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	80.66
		H_2S	13.92	1.05
		NO_x (8)	37.67	9.41
		SO_2 (8)	3665.97	395.13

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
		TRS	41.35	5.17
		VOC 32.33	7.58	
	Flare	CO (8)	322.97	80.66
	Start-up, Shutdown, and Maintenance	H_2S	14.41	0.39
		NO_x (8)	37.67	9.41
		SO_2 (8)	2541.37	106.44
		TRS	24.27	0.51
		VOC 32.38	0.85	
	Total hourly and annual emissions	CO (8)	322.97	80.66
	from steady state and SSM (10)	H_2S	28.33	1.44
		NO_x (8)	37.67	9.41
		SO_2 (8)	6207.34	501.57
		TRS 65.62	5.68	
		VOC 64.71	8.43	
H202	Heat Transfer Fluid Heater	CO	2.59	11.32
	(31 MMBtu/hr)	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

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)		Emission Rates * lb/hr	TPY**
			AIR CONTAMINANTS DATA		
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
		PM_{10}		0.23	1.02
			SO_2	0.02	0.08
		VOC		0.17	0.74
INCIN	Incinerator		CO	1.39	6.07
		H_2S		0.10	0.42
		NO_x		1.06	4.66
			PM_{10}	0.13	0.55
			SO_2	139.00	83.06
		VOC		1.69	7.41
S-1	Sulfur Storage Tank		H_2S	0.23	1.00
		SO_2		0.86	3.75
S-2	Sulfur Pit		H_2S	0.04	0.02
		SO_2		0.17	0.09
S-3	Sulfur Truck		H_2S	0.02	0.01
		SO_2		0.07	0.04
SULFOX-Chlr	Sulfox Chiller System		HCFC	0.01	0.01
SULFOX-CT	Sulfox Cooling Tower		PM_{10}	0.06	0.25
		VOC		0.61	2.65

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**
SULFOX-INH	Bagfilter	PM_{10}	0.08	0.01
SULFOX-TO	Thermal Oxidizer	CO (8)	9.56	41.87
	(134.5 MMBtu/hr)	NO_x (8)	8.35	36.57
	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	CO (8)	9.56	41.87
	(134.5 MMBtu/hr)	NO_x (8)	8.35	36.57
	Start-up, Shutdown, and Maintenance	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	CO (8)	9.56	41.87
	from steady state and SSM (10)	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	CO	1.33	5.81
	(15.8 MMBtu/hr)	NO_x	2.05	9.00
		PM_{10}	0.12	0.53
		SO_2	0.01	0.04
		VOC	0.09	0.38

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	AIR CONTAMINANTS DATA Emission Rates * lb/hr	TPY**
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
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

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
		AIR CONTAMINANTS DATA		
DMS	Dimethyl Sulfide Area Process Fugitives (4)	TRS	0.02	0.10
		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 Process Fugitives (4)	VOC	0.01	0.01
MMPtks-Fug	MMP Storage Area Process Fugitives (4)	VOC	0.01	0.04

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*
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 plot plan.
(2) Specific point source name. For fugitive sources use area name or fugitive source name.
(3) CO - carbon monoxide
HCFC - hydrochlorofluorocarbons
H_2S - hydrogen sulfide
NH_3 - ammonia

NO_x - total oxides of nitrogen

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.

SO_2 - sulfur dioxide

TRS - total reduced sulfur. Includes H_2S and sulfur bearing VOC. Excludes SO_2

VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1.

(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 when Emission Point No. Sulfox-TO is not operating.

* 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.

Dated_____