

# EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 22038/PSD-TX-815

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)	lb/hr TPY	Emission Rates *
<b>CASE I: TURBINE WITH DUCT BURNER FIRED</b>				
CG1	GE FRAME 7 TURBINE (75 MW) 265 MMBTU/HR DUCT BURNER	NO <sub>x</sub>	89.8	367.0
		CO	85.5	343.8
		SO <sub>2</sub>	7.9	19.5
		PM <sub>10</sub>	12.3	53.9
		VOC	5.2	21.8
		SO <sub>3</sub>	.3	.73
CG2	GE FRAME 7 TURBINE (75 MW) 265 MMBTU/HR DUCT BURNER	NO <sub>x</sub>	89.8	367.0
		CO	85.5	343.8
		SO <sub>2</sub>	7.9	19.5
		PM <sub>10</sub>	12.3	53.9
		VOC	5.2	21.8
		SO <sub>3</sub>	.3	.73
FECG	Fugitives (4)	VOC	.33	1.45
<b>CASE II: TURBINE ONLY - DUCT BURNER UNFIRED</b>				
CG1	GE FRAME 7 TURBINE (75 MW) 265 MMBTU/HR DUCT BURNER	NO <sub>x</sub>	58.0	227.8
		CO	59.0	227.8
		SO <sub>2</sub>	.7	2.8
		PM <sub>10</sub>	7.0	30.7
		VOC	2.0	7.9
		SO <sub>3</sub>	.03	.10
CG2	GE FRAME 7 TURBINE (75 MW) 265 MMBTU/HR DUCT BURNER	NO <sub>x</sub>	58.0	227.8
		CO	59.0	227.8
		SO <sub>2</sub>	.7	2.8
		PM <sub>10</sub>	7.0	30.7
		VOC	2.0	7.9

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	SO <sub>3</sub>	.03
.10		

- (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) PM<sub>10</sub> - particulate matter less than 10 microns  
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  
CO - carbon monoxide  
SO<sub>3</sub> - sulfur trioxide
- (4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
- (5) Maximum hourly emission based on 20°F ambient temperature.
- (6) Annual emissions based on 70°F ambient temperature with duct burners in operation.
- \* SO<sub>2</sub> lb/hr emission rates are based on 100% conversion of .25 grains of hydrogen sulfide (H<sub>2</sub>S) per 100 dry standard cubic feet in the refinery fuel gas to SO<sub>2</sub>. SO<sub>2</sub> tpy emission rates are based on 100% conversion of 10 grains of hydrogen sulfide (H<sub>2</sub>S) per 100 dry standard cubic feet in the refinery fuel gas to SO<sub>2</sub>.
- \*\* Emission rates are based on and the facilities are limited by the following maximum operating schedule:

Hrs/day 24 Days/week 7 Weeks/year 52 or Hrs/year 8,760