

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 20057

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**
<u>APPLICABLE TO BOTH DMTA OPERATION AND HMP OPERATION</u>				
K-1798	Flare Stack	PM	0.01	0.01
		VOC	0.01	0.01
		NO _x	0.02	0.07
		SO ₂	0.01	0.01
		CO	0.02	0.07
WB-1769	HMP Scrubber	VOC	0.10	0.03
		Formaldehyde	0.01	0.01
		MEK	0.01	0.01
		MeOH	0.01	0.01
PK-1901	Cooling Tower (4)	VOC	0.40	1.76
K-1970	DMTA Generator	VOC	1.59	0.02
		PM	1.39	0.02
		CO	4.24	0.06
		SO ₂	1.30	0.02
		NO _x	19.65	0.26
<u>DMTA OPERATION ONLY</u>				
K-1790	Vent Stack	PM	0.01	0.01
		VOC	0.40	1.74
		NO _x	2.06	9.05
		SO ₂	0.52	2.29
		CO	0.05	0.23
		Cl ₂	0.01	0.09
		HCl	0.10	0.44
		H ₂ S	0.01	0.02

S582F-1	Storage Tank Farm (4)	VOC	1.37	6.00
		Cl ₂	0.04	0.19
		H ₂ S	0.15	0.64
		HCl	0.28	1.22
S582F-2	Process Unit Fugitives (4)	VOC	0.88	3.86
D-1868	HCl/Cl ₂ Scrubber	HCl	0.01	0.01
HMP OPERATION ONLY				
K-1790	Vent Stack	VOC	0.44	0.77
		NO _x	0.60	0.99
		SO ₂	0.01	0.01
		CO	0.10	0.15
		PM	0.01	0.01
		Formaldehyde	0.02	0.03
		MEK	0.01	0.01
		MeOH	0.02	0.07
D-1868	HCl/Cl ₂ Scrubber	VOC	0.01	0.01
S582F-1	Tank Farm Fugitives (4)	VOC	0.16	0.30
		Formaldehyde	0.01	0.03
		MEK	0.01	0.01
		MeOH	0.15	0.67
S582F-2	Process Unit Fugitives (4)	VOC	0.42	11.84
		Formaldehyde	0.01	0.03
		MEK	0.01	0.01
		MeOH	0.08	0.35
S582F-3	Wastewater Fugitives (4)	Formaldehyde	0.01	0.01
		MEK	0.01	0.01
		MeOH	0.02	0.07

PLANNED MAINTENANCE, STARTUP, AND SHUTDOWN (MSS) EMISSION RATE LIMITS

Vacuum Truck	VOC
Filter Clearing (DMTA and HMP)	VOC
Surface Coating (Hand painting/Aerosol)	VOC
Filter Purging	VOC
Tank Clearing	VOC

MSS-DMTA	Small and Large Equipment Purging (DMTA and HMP)	VOC		
	DMTA/HMP Flare Maintenance, Start-Up and Shut-Down	VOC		
		VOC	38.88	2.43
MSS-DMTA	Small and Large Equipment Purging (DMTA)	Cl ₂		
	Filter Clearing (DMTA) Maintenance, Start-Up and Shut-Down	Cl ₂		
		Cl ₂	4.50	0.10
MSS-DMTA	Small and Large Equipment Purging (HMP)	HCl		
	Filter Clearing (HMP) Maintenance, Start-Up and Shut-Down	HCl		
		HCl	1.87	0.04
MSS-DMTA	Small and Large Equipment Purging (DMTA)	H ₂ S		
	Maintenance, Start-Up and Shut-Down	H ₂ S		
			0.01	0.01
MSS-DMTA	Surface Coating (Aerosol)	PM		
	Maintenance, Start-Up and Shut-Down	PM		
			0.06	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) PM - particulate matter, suspended in the atmosphere, including PM₁₀
PM₁₀ - 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.

- VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code ' 101.1.
The VOC does not include hazardous air pollutants.
- NO_x - total oxides of nitrogen
- SO₂ - sulfur dioxide
- CO - carbon monoxide
- Cl₂ - chlorine
- HCl - hydrochloric acid mist
- H₂S - hydrogen sulfide
- MEK - methyl ethyl ketone
- MeOH - methyl alcohol
- (4) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
- * Emission rates are based on and the facilities are limited by the following maximum operating schedule:
- 5,160 hours per year (hrs/yr) for DMTA operation and 3,600 hrs/yr for HMP operation.
- ** Compliance with annual emission limits is based on a rolling 12-month period.

Dated

June:14, 2011