EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Numbers 865A and PSD-TX-1016

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**
ColumnMain	Acrolein Unit Column/Filter Cleaning	VOC	0.01	0.01
D215	Diesel Tank D-215	VOC	0.02	0.01
D307	Methanol Tank D-307	VOC	0.05	0.25
D310	Methanol Tank D-310	VOC	0.07	0.36
D398	Gasoline Tank D-398	VOC	4.56	0.22
D399	Diesel Tank D-399	VOC	0.02	0.01
D2307	Methanol Tank D-2307	VOC	0.05	0.25
D3191A	Diesel Tank 3191A	VOC	0.02	0.01
D3191B	Diesel Tank 3191B	VOC	0.02	0.01
D8540	Caustic Tank	NaOH	0.01	0.01
D8600	Sulfuric Acid Tank	H_2SO_4	0.01	0.01
Flare	Flare (5) (9) Steady State Operation	CO (8)	322.97	82.07
		H_2S	13.92	5.40
		NO_x (8)	37.67	9.57
		SO_2 (8)	3665.97	311.30
		TRS	41.35	9.89
		VOC 32.33	5.21	
		H_2SO_4 7.36	32.25	

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AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
	Flare Start-Up, Shutdown, and Maintenance	CO (8)	322.97	82.07
		H_2S	14.41	1.24
		NO_x (8)	37.67	9.57
		SO_2 (8)	2541.37	165.02
		TRS	24.27	3.67
		VOC 32.38	4.01	
	Total Hourly and Annual Emissions from Steady State and SSM (10)	CO (8)	322.97	82.07
		H_2S	28.33	6.63
		NO_x (8)	37.67	9.57
		SO_2 (8)	6207.34	476.33
		TRS 65.62	13.57	
		VOC 64.71	9.22	
		H_2SO_4 7.36	32.25	
H202	Heat Transfer Fluid Heater (31 MMBtu/hr)	CO	2.59	11.32
		NO_x	3.08	13.48
		PM_{10} 0.23	1.02	
		SO_2	0.02	0.08
		VOC	0.17	0.74
H401/H402	Sulfur Heater/Methane Heater (7)	CO	1.32	5.77
		NO_x	1.61	7.04
		PM_{10}	0.11	0.52
		SO_2 0.01	0.05	
		VOC	0.09	0.38
H501/H502	Sulfur Heater/Methane (7)	CO	1.32	5.77
		NO_x	1.61	7.04
		PM_{10}	0.11	0.52
		SO_2 0.01	0.05	
		VOC	0.09	0.38
H2202	Heat Transfer Fluid Heater (31 MMBtu/hr)	CO	2.59	11.32
		NO_x	3.08	13.48

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
		PM_{10} 0.23	1.02	
		SO_2	0.02	0.08
		VOC 0.17	0.74	
INCIN	Incinerator	CO	2.03	8.90
		H_2S 0.10	0.42	
		NO_x 1.57	6.87	
		PM_{10}	0.89	3.90
		SO_2	139.00	83.06
		VOC 0.37	1.61	
		TRS 0.36	1.56	
S-1	Sulfur Storage Tank	H_2S	0.23	1.00
		SO_2 0.86	3.75	
		TRS 0.23	1.00	
S-2	Sulfur Pit	H_2S	0.04	0.02
		SO_2 0.17	0.09	
		TRS 0.04	0.02	
S-3	Sulfur Truck	H_2S	0.02	0.01
		SO_2 0.07	0.04	
		TRS 0.02	0.01	
SULFOX-CT	Sulfox Cooling Tower	PM_{10}	0.06	0.25
		VOC 0.61	2.65	
SULFOX-INH	Bagfilter	PM_{10}	0.08	0.01
SULFOX-TO	Thermal Oxidizer (134.5 MMBtu/hr)	CO (8)	9.56	41.87
		NO_x (8)	8.35	36.57

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	Emission Rates * TPY**
	Steady State Service	PM_{10}	1.95	8.54
		SO_2 (8)	4.21	16.88
		TRS 0.89	0.02	
		VOC 7.84	29.28	
	Thermal Oxidizer (134.5 MMBtu/hr) Start-Up, Shutdown, and Maintenance	CO (8)	9.56	41.87
		NO_x (8)	8.35	36.57
		PM_{10}	1.95	8.54
		SO_2 (8)	1156.47	1.55
		TRS 0.89	0.02	
		VOC 7.84	29.28	
	Total Hourly and Annual Emissions From Steady State and SSM (10)	CO (8)	9.56	41.87
		NO_x (8)	8.35	36.57
		PM_{10}	1.95	8.54
		SO_2 (8)	1157.44	18.43
		TRS 0.89	0.02	
		VOC 7.84	29.28	
WWTP	Wastewater Treatment Plant	H_2S	0.05	0.20
		VOC	0.12	0.50
X-426A	Steam Boiler (15.8 MMBtu/hr)	CO	1.33	5.81
		NO_x	2.05	9.00
		PM_{10} 0.12	0.53	
		SO_2	0.01	0.04
		VOC 0.09	0.38	
X-426B	Steam Boiler (15.8 MMBtu/hr)	CO	1.33	5.81
		NO_x	2.05	9.00
		PM_{10} 0.12	0.53	
		SO_2	0.01	0.04
		VOC 0.09	0.38	
ACRO-Fug	Acrolein Process Fugitives (4)	VOC	0.07	0.31

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
ACRO-TksFug	Acrolein Storage Tanks Fugitives (4)	VOC	0.01	0.06
ACRO-WWFug	Acrolein Wastewater Fugitives (4)	VOC	0.01	0.01
B1/B2 Chlr	B1/B2 Units Chiller System (4)	HCFC	0.01	0.02
BMT-1E/T	Fugitives (4) (6)	H_2S	0.01	0.01
	Train 1 - EtSH or	TRS	0.01	0.01
	TBM Production	VOC	0.30	0.07
BMT-1M	Fugitives (4) (6)	H_2S	0.01	0.04
	Train 1 - MeSH Production	TRS	0.02	0.07
		VOC	0.05	0.22
BMT-2M	Fugitives (4)	H_2S	0.01	0.05
	Train 2 - MeSH Production	TRS	0.02	0.09
		VOC 0.08	0.33	
DMDS	Dimethyl Disulfide Area	TRS	0.06	0.24
	Process Fugitives (4)	VOC	0.06	0.24
DMS	Dimethyl Sulfide Area	TRS	0.02	0.10
	Process Fugitives (4)	VOC	0.02	0.10
F-1	H_2S Plant Process Fugitives (4)	H_2S	0.01	0.01
		TRS	0.01	0.01
		VOC 0.01	0.01	
FlareFug	Flare Area Fugitives (4)	VOC	0.01	0.01
Fug-Incin	Incinerator Process Fugitives (4)	H_2S	0.01	0.01
		VOC 0.01	0.01	
MMP-Fug	MMP Process Area Fugitives (4)	VOC	0.13	0.55
MMPRC-Fug	MMP Railcar Loading Area	VOC	0.01	0.01

	Process Fugitives (4)			
MMPtks-Fug	MMP Storage Area Process Fugitives (4)	VOC	0.01	0.04
PR-Tower	Product Recovery Tower Fugitives (4)	H_2S	0.01	0.01
		TRS	0.01	0.01
		VOC	0.02	0.10
RCSHIP	Fugitives Railcar Loading/Unloading (4)	TRS	0.03	0.11
		VOC	0.03	0.11
RUNDOWN	Rundown Tank Fugitives (4)	H_2S	0.01	0.01
		TRS	0.11	0.46
		VOC	0.11	0.46
STORAGE	Fugitives Storage Tanks (4)	TRS	0.15	0.64
		VOC	0.16	0.69
SulfoxChlr	Sulfox Chiller System (4)	HCFC	0.01	0.01
SWS	Fugitives Sour Water Strippers (4)	H_2S	0.01	0.01
		TRS	0.01	0.01
		VOC	0.01	0.01
TO-Fug	Thermal Oxidizer Process Fugitives (4)	VOC	0.01	0.01
TTSHIP	Fugitives Tank Truck Loading/Unloading (4)	TRS	0.03	0.11
		VOC	0.03	0.11

(1) Emission point identification - either specific equipment designation or emission point number from a plot plan.
(2) Specific point source names. 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.
NaOH - sodium hydroxide
H_2SO_4 - sulfuric acid
CO - carbon monoxide
H_2S - hydrogen sulfide
NO_x - total oxides of nitrogen
SO_2 - sulfur dioxide
TRS - total reduced sulfur. Includes H_2S and sulfur bearing VOC. Excludes SO_2
PM_{10} - particulate matter (PM) equal to or less than 10 microns in diameter. Where PM is not listed, it shall be assumed that no PM greater than 10 microns is emitted.
HCFC - hydrochlorofluorocarbons

(4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.

(5) Steady state operation

(6) The BMT-1 Unit can produce either MeSH, EtSH or TBM. Therefore, emissions from BMT-1M and BMT-1E/T do not occur simultaneously.

(7) Common exhaust stack

(8) PSD-TX-1016 pollutant

(9) 416 hours per calendar year operation as the backup control device for EPN Sulfox-TO when it is not operating and 416 hours per calendar year for EPN INCIN when it is not operating.

(10) The start-up, shutdown, and maintenance emissions and steady state emissions are not enforceable emission limits. The total is done to clarify the total emission rates from each method of operation. The total annual and hourly emission rates are the only enforceable limits.

* Emission rates are based on and the facilities are limited by the following maximum operating schedule:

24 Hrs/day 7 Days/week 52 Weeks/year

** Compliance with annual emission limits is based on a rolling 12-month period beginning with the first full calendar month after the February 2004 amendment. This 12-month basis is to be re-tabulated each full calendar month.

Dated February 26, 2004