

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Nos. 8373 and PSD-TX-324M7

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>	
<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Name (3)</u>	<u>lb/hr</u>	<u>TPY</u>
114	Desalter Heater	SO <sub>2</sub>	1.78	7.78
		NO <sub>x</sub>	6.29	27.54
		PM <sub>10</sub>	0.58	2.55
		CO	5.24	22.95
		VOC	0.16	0.72
115	HDS Heater A/B	SO <sub>2</sub>	2.56	11.23
		NO <sub>x</sub>	9.08	39.77
		PM <sub>10</sub>	2.31	10.10
		CO	7.57	33.15
		VOC	0.47	2.05
116	HDS Heavy Oil Preheater	SO <sub>2</sub>	0.59	2.60
		NO <sub>x</sub>	4.20	18.40
		PM <sub>10</sub>	0.53	2.34
		CO	0.56	2.45
		VOC	0.11	0.47
117	Alky Reboiler	SO <sub>2</sub>	1.67	7.30
		NO <sub>x</sub>	11.81	51.72
		PM <sub>10</sub>	0.55	2.40
		CO	1.57	6.89
		VOC	0.15	0.68
118	H <sub>2</sub> Reformer Heater	SO <sub>2</sub>	21.92	40.70
		NO <sub>x</sub>	78.00	236.52
		PM <sub>10</sub>	7.23	22.23
		CO	65.00	197.10
		VOC	2.04	6.30
119	Sulften Heater	SO <sub>2</sub>	0.33	1.45
		NO <sub>x</sub>	2.35	10.30

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		PM <sub>10</sub>	0.30	1.31
		CO	0.31	1.38
		VOC	0.06	0.27
120	Butamer Heater (6)	SO <sub>2</sub>	0.21	0.47
		NO <sub>x</sub>	1.51	3.31
		PM <sub>10</sub>	0.19	0.42
		CO	0.20	0.44
		VOC	0.04	0.09
121	Caustic Scrubber Stack (7)	SO <sub>2</sub>	180.28	789.63
		NO <sub>x</sub>	300.75	1317.29
		PM <sub>10</sub>	51.39	225.08
		(nonsulfate)		
		CO	593.23	2598.34
		VOC	4.54	19.89
		Sulfates (5)	41.53	181.90
		H <sub>2</sub> S	0.03	0.12
122	Cooling Tower 45-CT-01	VOC	6.09	26.67
123	Cooling Tower 06-CT-01	VOC	1.26	5.52
83-L-16	API Separator Combustor	SO <sub>2</sub>	0.03	0.13
		NO <sub>x</sub>	0.19	0.84
		CO	1.65	7.22
		VOC	2.94	12.88
126	Main Flare	Emergency Use Only		
127	MTBE Flare	SO <sub>2</sub>	0.58	2.52
		NO <sub>x</sub>	0.03	0.14
		CO	0.27	1.17
		VOC	0.02	0.09
128	SRU Bypass Flare	Emergency Use Only		

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135	Main Flare Acid Gas	Emergency Use Only		
TRUCKCOMB	Vapor Combustor	SO <sub>2</sub>	0.01	0.03
		NO <sub>x</sub>	4.77	2.45
		CO	9.53	4.91
		VOC	5.01	2.63
		H <sub>2</sub> S	< 0.01	< 0.01
65	Tank 1	VOC	1.23	0.35
66	Tank 2	VOC	1.80	0.55
67	Tank 3	VOC	1.23	0.35
68	Tank 4	VOC	1.23	0.43
72	Tank 18	VOC	3.63	0.18
81	Tank 152	VOC	2.28	0.93
82	Tank 153	VOC	2.28	0.93
83	Tank 154	VOC	2.28	0.93
84	Tank 52	VOC	0.25	0.55
85	Tank 53	VOC	0.35	0.45
88	Tank 57	VOC	3.92	10.33
89	Tank 58	VOC	2.44	3.73
90	Tank 59	VOC	3.92	7.11

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91	Tank 60	VOC	3.50	4.58
92	Tank 61	VOC	3.92	11.40
93	Tank 19	VOC	0.91	0.07
94	Tank 20	VOC	0.91	0.07
95	Tank 77	VOC	2.81	6.19
96	Tank 78	VOC	2.81	6.19
129	Tank 156	VOC	1.20	0.47
140	Tank 161	VOC	1.20	0.46
141	Tank 54	VOC	0.35	0.45
143	Tank 151	VOC	2.28	0.93
176	Tank 163	VOC	2.28	0.93
LPGSTGF	LPG Fugitives (4)	VOC	2.24	9.82
GBF	Gas Blend Fugitives (4)	VOC	0.50	2.17
FUELDRM	FG Drum Fugitives (4)	VOC	0.01	0.06
11F	Desalter Fugitives (4)	VOC	0.72	3.15
12F	HDS Fugitives (4)	VOC	2.36	10.37
		H <sub>2</sub> S	0.09	0.39
13F	SMR Fugitives (4)	VOC	0.21	0.89

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21/22F	HOC Fugitives (4)	VOC	3.99	17.49
		H <sub>2</sub> S	0.03	0.11
31F	Alky Fugitives (4)	VOC	10.53	46.12
36F	Butamer Fugitives (4)	VOC	1.14	5.00
41/46/24F	SRU/SEU/SULF	VOC	0.26	1.14
	Fugitives (4)	H <sub>2</sub> S	0.16	0.68
42F	SWS Fugitives (4)	H <sub>2</sub> S	0.03	0.14
43F	Amine Unit Fugitives (4)	H <sub>2</sub> S	0.08	0.34
T1F	Term 1 Fugitives (4)	VOC	2.22	9.75
T2/2AF	Term 2 2A Fugitives (4)	VOC	0.76	3.31
T3F	Term 3 Fugitives (4)	VOC	0.84	3.70
TRUCKFUG	Loading Fugitives	VOC	14.46	6.58
TRKRACKFUG	Piping Fugitives (4)	VOC	0.89	3.88

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

NO<sub>x</sub> - total oxides of nitrogen

PM<sub>10</sub> - particulate matter

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CO - carbon monoxide

VOC - volatile organic compounds as defined in General Rule 101.1

H<sub>2</sub>S - hydrogen sulfide

H<sub>2</sub> - hydrogen

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

(5) Contains sulfuric acid emitted at no more than 6.42 lb/hr and 28.12 TPY.

(6) Operating hours restricted to 4,380 per year.

(7) Common stack for the SRU tailgas incinerator and the FCCU caustic scrubber.

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

\_\_\_\_\_ Hrs/day \_\_\_\_\_ Days/week \_\_\_\_\_ Weeks/year or 8,760 Hrs/year