

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 865A

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

<u>Emission **</u>	Source	Air Contaminant	<u>Emission Rates</u>	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY*
BMT-1E/T	Fugitives (4) (6)	VOC	2.40	10.50
	Train 1 - EtSH or	H ₂ S	<0.01	<0.01
	TBM Production	TRS	<0.01	<0.01
BMT-1M	Fugitives (4) (6)	VOC	0.33	1.43
	Train 1 - MeSH Production	H ₂ S	0.01	0.06
		TRS	0.02	0.10
BMT-2M	Fugitives (4)	VOC	0.89	3.89
	Train 2 - MeSH Production	H ₂ S	<0.01	0.03
		TRS	0.01	0.05
BMT-3M	Fugitives (4)	VOC	0.33	1.43
	Train 3 - MeSH Production	H ₂ S	0.01	0.06
		TRS	0.02	0.10
CT-1	Cooling Tower	H ₂ S	0.03	0.07
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

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Emission Point No. (1)	Source Name (2)	AIR CONTAMINANTS DATA		
		Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
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
DMDS	Dimethyl Disulfide Area Fugitives (4)	VOC	0.06	0.24
		TRS	0.06	0.24
DMS	Dimethyl Sulfide Area Fugitives (4)	VOC	0.06	0.25
		TRS	0.06	0.25
F-1	Fugitives (4)	VOC	<0.01	<0.01
		H ₂ S	<0.01	<0.01
		TRS	<0.01	<0.01
		COS	<0.01	<0.01
		CS ₂	<0.01	<0.01
F-2	Fugitives (4)	VOC	<0.01	<0.01
		H ₂ S	<0.01	<0.01
		TRS	<0.01	<0.01
Flare/Flare2	Plant Flares, H-225 and H-2225 (5)	VOC	62.62	6.99
		NO _x	37.49	9.11
		SO ₂	6330.00	467.19
		CO	321.48	78.10
		H ₂ S	29.53	1.82
		TRS	96.25	6.37
FlareFug	Flare Area Fugitives (4)	VOC	<0.01	<0.01
Flare2Fug	Flare Area Fugitives (4)	VOC	<0.01	<0.01
H202	Oil Heater	VOC	0.08	0.37
		NO _x	4.40	19.30
		SO ₂	3.12	13.68
		SO ₃	0.04	0.19

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Emission Point No. (1)	Source Name (2)	AIR CONTAMINANTS DATA		
		Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
		PM ₁₀	0.44	1.93
		CO	1.10	4.82
H401 - H402	Sulfur Heater/Methane Heater 0.20		VOC	0.04
		NO _x	1.56	6.83
		SO ₂	0.01	0.04
		PM ₁₀	0.21	0.93
		CO	0.52	2.30
H501 - H502	Sulfur Heater/Methane Heater	VOC	0.04	0.20
		NO _x	1.56	6.83
		SO ₂	0.01	0.04
		PM ₁₀	0.21	0.93
		CO	0.52	2.30
H2202	Oil Heater	VOC	0.08	0.37
		NO _x	4.40	19.30
		SO ₂	3.12	13.68
		SO ₃	0.04	0.19
		PM ₁₀	0.44	1.93
		CO	1.10	4.82
H2VENT	Hydrogen Reformer Vent	VOC	0.11	0.40
		NO _x	1.00	0.85
		SO ₂	0.004	0.02
		PM ₁₀	0.17	0.43
		CO	0.71	1.87
		NH ₃	0.10	0.45
MEOHSCBR	Methanol Scrubber	VOC	0.93	4.05
		H ₂ S	<0.01	0.01
		TRS	0.01	0.04
RCSHIP	Fugitives (4) Railcar Loading/Unloading	VOC	0.09	0.37
		TRS	0.08	0.36

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Emission Point No. (1)	Source Name (2)	AIR CONTAMINANTS DATA		
		Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
RUNDOWN	Rundown Tank Fugitives (4)	VOC	0.23	0.99
		H ₂ S	<0.01	<0.01
		TRS	0.23	0.99
S-1	Sulfur Storage Tank	SO ₂	0.86	3.75
		H ₂ S	0.23	1.00
S-1E	Sulfur Storage Tank	SO ₂	0.86	3.75
		H ₂ S	0.23	1.00
S-2	Sulfur Pit	SO ₂	0.17	0.09
		H ₂ S	<0.01	0.02
S-2E	Sulfur Pit	SO ₂	0.17	0.11
		H ₂ S	0.04	0.11
S-3	Sulfur Truck	SO ₂	0.07	0.04
		H ₂ S	0.02	0.01
S-3E	Sulfur Truck	SO ₂	0.07	0.05
		H ₂ S	0.02	0.01
STORAGE	Fugitives (4) Storage Tanks	VOC	0.28	1.24
		TRS	0.28	1.24
SWS	Fugitives (4) Sour Water Strippers	VOC	0.10	0.04
		H ₂ S	0.03	0.15
		TRS	0.04	0.18
TTSHIP	Fugitives (4) Tank Truck Loading/Unloading	VOC	0.04	0.19
		TRS	0.04	0.19
WWTP	Fugitives (4) Wastewater Treatment Plant	VOC	0.12	0.50
		H ₂ S	0.05	0.20
X-426A	Steam Boiler	VOC	0.06	0.26
		NO _x	1.58	6.92

		SO ₂	0.01	0.04
		PM ₁₀	0.22	0.95
		CO	0.55	2.42
X-426B	Steam Boiler	VOC	0.06	0.26
		NO _x	1.58	6.92
		SO ₂	0.01	0.04
		PM ₁₀	0.22	0.95
		CO	0.55	2.42
X-930	Steam Boiler (30 MMBTU/hr)	VOC	0.17	0.72
		NO _x	3.00	13.14
		SO ₂	0.02	0.08
		PM ₁₀	0.22	0.97
		CO	2.52	11.04
THE FOLLOWING ALLOWABLES ARE IN EFFECT UNTIL THE INCINERATOR IS PERMANENTLY SHUT-DOWN				
Incinerator	Incinerator (7)	NO _x	4.6	20.0
		CO	2.25	9.9
		VOC	0.06	0.24
		SO ₂	139	608
		PM ₁₀	1.55	6.79
		H ₂ S	0.10	0.44
		Cl ₂	1.0	<0.01
Fug-Incin	Incinerator Fugitives (4)	VOC	0.02	0.08
		H ₂ S	<0.01	<0.01

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.

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

- (2) Specific point source name. For fugitive sources use area name or fugitive source name.
- (3) VOC - volatile organic compounds as defined in 30 Texas Administrative Code Section 101.1
- NO_x - total oxides of nitrogen
- SO₂ - sulfur dioxide
- SO₃ - sulfur trioxide
- 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.
- CO - carbon monoxide
- H₂S - hydrogen sulfide
- TRS - total reduced sulfur. Includes H₂S and sulfur bearing VOC. Excludes SO₂
- Cl₂ - chlorine
- COS - carbonyl sulfide
- CS₂ - carbon disulfide
- NH₃ - ammonia
- (4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
- (5) The combined emissions from Flares 225, 2225, and all temporary flares shall not exceed the values shown for EPN FLARE/FLARE2.
- (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) The thermal oxidizer shall operate with no less than 99.9 percent efficiency in destructing the carbon compounds captured by the collection system as represented in the permit application dated December 5, 1997.

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

_____Hrs/day _____Days/week _____Weeks/year or 8,760

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Emission	Source	Air Contaminant	Emission Rates	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY
Hrs/year				

Dated_____