

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

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

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Permit Nos. 19108 and PSD-TX-331M1

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.

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates*	
TPY**			lb/hr	
B-009	Steam Boiler	CO	4.45	19.48
		NO _x	3.33	14.59
		PM ₁₀	0.47	2.06
		SO ₂	0.05	0.14
		VOC	0.34	1.49
H-014	Naphtha Splitter Heater	VOC	0.19	0.83
		NO _x	2.02	8.84
		SO ₂	1.69	1.91
		PM	0.56	2.43
		CO	2.02	8.84
H-016	Vacuum Charge Unit Heater	VOC	0.38	1.65
		NO _x	12.00	52.56
		SO ₂	3.36	4.42
		PM	1.10	4.82
		CO	4.00	17.52
H-021	DAO Heater	VOC	0.12	0.53
		NO _x	1.28	5.61
		SO ₂	1.08	1.42

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			lb/hr	
TPY**				
		PM	0.36	1.55
		CO	1.28	5.61
H-022	Asphalt Heater	VOC	0.09	0.38
		NO _x 0.92	4.03	
		SO ₂	0.78	1.02
		PM	0.26	1.11
		CO	0.92	4.03
H-023	Demex Tracing Oil Heater	VOC	0.02	0.07
		NO _x	0.18	0.79
		SO ₂	0.15	0.20
		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	6.85
		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	6.85
		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	1.75
		PM	0.44	1.91
		CO	1.58	6.94
H-038	No. 2 HDU Reboiler Heater	VOC	0.14	0.61
		NO _x	1.48	6.46
		SO ₂	1.24	1.63
		PM	0.41	1.78
		CO	1.48	6.46

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			lb/hr	
H-040	H ₂ Plant Steam/Methane Reformer Heater	VOC	0.15	0.65
		NO _x	4.29	18.80
		SO ₂	1.13	1.48
		PM	0.43	1.88
		CO	1.56	6.84
H-041	DOT Hydrogen Recycle Furnace	VOC	0.15	0.30
		NO _x	1.52	3.16
		SO ₂	1.28	0.80
		PM	0.42	0.87
		CO	1.52	3.16
H-045	DHT Charge Heater	VOC	0.15	0.65
		NO _x	0.88	3.84
		SO ₂	0.84	1.11
		PM	0.21	0.90
		CO	1.86	8.13
H-046	Fractionator Feed Heater	VOC	0.25	1.10
		NO _x	1.47	6.44
		SO ₂	1.42	1.86
		PM	0.35	1.51
		CO	3.12	13.65
F-0100	No. 1 Naphtha Fractionator Fugitives (4)	VOC	3.00	13.13
		H ₂ S	<0.01	<0.01
F-0670	West Plant Cooling Tower No. 1 2.76	VOC		0.63
F-0680	Wastewater Treatment Unit	VOC	12.75	55.85
F-0682	Crude Unit Sump	VOC	0.66	2.89
F-0683	No. 1 Reformer Sump	VOC	0.34	1.47

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			lb/hr	
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 Fugitives (4)	VOC	1.32	5.78
		H ₂ S	<0.01	<0.01
F-0701	No. 2 Stabilizer Unit Fugitives (4)	VOC	1.69	7.41
		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
F-1400	Vacuum Unit Fugitives (4)	VOC	4.53	19.84
F-2000	Demex Unit Fugitives (4)	VOC	6.83	29.90
F-2010	Demex Flaker Fugitives (4)	VOC	0.27	1.20
F-2900	No. 1 Crude Unit Fugitives (4)	VOC	4.59	20.11
F-3000	No. 2 Naphtha HDU Fugitives (4)	VOC	3.29	14.43
F-3600	Hydrogen Plant Fugitives (4)	VOC	0.54	2.38
		NH ₃	<0.01	
F-3670	West Plant Cooling Tower No. 2 2.67 (4)	VOC		0.61
F-3700	DOT Fugitives (4)	VOC	1.48	6.46
F-3910	Aromatics Rail Rack Fugitives (4)	VOC	0.34	1.47
F-4000	DHT/ASU Fugitives (4)	VOC	2.88	12.62

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			lb/hr	
F-4100	Amine Regenerator Fugitives (4)	VOC	0.34	
		1.49		
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	VOC	0.27	0.58
		NO _x	0.14	0.16
		SO ₂	0.10	0.04
		CO	1.19	1.30
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
		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

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<u>TPY**</u>			

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:

_____Hrs/day_____Days/week_____Weeks/year or 8,760 Hrs/year

** Compliance with annual emissions is based on a 12-month rolling average.

Dated May 2, 2001