

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 5269A

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 *	Source	Air Contaminant	<u>Emission Rates</u>	
<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Name (3)</u>	<u>lb/hr</u>	<u>TPY</u>
003	MDEA Reboiler	VOC	0.05	0.21
		NO <sub>x</sub>	2.35	10.30
		CO	0.59	2.58
		SO <sub>2</sub>	0.01	0.04
		PM	0.10	0.46
006	Dehydrator Flare	VOC	0.37	1.61
		Benzene (4)	0.01	0.01
		NO <sub>x</sub>	0.65	2.83
		CO	3.52	15.40
		SO <sub>2</sub>	0.31	1.36
		H <sub>2</sub> S	<0.01	0.03
007	Amine and SRU Flare (5)	VOC	0.13	0.55
		NO <sub>x</sub>	0.62	2.69
		CO	3.35	14.70
		SO <sub>2</sub>	0.31	1.36
		H <sub>2</sub> S	<0.01	0.03
008	Preheater (SRU)	VOC	<0.01	0.03
		NO <sub>x</sub>	0.11	0.47
		CO	0.02	0.10
		SO <sub>2</sub>	<0.01	<0.01
		PM	<0.01	0.03
009	Reheater (SRU)	VOC	<0.01	0.01
		NO <sub>x</sub>	0.05	0.21
		CO	0.01	0.04
		PM	<0.01	0.01

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>	
			<u>lb/hr</u>	<u>TPY</u>
010	Reheater	VOC	<0.01	0.01
		NO <sub>x</sub>	0.05	0.21
		CO	0.01	0.04
		PM	<0.01	0.01
012	Condensate Flare	VOC	0.04	0.20
		Benzene	<0.01	<0.01
		NO <sub>x</sub>	0.01	0.43
		CO	0.53	2.32
		SO <sub>2</sub>	0.31	1.38
		H <sub>2</sub> S	<0.01	0.03
013	Plant Flare (5)	VOC	0.03	0.12
		NO <sub>x</sub>	0.13	0.56
		CO	0.69	3.04
		SO <sub>2</sub>	0.92	4.04
		H <sub>2</sub> S	0.02	0.08
015	Dehydrator Reboiler	VOC	0.01	0.05
		NO <sub>x</sub>	0.20	0.88
		CO	0.04	0.18
		SO <sub>2</sub>	<0.01	<0.01
		PM	0.01	0.05
017	Auxiliary Boiler	VOC	0.01	0.05
		NO <sub>x</sub>	0.22	0.96
		CO	0.04	0.19
		SO <sub>2</sub>	<0.01	0.01
		PM	0.01	0.06
018	Reheater (SRU)	VOC	<0.01	0.01
		NO <sub>x</sub>	0.05	0.21
		CO	0.01	0.04

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>	
			<u>lb/hr</u>	<u>TPY</u>
		PM	<0.01	0.01

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
019	Thermal Oxidizer (6)	VOC	0.01	0.10
		NO <sub>x</sub>	0.42	1.84
		CO	0.08	0.37
		SO <sub>2</sub>	142.0	622.0
		H <sub>2</sub> S	0.30	1.31
		PM	<0.01	0.01
019	Thermal Oxidizer (7)	VOC	0.01	0.10
		NO <sub>x</sub>	0.42	1.84
		CO	0.08	0.37
		SO <sub>2</sub>	170.70	39.99
		H <sub>2</sub> S	0.68	2.99
		PM	0.01	0.04
020	Sulfur Pit Vent	H <sub>2</sub> S	<0.01	0.02
023	Line Heater	VOC	0.01	0.03
		NO <sub>x</sub>	0.14	0.61
		CO	0.03	0.12
		SO <sub>2</sub>	<0.01	<0.01
		PM	<0.01	0.04
024	Solar Saturn Compressor	VOC	0.02	0.11
		NO <sub>x</sub>	3.48	15.20
		CO	1.32	5.78
		SO <sub>2</sub>	0.01	0.02
		PM	0.24	1.05
025	Solar Saturn Compressor	VOC	0.02	0.11
		NO <sub>x</sub>	3.48	15.20
		CO	1.32	5.78
		SO <sub>2</sub>	0.01	0.02
		PM	0.24	1.05
026	Starter Vent (8)	VOC	0.46	0.01

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
027	Solar Saturn Compressor	VOC	0.02	0.11
		NO <sub>x</sub>	3.48	15.20
		CO	1.32	5.78
		SO <sub>2</sub>	0.01	0.02
		PM	0.24	1.05
030	Sulfur Truck Loading	H <sub>2</sub> S	<0.03	<0.01
		PM	0.29	0.05
FG-1	Fugitive Emissions (9)	VOC	1.13	4.95
		Benzene (4)	0.01	0.04
		H <sub>2</sub> S	1.97	8.62

- (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 General Rule 101.1
  - NO<sub>x</sub> - total oxides of nitrogen
  - CO - carbon monoxide
  - SO<sub>2</sub> - sulfur dioxide
  - PM - particulate matter, suspended in the atmosphere, including PM<sub>10</sub>
  - PM<sub>10</sub> - 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.

  - H<sub>2</sub>S - hydrogen sulfide
- (4) Speciated emissions are included in total VOC emission rates.
- (5) Flare is also for emergency flaring during periods of maintenance or process upset as represented in permit application.
- (6) Emission rates when Sulfur Recovery Plant is operating.
- (7) Emission rates when Sulfur Recovery Plant is not operating due to feed rates of less than 2 long tons per day of sulfur.

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- (8) Emission rates are an estimate only based on an average of 40 seconds per start with an estimated 52 starts per year and should not be considered a maximum allowable emission rate. (Starter vents approximately 6.6 lb/hr sweet natural gas that is approximately 7 percent wt. VOC.)
- (9) 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 Hrs/year\_\_\_\_\_  
8,760

Dated\_\_\_\_\_