

# EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 4017

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 *	
TPY			lb/hr	
7	T-5902	VOC	0.13	0.03
9	Flare	VOC	1.53	6.72
		NO <sub>x</sub>	0.17	0.76
		CO	2.61	11.42
11	Cracking Furnace No. 1	NO <sub>x</sub>	1.40	6.13
		CO	1.18	5.15
		VOC	0.08	0.34
		PM <sub>10</sub>	0.11	0.47
		SO <sub>2</sub>	0.008	0.04
12	Packout Emissions	VOC	3.12	0.50
38	Tank (T-3105)	VOC	0.15	0.06
39	Bag Filter	PM	0.02	0.10
40	Boiler No. 1 (B-4001A)	VOC	0.11	0.47
		NO <sub>x</sub>	5.39	23.61
		SO <sub>2</sub>	0.03	0.10
		PM <sub>10</sub>	0.53	2.31
		CO	1.35	5.9
41	Boiler No. 2 (B-4001B)	VOC	0.11	0.47
		NO <sub>x</sub>	5.39	23.61
		SO <sub>2</sub>	0.03	0.10
		PM <sub>10</sub>	0.53	2.31
		CO	1.35	5.90

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
TPY				lb/hr
42A	Bag Filter (F-3203)	PM	0.02	0.10
42B	Bag Filter (F-3205)	PM	0.02	0.10
43A	Vent Condenser (E-3107)	VOC	4.30	2.61
44	Boiler No. 3	NO <sub>x</sub>	5.39	23.61
		CO	1.35	5.90
		PM <sub>10</sub>	0.53	2.31
		VOC	0.11	0.47
		SO <sub>2</sub>	0.03	0.10
46	Cracking Furnace No. 2	NO <sub>x</sub>	0.70	3.07
		CO	0.59	2.58
		PM <sub>10</sub>	0.05	0.23
		VOC	0.04	0.17
		SO <sub>2</sub>	<0.01	0.02
101	Vent Condenser (E-1208)	VOC	0.03	0.12
102	Vent Condenser (E-1306)	VOC	0.07	0.31
103	Vent Condenser (E-1410)	VOC	0.01	0.05
104	Vent Condenser (E-1307)	VOC	0.02	0.06
105	Vent Condenser (E-1411)	VOC	<0.01	0.02
106	Tank Vent (T-1309)	VOC	0.02	0.08
107	Vent Condenser (E-1414)	VOC	<0.01	0.02

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
TPY				lb/hr
108	Vent Condenser (E-1415)	VOC	0.21	<0.01
109	Vent Condenser (E-1613)	VOC	0.25	1.09
110	Vent Condenser (E-1602)	VOC	0.20	0.05
111	Vent Condenser (E-1604)	VOC	<0.01	0.05
113	Column (K-1102)	VOC	0.07	0.33
114	Column (K-1103)	VOC	0.04	0.19
115	Tank (T-1105)	VOC	<0.01	0.01
118	Tank (T-1506)	VOC	<0.01	0.02
119	Tank (T-1608)	VOC	0.02	0.07
120	Tank (T-2101)	VOC	0.12	<0.01
121	Tank (T-2102)	VOC	<0.01	0.02
122	Tank (T-2103)	VOC	<0.01	0.02
123	Tank (T-2104)	VOC	0.03	0.11
124	Tank (T-2105)	VOC	<0.01	0.02
125	Tank (T-2106)	VOC	<0.01	0.02
126	Tank (T-2107)	VOC	0.08	0.05
127	Tank (T-2110)	VOC	<0.01	0.04

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	
TPY				
128	Vacuum Pump (U-2101A)	VOC	0.36	0.80
129	Vacuum Pump (U-2101B)	VOC	0.36	0.80
130	Vent Condenser (E-4003)	VOC	2.12	0.27
137	Vent Condenser (E-3109)	VOC	0.21	0.03
138	Tank (T-3101)	VOC	0.31	0.03
139	Tank (T-3102)	VOC	0.10	0.26
140	Tank (T-3103)	VOC	0.20	0.10
141	Tank (T-3104)	VOC	0.05	0.08
145	Vent Condenser (E-1907)	VOC	17.29	0.28
146	Vent Condenser (E-1908)	VOC	9.89	0.10
147	Vent Condenser (E-1909)	VOC	0.03	0.04
148	Vent Condenser (E-1910)	VOC	0.04	0.04
149	Vent Condenser (E-1911)	VOC	.02	0.04
150	Vent Condenser (E-1916)	VOC	0.05	0.08
151	Vent Condenser (E-2901)	VOC	9.95	0.06
152	Vent Condenser (E-2902)	VOC	6.48	0.30
153	Column (K-1901)	VOC	0.13	0.07
154	Column (K-1902)	VOC	0.01	<0.01

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u> lb/hr	
TPY				
156	Tank T-2903	VOC	0.14	0.21
157	Tank T-2904	VOC	0.15	0.13
158	Tank T-3901	VOC	0.11	0.03
159	Tank T-3902	VOC	0.01	<0.01
160	Tank T-3903	VOC	0.07	0.02
161	Tank T-3904	VOC	0.90	0.07
F-A	Fugitives Arylides A (4)	VOC	1.16	5.08
F-B	Fugitives Arylides B (4)	VOC	1.24	5.42
F-C	Fugitives Arylides C (4)	VOC	0.56	2.45
F-D	Fugitives Diketene (4)	VOC	5.13	22.46
F-E	Fugitives Esters (4)	VOC	0.34	1.49
F-T	Fugitives Tank Farm (4)	VOC	1.16	5.09
F-L	Fugitives Loop Rx (4)	VOC	0.17	0.75

- (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> - nitrogen oxides  
 CO - carbon monoxide  
 PM - particulate matter, suspended in the atmosphere, including PM<sub>10</sub>.

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PM<sub>10</sub> - particulate matter less than 10 microns in diameter. Where PM is not listed, it shall be assumed that  
no particulate matter greater than 10 microns in emitted.  
SO<sub>2</sub> - sulfur dioxide

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

\* 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 July 1, 2002