

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 5611

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)	<u>Emission Rates *</u>	
			<u>lb/hr</u>	<u>TPY</u>
ST201ST	Hot Oil Heater	NO <sub>x</sub>	11.00	47.00
		PM	1.10	4.60
		CO	2.70	11.74
		SO <sub>2</sub>	1.07	4.69
		VOC	0.20	0.94
ST301ST	Regeneration Heater	NO <sub>x</sub>	0.09	0.40
		PM	0.01	0.05
		CO	0.02	0.08
		SO <sub>2</sub>	0.01	0.05
		VOC	<0.01	0.03
ST403ST	Superheater	NO <sub>x</sub>	22.75	99.65
		PM	2.43	10.62
		CO	1.67	7.31
		SO <sub>2</sub>	0.14	0.60
		VOC	2.38	10.44
ST202ST	"A" Feed Gas Compressor	NO <sub>x</sub>	1.45	6.35
		CO	2.18	9.55
		SO <sub>2</sub>	0.05	0.22
		VOC	0.36	1.58
ST203ST	"B" Feed Gas Compressor	NO <sub>x</sub>	1.45	6.35
		CO	2.18	9.55
		SO <sub>2</sub>	0.05	0.22
		VOC	0.36	1.58
ST204ST	"C" Feed Gas Compressor	NO <sub>x</sub>	1.45	6.35
		CO	2.18	9.55

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
ST101FL	Styrene Flare	SO <sub>2</sub>	0.05	0.22
		VOC	0.36	1.58
		NO <sub>x</sub>	3.40	3.67
		CO	24.50	26.50
		SO <sub>2</sub>	0.70	0.57
		Benzene	1.79	0.33
		VOC (total)	39.46	7.17
		H <sub>2</sub> S	<0.01	<0.01
ST501FL	Oxygen-Rich Flare	NO <sub>x</sub>	0.09	0.38
		CO	0.45	1.94
		SO <sub>2</sub>	0.02	0.06
		VOC	0.62	2.71
ST502FL	Hydrogen-Rich Flare	NO <sub>x</sub>	0.33	0.10
		CO	1.67	0.49
		SO <sub>2</sub>	<0.01	0.01
		VOC	0.45	0.07
ST601FL	Loading Flare	NO <sub>x</sub>	0.23	0.08
		CO	1.95	0.70
		SO <sub>2</sub>	0.05	<0.01
		VOC	1.30	1.18
ST601LR	Railcar Loading Rack	VOC	2.50	0.46
ST602LR	Truck Loading Rack	VOC	5.90	0.03
ST604LR	Truck Loading Rack	VOC	1.92	0.07
ST605LR	Railcar Loading Rack	VOC	6.10	0.02
FST301FE	300 Area Fugitives (4)	Benzene	0.29	1.27
		VOC (total)	4.83	21.10

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<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Name (3)</u>	<u>lb/hr</u>	<u>TPY</u>
		BF <sub>3</sub>	0.12	0.52

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			lb/hr	TPY
FST401FE	400 Area Fugitives (4)	VOC	3.53	15.51
FST501FE	500 Area Fugitives (4)	VOC	1.71	7.53
FST601FE	Loading Fugitives (4)	Benzene	0.03	0.13
		VOC (total)	0.13	0.54
FST701FE	Storage Fugitives (4)	Benzene	0.07	0.30
		VOC (total)	0.90	3.94
FST902FE	Styrene Cooling Tower (6) 3.31	VOC		0.76
ST001WT	Process Drains	VOC	0.27	1.19
ST502ST	TBC System	VOC	1.39	0.02
ST524-B	Tank 524-B	VOC	0.01	0.04
ST710VN	Tank V-10 - CAS	VOC	0.07	<0.01
ST711VN	Tank V-11 - CAS	VOC	0.12	<0.01
ST735TK	Tank V-35	VOC	1.37	1.96
ST737TK	Tank V-37	VOC	14.63	0.98
ST742TK	Tank V-42	VOC	1.91	1.96
EY005FL	Flare (5)			

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<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Name (3)</u>	<u>lb/hr</u>	<u>TPY</u>

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- (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)  $\text{NO}_x$  - total oxides of nitrogen  
PM - particulate matter  
CO - carbon monoxide  
 $\text{SO}_2$  - sulfur dioxide  
VOC - volatile organic compounds as defined in General Rule 101.1  
 $\text{H}_2\text{S}$  - hydrogen sulfide  
 $\text{BF}_3$  - boron trifluoride
- (4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
- (5) This Olefins Plant Flare is used as backup for Flare ST101FL.
- (6) The emission rate is an estimate only and should not be considered as a maximum allowable emission rate. By August 31, 1999, the permit holder shall provide the TNRCC with cooling tower data, shall reevaluate the basis for the cooling tower emissions, and shall apply for a permit alteration or amendment as appropriate to reflect the enforceable cooling tower baseline emissions.

\* 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\_\_\_\_\_