

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 19637/PSD-TX-767M2

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. (EPN) (1)		Name (2)	Name	
(3)	lb/hr (4)	TPY (5)		

#### **Case I: Turbine and Duct Burner Firing Simultaneously**

CG-1	18 MW (ISO) Westinghouse Model 191 Gas Turbine with 183 MMBtu/hr Fired Duct Burner	NO <sub>x</sub>	41.4	181
		CO	38.0	166
		VOC	3.7	16
		PM	7.5	24
		SO <sub>2</sub>	4.6	20
CG-2	18 MW (ISO) Westinghouse Model 191 Gas Turbine with 183 MMBtu/hr Fired Duct Burner	NO <sub>x</sub>	41.4	181
		CO	38.0	166
		VOC	3.7	16
		PM	7.5	24
		SO <sub>2</sub>	4.6	20
CG-3	Fugitive VOC (6)	VOC	0.4	2

\* Emission rates are based on and the facilities are limited by a maximum operating schedule of 8,760 hours per year.

#### **Case II: Duct Burner Firing Only**

CG-1	375 MMBtu/hr (HHV) Duct Burner	NO <sub>x</sub>	56.2	38
		CO	37.5	26
		VOC	6.0	4
		PM	12.5	6
		SO <sub>2</sub>	8.8	6

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* EPN (1) (5)	Source	Air Contaminant	Emission Rates	
	Name (2)	Name (3)	lb/hr (4)	TPY

CG-2	375 MMBtu/hr (HHV) Duct Burner	NO <sub>x</sub>	56.2	38
		CO	37.5	26
		VOC	6.0	4
		PM	12.5	6
		SO <sub>2</sub>	8.8	6

Total emissions from the combined operation of both Duct Burners (EPNs CG-1 and CG-2) in stand alone mode are as follows:

Two 375 MMBtu/hr (HHV) Duct Burners	NO <sub>x</sub>	38
	CO	26
	VOC	4
	PM	6
	SO <sub>2</sub>	6

CG-3	Fugitive VOC (6)	VOC	0.4	<1
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\* Emission rates are based on, and limited by, the duct burners in stand alone mode and a maximum operating schedule of 1,344 hours per year for both units combined.

**Case III: Turbine Only Firing**

CG-1	18 MW (ISO) Westinghouse Model 191 Gas Turbine	NO <sub>x</sub>	23.1	101
		CO	23.4	102
		VOC	0.8	4
		PM	1.5	7
		SO <sub>2</sub>	0.2	<1

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* EPN (1) (5)	Source	Air Contaminant	Emission Rates	
	Name (2)	Name (3)	lb/hr (4)	TPY
CG-2	18 MW (ISO) Westinghouse Model 191 Gas Turbine	NO <sub>x</sub>	23.1	101
		CO	23.4	102
		VOC	0.8	4
		PM	1.5	7
		SO <sub>2</sub>	0.2	<1
CG-3	Fugitive VOC (6)	VOC	0.4	2

\* Emission rates are based on, and limited by, the turbines in stand alone mode and a maximum operating schedule of 8,760 hours per year.

Compliance with the annual emission limits and operating schedules is based on a rolling 365 day year rather than the calendar year.

(1) Emission point identification - emission point number from plot plan.

(2) Specific point source name.

ISO - Rated electric output at International Standards Organization standard day conditions of 59°F, 1 atmosphere, and 60 percent relative humidity.

HHV - high heating value  
(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

CO - carbon monoxide

(4) Turbine maximum hourly emissions based on minimum ambient temperature.

(5) Turbine annual emissions based on base load at average annual

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	Source	Air Contaminant	Emission Rates
<u>*</u>			
EPN (1)	Name (2)	Name (3)	lb/hr (4) TPY
(5)			

ambient temperature of 68°F.

- (6) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.

Dated\_\_\_\_\_