

Emission Sources - Maximum Allowable Emission Rates

Permit Number 23271 and PSDTX1416

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)
16STK-001	Hydrogen Reformer Stack	CO	14.40	63.07
		NH ₃	0.55	2.40
		NO _x	10.80	47.30
		PM	1.30	5.71
		PM _{2.5}	1.30	5.71
		PM ₁₀	1.30	5.71
		SO ₂	0.03	0.11
		VOC	0.94	4.13
16VNT-002	Amine Stripper Vent	CO	7.17	29.88
04FUG	Fugitives (5)	Boric Acid	0.01	0.01
		CO	0.01	0.01
		NH ₃	0.37	1.61
		VOC	9.79	42.82
04LRC-006	Railcar Loading Scrubber Emissions	VOC	2.88	0.04
04LRC-006F	Railcar Loading Uncaptured Emissions	VOC	2.88	0.04
04VNT-013	Refining System Vent	NH ₃	1.14	1.06
		VOC	0.35	1.55
04LTR-018	Truck Loading Scrubber Emissions	NH ₃	0.84	0.02
		VOC	5.46	0.16
04LTR-018F	Truck Loading Uncaptured Emissions	NH ₃	0.22	0.01

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		VOC	1.29	0.03
04TVS-023	HMD Blend Tanks A-D Breather Pots	VOC	0.22	0.08
04TFX-025	"F" Crude DCH Tank Breather Pot	NH ₃	0.01	0.01
		VOC	11.56	2.86
04TFX-028	"A" Refined Tank Breather Pot	VOC	0.10	0.01
04TFX-029	"B" Refined Tank Breather Pot	VOC	0.10	0.01
Combined emissions from EPNs 04TFX-028 and 04TFX-029 shall not exceed		VOC	0.16	0.02
04FLR-032	Diamine Flare (HMD Flare) (Normal Operation Only)	CO	74.44	69.72
		H ₂ S	0.19	0.01
		HCN	0.07	0.06
		NH ₃	10.20	16.86
		NO _x	25.15	27.34
		SO ₂	17.62	0.11
		VOC	14.09	7.04
04FLR-032	Diamine Flare (HMD Flare) (Maintenance, Startup, and Shutdown [MSS] Activities Only)	CO	12.04	0.32
		NH ₃	0.60	0.01
		NO _x	5.00	0.13
		VOC	24.35	0.66
04TVS-033	Co-Product Storage Tanks A - E Breather Pot	VOC	13.16	0.71
04TVS-034	Crude HMD Tanks A and B	NH ₃	3.53	16.62
		VOC	1.18	2.29
04CWA-035	Cooling Basin (5)	NH ₃	0.34	1.49
		VOC	1.79	7.86
04TFX-508	HMD Permeate Tank	NH ₃	0.16	0.09

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		VOC	0.01	0.01
04TFX-506	Aqueous Waste Tank	NH ₃	0.97	0.01
		VOC	0.01	0.01
04LBA-006A	Barge Loading	VOC	0.06	0.02
04LBA-006F	Barge Loading Uncaptured Emissions	VOC	0.06	0.02
16TFX006	MDEA Tank	VOC	0.16	0.01
16TFX005	Dilute MDEA Tank	VOC	0.13	0.01
04LDR022C	Drum Loading of Crude HMI	NH ₃	0.11	0.01
		VOC	0.10	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	NH ₃	0.02	0.01
		VOC	0.01	0.01
04VNT-007	Synthesis Process Vent (MSS)	NH ₃	6.75	0.01
		VOC	0.02	0.01
04VNT-009	Refining Process Vent (MSS)	NH ₃	0.38	0.01
		VOC	0.01	0.01
04TANK-OPEN	Tank Depressure (MSS)	NH ₃	6.31	0.01
		VOC	2.23	0.02
04FUG-MSS	Fugitive Emissions (MSS) (5)	NH ₃	8.80	0.47
		PM	0.08	<0.01
		PM _{2.5}	0.08	<0.01
		PM ₁₀	0.08	<0.01

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		VOC	27.51	4.68
		HCL	0.10	0.43
04SWT-002	Flushing N112 Unloading Line to Sump	VOC	0.01	0.01
11LTR067AF	WOTL Uncaptured Emissions	VOC	0.22	0.01
04LDR-022D	Drum Loading Refined HMI	VOC	0.09	0.01
04LDR-036B	Drum Loading Crude MGN	VOC	0.01	0.01
04LDR-037B	Drum Loading Refined MGN	VOC	0.01	0.01
04LDR-025B	Drum Loading Crude DCH	NH ₃	0.01	0.01
		VOC	0.07	0.01
04LDR-020B	Drum Loading Refined DCH	VOC	0.01	0.01
04LDR-028B	Drum Loading Refined HMD	VOC	0.02	0.01
04LDR-033D	Drum Loading BHMT	VOC	0.02	0.01
04SEP-001	Oil/Sand Separator	NH ₃	0.36	0.11
		VOC	0.01	0.01
11BAG311	Wastewater Baghouse	PM	0.04	0.17
		PM ₁₀	0.04	0.17
		PM _{2.5}	0.04	0.17
11BAGACID	Wastewater Baghouse	PM	0.04	0.17
		PM ₁₀	0.04	0.17
		PM _{2.5}	0.04	0.17
11BAG311 & 11BAGACID	Wastewater Baghouses	VOC	0.02	0.11
11BAGFLTR	Wastewater Baghouse	PM	0.14	0.60
		PM _{2.5}	0.14	0.60
		PM ₁₀	0.14	0.60

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04TFX022B	Refined DCH Tank	VOC	0.71	0.10
04TFXACID	Acid Cleaning Storage Tank	VOC	0.01	0.01
		HCL	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)
- | | | |
|-------------------|---|---|
| CO | - | carbon monoxide |
| H ₂ S | - | hydrogen sulfide |
| NH ₃ | - | ammonia |
| NO _x | - | total oxides of nitrogen |
| PM | - | particulate matter, suspended in the atmosphere, including PM ₁₀ |
| PM _{2.5} | - | particulate matter equal to or less than 2.5 microns in diameter |
| PM ₁₀ | - | particulate matter equal to or less than 10 microns in diameter |
| SO ₂ | - | sulfur dioxide |
| VOC | - | volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1 |
| HCl | - | hydrochloric acid |
| HCN | - | hydrogen cyanide |
- (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.

Date: September 21, 2018