

EMISSION SOURCES, EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

Flexible Permit Numbers 6308 and PSD-TX-137M2

This table lists the maximum allowable emission caps 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.

NO_x EMISSION CAP

<u>Facility/Emission Point Categories</u>	<u>Year</u>	<u>lb/hr</u>	<u>TPY **</u>
Fired Units	2000 through 2005	431.86	921.08
Fired Units, Boilers	2006	455.46	1024.08

CO EMISSION CAP

<u>Facility/Emission Point Categories</u>	<u>Year</u>	<u>lb/hr</u>	<u>TPY **</u>
Fired Units	2000 through 2005	300.53	488.16
Fired Units, Boilers	2006	328.83	612.06

SO₂ EMISSION CAP

<u>Facility/Emission Point Categories</u>	<u>Year</u>	<u>lb/hr</u>	<u>TPY **</u>
Fired Units	2000 through 2005	277.10	160.29
Fired Units, Boilers	2006	289.09	191.89

PM EMISSION CAP

<u>Facility/Emission Point Categories</u>	<u>Year</u>	<u>lb/hr</u>	<u>TPY **</u>
Fired Units	2000 through 2005	50.84	192.97
Fired Units, Boilers, Cooling Towers (7)	2006	53.74	205.77

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VOC EMISSION CAP

<u>Facility/Emission Source Categories</u>	<u>Year</u>	<u>lb/hr</u>	<u>TPY **</u>
Fired Units, Cooling Towers, Tanks, Fugitives, Wastewater, Miscellaneous (4)	2000 through 2005	688.09	609.19
Fired Units, Cooling Towers, Tanks, Fugitives, Wastewater, Miscellaneous, Boilers (4)	2006	681.69	581.29

Cl₂ EMISSION CAP

<u>Facility/Emission Source Categories</u>	<u>Year</u>	<u>lb/hr</u>	<u>TPY **</u>
Cooling Towers (7)	2000 through 2005	0.00015	0.0007
Cooling Towers (7)	2006	0.00015	0.0007

Toluene EMISSION CAP

<u>Facility/Emission Point Categories</u>	<u>Year</u>	<u>lb/hr</u>	<u>TPY **</u>
Tanks E11TKS23, E11TKR17, and E11TKR18	2000	0.96	2.53

Xylene EMISSION CAP

<u>Facility/Emission Point Categories</u>	<u>Year</u>	<u>lb/hr</u>	<u>TPY **</u>
Tanks E11TKS32, E11TKR9, and E11TKR11	2000	11.92	13.06

Benzene EMISSION CAP

<u>Facility/Emission Point Categories</u>	<u>Year</u>	<u>lb/hr</u>	<u>TPY **</u>
Tanks E11TKR5, E11TKR7, and Tank E11TKS21	2000	1.34	2.77

Cyclohexane EMISSION CAP

<u>Facility/Emission Point Categories</u>	<u>Year</u>	<u>lb/hr</u>	<u>TPY **</u>
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Tanks E11TKS21, E11TKR34, and E11TKR40	2000	0.78	2.67
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MTBE EMISSION CAP

Facility/Emission Point Categories	Year	lb/hr	TPY **
Tanks E12TK146, E18TK125, and E18TK140	2000	3.79	6.16

INDIVIDUAL EMISSION LIMITATIONS

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY **
FL-97/FL-28/ FL-27	Main Flare, West Flare and East Flare	VOC	29.50	99.17
		NO _x	3.30	11.49
		CO	16.97	59.16
		SO ₂	7.30	31.27
		H ₂ S	0.08	0.34
22	Boiler No. HA-5 (5)	VOC	0.65	2.84
		NO _x	33.0	145.0
		CO	9.90	43.40
		SO ₂	3.68	9.67
		PM ₁₀	0.90	3.92
23	Boiler No. HA-6 (5)	VOC	0.65	2.84
		NO _x	33.0	145.0
		CO	9.90	43.40
		SO ₂	3.68	9.67
		PM ₁₀	0.90	3.92
24	Boiler No. HA-7 (5)	VOC	0.65	2.84
		NO _x	33.0	145.0
		CO	9.90	43.40

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AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY **
		SO ₂	3.68	9.67
		PM ₁₀	0.90	3.92
C-108	BTX Cooling Tower Cl ₂	PM	8.41	36.92
		0.0025	0.0110	
		PM (8)	0.17	0.74
		Cl ₂ (8)	0.00005	0.0002
C-109	Crudell Cooling Tower Cl ₂	PM	11.94	52.31
		0.0037	0.0164	
		PM (8)	0.24	1.05
		Cl ₂ (8)	0.00008	0.0003
C-110	Hydrobon Cooling Tower Cl ₂	PM	14.36	62.90
		0.0035	0.0153	
		PM (8)	0.29	1.26
		Cl ₂ (8)	0.00007	0.0003

SULFUR RECOVERY UNIT NO. 1 (6)

E29H417	SRU No. 1 Heater	VOC	0.02	0.09
		NO _x	0.58	2.53
		CO	0.31	1.36
		PM	0.03	0.12
		SO ₂	0.12	0.31
F-SRU1	SRU No. 1 Fugitives (4)	VOC	0.05	0.21
		CO	0.03	0.13
		H ₂ S	0.05	0.20
F-AMINE1	ARU No 1 Fugitives (4)	VOC	0.07	0.31
		CO	0.01	0.03
		H ₂ S	0.02	0.09
FL-87	SRU No. 1 Flare	VOC	0.10	0.22
		NO _x	0.08	0.18
		CO	0.71	1.55

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AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY **
		SO ₂	<0.01	0.01
S-84, S-85	SRU No. 1 and No. 2 Tail Gas Incinerator Stacks (TGI)	VOC	0.13	0.58
		NO _x	2.41	10.60
		CO	14.00	61.20
		PM	0.18	0.80
		SO ₂	39.04	171.01
		H ₂ S	0.42	1.82
<u>SULFUR RECOVERY UNIT NO. 2</u>				
ARU2SUMP	ARU No. 2 Sump	VOC	0.02	<0.01
F-SRU2	SRU No. 2 Fugitives	VOC	0.05	0.21
		CO	0.03	0.13
		H ₂ S	0.05	0.20
F-AMINE2	ARU No. 2 Fugitives	VOC	0.07	0.31
		CO	0.01	0.03
		H ₂ S	0.02	0.09
FL-88	SRU No. 2 Acid Gas Flare	VOC	0.10	0.22
		NO _x	0.08	0.18
		CO	0.71	1.55
		SO ₂	<0.01	<0.01
SRU2SUMP	SRU No. 2 Sump	VOC	0.02	<0.01
F-SWS2	SWS No. 2	H ₂ S	0.01	0.02

AIR CONTAMINANTS DATA

Emission	Source	Air Contaminant	<u>Emission Rates *</u>
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Point No. (1)	Name (2)	Name (3)	lb/hr	TPY
<u>MAINTENANCE AND START-UP EMISSIONS</u>				
FL-97/FL-28/ FL-27	Main Flare, West Flare and East Flare	VOC	561.58	1.24
		NO _x	46.03	0.23
		CO	236.91	1.17
		SO ₂	589.46	4.75
		H ₂ S	3.43	0.09
BTX REGEN	BTX Regenerator Vent	NO _x	46.00	2.73
		CO	13.65	0.82
		SO ₂	0.61	0.06
		HCl	0.58	0.03

(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) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1

NO_x - total oxides of nitrogen

SO₂ - sulfur dioxide

PM - particulate matter, suspended in the atmosphere, including PM₁₀

PM₁₀ - 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

Cl₂ - chlorine

MTBE - methyl-tert-butyl ether

H₂S - hydrogen sulfide

HCl - hydrogen chloride

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

(5) Boilers HA-5, HA-6, and HA-7 emission rates are valid through 2005 or until Low-NO_x burners have been installed. After 2005, the boilers are in the emission caps.

(6) Permit Number 1413 which authorized SRU No. 1 was consolidated into Permit Number 6308 in August 2002.

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- (7) Only the FCCU and Sulfolane Cooling Towers are included in the PM and Cl₂ emission caps.
(8) These emission rates are effective on January 1, 2007.

* 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

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

Dated _____