

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

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Permit Nos. 6825A and PSD-TX-49

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
Fired Units,	1996	3,914	2,851
FCCU,	1997	3,911	2,859
Tanks,	1998		3,868
2,751			
Cooling Towers,	1999	3,783	2,490
Marine Loading,	2000	778	2,080
Fugitives (4),	2001	668	1,643
Sulfur Recovery Units	2002	624	1,453
	2003	547	1,170
	2004 (Final)	544	1,137

NO_x EMISSION CAP

Source Name	Year	lb/hr	TPY
Fired Units,	1996	3,458	15,146
FCCU,	1997	3,458	15,146
Marine Loading,	1998	3,253	14,250
Sulfur Recovery Units	1999	2,903	12,717
	2000	2,908	12,701
	2001	2,035	8,877

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2002	1,831	7,982
2003	805	3,489
2004 (Final)	1007	4,372

SO₂ EMISSION CAP

Source Name	Year	lb/hr	TPY
Fired Units , FCCU, Marine Loading, Sulfur Recovery Units	1996	1,475	6,459
	1997	1,494	6,105
	1998	1,494	6,105
	1999	1,494	6,105
	2000	1,392	6,093
	2001	1,362	5,963
	2002	1,390	6,015
	2003	1,401	6,062
	2004 (Final)	761	3,340

CO EMISSION CAP

Source Name	Year	lb/hr	TPY
Fired Units, FCCU, Marine Loading, Sulfur Recovery Units	1996	1,299	5,690
	1997	1,299	5,690
	1998	1,299	5,690
	1999	1,304	5,709
	2000	1,325	5,724
	2001	1,324	5,721
	2002	1,326	5,731
	2003	1,317	5,716
	2004 (Final)	913	3,929

PM EMISSION CAP

Source Name	Year	lb/hr	TPY
Fired Units, FCCU, Sulfur Recovery Units	1996	153	671
	1997	153	671
	1998	153	671

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1999	153	671
2000	153	671
2001	154	673
2002	156	685
2003	157	686
2004 (Final)	133	581
H ₂ S EMISSION CAP		

Source Name	Year	lb/hr	TPY
Sulfur Recovery Units, Fugitive (4), Land Loading	1996	5.7	25.1
	1997	5.7	25.1
	1998	4.6	20.0
	1999	3.5	15.0
	2000	2.5	10.0
	2001	1.3	5.0
	2002	1.3	5.0
	2003	1.3	5.0
	2004 (Final)	0.5	1.9

HF EMISSION CAP

Source Name	Year	lb/hr	TPY
Fugitives (4), Fired Units	1996 (Initial)	0.5	2.4
	1997	0.5	2.4
	1998	0.5	2.4
	1999	0.5	2.4
	2000	0.5	2.4
	2001	0.5	2.4
	2002	0.5	2.4
	2003	0.5	2.4
	2004	0.5	2.4

NH₃ EMISSION CAP

Source Name	Year	lb/hr	TPY
Fugitives (4), Tanks	1996 (Initial)	0.1	0.2
	1997	0.1	0.2

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1998	0.1	0.2
1999	0.1	0.2
2000	0.1	0.2
2001	0.1	0.2
2002	0.1	0.2
2003	0.1	0.2
2004	0.1	0.2

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SPECIATED VOC EMISSION CAPS

Benzene CAP

Source Name	Year	lb/hr	TPY
Tanks, Fugitives (4), Marine Loading	1996	11.6	14.9
	1997	10.9	11.6
	1998	10.9	11.5
	1999	10.8	11.3
	2000	10.8	11.2
	2001	2.9	9.7
	2002	2.9	9.7
	2003	2.9	9.7
	2004	2.9	9.7

MTBE CAP

Source Name	Year	lb/hr	TPY
Tanks, Fugitives (4), Marine Loading	1996	19.2	31.1
	1997	19.2	31.1
	1998	19.2	31.1
	1999	19.2	31.1
	2000	13.2	30.4
	2001	13.2	30.4
	2002	13.2	30.4
	2003	13.2	30.4
	2004	13.2	30.4

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan per Attachment 1.
- (2) Specific point source name. For fugitive sources use area name or fugitive source name.
- (3) VOC - volatile organic compounds as defined in General Rule 101.1
 NO_x - total oxides of nitrogen
 SO₂ - sulfur dioxide

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PM - particulate matter
CO - carbon monoxide
H₂S - hydrogen sulfide
MTBE - methyl tert-butyl ether
NH₃ - ammonia
HF - hydrogen fluoride

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

Dated_____

ATTACHMENT 1

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Permit Emission Points by Type

Category:	Fired Units	<u>EPN</u>	<u>Description</u>
		E-01-146	AVU 146 Heater H-101
		E-02-146	AVU 146 Heater H-102A
		E-02-146	AVU 146 Heater H-102B
		E-01-241	GFU 241 Boiler B-101
		E-01-242	GFU 242 Boiler B-201
		E-01-243	GFU 243 Boiler B-301
		E-01-244	GFU 244 Furnace F-101
		E-01-244	GFU 244 Furnace F-102
		E-01-443	HFAU 443 Heater H-1
		E-01-841	DCU 841 Heater H-1B
		E-01-842	DCU 842 Heater 101-BA
		E-02-842	DCU 842 Heater 101-BB
		E-03-843	DCU 842 Heater 201-B
B-103A		E-01-1241	FCCU 1241 Boiler
B-103B		E-02-1241	FCCU 1241 Boiler
		E-03-1241	FCCU 1241 Boiler B-104
		E-01-ESP	CO 9 Boiler
		E-01-1242	SGRU 1242 Boiler B-102
		H-01-1344	CRU 1344 Heater H-1
		H-02-1344	CRU 1344 Heater H-31
		H-02-1344	CRU 1344 Heater H-33
		H-03-1344	CRU 1344 Heater H-2
		H-03-1344	CRU 1344 Heater H-3
		H-03-1344	CRU 1344 Heater H-32
		E-01-15BH	BH15 Boiler 15-41
		E-02-15BH	BH15 Boiler 15-42
		E-03-15BH	BH15 Boiler 15-43
		E-03-16BH	BH16 Boiler 16-31
		E-04-16BH	BH16 Boiler 16-32
		E-05-16BH	BH16 Boiler 16-33
		E-06-16BH	BH16 Boiler 16-34
		E-07-16BH	BH16 Boiler 16-35
		E-02-18BH	BH18 Boiler 18-4
		E-03-18BH	BH18 Boiler 18-5
		E-04-18BH	BH18 Boiler 18-6

E-05-18BH

BH18 Boiler 18-7

Category: Tanks

	<u>EPNDescription</u>
5121	Tank 1792
5122	Tank 1793
5106	Tank 77
5105	Tank 93
5021	Tank 151
5110	Tank 1802
5223	Tank 2101
5210	Tank 2117
5214	Tank 2127
5215	Tank 2128
5207	Tank 2136
5222	Tank 2137
5217	Tank 2138
5219	Tank 2159
5209	Tank 2178
7373	Tank 2102
7374	Tank 2103
5234	Tank 2109
7378	Tank 2110
5205	Tank 2111
5225	Tank 2160
5226	Tank 2161
5240	Tank 2182
5239	Tank 2183
5238	Tank 2184
T-1494	Tank 1494
T-78	Tank 78
T-2588	Tank 2588
T-2590	Tank 2590
E-01-SUMP	sump

Category: Sulfur Recovery Units

	<u>EPNDescription</u>
E-01-SCOT	SCOT I TGPU
E-02-SCOT	SCOT II TGPU

Category: Fugitive

EPNDescription

F-241	GFU 241 fugitives
F-242	GFU 242 fugitives
F-243	GFU 243 fugitives
F-443	HFAU 443 fugitives
F-541/3	SRU 541/2/3 fugitives
F-544	SRU 544 fugitives
F-842	DCU 842 fugitives
F-1241	FCCU 1241 fugitives
F-15BH	BH 15 fugitives
F-16BH	BH 16 fugitives
F-18BH	BH 18 fugitives
F-SRTF-BUT	SRTF-BUT fugitives
F-SRTF	SRTF fugitives
F-7542	MRU 7542 fugitives
F-NECHES	NECHES fugitives
F-PH1	PH1 fugitives
F-PH11	PH11 fugitives
F-PH163	PH163 fugitives
F-PH41	PH41 fugitives
F-PH84	PH84 fugitives
F-DOCKS	DOCKS fugitives
F-146	AVU 146 fugitives
F-244	GFU 244 fugitives
F-841	DCU 841 fugitives
F-1242	SGRU 1242 fugitives
F-1344	CRU 1344 fugitives
F-7848	ATU 7848 fugitives
F-FGMD	FGMD fugitives

Category:	EPN	Description
Cooling Water	F-366CT	AVU 146 Cooling Tower
	F-233PS	GFU 244 Cooling Tower
	F-136BCT	SGRU Cooling Tower
	F-360PS	CRU 1344 Cooling Tower
	F-100CT	GFU 241/242 Cooling
Tower	F-101CT	GFU 243 Cooling Tower
	F-244CT	HFAU 443 Cooling Tower
	F-364CT	SRU Complex Cooling
Tower	F-169BCT	DCU 841/842 Cooling
Tower	F-136ACT	FCCU 1241 Cooling

Category: Land Loading	F-316CT	BH 15 Cooling Tower	
	F-314CT	BH 16 Cooling Tower	
	<u>EPN</u>	<u>Description</u>	
	E01-12SRURK	Sulfur loading Racks	
Category: Marine Loading	<u>EPN</u>	<u>Description</u>	
emissions - berth 0	E-BERTH0-0	Marine	loading
emissions - berth 1	E-BERTH1-1	Marine	loading
emissions - berth 1	E-BERTH1-2	Marine	loading
emissions - berth 2	E-BERTH2-5	Marine	loading
emissions - berth 2	E-BERTH2-6	Marine	loading
emissions - berth 3	E-BERTH3-7	Marine	loading
emissions - berth 3	E-BERTH3-8	Marine	loading
emissions - berth 5	E-BERTH5-11	Marine	loading
emissions - berth 5	E-BERTH5-12	Marine	loading
emissions - berth 6	E-BERTH6-14	Marine	loading
emissions - berth 6	E-BERTH6-15	Marine	loading
loading	E-01-DOCKS	Flare 23	- marine
Category: FCCU	<u>EPN</u>	<u>Description</u>	
	E-01-ESP	CO 9 Boiler (FCCU)	
Category: Flare	<u>EPN</u>	<u>Description</u>	
	E-01-FLARE	Flare No. 1	
	E-02-FLARE	Flare No. 2	

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E-05-FLARE	Flare No. 5
E-07-FLARE	Flare No. 7
E-08-FLARE	Flare No. 8
E-12-FLARE	Flare No. 12
E-13-FLARE	Flare No. 13
E-15-FLARE	Flare No. 15
E-18-FLARE	Flare No. 18
E-19-FLARE	Flare No. 19
E-20-FLARE	Flare No. 20
E-22-FLARE	Flare No. 22
E-B103FLARE	Flare No. B-103

All the flares are Emergency Use Only

Dated_____