

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 23271

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**
16STK-001	Hydrogen Reformer	CO	14.40	63.07
		NH <sub>3</sub>	0.55	2.40
		NO <sub>x</sub>	10.80	47.30
		PM	1.30	5.71
		SO <sub>2</sub>	0.10	0.45
		VOC	0.94	4.13
16VNT-002	Amine Stripper Vent	CO	6.81	29.84
04FUG	Fugitives (4)	NH <sub>3</sub>	0.64	2.81
		VOC	5.93	25.95
04LRC-006	Railcar Loading	VOC	0.74	0.07
04VNT-013	Refining Jet Condenser System	NH <sub>3</sub>	0.10	0.45
		VOC	0.19	0.84
04LTR-018	Truck Loading	NH <sub>3</sub>	0.01	0.02
		VOC	0.96	0.05
04TFX-020	North DCH Tanks Breather Pot	VOC	1.35	0.24
04TFX-021	South DCH Tank Breather Pot	VOC	1.35	0.24
04TVS-023	HMD Blend Tanks A-D Breather Pots	VOC	0.06	0.01
04TFX-025	"F" Crude DCH Tank Breather Pot	NH <sub>3</sub>	1.94	0.35
		VOC	8.43	1.52
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		VOC	8.43	1.52

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**
04TFX-028	"A" Refined Tank Breather Pot	VOC	0.04	0.01
04TFX-029	"B" Refined Tank Breather Pot	VOC	0.04	0.01
Combined emissions from EPNs 04TFX-028 and 04TFX-029 shall not exceed		VOC	0.07	0.01
04FLR-032	Diamine Flare (HMD Flare)	CO	42.54	34.34
		H <sub>2</sub> S	0.01	0.01
		NH <sub>3</sub>	4.48	8.17
		NO <sub>x</sub>	7.24	8.01
		PM	0.60	0.43
		SO <sub>2</sub>	0.20	0.14
		VOC	7.80	6.55
04TVS-033	Co-Product Storage Tanks A - E Breather Pot	VOC	4.27	0.46
04TVS-034	Crude HMD Tanks A and B	NH <sub>3</sub>	3.67	7.60
		VOC	2.78	2.11
04CWA-035	Cooling Basin (4)	NH <sub>3</sub>	0.11	0.50
		VOC	0.41	1.78
04TFX-508	HMD Permeate Tank	NH <sub>3</sub>	0.25	0.11
		VOC	0.01	0.01
04TFX-506	Aqueous Waste Tank	NH <sub>3</sub>	1.40	0.01
		VOC	0.01	0.01
04LBA-006A	Loading: Barge	VOC	0.04	0.05
16TFX006	MDEA Tank	VOC	0.08	0.01
16TFX005	MDEA Tank	VOC	0.01	0.01
04LDR022C	Drum loading of crude HMI	VOC	0.01	0.01
04DGR001	HMD Maintenance Degreaser Area	VOC	0.36	0.33

16VNT-004	Hydrogen Plant Vent (MSS)	CO	466.88	10.55
		VOC	106.54	3.41
04VNT-007	Synthesis Process Vent (MSS)	NH <sub>3</sub>	6.75	0.01
		VOC	0.02	0.01
04VNT-009	Refining Process Vent (MSS)	NH <sub>3</sub>	0.38	0.01
		VOC	0.01	0.01
04VNT-010	Foreshots Column Vent (MSS)	NH <sub>3</sub>	1.32	0.09
		VOC	0.37	0.03
04FLR-032	Diamine Flare (HMD Flare) (MSS)	CO	0.25	0.01
		NH <sub>3</sub>	1.19	0.01
		NO <sub>x</sub>	0.33	0.01
04TANKOPEN	Tank Depressure (MSS)	NH <sub>3</sub>	6.31	0.01
		VOC	2.24	0.02
04FUG-MSS	Fugitive Emissions (MSS)	NH <sub>3</sub>	2.87	0.09
		PM/PM <sub>10</sub>	0.20	0.01
		VOC	17.84	1.35

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

- (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
  - H<sub>2</sub>S - hydrogen sulfide
  - NH<sub>3</sub> - ammonia
  - NO<sub>x</sub> - total oxides of nitrogen
  - 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
  - SO<sub>2</sub> - 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.

\* 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

\*\* Compliance with annual emission limits is based on a rolling 12-month period. **(9/05)**

Dated: July 5, 2011