of nitrogen  
CO - carbon monoxide  
VOC - volatile organic compounds as defined in 30 Texas Administrative Code Section 101.1  
SO<sub>2</sub> - sulfur dioxide  
PM<sub>10</sub> - 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.  
NH<sub>3</sub> - ammonia
- (4) These emissions are permitted under PSD and state.

\* Emission rates are based on and the facilities are limited by the following maximum operating schedule. The allowables listed apply to each of the two gas turbine stacks.

24 Hrs/day 7 Days/week 52 Weeks/year

Emissions listed in parentheses under Case 1 represent the maximum (worst-case) hourly emissions allowed. Maximum hourly emissions of NO<sub>x</sub>, NH<sub>3</sub>, SO<sub>2</sub>, and PM<sub>10</sub> are expected to occur at 100 percent load at 15°F. Maximum hourly emissions of CO and VOC are expected to occur at 50 percent of base load at 15°F. The annual emissions of the pollutants are calculated using the hourly emissions at a base load at 68°F for 6,860 hours per year with 1,900 hrs of power augmentation with steam injection, with the exception of CO.

\*\* Annual CO emission rates calculated based on the hourly CO emission rate of 39.9 lb/hr at 75 percent load for 6,860 hrs and the hourly CO emission rate of 94.9 lb/hr for 1,900 hrs of power augmentation with steam injection.

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

Dated\_\_\_\_\_