EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Numbers 9914 and PSD-TX-861M1

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-1	No. 1 Crude Heater (283.5 MMBtu/hr) (5)	VOC	1.20	5.2
		NO_x	34.02	149.0
		SO_2	10.71	14.1
		PM_{10}	2.84	12.4
		CO	7.97	34.9
H-2	No. 1 Vacuum Heater (68.0 MMBtu/hr hourly, 60.0 MMBtu/hr annual) (5)	VOC	0.27	1.04
		NO_x	3.06	11.83
		SO_2	2.57	2.98
		PM_{10}	0.68	2.63
		CO	1.92	7.39
H-3	Naphtha Reboiler Heater (43.2 MMBtu/hr) (5)	VOC	0.19	0.8
		NO_x	5.19	22.7
		SO_2	1.64	2.1
		PM_{10}	0.44	1.9
		CO	1.22	5.3
H-5	PDA Asphalt Heater (12.0 MMBtu/hr hourly, 10.0 MMBtu/hr annual) (5)	VOC	0.05	0.18
		NO_x	2.40	8.76
		SO_2	0.46	0.50
		PM_{10}	0.12	0.44
		CO	0.34	1.24
H-6	PDA Gas Oil Heater (25.6 MMBtu/hr) (5)	VOC	0.11	0.5
		NO_x	3.08	13.5
		SO_2	0.97	1.3
		PM_{10}	0.26	1.3
		CO	0.72	3.2

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates* lb/hr	TPY**
H-9	No. 2 Crude Heater (43.0 MMBtu/hr) (5)	VOC	0.19	0.8
		NO_x	5.16	22.6
		SO_2	1.63	2.1
		PM_{10}	0.43	1.9
		CO	1.21	5.3
H-11	No. 2 Crude Heater (70.0 MMBtu/hr hourly, 64.0 MMBtu/hr annual) (5)	VOC	0.28	1.11
		NO_x	3.15	12.62
		SO_2	2.65	3.18
		PM_{10}	0.70	2.81
		CO	1.97	7.88
H-13	Gas Oil Heater (36.5 MMBtu/hr) (5)	VOC	0.16	0.7
		NO_x	11.80	51.7
		SO_2	1.38	1.8
		PM_{10}	0.37	1.6
		CO	1.03	4.5
H-26	No. 2 Vacuum Heater (74.0 MMBtu/hr hourly, 68.0 MMBtu/hr annual) (5)	VOC	0.30	1.2
		NO_x	3.33	13.4
		SO_2	2.80	3.4
		PM_{10}	0.74	3.0
		CO	2.09	8.4
H-40	PDA Asphalt Heater (60.0 MMBtu/hr hourly,) 55 MMBtu/hr annual) (5)	VOC	0.24	1.0
		NO_x	7.20	28.9
		SO_2	2.27	2.7
		PM_{10}	0.60	2.4
		CO	1.69	6.8
H-41	No. 2 Crude Heater (280.0 MMBtu/hr hourly, 250.0 MMBtu/hr annual) (5)	VOC	1.11	4.3
		NO_x	12.60	49.3
		SO_2	10.58	12.4
		PM_{10}	2.80	11.0
		CO	7.88	30.8
H-57	PDA No. 2 DAGO Heater	VOC	0.06	0.26

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates* lb/hr	TPY**
	(15.0 MMBtu/hr) (5)	NO_x	0.68	2.96
		SO_2	0.57	0.74
		PM_{10}	0.16	0.70
		CO	0.43	1.85
H-58	PDA No. 2 Asphalt Heater	VOC	0.10	0.44
	(25.0 MMBtu/hr) (5)	NO_x	1.13	4.93
		SO_2	0.95	1.28
		PM_{10}	0.27	1.17
		CO	0.71	3.08
H-59	GOF Charge Heater	VOC	0.13	0.56
	(32.4 MMBtu/hr) (5)	NO_x	1.46	6.39
		SO_2	1.23	1.61
		PM_{10}	0.35	1.51
		CO	0.92	3.99
S-1	Storage Tank 120M1	VOC	3.32	9.94
S-2	Storage Tank 133	VOC	2.56	8.70
S-4	Storage Tank 139	VOC	1.56	3.45
S-5	Storage Tank 150M1	VOC	3.28	5.13
S-6	Storage Tank 157	VOC	2.67	11.70
S-7	Storage Tank 168	VOC	0.12	0.4
S-8	Storage Tank 1001	VOC	2.27	6.61
S-9	Storage Tank 1003	VOC	2.35	10.01
S-10	Storage Tank 1501	VOC	0.45	0.40
S-11	Storage Tank 1502	VOC	0.45	0.40

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates* lb/hr	TPY**
S-12	Storage Tank 3001	VOC	1.80	7.90
S-13	Storage Tank 3002	VOC	1.85	4.02
S-14	Storage Tank 6701	VOC	2.65	11.10
S-15	Storage Tank 6702	VOC	1.96	5.16
S-16	Storage Tank 31	VOC	1.74	4.95
S-18	Storage Tank 161	VOC	0.75	0.82
S-19	Storage Tank 163	VOC	0.75	0.82
S-20	Storage Tank 167	VOC	0.09	0.3
S-21	Storage Tank 101	VOC	1.66	4.01
S-22	Storage Tank 120M2	VOC	3.62	14.64
S-23	Storage Tank 120M3	VOC	2.14	6.93
S-26	Storage Tank 165	VOC	0.21	0.42
S-30	Storage Tank 131	VOC	6.09	3.9
S-31	Storage Tank 132	VOC	6.85	3.8
S-42	Storage Tank 162	VOC	0.13	0.24
S-43	Storage Tank 164	VOC	0.13	0.22
S-49	Storage Tank 155	VOC	0.19	0.36
S-53	Storage Tank 222	VOC	0.77	0.3

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates* lb/hr	TPY**
S-90	Storage Tank 4	VOC	1.79	3.74
S-140	Storage Tank 181	VOC	0.39	0.4
S-143	Storage Tank 5505	VOC	2.27	9.60
S-144	Storage Tank 5504	VOC	2.27	9.60
S-176	Storage Tank 200M1	VOC	2.24	7.9
S-184	Storage Tank 940T1	VOC	0.84	2.21
S-187	Storage Tank 150M2	VOC	1.72	2.19
S-195	Storage Tank T101	VOC	0.84	2.7
S-196	Storage Tank T102	VOC	0.84	2.7
S-197	Storage Tank T109	VOC	0.45	1.3
V-5	No. 1 SRU Incinerator	SO_2	295	516
E-5	PDA Solvent Comp. Engine	VOC	0.46	2.0
		NO_X	12.15	53.2
		SO_2	0.06	0.1
		PM_{10}	0.19	0.9
		CO	1.48	6.5
F-1	Crude No. 1 Fugitives (4)	VOC	5.77	25.25
F-2	PDA Fugitives (4)	VOC	13.78	60.35
F-15	SRU No. 1 Fugitives (4)	VOC	<0.01	0.01
F-28	Vacuum No. 2 Fugitives (4)	VOC	3.12	13.68

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates* lb/hr	TPY**
F-29	Crude No. 2 Fugitives (4)	VOC	6.11	26.74
F-30	Gas Oil Frac Fugitives (4)	VOC	1.95	8.52
F-31	Crude Preheat Fugitives (4)	VOC	3.66	16.05
F-32	Naphtha No. 1 Frac Fugitives (4) 12.35	VOC		2.82
F-33	LSR No. 1 Frac Fugitives (4)	VOC	0.97	4.25
F-34	Vacuum No. 1 Fugitives (4)	VOC	2.53	11.09
F-41	Hex MinAlk Fugitives (4)	VOC	0.99	4.32
F-47	No. 4 Refinery Cooling Tower	VOC	1.76	7.73
F-51	LTFU Fugitives (4)	VOC	6.33	27.74
F-52	LSR No. 2 Fugitives (4)	VOC	1.72	7.53
F-71	TF Merox Fugitives (4)	VOC	0.91	3.98
F-77	Naphtha No. 4 Fugitives (4)	VOC	3.05	13.38
F-79	WWTU Fugitives (4)	VOC	0.67	2.93
F-87	Desalter SWRU Fugitives (4)	VOC	0.09	0.38
		H_2S	0.03	0.11
		NH_3	0.02	0.10
FL-1	Refinery Flare (also for emergency use)	VOC	3.05	9.30
		NO_x	1.48	4.52
		SO_2	0.72	2.03
		CO	7.55	23.01
		H_2S	0.01	0.02

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates* lb/hr	TPY**
FL-6	WWT Flare	Total Hydrocarbons	4.86	6.39
		NO_x	0.57	0.75
		SO_2	0.11	0.15
		CO	4.89	6.43
		H_2S	<0.01	<0.01

(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 Title 30 Texas Administrative Code § 101.1
NO_x - total oxides of nitrogen
SO_2 - sulfur dioxide
PM_{10} - particulate matter (PM) 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
H_2S - hydrogen sulfide
NH_3 - ammonia
(4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
(5) Maximum heater firing rates are on the basis of lower heating value.

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

Hrs/year 8,760

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

Dated_____