

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 18046

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 Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY **
CP-B-1	Central Dust Collector	PM <sub>10</sub>	0.05	0.20
CP-B-3	Spray Dryer Baghouse	CO	0.13	0.56
		NO <sub>x</sub>	0.10	0.42
		PM <sub>10</sub>	0.18	0.79
		SO <sub>2</sub>	0.01	0.01
		VOC	0.01	0.04
CP-B-4	South Semiworks Hopper Vent Filler	PM <sub>10</sub>	0.70	0.39
CP-B-5	Powder Filter/Receiver	PM <sub>10</sub>	1.46	0.80
CP-B-6	Vanadium Receiver Vent Filter	PM <sub>10</sub>	0.01	0.01
CP-S-1	Fresh Tank (6) (7)	VOC	34.94	1.65
			3.74	0.18
CP-S-2	Spent Tank	VOC	2.33	0.57
CP-S-4	Recycle Tank (6) (7)	VOC	30.62	0.89
			3.28	0.10
CP-SC-1	Filter Press Vent Scrubber	PM <sub>10</sub>	0.04	0.18
		VOC	5.37	4.15
CP-T-1	Truck Unloading	VOC	2.78	0.06
FL-G4	Process Flare (5)	CO	0.04	0.01
		NO <sub>x</sub>	0.01	0.01
		VOC	0.15	0.03

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>	
			<u>lb/hr</u>	<u>TPY</u>
H-3	Incinerator	CO	101.10	141.30
		NO <sub>x</sub>	5.26	9.74
		PM <sub>10</sub>	2.16	3.99
		SO <sub>2</sub>	0.47	0.88
		VOC	0.01	0.02
SW-H-2	Start-Up Heater	CO	0.08	0.33
		NO <sub>x</sub>	0.53	2.34
		PM <sub>10</sub>	0.02	0.10
		SO <sub>2</sub>	0.01	0.01
		VOC	0.02	0.08
CP-F-1	Fugitives (4)	PM <sub>10</sub>	0.04	0.18
		VOC	1.08	4.73
FUG	Fugitives (4)	VOC	0.03	0.15

- (1) Emission point identification - either specific equipment designation or emission point number from a plot plan.
- (2) Specific point source names. For fugitive sources use area name or fugitive source name.
- (3) CO - carbon monoxide  
 NO<sub>x</sub> - total oxides of nitrogen  
 PM<sub>10</sub> - particulate matter (PM) less than or equal to 10 microns in diameter. Where PM is not listed, it shall be assumed that no P M greater than 10 microns is emitted.  
 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) Flare data represent only those emissions associated with the unit covered by this permit.
- (6) Storage tank hourly and annual emission limits are subject to Special Condition No. 10. Recycle isobutanol service.
- (7) Fresh isobutanol service

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- \* 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.

Dated September 22, 2006