

# EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Numbers 20042 and PSD-TX-842

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 **
H-101	Charge Heater (8) (180 MMBtu/hr Heat Input)	CO	6.30	27.60
		H <sub>2</sub> S	0.09	0.07
		NO <sub>x</sub> 14.40	63.10	
		PM <sub>10</sub>	2.10	9.20
		SO <sub>2</sub> (7)	34.15	25.32
		VOC (5)	0.72	3.15
K-101	Gas Turbine Start-Up (8) Bypass Stack (6)	CO	96.6	7.25
		NO <sub>x</sub>	99.8	7.49
		SO <sub>2</sub> (7)	0.18	<0.01
		VOC	30.3	2.27
U-101	Dehydrogenation Heat (8) Recovery Unit	CO	50.0	113.80
		H <sub>2</sub> S	0.09	0.07
		NH <sub>3</sub> 5.50	24.10	
		NO <sub>x</sub>	68.4	159.80
		PM <sub>10</sub>	0.10	0.64
		SO <sub>2</sub>	34.15	25.0
		VOC 27.50	62.60	
U-5001	Steam Boiler (8) (35 MMBtu/hr Heat Input)	CO	1.23	5.39
		NO <sub>x</sub>	2.80	12.26
		PM <sub>10</sub>	0.47	2.06
		SO <sub>2</sub>	0.02	0.09
		VOC	0.20	0.88
U-5004A	Steam Boiler - Backup (154 MMBtu/hr Heat Input) (300 Hours per Calendar Year)	CO	2.70	0.41
		NO <sub>x</sub>	4.62	0.69
		PM <sub>10</sub>	0.38	0.11
		SO <sub>2</sub>	0.05	0.01
		VOC	0.13	0.02

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY **
U-5004A	Steam Boiler Operation (9) U-5004A - Primary U-5004B - Secondary	CO	2.70	11.83
		NO <sub>x</sub>	4.62	20.24
		PM <sub>10</sub>	0.38	1.67
		SO <sub>2</sub>	0.05	0.22
		VOC	0.13	0.57
U-5004B	Steam Boiler - Primary (8) (145 MMBtu/hr Heat Input)	CO	5.06	22.16
		NO <sub>x</sub>	5.78	31.34
		PM <sub>10</sub>	0.70	3.07
		SO <sub>2</sub>	0.08	0.35
		VOC	0.24	1.06
U-5041	Cooling Towers (4)	VOC	0.60	2.63
B-5031	Flare (8)	CO	0.09	0.39
		NO <sub>x</sub>	0.12	0.53
TK-5026A	Storage Tank	MTBE	0.50	1.68
TK-5026B	Storage Tank	MTBE	0.50	1.68
F-101,201, 403-406	Fugitives (4)	VOC	2.80	12.23
F-407	P/P Mix Process Fugitives (4)	VOC	0.70	3.22
F-408	Loading Rack Process Fugitives (4)	VOC	0.05	0.23

(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) CO - carbon monoxide

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H<sub>2</sub>S - hydrogen sulfide  
NH<sub>3</sub> - ammonia  
MTBE - methyl-tertiary-butyl ether  
NO<sub>x</sub> - total oxides of nitrogen  
PM<sub>10</sub> - particulate matter less than 10 microns  
SO<sub>2</sub> - sulfur dioxide  
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Section 101.1

- (4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
- (5) Includes products of fuel combustion and flash gas.
- (6) Start-up bypass vent for 150 hours per calendar year.
- (7) The SO<sub>2</sub> emissions shall comply with Special Condition No. 24.
- (8) PSD-TX-842-CO and NO<sub>x</sub> are subject to PSD.
- (9) This emission rate applies when Steam Boiler U-5004B is not operating and Steam Boiler U-5004A becomes the primary operating Steam Boiler. The operation time does not count towards the 300 hours per calendar year limit for Steam Boiler U-5004A in Special Condition No. 22.

\* 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

\*\* Compliance with annual emission limits is based on a rolling 12-month period.

Dated \_\_\_\_\_