

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 19108

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

<u>Emission Rates*</u>	<u>Source</u>	<u>Air Contaminant</u>	<u>Emission</u>	
<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Name (3)</u>	<u>lb/hr</u>	
<u>TPY</u>				
B-002	Boiler SP-2	VOC	0.1	0.3
		NO _x	2.8	12.2
		SO ₂	0.4	1.6
		PM	0.1	0.4
		CO	0.7	3.0
B-009	Steam Boiler	CO	4.45	19.48
		NO _x	3.33	14.59
		PM ₁₀	0.47	2.06
		SO ₂	0.88	3.84
		VOC	0.34	1.49
H-002	No. 1 Crude Charge Heater	VOC	0.03	0.1
		NO _x	2.21	9.7
		SO ₂	0.24	1.1
		PM	0.19	0.8
		CO	0.19	0.8
H-014	Naphtha Splitter Heater	VOC	0.19	0.83
		NO _x	2.02	8.84
		SO ₂	1.69	5.19
		PM	0.56	2.43
		CO	2.02	8.84
H-016	Vacuum Charge Heater	VOC	0.41	1.80
		NO _x	13.20	57.81
		SO ₂	3.69	11.31

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

<u>Emission Rates*</u> Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission</u>	
			lb/hr	TPY
		PM	1.21	5.30
		CO	4.40	19.27
H-021	Demex DMO Heater	VOC	0.15	0.65
		NO _x	1.59	6.97
		SO ₂	1.33	4.09
		PM	0.44	1.92
		CO	1.59	6.97
H-022	Asphalt Heater	VOC	0.10	0.43
		NO _x	1.05	4.58
		SO ₂	0.88	2.69
		PM	0.29	1.26
		CO	1.05	4.58
H-023	Demex Tracing Oil Heater	VOC	0.02	0.07
		NO _x	0.18	0.79
		SO ₂	0.15	0.46
		PM	0.05	0.22
		CO	0.18	0.79
H-028	No. 1 Crude Charge Heater	VOC	0.58	2.54
		NO _x	6.21	27.18
		SO ₂	5.20	15.95
		PM	1.71	7.47
		CO	6.21	27.18
H-036	No. 1 Crude Charge Heater	VOC	0.58	2.54
		NO _x	6.21	27.18
		SO ₂	5.20	15.95
		PM	1.71	7.47
		CO	6.21	27.18
H-037	No. 2 HDU Charge Heater	VOC	0.15	0.65
		NO _x	1.58	6.94
		SO ₂	1.33	4.07

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

<u>Emission Rates*</u> Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission</u>	
			lb/hr	TPY
		PM	0.44	1.91
		CO	1.58	6.94
H-038	No. 2 HDU Reboiler	VOC	0.14	0.61
	Heater	NO _x	1.48	6.46
		SO ₂	1.24	3.79
		PM	0.41	1.78
		CO	1.48	6.46
F-0100	No. 1 Naphtha Fractionator	VOC		3.00
	13.13			
	Fugitives (4)	H ₂ S	<0.01	<0.01
F-0670	West Plant Cooling Tower	VOC		0.63
	2.76			
F-0680	Wastewater Treatment Unit	VOC		12.00
	52.56			
F-0682	Crude Unit Sump	VOC	0.66	2.89
F-0683	No. 1 Reformer Sump	VOC	0.34	1.47
F-0688	Vacuum Unit Sump	VOC	0.42	1.84
F-0689	Crude Unload Sump	VOC	0.04	0.18
F-0700	No. 1 Stabilizer Unit	VOC	1.32	5.78
	Fugitives (4)	H ₂ S	<0.01	<0.01
F-0701	No. 2 Stabilizer Unit	VOC	1.69	7.41
	Fugitives (4)	H ₂ S	<0.01	<0.01
F-0710	Light Ends Fugitives (4)	VOC		1.58
	6.93			
		H ₂ S	0.02	0.10

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

<u>Emission Rates*</u> Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission</u>	
			lb/hr	TPY
F-1400	Vacuum Unit Fugitives (4) 19.84	VOC	4.53	
F-2000	Demex Unit Fugitives (4) 29.90	VOC	6.83	
F-2010	Demex Flaker Fugitives (4) 1.20	VOC	0.27	
F-2900	No. 1 Crude Unit Fugitives (4)	VOC	5.82	25.5
F-3000	No. 2 Naphtha HDU Fugitives (4)	VOC	3.29	14.43
F-3910	Aromatics Rail Rack Fugitives (4)	VOC	0.34	1.47
FL-002	Loading Rack Vapor Combustor	VOC	20.43	6.40
		NO _x	2.80	0.87
		CO	8.13	2.53
FL-005	Wastewater Treater Flare 1.16	VOC	0.40	
		NO _x	0.05	0.13
		SO ₂	0.04	0.11
		CO	0.37	1.08
FL-501	No. 1 West Plant Flare	VOC	1.06	3.10
		NO _x	0.03	0.14
		SO ₂	0.55	1.60
		CO	0.34	1.04
FL-006	No. 2 West Plant Flare	VOC	1.34	3.03

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

		NO _x	0.14	0.37
		SO ₂	0.04	0.08
		CO	0.73	1.89
L-001	Black Oil Truck Rack	VOC	1.00	0.78
L-002	Gasoline Truck Rack	VOC	39.98	14.26
L-005	Aromatics Railcar Rack	VOC	7.66	1.51

- (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 30 Texas Administrative Code Section 101.1
 - NO_x - total oxides of nitrogen
 - SO₂ - sulfur dioxide
 - PM - particulate matter, suspended in the atmosphere, including PM₁₀
 - PM₁₀ - particulate matter equal to or less than 10 microns in diameter. Where PM is not listed, it shall be assumed that no particulate matter greater than 10 microns is emitted.
 - CO - carbon monoxide
 - H₂S - hydrogen sulfide
- (4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.

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

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

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Dated _____