

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 3836

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 *	Source	Air Contaminant	Emission Rates	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY
Storage Tank Area				
T-202	Tank	NaOH	<0.01	<0.01
T-207	Tank	VOC	<0.01	<0.01
T-401	Tank	VOC	0.02	<0.01
T-403	Tank	VOC	<0.01	<0.01
T-404	Tank	VOC	0.17	<0.01
T-405	Tank	VOC	0.16	<0.01
T-416	Tank	VOC	0.94	0.06
T-418	Tank	VOC	0.09	<0.01
T-420	Tank	VOC	<0.01	<0.01
T-603	Tank	VOC	1.53	0.08
T-604	Tank	VOC	12.61	0.08
Z-703	Scrubber	HCl	0.02	<0.01
		VOC	<0.01	<0.01
Z-709	Scrubber	VOC	0.12	<0.01

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Emission *	Source	Air Contaminant	Emission Rates	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY
Z-711	Scrubber	H <sub>2</sub> S	<0.01	<0.01
		VOC	0.03	<0.01
STOR-FUG	Tank Farm Fugitives (4)	VOC	1.75	7.64
<b>Plant Utilities Area</b>				
B-601	Utility Boiler (6)	CO	1.30	5.68
		NO <sub>x</sub>	5.93	25.98
		PM	0.51	2.23
		SO <sub>2</sub>	0.53	2.32
		VOC	0.10	0.45
B-602	Utility Boiler (6)	CO	1.30	5.68
		NO <sub>x</sub>	5.93	25.98
		PM	0.51	2.23
		SO <sub>2</sub>	0.53	2.32
		VOC	0.10	0.45
H-601	Heater	CO	0.12	0.54
		NO <sub>x</sub>	0.59	2.59
		PM	0.07	0.31
		SO <sub>2</sub>	0.08	0.37
		VOC	0.02	0.10
T-700	API Separator	VOC	1.08	2.36
		Acetone	0.22	0.10
G-601	Standby Generator (5)	CO	7.10	0.09
		NO <sub>x</sub>	11.70	0.15
		PM	0.40	<0.01
		SO <sub>2</sub>	0.86	0.01
		VOC	1.20	0.02

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
FWP	Fire Water Pumps (5)	CO	38.50	0.50
		NO <sub>x</sub>	63.40	0.83
		PM	2.20	0.03
		SO <sub>2</sub>	4.60	0.06
		VOC	6.30	0.08
V-605	Tank	VOC	<0.01	<0.01
FUG-XP	XP-200 Process Fugitives (4) 0.25	VOC		0.06
UTIL-FUG	Process Fugitives (4)	VOC	0.12	0.50
<b>Plant 3 - Intermediates Chemical Processing</b>				
DP-3	Drum Loading	VOC	1.17	3.21
T-350	Tank	VOC	<0.01	<0.01
V-311	Tank	VOC	4.12	0.01
V-312	Tank	CH <sub>2</sub> O	2.24	<0.01
V-301V USE ONLY	Emergency Vent	VOC		EMERGENCY
PL3-FUG	Process Fugitives (4)	VOC	1.71	7.49
<b>Plant 2 - Amine Condensation Polymerization Area</b>				
DP1, DP2	Drum Loading	VOC	1.17	3.21
T-253	Tank	VOC	0.07	<0.01
T-263	Tank	VOC	<0.01	<0.01

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
V-023	Reactor Vent	VOC	0.01	<0.01
V-024	Tank	VOC	0.87	<0.01
V-025	Tank	VOC	0.87	<0.01
V-206V	Process/Emergency Vent	VOC	<0.01	<0.01
Z-104	Caustic Scrubber	H <sub>2</sub> S	<0.01	<0.01
		VOC	0.16	<0.01
Z-705	Tank T-250 Scrubber	VOC	0.06	<0.01
Z-707	V-022 Scrubber	NH <sub>3</sub>	0.24	<0.01
		VOC	<0.01	<0.01
Z-708	Scrubber	NH <sub>3</sub>	0.37	0.03
		VOC	0.22	<0.01
Z-712	Tank T-252 Scrubber	VOC	<0.01	<0.01
		HCl	<0.01	<0.01
Z-713	Methyl Chloride Scrubber	CH <sub>3</sub> Cl	2.65	0.14
Z-714	Flare	CO	25.29	10.92
		NO <sub>x</sub>	2.95	1.27
		VOC	26.11	3.90
		SO <sub>2</sub>	22.63	12.50
		HCl	34.2	2.11
		H <sub>2</sub> S	0.21	0.12
PL2-FUG	Plant 2 Fugitives (4)	H <sub>2</sub> S	0.03	0.13
		VOC	2.66	11.62

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
CS2-FUG	CS2 Drum Fugitives (4)	CS <sub>2</sub>	0.02	<0.01
<b>Plant 5 - Blending and Drumming</b>				
F-501	Filter Press	VOC	0.53	0.48
F-502	Filter Press	VOC	0.53	0.48
F-503	Sparkler Filter	VOC	<0.01	<0.01
Z-501/502	Drum Loading	VOC	4.69	12.80
TP-805	Truck Loading	VOC	4.26	3.59
WTRR-CAR	Truck Loading	VOC	4.26	0.11
R-SPOT4	Railcar Loading	VOC	4.26	0.18
R-SPOT5	Railcar Loading	VOC	4.26	0.34
TP-804	Truck Loading Fugitives	VOC	0.38	0.32
TP-811	Truck Loading Fugitives	VOC	0.38	0.03
TP-812	Truck Loading Fugitives	VOC	0.38	0.12
TP-813	Truck Loading Fugitives	VOC	0.38	0.12
TP-816	Truck Loading Fugitives	VOC	0.38	0.61

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
OILCARF	Railcar Loading Fugitives	VOC	0.38	0.01
R-SPOT3	Railcar Loading Fugitives	VOC	0.38	0.03
R-SPOT6	Railcar Loading Fugitives	VOC	0.38	0.02
PL5-FUG	Plant 5 Fugitives (4)	VOC	1.08	4.74
DF-1	Reactor Combustor	CO	0.09	0.37
		NO <sub>x</sub>	0.41	1.78
		PM	0.05	0.21
		SO <sub>2</sub>	0.06	0.25
		VOC	0.02	0.07
DF-2	Reactor Combustor	CO	0.09	0.37
		NO <sub>x</sub>	0.41	1.78
		PM	0.05	0.21
		SO <sub>2</sub>	0.06	0.25
		VOC	0.02	0.07

(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) NaOH - sodium hydroxide  
 VOC - volatile organic compounds as defined in 30 Texas Administrative Code Section 101.1

HCl - hydrogen chloride

H<sub>2</sub>S - hydrogen sulfide

CO - carbon monoxide

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

NO<sub>x</sub> - total oxides of nitrogen

PM - particulate matter, suspended in the atmosphere, including PM<sub>10</sub>

PM<sub>10</sub> - 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.

SO<sub>2</sub> - sulfur dioxide

NH<sub>3</sub> - ammonia

CH<sub>2</sub>O - formaldehyde

CH<sub>3</sub>Cl - methyl chloride

CS<sub>2</sub> - carbon disulfide

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

(5) Operated for emergency use and required maintenance only.

(6) Total combined annual emissions from Emission Point Nos. B-601 and B-602 shall not exceed 2.90 tons per year (TPY) SO<sub>2</sub>, 32.47 TPY NO<sub>x</sub>, 2.78 TPY PM, 7.10 TPY CO, and 0.56 TPY VOC.

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

Hrs/day \_\_\_\_\_ Days/week \_\_\_\_\_ Weeks/year \_\_\_\_\_  
or Hrs/year 8,760

Dated \_\_\_\_\_