

# EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Nos. 9868A and PSD-TX-102M4

## EMISSION CAP TABLE

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.

See Attachment I for Source Name and Emission Point Number Index.

### VOC EMISSION CAP

Source Name	Year	lb/hr	TPY
Flares	1995 (Initial)	11071	10202
Fired Units (Furnaces, Heaters, Boilers, etc.)	1996		10978
10134			
FCCU CO Boilers	1997	10776	9912
Engines	1998	8908	9795
Cooling Towers	1999	4941	9374
Wastewater (4)	2000	4753	8898
Tanks	2001	4608	8749
Truck and Rail Loading	2002	4475	8292
Fugitives (4)	2003	4161	7829
Incinerators	2004	3785	7219
Vents (56V1)	2005	3428	6663
	2006 (Final)	2590	6358

### NO<sub>x</sub> EMISSION CAP

Source Name	Year	lb/hr	TPY
Flares	1995 (Initial)	2082	4632
Fired Units (Furnaces, Heaters, Boilers, etc.)	1996		2014
4632			
FCCU CO Boilers	1997	1957	4632
Engines	1998	1957	4632
Incinerators	1999	1843	4452
	2000	1735	3882
	2001	1638	3325
	2002	1589	3111
	2003	1517	2798

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

2004	1518	2800
2005	1519	2809
2006 (Final)	1626	2907
SO <sub>2</sub> EMISSION CAP		

Source Name	Year	lb/hr	TPY
Flares	1995 (Initial)	7128	12740
Fired Units (Furnaces, Heaters, Boilers, etc.)	1996	12560	7004
FCCU CO Boilers	1997	6880	12016
Engines	1998	6880	12017
Incinerators	1999	6877	12015
Sulfur Handling	2000	6860	11960
Fugitives (4)	2001	6849	11910
Wastewater (4)	2002	6849	11910
	2003	6849	11910
	2004	6850	11910
	2005	6850	11910
	2006 (Final)	6855	5200

CO EMISSION CAP

Source Name	Year	lb/hr	TPY
Flares	1995 (Initial)	1285	5305
Fired Units (Furnaces, Heaters, Boilers, etc.)	1996	5305	1295
FCCU CO Boilers	1997	1302	5305
Engines	1998	1302	5305
Incinerators	1999	1260	5305
	2000	1216	5250
	2001	1174	5025
	2002	1177	5000
	2003	1182	4965
	2004	1186	4980
	2005	1188	4990
	2006 (Final)	1264	5305

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

PM EMISSION CAP

Source Name	Year	lb/hr	TPY
Flares	1995 (Initial)	271	1129
Fired Units (Furnaces, Heaters, Boilers, etc.)	1996	271	1129
FCCU CO Boilers	1997	271	1129
Engines	1998	271	1129
Incinerators	1999	271	1129
	2000	267	1129
	2001	263	1129
	2002	263	1129
	2003	263	1129
	2004	263	1129
	2005	263	1129
	2006 (Final)	284	1129

H<sub>2</sub>S EMISSION CAP

Source Name	Year	lb/hr	TPY
Flares	1995 (Initial)	128	307
Fired Units (Furnaces, Heaters, Boilers, etc.)	1996	126	299
FCCU CO Boilers	1997	125	292
Incinerators	1998	128	305
Sulfur Handling	1999	120	243
Fugitives (4)	2000	112	210
Wastewater (4)	2001	111	203
Vent (32V1)	2002	110	199
Tank (3003)	2003	106	185
	2004	102	180
	2005	102	180
	2006 (Final)	56	153

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

## HCl EMISSION CAP

Source Name	Year	lb/hr	TPY
Flares	1995 (Initial)	13	30
Fugitives (4)	1996	13	30
	1997	12	28
	1998	12	28
	1999	12	28
	2000	12	28
	2001	12	28
	2002	12	28
	2003	12	28
	2004	12	28
	2005	12	28
	2006 (Final)	12	28

NH<sub>3</sub> EMISSION CAP

Source Name	Year	lb/hr	TPY
Fugitives (4)	1995 (Initial)	82	355
Wastewater (4)	1996	82	355
Vent (32V1)	1997	82	355
Tank (3003)	1998	82	355
	1999	5	7
	2000	5	6
	2001	5	6
	2002	5	6
	2003	5	6
	2004	5	6
	2005	5	6
	2006 (Final)	5	6

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

## HF EMISSION CAP

Source Name	Year	lb/hr	TPY
Fugitives (4)	1995 (Initial)	0.56	2.44
	1996	0.56	2.44
	1997	0.56	2.44
	1998	0.56	2.44
	1999	0.56	2.44
	2000	0.56	2.44
	2001	0.56	2.44
	2002	0.56	2.44
	2003	0.51	2.23
	2004	0.51	2.23
	2005	0.51	2.23
	2006 (Final)	0.51	2.23

## SPECIATED VOC EMISSION CAPS

## Benzene CAP

Source Name	Year	lb/hr	TPY
Flares	1995 (Initial)	47	78
Tanks	1996	45	75
Truck and Rail Loading	1997	42	68
Fugitives (4)	1998	41	67
Wastewater (4)	1999	22	65
	2000	13	41
	2001	13	41
	2002	12	40
	2003	12	39
	2004	11	39
	2005	10	35
	2006 (Final)	10	35

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

## Cyclohexane CAP

Source Name	Year	lb/hr	TPY
Flares	1995 (Initial)	828	316
Tanks	1996	827	316
Truck and Rail Loading	1997	813	268
Fugitives (4)	1998	308	223
Wastewater (4)	1999	104	211
	2000	87	170
	2001	87	169
	2002	87	169
	2003	86	167
	2004	79	159
	2005	78	155
	2006 (Final)	70	147

## Ethylbenzene CAP

Source Name	Year	lb/hr	TPY
Flares	1995 (Initial)	15	61
Tanks	1996	15	61
Fugitives (4)	1997	15	61
Wastewater (4)	1998	14	60
	1999	13	55
	2000	12	50
	2001	12	49
	2002	12	49
	2003	12	49
	2004	10	38
	2005	10	38
	2006 (Final)	10	38

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

## Hexane CAP

Source Name	Year	lb/hr	TPY
Flares	1995 (Initial)	1353	400
Tanks	1996	1353	399
Truck and Rail Loading	1997	1333	368
Fugitives (4)	1998	576	350
Wastewater (4)	1999	163	341
	2000	138	303
	2001	137	302
	2002	137	301
	2003	133	284
	2004	133	282
	2005	131	274
	2006 (Final)	131	273

## Toluene CAP

Source Name	Year	lb/hr	TPY
Flares	1995 (Initial)	104	110
Tanks	1996	103	106
Fugitives (4)	1997	102	102
Wastewater (4)	1998	76	101
	1999	29	97
	2000	26	87
	2001	26	86
	2002	25	84
	2003	25	84
	2004	24	83
	2005	23	78
	2006 (Final)	23	77

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Xylene CAP

Source Name	Year	lb/hr	TPY
Flares	1995 (Initial)	15	67
Tanks	1996	14	63
Fugitives (4)	1997	14	63
Wastewater (4)	1998	13	63
	1999	13	60
	2000	11	51
	2001	10	51
	2002	10	48
	2003	10	48
	2004	10	48
	2005	9	47
	2006 (Final)	9	47

- (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
  - NO<sub>x</sub> - total oxides of nitrogen
  - SO<sub>2</sub> - sulfur dioxide
  - PM - particulate matter
  - CO - carbon monoxide
  - H<sub>2</sub>S - hydrogen sulfide
  - HCl - hydrogen chloride
  - NH<sub>3</sub> - ammonia
  - HF - hydrogen fluoride
- (4) Fugitive emissions 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 \_\_\_\_\_