EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 22100

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	Emission Rates * TPY**
S-34	North Boiler	PM_{10}	0.22	0.93
		VOC	0.16	0.68
		NO_x	2.79	12.21
		CO	2.34	10.25
		SO_2	0.01	0.05
S-35	South Boiler	PM_{10}	0.25	1.08
		VOC	0.18	0.78
		NO_x	3.24	14.16
		CO	2.72	11.89
		SO_2	0.02	0.05
S-6A	North Sulfur Heater A	PM_{10}	0.06	0.23
		VOC	0.04	0.17
		NO_x	0.67	2.93
		CO	0.57	2.46
		SO_2	0.01	0.02
S-6B	North Sulfur Heater B	PM_{10}	0.06	0.23
		VOC	0.04	0.17
		NO_x	0.67	2.93
		CO	0.57	2.46
		SO_2	0.01	0.02
S-5A	North Methane Heater A	PM	0.01	0.04
		VOC	0.01	0.03
		NO_x	0.12	0.49
		CO	0.10	0.41
		SO_2	0.01	0.01

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
S-5B	North Methane Heater B	PM	0.01	0.04
		VOC	0.01	0.03
		NO_x	0.12	0.49
		CO	0.10	0.41
		SO_2	0.01	0.01
S-12	DMDS Unit Reactor Preheater	PM (7)	0.02	0.08
		VOC (7)	0.02	0.06
		NO_x (7)	0.06	0.26
		CO (7)	0.19	0.82
		SO_2 (7)	0.01	0.01
S-13	DMDS Unit Hot Oil Heater	PM (7)	0.09	0.37
		VOC (7)	0.07	0.27
		NO_x (7)	0.30	1.31
		CO (7)	0.94	4.08
		SO_2 (7)	0.01	0.02
S-14	Unit 196 Reactor Heater	PM	0.01	0.04
		VOC	0.01	0.03
		NO_x	0.12	0.49
		CO	0.10	0.41
		SO_2	0.01	0.01
S-15	196 Unit Driers Regen Heater	PM	0.01	0.03
		VOC	0.01	0.02
		NO_x	0.07	0.30
		CO	0.06	0.25
		SO_2	0.01	0.01

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
S-37	Unit 196 Hot Oil Heater (Existing)	PM	0.04	0.17
		VOC	0.03	0.13
		NO_x	0.51	2.20
		CO	0.43	1.85
		SO_2	0.01	0.01
S-37	Unit 196 Hot Oil Heater	PM	0.06	0.25
		VOC	0.05	0.18
		NO_x	0.38	1.64
		CO	0.63	2.75
		SO_2	0.01	0.02
S-38	Unit 197 Hot Oil Heater	PM	0.07	0.30
		VOC	0.31	0.24
		NO_x	0.90	3.91
		CO	0.75	3.28
		SO_2	1.13	0.06
T-9770	Tank T-9770	VOC	3.96	0.67
T-9606	Tank T-9606	VOC	3.96	0.67
T-9635	Tank T-9635	VOC	3.96	1.03
T-9641	Tank T-9641	VOC	3.96	0.94
T-8078	Tank T-8078	H_2S	0.01	0.01
		SO_2	0.17	0.14
V-8001	Sulfur Pit	H_2S	0.04	0.15
		SO_2	1.00	3.78
T-9094	Tank T-9094	VOC	2.89	0.73

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
T-9705	Tank T-9705	VOC	0.20	0.01
TX-9280	Tank TX-9280	VOC	0.05	0.01
P-FLR	Plant Flare	VOC (6)	20.82	16.07
		SO_2 (6)	600.00	754.51
		NO_x (6)	1.20	2.11
		CO (6)	5.17	9.11
		H_2S (6)	6.40	27.90
		VOC (5)(7)	22.39	17.39
		SO_2 (5)(7)	600.00	845.27
		NO_x (5)(7)	1.35	2.22
		CO (5)(7)	5.81	9.57
		H_2S (5)(7)	6.40	27.90
S-17	Thermal Oxidizer	PM	0.11	0.50
		H_2S 0.2	0.88	
		SO_2 378.96	603.39	
		NO_x 0.76	3.33	
		CO 42.22	63.33	
		VOC 0.18	0.80	
		TRS 0.23	0.36	
F-180	180 Unit Fugitives (4)	VOC	0.23	1.02
		H_2S 0.16	0.68	
F-196	196 Unit Fugitives (4)	VOC	0.26	1.13
		H_2S 0.01	0.06	
F-197	197 Unit Fugitives (4)	VOC	0.32	1.38
		H_2S 0.08	0.35	

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F-293	293 Unit Fugitives (4)		VOC	0.01	0.01
		H_2S	0.06	0.28	
F-HZWST	Haz. Storage/Handling Fugitives (4)		VOC	0.07	0.31
			H_2S	0.01	0.02
F-DMDS	DMDS Fugitives (4)		VOC (7)	0.26	1.15
		H_2S (7)		0.10	0.45
		Sulfur (7)		0.01	0.05
F-DMDS	DMDS Fugitives (4)		VOC (6)	0.04	0.19
F-WST-WTR	Wastewater		VOC	0.01	0.01
S-PYRO	Pyrolysis Furnace		PM	0.01	0.01
		NO_x	0.03	0.03	
		VOC	0.02	0.02	
		SO_2	0.01	0.01	
		CO	0.05	0.05	
CT1, CT2 and CT3	Cooling Tower 1, 2, and 3		VOC (6)	0.91	1.44
		H_2S (6)		0.91	1.44
CT1, CT2, CT3and DMDS-CT	Cooling Tower 1, 2, 3 and DMDS Unit Cooling Tower		VOC (7)	1.02	1.62
			H_2S (7)	1.22	1.93
P-DEGR	Degreaser		VOC	0.47	1.02
P-REFRIG	Refrigerant Losses		non-VOC	0.34	0.75

(1) Emission point identification - either specific equipment designation or emission point number from a plot plan.
(2) Specific point source names. For fugitive sources, use an area name or fugitive source name.

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(3) PM - particulate matter, suspended in the atmosphere, including PM_{10}.
PM_{10} - particulate matter equal to or less than 10 microns in diameter. Where PM is not listed, it shall be assumed that no PM greater than 10 microns is emitted.
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
NO_x - total oxides of nitrogen
CO - carbon monoxide
SO_2 - sulfur dioxide
H_2S - hydrogen sulfide
TRS - total reduced sulfur

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

(5) Hourly maintenance emission is part of the total hourly allowable for the flare.

(6) Emission rates effective before the start-up of the DMDS unit.

(7) Emission rates effective after the start-up of the DMDS unit.

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

Dated October 31, 2006