### EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

### Permit Number 19797

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	<u>Emission</u>	Emission Rates *	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY**	
A	Flare (5)	$\begin{array}{c} \text{Acetone} \\ \text{CO} \\ \text{HCI}  0.06 \\ \text{NO}_{\times}  1.70 \\ \text{SO}_{2}  0.01 \\ \text{VOC}  6.29 \\ \end{array}$	0.36 8.69 0.05 1.11 0.01 4.30	0.91 5.66	
	(6)	$\begin{array}{c} \text{Acetone} \\ \text{CO} \\ \text{HCI}  0.06 \\ \text{NO}_{x}  1.61 \\ \text{SO}_{2}  0.01 \\ \text{VOC}  6.29 \\ \end{array}$	0.36 13.78 0.05 1.05 0.01 4.30	0.91 8.98	
С	Flare (5)	$CO$ $NO_x$ $SO_2$ 0.01 $VOC$ 0.73	6.19 1.21 0.01 0.30	3.16 0.62	
	(6)	$\begin{array}{c} \text{CO} \\ \text{NO}_{x} \\ \text{SO}_{2}  0.01 \\ \text{VOC}  0.73 \end{array}$	9.82 1.15 0.01 0.30	5.01 0.58	
Н	Scrubber	HCI VOC 0.04	0.09 0.17	0.03	
P1	Filter	PM/PM <sub>10</sub>	0.01	0.01	
P2	Scrubber	PM/PM <sub>10</sub>	0.01	0.01	

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Emission	Source	Air	Contaminant	Emission Rates *	
Point No. (1)	Name (2)		Name (3)	lb/hr	TPY**
P3	Filter		PM/PM <sub>10</sub>	0.01	0.01
P4	Scrubber		PM/PM <sub>10</sub>	0.01	0.01
P5	Filter	PM/PI	$MeCl_2$ $M_{10}$	0.01 0.01	0.01 0.01
TF1	MeCl Tank Adsorber		MeCl <sub>2</sub>	0.71	0.05
TF2	Toluene Tank		VOC	3.38	0.01
TF3	Potassium Hydroxide Tank		КОН	0.01	0.01
TF4	HCI Tank Scrubber		HCI	0.64	0.28
TF5	Acetic Acid Tank Scrubber		VOC	0.12	0.02
TF6	Beta Ionone Tank		VOC	0.01	0.01
TF7	Hexane Tank		VOC	10.50	0.02
TF8	Methanol Tank		VOC	8.74	0.27
TF9	Storage Tank	MeCl <sub>2</sub> VOC		17.38 0.07 0.17	0.36
TF10	Storage Tank	MeCl <sub>2</sub> VOC	Acetone 2 18.22 9.70	7.35 0.42 0.21	0.17
TF12	Acetone Tank Scrubber		Acetone	20.32	1.56
TF13	Sodium Hydroxide Tank		NaOH	0.01	0.01

TF15	Sulfuric Acid Tank		H <sub>2</sub> SO <sub>4</sub>	0.01	0.01
WWTP-01	Wastewater Treatment Plant	MeCl <sub>2</sub> VOC		0.03 3.12 5.82	0.28
FUG-BETA	Process Fugitives (4)	MeCl <sub>2</sub>	Acetone 1.01 NH <sub>3</sub> 5.51	0.82 4.42 0.06 24.13	3.58 0.27

- (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

H<sub>2</sub>SO<sub>4</sub> - sulfuric acid

HCI - hydrogen chloride
 KOH - potassium hydroxide
 MeCl<sub>2</sub> - methylene chloride
 NaOH - sodium hydroxide

NH<sub>3</sub> - ammonia

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

PM - particulate matter

PM<sub>10</sub> - particulate matter less than 10 microns in diameter

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

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) Steam assist operation up to June 30, 2009.
- (6) Air assist operation beginning before or on June 30, 2009.
- \* Emission rates are based on and the facilities are limited by the following maximum operating schedule:

Hrs/day 24 Days/week 7 Weeks/year 52

\*\* Compliance with annual emission limits is based on a rolling 12-month period.