

# Emission Sources - Maximum Allowable Emission Rates

Permit Number 56566

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)
104	Spent Acid Furnace (6)	SO <sub>2</sub>	0.65	0.18
		VOC	0.01	0.01
		H <sub>2</sub> SO <sub>4</sub>	0.01	0.01
117	Package Boiler (Normal +MSS Operation is 2,100 hours per calendar year)	CO	29.41	28.12
		NH <sub>3</sub>	0.45	0.43
		NO <sub>x</sub>	1.09	1.04
		PM	0.82	0.78
		PM <sub>10</sub>	0.82	0.78
		PM <sub>2.5</sub>	0.82	0.78
		SO <sub>2</sub>	0.06	0.06
		VOC	0.59	0.57
117MSS	Package Boiler (7) (Planned Maintenance, Start-up and Shutdown Activities)	CO	29.41	2.76
		NH <sub>3</sub>	0.45	0.02
		NO <sub>x</sub>	22.92	1.43
		PM	0.82	0.08
		PM <sub>10</sub>	0.82	0.08
		PM <sub>2.5</sub>	0.82	0.08
		SO <sub>2</sub>	0.07	0.01
		VOC	0.59	0.06
123	Spent Acid Caustic Scrubber (1,314 hours per calendar year)	SO <sub>2</sub>	0.03	0.01
		VOC	8.33	0.34
		H <sub>2</sub> SO <sub>4</sub>	0.01	0.01

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124	Tank 77 Oleum Storage Vent	H <sub>2</sub> SO <sub>4</sub>	0.01	0.01
125	Oleum Barge Loading Vent	H <sub>2</sub> SO <sub>4</sub>	0.01	0.01
126	Oleum Rail Loading Stack Vent	H <sub>2</sub> SO <sub>4</sub>	0.02	0.01
127	Oleum Vent Stack System	H <sub>2</sub> SO <sub>4</sub>	0.01	0.01
127MSS	Oleum Tanks 15, 18 and 31 and 74 Planned MSS Activities(Oleum VENT Stack System)	H <sub>2</sub> SO <sub>4</sub>	0.01	0.01
130	Oleum Tank Truck Loading Vent Stack	H <sub>2</sub> SO <sub>4</sub>	0.03	0.01
301A	AWT Neutralization Tanks 301, 301A and 302	SO <sub>2</sub>	0.67	2.95
		VOC	0.01	0.01
FUG-LOAD	Spent Sulfuric Acid Dock Uncontrolled Loading Losses	SO <sub>2</sub>	0.26	0.07
		VOC	0.08	0.02
		H <sub>2</sub> SO <sub>4</sub>	0.01	0.01
PIT-LOAD	Molten Sulfur Pit Loading Operation	H <sub>2</sub> S	0.38	0.41
		SO <sub>2</sub>	0.01	0.01
		VOC	0.01	0.01
PIT	Molten Sulfur Pit Normal Operation	H <sub>2</sub> S	0.03	0.13
		SO <sub>2</sub>	0.01	0.01
		VOC	0.01	0.01
S1	Molten Sulfur Tank 802 Normal Operation	H <sub>2</sub> S	0.56	2.45
		SO <sub>2</sub>	0.01	0.01
		VOC	0.01	0.05
S1-LOAD	Molten Sulfur Tank 802 Loading Operation	H <sub>2</sub> S	2.23	0.70
		SO <sub>2</sub>	0.01	0.01
		VOC	0.08	0.03
S2	Molten Sulfur Tank 801 Normal Operation	H <sub>2</sub> S	0.56	2.45
		SO <sub>2</sub>	0.01	0.01

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		VOC	0.01	0.05
S2-LOAD	Molten Sulfur Tank 801 Loading Operation	H <sub>2</sub> S	2.23	0.70
		SO <sub>2</sub>	0.01	0.01
		VOC	0.08	0.03
SWINGTK	Swing Tanks 312, 313, 314 and 315	H <sub>2</sub> SO <sub>4</sub>	0.01	0.01
		VOC	0.01	0.01
VACTKFUG	Vacuum Truck Fugitive Oleum Tanks MSS	H <sub>2</sub> SO <sub>4</sub>	0.01	0.01
		SO <sub>2</sub>	0.01	0.01
FUG-AWT	Advance Water Treatment Fugitives (5)	SO <sub>2</sub>	0.01	0.01
		VOC	0.01	0.01
FUG-OLEUM1	Oleum Process Fugitives (5)	H <sub>2</sub> SO <sub>4</sub>	0.09	0.40
FUG-OLEUM2	Oleum Process Fugitives (5)	H <sub>2</sub> SO <sub>4</sub>	0.01	0.06
FUG-OLEUM3	Oleum Process Fugitives (5)	H <sub>2</sub> SO <sub>4</sub>	0.03	0.12
FUG-OLEUM4	Oleum Process Fugitives (5)	H <sub>2</sub> SO <sub>4</sub>	0.02	0.08
FUG-PIT	Sulfur Pit Fugitives (5)	H <sub>2</sub> S	0.01	0.01
		SO <sub>2</sub>	0.01	0.01
		VOC	0.01	0.01
FUG-S1S2	Sulfur Tanks Fugitives (5)	H <sub>2</sub> S	0.01	0.01
		SO <sub>2</sub>	0.01	0.01
		VOC	0.01	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) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
- NO<sub>x</sub> - total oxides of nitrogen
- NH<sub>3</sub> - ammonia
- SO<sub>2</sub> - sulfur dioxide
- PM - total particulate matter, suspended in the atmosphere, including PM<sub>10</sub> and PM<sub>2.5</sub>, as represented
- PM<sub>10</sub> - total particulate matter equal to or less than 10 microns in diameter, including PM<sub>2.5</sub>, as represented
- PM<sub>2.5</sub> - particulate matter equal to or less than 2.5 microns in diameter
- CO - carbon monoxide
- SO<sub>2</sub> - sulfur dioxide

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H<sub>2</sub>SO<sub>4</sub> - sulfuric acid  
H<sub>2</sub>S - hydrogen sulfide

- (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.
- (6) Only emissions from this permitted facility are shown as controlled by the Spent Acid Furnace (EPN 104) authorized under Permit Number 4802.
- (7) The maintenance, start-up, and shutdown (MSS) emissions are from the MSS activities on the boiler when the SCR does not control NO<sub>x</sub>.

Date: September 14, 2016