

# Emission Sources - Maximum Allowable Emission Rates

Permit Number 160247

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)
Routine Operations				
PreHeater	Pre-Heater	VOC	0.19	0.84
		PM	0.27	1.16
		PM <sub>10</sub>	0.27	1.16
		PM <sub>2.5</sub>	0.27	1.16
		NO <sub>x</sub>	1.12	4.89
		SO <sub>2</sub>	0.02	0.09
		CO	2.93	12.85
CoolingTow	Cooling Tower	PM	0.05	0.22
		PM <sub>10</sub>	0.05	0.22
		PM <sub>2.5</sub>	0.05	0.22
MainStack	Main Stack	VOC	0.43	1.87
		PM	0.59	2.59
		PM <sub>10</sub>	0.59	2.59
		PM <sub>2.5</sub>	0.59	2.59
		NO <sub>x</sub>	4.20 (6)	18.40
		NO <sub>x</sub>	2.98 (7)	
		SO <sub>2</sub>	5.85 (6)	25.62
		SO <sub>2</sub>	4.14 (7)	
		CO	11.54 (6)	50.53
		CO	10.08 (7)	
		H <sub>2</sub> SO <sub>4</sub>	7.50 (6)	21.90
		H <sub>2</sub> SO <sub>4</sub>	5.31 (7)	
SulfurPit	Sulfur Pit	H <sub>2</sub> S	<0.01	<0.01
		SO <sub>2</sub>	<0.01	<0.01
Fugitives	Fugitives (5)	VOC	<0.01	<0.01
		H <sub>2</sub> SO <sub>4</sub>	0.02	0.10

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		SO <sub>2</sub>	<0.01	<0.01
		NH <sub>3</sub>	<0.01	<0.01
		H <sub>2</sub> S	<0.01	<0.01
Planned Maintenance, Startup and Shutdown (MSS)				
SUStack	Start-up Fan Vent	VOC	0.64	0.05
		PM	0.89	0.07
		PM <sub>10</sub>	0.89	0.07
		PM <sub>2.5</sub>	0.89	0.07
		NO <sub>x</sub>	5.82	0.49
		SO <sub>2</sub>	0.07	0.01
		CO	9.78	0.82
MSSStack	Main Stack MSS	VOC	0.39	0.03
		PM	0.54	0.05
		PM <sub>10</sub>	0.54	0.05
		PM <sub>2.5</sub>	0.54	0.05
		NO <sub>x</sub>	1.40	0.12
		SO <sub>2</sub>	28.33	2.38
		CO	9.28	0.78
		H <sub>2</sub> SO <sub>4</sub>	2.50	0.21

- (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
- 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
- H<sub>2</sub>S - hydrogen sulfide
- H<sub>2</sub>SO<sub>4</sub> - sulfuric acid
- NH<sub>3</sub> - ammonia
- (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) The emission rates are associated with the maximum operating scenario that the production rate is greater than 850 tons of 99% sulfuric acid per day. The main stack will be required to operate with a stack heater as specified in Special Condition No. 10.
- (7) The emission rates are associated with EPN MainStack at a production rate of no more than 850 tons of 99% sulfuric acid per day. The main stack can be operating without a stack heater.

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Date: October 13, 2020