

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 19168 and PSD-TX-760M3

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
1001	Pyrolysis Furnace	VOC	0.70	3.00
		NO <sub>x</sub>	30.30	132.71
		CO	8.20	35.92
		TSP	0.50	2.20
		SO <sub>2</sub>	0.38	1.70
1002	Pyrolysis Furnace	VOC	0.70	3.00
		NO <sub>x</sub>	30.30	132.71
		CO	8.20	35.92
		TSP	0.50	2.20
		SO <sub>2</sub>	0.38	1.70
1003	Pyrolysis Furnace	VOC	0.70	3.00
		NO <sub>x</sub>	30.30	132.71
		CO	8.20	35.92
		TSP	0.50	2.20
		SO <sub>2</sub>	0.38	1.70
1004	Pyrolysis Furnace	VOC	0.70	3.00
		NO <sub>x</sub>	30.30	132.71
		CO	8.20	35.92
		TSP	0.50	2.20
		SO <sub>2</sub>	0.38	1.70
1005	Pyrolysis Furnace	VOC	0.70	3.00
		NO <sub>x</sub>	30.30	132.71

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AIR CONTAMINANTS DATA

Emission *	Source	Air Contaminant	<u>Emission Rates</u>	
Point No. (1)	Name (2)	Name (3)	<u>lb/hr</u>	<u>TPY</u>
		CO	8.20	35.92
		TSP	0.50	2.20
		SO <sub>2</sub>	0.38	1.70
1006	Pyrolysis Furnace	VOC	0.70	3.00
		NO <sub>x</sub>	30.30	132.71
		CO	8.20	35.92
		TSP	0.50	2.20
		SO <sub>2</sub>	0.38	1.70

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
1007	Pyrolysis Furnace	VOC	0.70	3.00
		NO <sub>x</sub>	30.30	132.71
		CO	8.20	35.92
		TSP	0.50	2.20
		SO <sub>2</sub>	0.38	1.70
1008	Pyrolysis Furnace	VOC	0.70	3.00
		NO <sub>x</sub>	30.30	132.71
		CO	8.20	35.92
		TSP	0.50	2.20
		SO <sub>2</sub>	0.38	1.70
1009B	Pyrolysis Furnace	VOC	0.70	3.00
		NO <sub>x</sub>	30.30	132.71
		CO	8.20	35.92
		TSP	0.50	2.20
		SO <sub>2</sub>	0.38	1.70
1009	Decoke Drum (5)	CO	34.62	14.00
		TSP	3.20	1.30
1010	Cooling Tower	VOC	5.29	23.19
		BZ	0.17	0.73
1011	API Oil/Water Separator	VOC	1.34	5.86
		BZ	0.04	0.19
1012	MAPD Regenerator 3418F	CO	17.30	0.01
1015	Raw Condensate Tank 6402F	VOC	2.21	4.60
		BZ	0.02	0.04
1017	Methanol Tank 3416F	VOC	0.65	0.02

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
1018	Olefins Plant Flare (6)	VOC	0.026	0.010
		NO <sub>x</sub>	0.003	0.001
		CO	0.018	0.007
1018	Olefins Plant Flare (7)	VOC	1.67	0.02
		CO	3.31	0.02
1019	Fugitive (4)	VOC	0.72	3.16
		BZ	0.02	0.10
1020	Naphtha Tank 6401F	VOC	5.69	12.98
		BZ	0.06	0.11
1028	Fugitives - A (4)	VOC	0.72	3.16
		BZ	0.02	0.10
1029	Fugitives - B (4)	VOC	0.72	3.16
		BZ	0.02	0.10
1030	Fugitives - C (4)	VOC	0.72	3.16
		BZ	0.02	0.10
1031	Fugitives - D (4)	VOC	0.72	3.16
		BZ	0.02	0.10
1032	Fugitives - E (4)	VOC	0.72	3.16
		BZ	0.02	0.10
1033	Fugitives - F (4)	VOC	0.72	3.16
		BZ	0.02	0.10
1034	Fugitives - G (4)	VOC	0.72	3.16
		BZ	0.02	0.10

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
1035	Fugitives - H (4)	VOC BZ	0.72 0.02	3.16 0.10
1036	Fugitives - I (4)	VOC BZ	0.72 0.02	3.16 0.10
1037	Fugitives - J (4)	VOC BZ	0.72 0.02	3.16 0.10
1038	Fugitives - K (4)	VOC BZ	0.72 0.02	3.16 0.10
1039	Fugitives - L (4)	VOC BZ	0.72 0.02	3.16 0.10
1040	Fugitives - M (4)	VOC BZ	0.72 0.02	3.16 0.10
1041	Fugitives - N (4)	VOC BZ	0.72 0.02	3.16 0.10
1042	Fugitives - O (4)	VOC BZ	0.72 0.02	3.16 0.10
1043	Fugitives - P (4)	VOC BZ	0.72 0.02	3.16 0.10
1044	Fugitives - Q (4)	VOC BZ	0.72 0.02	3.16 0.10
1045	Fugitives - R (4)	VOC BZ	0.72 0.02	3.16 0.10

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
1046	Reboiler No. 1	VOC	0.08	0.36
		NO <sub>x</sub>	1.82	7.97
		CO	1.02	4.47
		TSP	0.03	0.13
		SO <sub>2</sub>	0.02	0.10
1047	Reboiler No. 2	VOC	0.08	0.36
		NO <sub>x</sub>	1.82	7.97
		CO	1.02	4.47
		TSP	0.03	0.13
		SO <sub>2</sub>	0.02	0.10
1048	Slop Oil Tank 7408F	VOC	0.54	0.07
1049	Fugitives - T (4)	VOC	0.16	0.70
		BZ	<0.01	0.02
1050	H <sub>2</sub> SO <sub>4</sub> Tank	H <sub>2</sub> SO <sub>4</sub>	<0.01	<0.01
1051	Tank Flare	VOC	0.21	0.43
		NO <sub>x</sub>	1.35	0.04
		CO	11.50	0.31
		TSP	0.07	<0.01
		BZ	0.02	0.04
PPUFUG-1	PPU Unloading Station Fugitives (4)	VOC	0.47	2.04
PPUFUG-2	PPU Process Area Fugitives (4)	VOC	0.62	2.72
PPUFUG-3	PPU Storage Spheres Area Fugitives (4)	VOC	0.19	0.82

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
WWTP	Wastewater Emissions	VOC	0.22	0.96
8001B	Regeneration Heater	NO <sub>x</sub>	0.66	0.14
		CO	0.67	0.15
		SO <sub>2</sub>	0.01	<0.01
		VOC	0.03	0.01
		PM	0.15	0.03
8002B	Second Stage Feed Heater	NO <sub>x</sub>	0.24	1.05
		CO	0.11	0.48
		SO <sub>2</sub>	0.01	0.01
		VOC	0.02	0.09
		PM	0.05	0.22
8003B	GHU Flare	VOC	0.99	4.23
		NO <sub>x</sub>	1.74	4.92
		CO	3.48	9.82
		SO <sub>2</sub>	0.01	0.02
8801U	GHU Cooling Tower	VOC	0.88	3.86
8801F	GHU Fugitive (4)	VOC	0.29	1.27

(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

CO - carbon monoxide

TSP - total suspended particulate

SO<sub>2</sub> - sulfur dioxide

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

BZ - benzene

PM - particulate matter

H<sub>2</sub>SO<sub>4</sub> - sulfuric acid (98 percent)

- (4) Fugitive emission rates are an estimate only and should not be considered as a maximum allowable emission rate.
- (5) Only one furnace shall be decoked at a time.
- (6) Emission rates given are those attributable to normal service only, and do not include non-routine services such as emergency service.
- (7) Catalyst Regeneration

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

Hrs/day\_\_\_\_\_Days/week\_\_\_\_\_Weeks/year\_\_\_\_\_ or Hrs/year 8,760

Dated\_\_\_\_\_