

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 5414

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>	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY**
FE-1	Fire Pump Engine No. 1 (6) 334-hp	NO _x	10.35	0.45
		CO	2.23	0.10
		VOC	0.82	0.04
		SO ₂	0.68	0.03
		PM ₁₀	0.73	0.03
FE-2	Fire Pump Engine No. 2 (6) 334-hp	NO _x	10.35	0.45
		CO	2.23	0.10
		VOC	0.82	0.04
		SO ₂	0.68	0.03
		PM ₁₀	0.73	0.03
FE-3	Fire Pump Engine No. 3 (6) 334-hp	NO _x	10.35	0.45
		CO	2.23	0.10
		VOC	0.82	0.04
		SO ₂	0.68	0.03
		PM ₁₀	0.73	0.03
FE-4	Fire Pump Engine No. 4 (6) 468-hp	NO _x	14.51	0.63
		CO	3.13	0.14
		VOC	1.16	0.05
		SO ₂	0.96	0.04
		PM ₁₀	1.03	0.05

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<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Name (3)</u>	<u>lb/hr</u>	<u>TPY**</u>
FL-1	Flare Stack (Normal operation and pilot fuel)	CO	60.80	20.05
		NO _x	30.45	10.04
		SO ₂	0.01	0.01
		VOC (7)	200.00	50.74
		Ethylene	100.00	15.00
		Propylene	100.00	15.00
		Butenes	126.50	9.49
		1, 3 Butadiene	110.23	8.27
H-02	Smalling Heater Stack	CO	3.28	14.35
		NO _x	3.90	17.08
		PM ₁₀	0.30	1.30
		SO ₂	0.02	0.01
		VOC	0.21	0.94
H-07	Propane Regen Heater Stack	CO	0.42	1.84
		NO _x	0.50	2.19
		PM ₁₀	0.01	0.01
		SO ₂	0.04	0.17
		VOC	0.03	0.12
H-08	Boiler Stack	CO	1.23	5.41
		NO _x	1.47	6.44
		PM ₁₀	0.01	0.04
		SO ₂	0.11	0.49
		VOC	0.08	0.35
H-09	Butane Regen Heater Stack	CO	0.29	1.29
		NO _x	0.35	1.53
		PM ₁₀	0.01	0.01
		SO ₂	0.03	0.12
		VOC	0.02	0.08
LR-1MP	Barge Slip Tubes and Rotary Gauges	VOC	396.76	30.79

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<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Name (3)</u>	<u>lb/hr</u>	<u>TPY**</u>

LR-1T	Truck Loading and Unloading Connections	VOC	0.65	0.29
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FUG-1	Pmtd. Comp. Process Fug (4)	VOC	54.42	238.34
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GAS-FUG	Blending Fugitives	VOC	0.71	3.13
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----- These emission rates apply as long as H-03 and H-04 do not each exceed 4,730 hr/yr operation -----

H-03	A Glycol Heater Stack	CO	2.28	5.38
		NO _x	6.19	14.64
		PM ₁₀	0.89	2.11
		SO ₂	0.04	0.09
		VOC	0.18	0.41

H-04	B Glycol Heater Stack	CO	2.28	5.38
		NO _x	6.19	14.64
		PM ₁₀	0.89	2.11
		SO ₂	0.04	0.09
		VOC	0.18	0.41

----- These emission rates apply once H-03 and/or H-04 exceed 4,730 hr/yr operation -----

H-03	A Glycol Heater Stack (5)	CO	5.46	16.73
		NO _x	1.63	4.98
		PM ₁₀	0.49	1.51
		SO ₂	0.04	0.12
		VOC	0.36	1.10

H-04	B Glycol Heater Stack (5)	CO	5.46	16.73
		NO _x	1.63	4.98
		PM ₁₀	0.49	1.51
		SO ₂	0.04	0.12

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<u>Emission Rates *</u>	Source	Air Contaminant	<u>Emission</u>	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY**
		VOC	0.36	1.10

- (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) CO - carbon monoxide
 NO_x - total oxides of nitrogen
 PM₁₀ - particulate matter equal to or less than 10 microns in diameter
 SO₂ - sulfur dioxide
 VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
- (4) Emission rate is an estimate and compliance is demonstrated by meeting the requirements of the applicable special conditions and permit application representations.
- (5) Emission rates for H-03 and H-04 are based on and the facilities are limited by the following maximum operating schedule: 6,130 hours per year.
- (6) 87 hours per year of operation.
- (7) VOC emissions include emission rates for HRVOC species of ethylene, propylene, Butenes, and 1, 3 Butadiene.

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

Hrs/day 24 Days/week 7 Weeks/year 52

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

Dated August 20, 2009