

# EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 18568

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
F-1343	1343 Unit Fugitives (4)	Benzene	0.40	1.74
		Butadiene, 1,3-	0.25	1.11
		Cumene	<0.01	0.01
		Ethyl Benzene	0.04	0.16
		Hexane, —	0.02	0.07
		Toluene	0.08	0.36
		Xylene, —	0.04	0.19
		Xylene, o-	0.03	0.13
		Xylene, p-	0.03	0.11
		VOC	0.42	1.83
F-1743	1743 Unit Fugitives (4)	Benzene	0.03	0.11
		Cyclohexane	0.33	1.45
F-1749	1749 Unit Fugitives (4)	Benzene	0.95	4.18
		Butadiene, 1,3-	<0.01	<0.01
		Cumene	0.01	0.04
		Ethyl Benzene	0.03	0.11
		Hexane, —	0.06	0.25
		Toluene	0.30	1.30
		Xylene, —	0.01	0.05
		Xylene, o-	<0.01	0.02
		Xylene, p-	0.01	0.05
		VOC	0.23	1.02
E-01-1343	Process Heater PH-1 (72.13 MM Btu/hour)	VOC	0.39	1.70
		NO <sub>x</sub>	4.33	18.96
		SO <sub>2</sub>	1.82	7.98
		PM	0.55	2.40
		CO	5.33	23.34

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>	
			lb/hr	TPY
E-02-1343	Process Heater PH-2 (48.09 MM Btu/hour)	VOC	0.26	1.14
		NO <sub>x</sub>	2.89	12.64
		SO <sub>2</sub>	1.12	4.89
		PM	0.37	1.60
		CO	3.55	15.56
E-07-1343	Process Heater PH-7 (72.13 MM Btu/hour)	VOC	0.39	1.70
		NO <sub>x</sub>	4.33	18.96
		SO <sub>2</sub>	1.82	7.98
		PM	0.55	2.40
		CO	5.33	23.34
804	Benzene Tank No. 804	Benzene	1.65 (5)	2.06
810	Benzene Tank No. 810 (6)	Benzene	1.07	1.38
810	Benzene Tank No. 810 (6)	Benzene	1.04	1.30
837	Benzene Tank No. 837	Benzene	1.77 (5)	2.26
851	Toluene Tank No. 851	Toluene	0.81	0.46
852	Toluene Tank No. 852	Toluene		6.3
855	Toluene Tank No. 855	Toluene		14.3
857	Toluene Tank No. 857	Toluene	0.82	0.56
866	Toluene Tank No. 866	Toluene	3.4	14.9
925	Toluene Tank No. 925	Toluene	0.89	0.95

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
2112	Raffinate Tank No. 2112	Benzene	0.01	0.03
		Ethyl Benzene	<0.01	<0.01
		Hexane	0.15	0.34
		Toluene	<0.01	0.01
		Xylenes, mixed	<0.01	<0.01
		VOC	0.72	1.65
2135	Raffinate Tank No. 2135	Benzene	0.01	0.03
		Ethyl Benzene	<0.01	<0.01
		Hexane	0.14	0.30
		Toluene	<0.01	0.01
		Xylenes, mixed	<0.01	<0.01
		VOC	0.67	1.45
2424	Benzene Tank No. 2424	Benzene	1.51	0.82
2425	Benzene Tank No. 2425	Benzene	1.51	0.82
2426	Benzene Tank No. 2426	Benzene	1.51	0.82
2589	Hydro Pyrolysis Gasoline (HPG) Feed Tank No. 2589	Benzene	0.45	0.92
		Ethyl Benzene	<0.01	0.01
		Hexane	0.03	0.07
		Toluene	0.04	0.08
		Xylenes, mixed	<0.01	<0.01
		VOC	0.78	1.59
2597	UDEX Charge Tank No. 2597	Benzene	0.26	0.31
		Ethyl Benzene	0.01	0.01
		Toluene	0.08	0.10
		VOC	1.21	1.41

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
2598	HPG Feed Tank No. 2598	Benzene	0.33	0.61
		Ethyl Benzene	<0.01	0.01
		Hexane	0.02	0.05
		Toluene	0.03	0.06
		Xylenes, mixed	<0.01	<0.01
		VOC	0.57	1.05
CA-1	Carbon Adsorption Unit	Benzene	15.0	5.4
F-169-CT	Cooling Tower 169	VOC (7,8)	16.20	70.96
F-169-CT	Cooling Tower 169	VOC (7,9)	1.89	8.28

(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 30 Texas Administrative Code Section 101.1 excluding benzene, 1,3-butadiene; cumene, ethyl benzene, n-hexane, toluene, and xylenes (m-, o-, and p-) which are designated as hazardous air pollutants (HAPS) under Section 112(b) of the Federal Clean Air Act

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

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

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.

CO - carbon monoxide

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

(5) The short-term emission rates for Tank Nos. 804 and 837 were calculated as part of a Notification of Changes to Qualified Facilities dated August 1997 which was incorporated into Permit No. 18568 with the October 30, 1998 amendment. These emissions have not been through an off-property impacts analysis pursuant to 30 TAC Chapter 116.

(6) Benzene Tank No. 810 shall be retrofitted with internal floating roof seals that meet the requirements of permit Special Condition No. 13B no later than November 1, 2001. The lower emission rates apply after the internal floating roof tank seals are retrofitted, but not later than

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- November 1, 2001. Benzene Tank No. 810 is also authorized under Permit No. 32713.
- (7) VOC emitted from Cooling Tower 169 may be comprised of isopentane, benzene, cyclohexane, and/or heavy reformat.
- (8) Maximum allowable emission rates for Cooling Tower 169 prior to January 1, 2001.
- (9) Maximum allowable emission rates for Cooling Tower 169 after January 1, 2001 as the cooling tower water monitoring and equipment maintenance requirements of Special Condition No. 18 will be in effect.
- \* Emission rates are based on and the facilities are limited by the following maximum operating schedule:

\_\_\_\_\_Hrs/day \_\_\_\_Days/week \_\_\_\_Weeks/year or 8,760 Hrs/year

Dated \_\_\_\_\_