

# 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, sources, and related activities. 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	
			lbs/hour	TPY (4)
FE-5	Fire Pump Engine No. 5 (7), 334-hp	NOx	10.35	0.45
		CO	2.23	0.10
		VOC	0.82	0.04
		SO <sub>2</sub>	0.68	0.03
		PM	0.73	0.03
		PM <sub>10</sub>	0.73	0.03
		PM <sub>2.5</sub>	0.73	0.03
FE-6	Fire Pump Engine No. 6 (7), 334-hp	NOx	10.35	0.45
		CO	2.23	0.10
		VOC	0.82	0.04
		SO <sub>2</sub>	0.68	0.03
		PM	0.73	0.03
		PM <sub>10</sub>	0.73	0.03
		PM <sub>2.5</sub>	0.73	0.03
FE-7	Fire Pump Engine No. 7 (7), 334-hp	NOx	10.35	0.45
		CO	2.23	0.10
		VOC	0.82	0.04
		SO <sub>2</sub>	0.68	0.03
		PM	0.73	0.03
		PM <sub>10</sub>	0.73	0.03
		PM <sub>2.5</sub>	0.73	0.03
FE-8	Fire Pump Engine No. 8 (7), 468-hp	NOx	14.51	0.63
		CO	3.13	0.14
		VOC	1.16	0.05
		SO <sub>2</sub>	0.96	0.04
		PM	1.03	0.05
		PM <sub>10</sub>	0.73	0.03
		PM <sub>2.5</sub>	0.73	0.03

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FL-1	Flare Stack (normal operation and pilot gas emissions)	NOx	30.45	10.04
		CO	60.80	20.05
		VOC (8)	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
		SO <sub>2</sub>	0.01	0.01
FL-3C	Flare Stack (Normal operation and pilot fuel)	NOx	4.42	1.58
		CO	8.83	3.16
		VOC	28.79	9.65
		HAP	5.71	0.99
H-02	Smalling Heater Stack	NOx	3.90	17.08
		CO	3.28	14.35
		VOC	0.21	0.94
		SO <sub>2</sub>	0.02	0.01
		PM	0.30	1.30
		PM <sub>10</sub>	0.30	1.30
		PM <sub>2.5</sub>	0.30	1.30
H-07	Propane Regen Heater Stack	NOx	0.50	2.19
		CO	0.42	1.84
		VOC	0.03	0.12
		SO <sub>2</sub>	0.01	0.01
		PM	0.04	0.17
		PM <sub>10</sub>	0.04	0.17
		PM <sub>2.5</sub>	0.04	0.17
H-08	Boiler Stack	NOx	1.47	6.44
		CO	1.23	5.41
		VOC	0.08	0.35
		SO <sub>2</sub>	0.01	0.04
		PM	0.11	0.49
		PM <sub>10</sub>	0.11	0.49
		PM <sub>2.5</sub>	0.11	0.49
H-09	Butane Regen Heater Stack	NOx	0.35	1.53

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		CO	0.29	1.29
		VOC	0.02	0.08
		SO <sub>2</sub>	0.01	0.01
		PM	0.03	0.12
		PM <sub>10</sub>	0.03	0.12
		PM <sub>2.5</sub>	0.03	0.12
H-11	Regen Heater	NOx	0.84	3.36
		CO	0.84	3.36
		VOC	0.40	1.60
		SO <sub>2</sub>	0.01	0.05
		PM	0.16	0.62
		PM <sub>10</sub>	0.16	0.62
		PM <sub>2.5</sub>	0.16	0.62
LR-1T	Truck Loading and Unloading Connections	VOC	0.65	0.29
FUG-1	Permitted Component Fugitives (5)	VOC	57.42	251.48
GAS-FUG	Gasoline Blending Area Fugitives (5)	VOC	0.71	3.13
FUG-PURITY1	LEP1 Fugitives (5)	VOC	0.51	2.22
FUG-PURITY2	LEP2 Fugitives (5)	VOC	0.57	2.50
DK4FUG	Dock 4 Fugitives (5)	VOC	0.08	0.37
H-03	A Glycol Heater Stack (6)	NOx	1.63	4.98
		CO	5.46	16.73
		VOC	0.36	1.10
		SO <sub>2</sub>	0.04	0.12
		PM	0.49	1.51
		PM <sub>10</sub>	0.49	1.51
		PM <sub>2.5</sub>	0.49	1.51
H-04	B Glycol Heater Stack (6)	NOx	1.37	4.18
		CO	5.46	16.73
		VOC	0.36	1.10
		SO <sub>2</sub>	0.04	0.12
		PM	0.49	1.51
		PM <sub>10</sub>	0.49	1.51

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		PM <sub>2.5</sub>	0.49	1.51
<b>Maintenance, Start-up and Shutdown Activities</b>				
MSSEQIP	Equipment MSS to atmosphere	VOC	1.79	0.11
MSSTANK	Tank MSS to atmosphere	VOC	0.01	0.01
FL-1	MSS	NOx	24.33	0.40
		CO	48.58	0.80
		VOC	170.94	2.80
		SO <sub>2</sub>	0.03	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) NOx - total oxides of nitrogen  
CO - carbon monoxide  
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1  
SO<sub>2</sub> - sulfur dioxide  
HAP - hazardous air pollutants  
PM - total particulate matter, suspended in the atmosphere, including PM<sub>10</sub> and PM<sub>2.5</sub>  
PM<sub>10</sub> - particulate matter equal to or less than 10 microns in diameter, including PM<sub>2.5</sub>  
PM<sub>2.5</sub> - particulate matter equal to or less than 2.5 microns in diameter
- (4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
- (5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
- (6) 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.
- (7) 87 hours per year of operation.
- (8) VOC emissions include emission rates for highly reactive volatile organic carbon (HRVOC) species of ethylene, propylene, butenes and 1,3 butadiene.

Date: May 8, 2017