

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	TPY**
S-34	North Boiler	PM ₁₀	0.22	0.93
		VOC	0.16	
		NO _x	2.79	
		CO	2.34	
		SO ₂	0.01	
S-35	South Boiler	PM ₁₀	0.25	1.08
		VOC	0.18	
		NO _x	3.24	
		CO	2.72	
		SO ₂	0.02	
S-6A	North Sulfur Heater A	PM ₁₀	0.06	0.23
		VOC	0.04	
		NO _x	0.67	
		CO	0.57	
		SO ₂	<0.01	
S-6B	North Sulfur Heater B	PM ₁₀	0.06	0.23
		VOC	0.04	
		NO _x	0.67	
		CO	0.57	
		SO ₂	<0.01	
S-5A	North Methane Heater A	PM	0.01	0.04
		VOC	0.01	
		NO _x	0.12	
		CO	0.10	
		SO ₂	<0.01	

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			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-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
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

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**
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 ₂ S	0.01	0.01
		SO ₂	0.13	
V-8001	Sulfur Pit	H ₂ S	0.04	0.15
		SO ₂	3.75	
T-9094	Tank T-9094	VOC	2.89	0.73
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	20.82	16.07
		SO ₂	600.00	
		NO _x	1.20	2.11
		CO	5.17	9.11
		H ₂ S	6.40	27.90
S-17	Thermal Oxidizer	PM	2.00	8.76
		SO ₂	567.92	603.56
		NO _x	0.80	3.52
		CO	44.60	66.89
		VOC	0.19	0.84
		TRS	0.34	0.36
F-180	180 Unit Fugitives (4)	VOC	0.23	1.02
		H ₂ S	0.68	

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F-196	196 Unit Fugitives (4)		VOC	0.26	1.13
		H ₂ S	0.01	0.06	
F-197	197 Unit Fugitives (4)		VOC	0.32	1.38
		H ₂ S	0.08	0.35	
P-293	293 Unit Fugitives (4)		VOC	<0.01	<0.01
		H ₂ S	0.06	0.28	
F-HZWST	Haz. Storage/Handling		VOC	0.07	0.31
		H ₂ S	0.01	0.02	
F-DMDS	DMDS Fugitives		VOC	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	
WESTCT1	West Cooling Tower 1		VOC	0.39	0.62
		H ₂ S	0.39	0.62	
WESTCT2	West Cooling Tower 2		VOC	0.33	0.52
		H ₂ S	0.33	0.52	
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

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from a plot plan.

- (2) Specific point source names. For fugitive sources, use an area name or fugitive source name.
- (3) 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.
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
NO_x - total oxides of nitrogen
CO - carbon monoxide
SO₂ - sulfur dioxide
H₂S - hydrogen sulfide
TRS - total reduced sulfur
- (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 emission limits is based on a rolling 12-month period.

Dated April 7, 2004