

## Emission Sources - Maximum Allowable Emission Rates

Permit Number 110274 and N182

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)
3SK25.002	FRAC III Thermal Oxidizer	VOC	0.93	2.68
		NO <sub>x</sub>	0.64	2.20
		CO	1.93	6.59
		PM	0.19	0.65
		PM <sub>10</sub>	0.19	0.65
		PM <sub>2.5</sub>	0.19	0.65
		SO <sub>2</sub>	<0.01	0.01
3HR15.001	FRAC III Hot Oil Heater (215 MMBtu/hr) SCR Stack	VOC	0.25	1.22
		VOC (MSS)	5.73	--
		NO <sub>x</sub>	1.18	5.33
		NO <sub>x</sub> (MSS)	6.87	--
		CO	7.25	31.60
		PM	1.42	6.20
		PM <sub>10</sub>	1.42	6.20
		PM <sub>2.5</sub>	1.42	6.20
		SO <sub>2</sub>	0.14	0.61
		NH <sub>3</sub>	1.02	4.43

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3HR15.002	FRAC III Mole Sieve Regenerator heater (59 MMBtu/hr)	VOC	0.06	0.31
		VOC (MSS)	1.41	--
		NO <sub>x</sub>	0.29	1.31
		NO <sub>x</sub> (MSS)	1.36	--
		CO	1.78	7.76
		PM	0.35	1.52
		PM <sub>10</sub>	0.35	1.52
		PM <sub>2.5</sub>	0.35	1.52
		SO <sub>2</sub>	0.03	0.15
3SV19.001	FRAC III Amine Tank 1	VOC	0.26	<0.01
3SV19.002	FRAC III Amine Tank 2	VOC	0.09	<0.01
3SV19.009	FRAC III Diesel Tank	VOC	0.02	<0.01
3SV19.006	FRAC III Slop Water Tank	VOC	<0.01	<0.01
3SV19.006L	FRAC III Slop Water Loading	VOC	<0.01	<0.01
3FUG	FRAC III Fugitives (5)	VOC	1.42	6.23
		Propylene	0.18	0.80
3GEN.001	FRAC III Emergency Diesel Generator	VOC	3.09	0.15
		NO <sub>x</sub>	3.09	0.15
		CO	2.70	0.14
		PM	0.15	0.01
		PM <sub>10</sub>	0.15	0.01
		PM <sub>2.5</sub>	0.15	0.01
		SO <sub>2</sub>	<0.01	<0.01
3PM18.044	FRAC III Firewater Pump Diesel Engine	VOC	3.02	0.15

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		NO <sub>x</sub>	3.02	0.15
		CO	2.65	0.13
		PM	0.15	0.01
		PM <sub>10</sub>	0.15	0.01
		PM <sub>2.5</sub>	0.15	0.01
		SO <sub>2</sub>	<0.01	<0.01
ISK25.001	Plant Flare MSS (6)	VOC	320.35	7.96
		Propylene	135.72	2.23
		NO <sub>x</sub>	67.03	4.90
		CO	133.82	9.78
		SO <sub>2</sub>	0.44	0.05
3MSS1	FRAC III Miscellaneous Maintenance	VOC	14.63	0.15
		Propylene	7.56	0.08

- (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<sub>x</sub> - total oxides of nitrogen
- SO<sub>2</sub> - sulfur dioxide
- PM - total particulate matter, suspended in the atmosphere, including PM<sub>10</sub> and PM<sub>2.5</sub>, as represented
- PM<sub>10</sub> - total particulate matter equal to or less than 10 microns in diameter, including PM<sub>2.5</sub>, as represented
- PM<sub>2.5</sub> - particulate matter equal to or less than 2.5 microns in diameter
- CO - carbon monoxide
- NH<sub>3</sub> - ammonia
- (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) The Plant Flare, EPN ISK25.001, is also authorized under Standard Permit (SP) Registration 83813. SP 83813 authorizes facilities in FRAC I, FRAC II, FRAC Export and the combustion of vent gas and sweep gas sources through the Plant Flare, and the Plant Flare Pilot Gas and emissions and those potential emissions and authorized limits are associated with that registration. The allowable emissions in this MAERT are for the sources represented in this permit for FRAC III sources only, and the annual 12 month rolling limit includes both the normal operations and planned maintenance, startup and shutdown emissions.

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Date: November 21, 2014