

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Flexible Permit Numbers 9868A and PSD-TX-102M5

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	4399	7396
Tanks	2001	4229	7140
Truck and Rail Loading	2002	4068	6718
Fugitives (4)	2003	3760	6320
Incinerators	2004	3110	5663
Vents (56V1)	2005A (6)	3024	5474
	2005B (6)	3027	(6)
	2006	2251	5015
	2007 (7)	2244	(7)
	2008 (Final)	2244	5019

NO_x 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	1753	3699
	2001	1697	3456
	2002	1590	3115
	2003	1519	2802
	2004	1513	2764
	2005A (6)	1512	2770
	2005B (6)	1523	(6)
	2006	1630	2915
	2007 (7)	1656	(7)

EMISSION CAP TABLE
2008 (Final) 1656 2970
NO_x EMISSION SUBCAP FOR BOILERS 81B17 AND 81B18 (5)

EPNs	Year	lb/hr	TPY
81B17 and 81B18	2004	68	94
	2005 (Final)	68	57

SO₂ EMISSION CAP

Source Name	Year	lb/hr	TPY
Flares	1995 (Initial)	7128	12740
Fired Units (Furnaces, Heaters, Boilers, etc.)	1996	7004	12560
FCCU CO Boilers	1997	6880	12016
Engines	1998	6880	12017
Incinerators	1999	6877	12015
Sulfur Handling	2000	6850	11934
Fugitives (4)	2001	6850	11934
Wastewater (4)	2002	6847	11927
	2003	6847	11927
	2004	6845	11921
	2005A (6)	6845	10680
	2005B (6)	6854	(6)
	2006	6860	10729
	2007 (7)	6881	(7)
	2008 (Final)	6881	3612

CO EMISSION CAP

Source Name	Year	lb/hr	TPY
Flares	1995 (Initial)	1285	5305
Fired Units (Furnaces, Heaters, Boilers, etc.)	1996	1295	5305
FCCU CO Boilers	1997	1302	5305
Engines	1998	1302	5305
Incinerators	1999	1260	5305
	2000	1204	4758
	2001	1206	4765
	2002	1164	4642
	2003	1168	4606
	2004	1166	4579
	2005A (6)	1167	4587
	2005B (6)	1189	(6)
	2006	1265	5013
	2007 (7)	1319	(7)
	2008 (Final)	1319	5250

PM EMISSION CAP

EMISSION CAP TABLE

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
Vacuum Cooling Tower	2000	261	1125
	2001	261	1125
	2002	261	1125
	2003	261	1125
	2004	261	1125
	2005A (6)	261	1120
	2005B (6)	263	(6)
	2006	263	1103
	2007 (7)	276	(7)
	2008 (Final)	276	1131

H₂S 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	43	115
Wastewater (4)	2001	42	108
Vent (32V1)	2002	42	108
Tank (3003)	2003	42	108
	2004	37	103
	2005	38	104
	2006	37	97
	2007 (Final)	38	98

EMISSION CAP TABLE
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	5.7	25
	2001	5.7	25
	2002	5.7	25
	2003	5.7	25
	2004	5.7	25
	2005	5.7	25
	2006	5.7	25
	2007 (Final)	5.7	25

NH₃ 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	2.0	5.4
	2001	2.0	5.4
	2002	2.0	5.4
	2003	2.0	5.5
	2004	2.0	5.5
	2005	2.0	5.5
	2006	2.0	5.5
	2007 (Final)	2.0	5.5

EMISSION CAP TABLE
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	0.43	1.9
	2001	0.43	1.9
	2002	0.43	1.9
	2003	0.43	1.9
	2004	0.43	1.9
	2005	0.43	1.9
	2006	0.43	1.9
	2007 (Final)	0.44	1.9

CHLORINE CAP (3/03)

Source Name	Year	lb/hr	TPY
Cooling Towers	2003	1.65	7.23
	2004	1.65	7.23
	2005	1.65	7.23
	2006	1.65	7.23
	2007 (Final)	1.7	7.50

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	14	35
	2001	13	34
	2002	13	33
	2003	13	33
	2004	12	32
	2005	12	32
	2006	11	31
	2007 (Final)	11	31

(1) Emission point identification - either specific equipment designation or emission point number from a plot plan.

EMISSION CAP TABLE

- (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
H₂S - hydrogen sulfide
HCl - hydrogen chloride
NH₃ - ammonia
HF - hydrogen fluoride
- (4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
- (5) The NO_x emissions in this subcap are also included in the overall NO_x cap.
- (6) 2005A caps are in effect prior to startup of the new Hydrogen Unit in 2005.
2005B annual caps = 2005A annual caps + ratable increases from Table D-1 dated June 28, 2004 of the Hydrogen Unit amendment application. Those annual increases/(decreases) in TPY are as follows:
VOC = 12; NO_x = 47; SO₂ = 39; CO = 97; and PM = 10.
- (7) 2007 short-term and annual caps will be equal to 2006 caps adjusted for ratable increases/(decreases) due to startup of the Vacuum and Coker Units in 2007 (Table H-1 dated 2/14/05 of the Vacuum/Coker Unit amendment application). Those annual increases/(decreases) in TPY are as follows:
VOC = 4; NO_x = 54; SO₂ = (7117); CO = 224; and PM = 28.

Emission rates are based on continuous operation.

Dated April 8, 2005

ATTACHMENT I

CONTAMINANTS, EMISSION POINT NUMBERS AND SOURCE NAMES

Flexible Permit Numbers 9868A and PSD-TX-102M5

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.

Contaminant	Emission Point No. (1)	Source Name (2)
SO₂ SOURCES:		
	2H1	Unit 2-2 HDS Charge Htr
	2H2	NGL Deoiler Furnace
	4H1	Unit 4 Feed Heater
	4H2	Unit 4 Dehydrator Heater
	5H1	Unit 5-A Feed Heater
	6H3	BHU Reduction Furnace
	6H1	Unit 6 Hydro Preheater
	6H2	Unit 6 Stripper Reboiler
	6H4	Unit 6 Dryer Regen Gas Heater
	6H5	HPU Charge Furnace
	7H1-4	Unit 7 Charge Furnace
	7H1-4	Unit 7 No. 1 Reheater
	7H1-4	Unit 7 No. 2 Reheater
	7H1-4	Unit 7 No. 3 Reheater
	9H1	Crude Oil Heater
	10H1	Crude Oil Heater
	11H1	Ethane Unit Superheater
	12H1	Mol Sieve Regen Gas Heater
	19H3	19.1 Naphtha HDS Chg Htr
	19H5	19.1 No. 1 Reboiler
	19H5	19.1 No. 2 Reboiler
	19B1/19H1	19.2 Charge Furnace
	19H6	19.2 Platformer Reheater No. 1
	19B1/19H2	19.2 No. 2 Reheater
	19B1/19H2	19.2 No. 3 Reheater

ATTACHMENT I - CONTAMINANTS, EMISSION POINT NUMBERS
AND SOURCE NAMES

<u>Contaminant (3)</u>	<u>Emission Point No. (1)</u>	<u>Source Name (2)</u>
	19B2/19H4	19.3 Charge Furnace

ATTACHMENT I - CONTAMINANTS, EMISSION POINT NUMBERS
AND SOURCE NAMES

Contaminant (3)	Emission Point No. (1)	Source Name (2)
	19B2/19H4	19.3 Frac Feed Furnace
	22H1	Alky Reboiler Furnace
	26H1	Unit 26 DeC4 Reboiler
	28H1	Unit 28 Charge Heater
	29H4	Unit 29 DeC4 Reboiler
	29H2	Unit 29 Preheater
	36H1	HDS Unit Charge Heater
	40H1	Unit 40 Superheater No. 1
	40H2	Unit 40 Superheater No. 2
	41H1 (PSD)	Unit 41 Reformer Furnace
	42H1 (PSD)	Unit 42 Reactor Chg Htr
	42H2 (PSD)	Unit 42 Reactor Chg Htr
	42H3 (PSD)	Unit 42 Fract Feed Heater
	50H1	Unit 50 Charge Heater
	51H1	Unit 51 Charge Heater
	98H1	Unit 98 Reformer Furnace
	81B17	Refinery Boiler 2.4
	81B18	Refinery Boiler 2.2
	7E1	Unit 7 Plat Engine No. 1
	7E2	Unit 7 Plat Engine No. 2
	7E3	Unit 7 Plat Engine No. 3
	7E4	Unit 7 Plat Engine No. 4
	7E5	Unit 7 Plat Engine No. 5
	7E6	Unit 7 Plat Engine No. 6
	12E1	Engine
	12E2	Engine
	12E3	Engine
	12E4	Engine

ATTACHMENT I - CONTAMINANTS, EMISSION POINT NUMBERS
AND SOURCE NAMES

Contaminant (3)	Emission Point No. (1)	Source Name (2)
	12E5	Engine
	12E6	Engine
	12E7	Engine
	55E1	Engine
	55E2	Engine
	55E3	Engine
	93E1	Engine No. 37
	93E2	Engine No. 38
	93E3	Engine No. 39
	93E4	Engine No. 40
	85B1 (PSD)	Cat Cracker Regenerator (Unit 29 CO Boiler Stack)
	29P1	Unit 29 FCCU Stack
	85B2 (PSD)	Cat Cracker Regenerator (Unit 40 CO Boiler Stack)
	40P1	Unit 40 FCCU Stack
	34I1	SRU Incinerator
	43I1 (PSD)	SCOT Unit Incinerator
	66FL1	Refinery East HC Flare
	66FL2	Refinery West HC Flare
	66FL3	Refinery Cat Flare
	66FL4	NGL Non-Corrosive Flare
	66FL5	NGL Corrosive Flare
	66FL6	H ₂ S Emergency Flare
	66FL8	100M Sour Brine Flare Pit
	66FL9	55M Swt Brine Flare Pit
	66FL10	100M Swt Brine Flare Pit
	66FL11	30M Swt Brine Flare Pit
	66FL12	ARDS HC Flare
	66FL13	ARDS Emergency Sulfur Flare

ATTACHMENT I - CONTAMINANTS, EMISSION POINT NUMBERS
AND SOURCE NAMES

Contaminant (3)	Emission Point No. (1)	Source Name (2)
	53FL1	Thermal Oxidation Unit

VOC SOURCES:

2H1	Unit 2-2 HDS Charge Htr
2H2	NGL Deoiler Furnace
4H1	Unit 4 Feed Heater
4H2	Unit 4 Dehydrator Heater
5H1	Unit 5-A Feed Heater
6H3	BHU Reduction Furnace
6H1	Unit 6 Hydro Preheater
6H2	Unit 6 Stripper Reboiler
6H4	Unit 6 Dryer Regen Gas Heater
6H5	HPU Charge Furnace
7H1-4	Unit 7 Charge Furnace
7H1-4	Unit 7 No. 1 Reheater
7H1-4	Unit 7 No. 2 Reheater
7H1-4	Unit 7 No. 3 Reheater
9H1	Crude Oil Heater
10H1	Crude Oil Heater
11H1	Ethane Unit Superheater
12H1	Mol Sieve Regen Gas Heater
19H3	19.1 Naphtha HDS Chg Htr
19H5	19.1 No. 1 Reboiler
19H5	19.1 No. 2 Reboiler
19B1/19H1	19.2 Charge Furnace
19H6	19.2 Platformer Reheater No. 1
19B1/19H2	19.2 No. 2 Reheater
19B1/19H2	19.2 No. 3 Reheater
19B2/19H4	19.3 Charge Furnace

ATTACHMENT I - CONTAMINANTS, EMISSION POINT NUMBERS
AND SOURCE NAMES

Contaminant (3)	Emission Point No. (1)	Source Name (2)
	19B2/19H4	19.3 Frac Feed Furnace
	22H1	Alky Reboiler Furnace
	26H1	Unit 26 DeC4 Reboiler
	28H1	Unit 28 Charge Heater
	29H4	Unit 29 DeC4 Reboiler
	29H2	Unit 29 Preheater
	36H1	HDS Unit Charge Heater
	40H1	Unit 40 Superheater No. 1
	40H2	Unit 40 Superheater No. 2
	41H1 (PSD)	Unit 41 Reformer Furnace
	42H1 (PSD)	Unit 42 Reactor Chg Htr
	42H2 (PSD)	Unit 42 Reactor Chg Htr
	42H3 (PSD)	Unit 42 Fract Feed Heater
	50H1	Unit 50 Charge Heater
	51H1	Unit 51 Charge Heater
	98H1	Unit 98 Reformer Furnace
	81B17	Refinery Boiler 2.4
	81B18	Refinery Boiler 2.2
	7E1	Unit 7 Plat Engine No. 1
	7E2	Unit 7 Plat Engine No. 2
	7E3	Unit 7 Plat Engine No. 3
	7E4	Unit 7 Plat Engine No. 4
	7E5	Unit 7 Plat Engine No. 5
	7E6	Unit 7 Plat Engine No. 6
	12E1	Engine
	12E2	Engine
	12E3	Engine
	12E4	Engine
	12E5	Engine
	12E6	Engine
	12E7	Engine

ATTACHMENT I - CONTAMINANTS, EMISSION POINT NUMBERS
AND SOURCE NAMES

Contaminant (3)	Emission Point No. (1)	Source Name (2)
	55E1	Engine
	55E2	Engine
	55E3	Engine
	93E1	Engine No. 37
	93E2	Engine No. 38
	93E3	Engine No. 39
	93E4	Engine No. 40
	53R1	Refinery Tank Car Loading
	53T1	Refy Tank Truck Loading
	53R2	NGL Tank Car Tracks 1 and 2
	53R3	NGL Tank Car Tracks 3 and 4
	53R4	NGL Tank Car Track 5
	53T2	NGL Tank Truck Loading
	56-3	ABS Stack
	56-4	Truck Loading and Fugitives
	56V1	Caustic Regeneration Vent
	85B1 (PSD)	Cat Cracker Regenerator (Unit 29 CO Boiler Stack)
	29P1	Unit 29 FCCU Stack
	85B2 (PSD)	Cat Cracker Regenerator (Unit 40 CO Boiler Stack)
	40P1	Unit 40 FCCU Stack
	34I1	SRU Incinerator
	43I1 (PSD)	SCOT Unit Incinerator
	66FL1	Refinery East HC Flare
	66FL2	Refinery West HC Flare
	66FL3	Refinery Cat Flare
	66FL4	NGL Non-Corrosive Flare
	66FL5	NGL Corrosive Flare
	66FL6	H ₂ S Emergency Flare

ATTACHMENT I - CONTAMINANTS, EMISSION POINT NUMBERS
AND SOURCE NAMES

Contaminant (3)	Emission Point No. (1)	Source Name (2)
	66FL8	100M Sour Brine Flare Pit
	66FL9	55M Swt Brine Flare Pit
	66FL10	100M Swt Brine Flare Pit
	66FL11	30M Swt Brine Flare Pit
	66FL12	ARDS HC Flare
	66FL13	ARDS Emergency Sulfur Flare
	53FL1	Thermal Oxidation Unit
	F-1	Unit 1 Fugitives
	F-1-6	Unit 1.6 Fugitives
	F-1-7	Unit 1.7 Fugitives
	F-2-1	Unit 2 Fugitives
	F-2-5	Process Fugitives
	F-4	Butane Isom Fugitives
	F-5	Pentane Isom Fugitives
	F-6	Hexane Isom Fugitives
	F-7	Platformer
	F-9	Unit 9 Fugitives
	F-10	Unit 10 Fugitives
	F-11	NGL Deethanizer Unit Fug
	F-12	Cryogenic Gas Plant Fug
	F-13	NGL CLean-Up Unit Fug
	F-19-1	Naphtha HDS Fugitives
	F-19-2	Reformer Fugitives
	F-19-3	Distillate HDS Fugitives
	F-22	HF Alkylation Fugitives
	F-23	St Run Fract Fugitives
	F-26	HO FCCU Fract Fugitives
	F-28	Unit 28 Fugitives

ATTACHMENT I - CONTAMINANTS, EMISSION POINT NUMBERS
AND SOURCE NAMES

Contaminant (3)	Emission Point No. (1)	Source Name (2)
	F-29	Gas Oil FCCU 29 Fugitives
	F-32	Unit 32 Fugitives
	F-35	Unit 35 Fugitives
	F-36	Unit 36 Fugitives
	F-40	Heavy Oil FCCU Fugitives
	F-41	Fugitives
	F-42	ARDS Unit 42 Fugitives
	F-43	Sulfur Handling/Storage
	F-50	Unit 50 Fugitives
	F-51	Unit 51 Fugitives
	F-53-1	Refinery Loading Fugitives
	F-53-2	NGL Loading Rack
	F-55	Air Compressor Fugitives
	F-56-5	Unit 56 Fugitives
	F-66-1	Ref. Flare Area Fugitives
	F-66-3	ARDS/Cat Area Fugitives
	F-68-1a	ARDS Storage Fugitives
	F-68-1e	E. Refinery Storage Fugitives
	F-68-1n	N. Refinery Storage Fugitives
	F-68-1r	Rocky Station Fugitives
	F-68-1s	S. Refinery Storage Fugitives
	F-68-1t	Taubman Yard Fugitives
	F-68-1w	W. Refinery Storage Fugitives
	F-68-2n	N. Coble Storage Fugitives
	F-68-2s	S. Coble Storage Fugitives
	F-68-3	NGL West Storage Fugitives
	F-68-4t	JTF Fugitives
	F-68-5	Gasoline Blending System

ATTACHMENT I - CONTAMINANTS, EMISSION POINT NUMBERS
AND SOURCE NAMES

Contaminant (3)	Emission Point No. (1)	Source Name (2)
	F-81	Refinery Boilers
	F-82	NGL Boilers
	F-85-1	Unit 29 COB Fugitives
	F-85-2	Unit 40 COB Fugitives
	F-68-4a	100M SWT Brine Pond
	F-68-4b	55M SWT Brine Pond
	F-68-4c	100M Sour Brine Pond
	F-68-4d	100M SWT Brine Pond
	F-68-4e	30M SWT Brine Pond
	F-68-4f	300M Sour Brine Pond
	F-68-4g	2MM Brine Pond
	F-68-4h	3MM Brine Pond
	F-54-C1	Cooling Towers (Marley 1)
	F-54-C10	Cooling Twr (Refy No. 9)
	F-54-C11	Cooling Twr (Refy No. 3)
	F-54-C12	Cooling Twr (NGL Mar No. 12)
	F-54-C13	Cooling Twr (NGL Prt No. 14)
	F-54-C14	Cooling Twr (NGL Mar No. 15)
	F-54-C15	Cooling Twr (NGL Prt No. 16)
	F-54-C17	Cooling Twr (Refy No. 8)
	F-54-C18	Cooling Twr (Refy No. 13)
	F-54-C19	Cooling Twr (Refy No. 10)
	F-54-C21	Cooling Twr (Vacuum Unit)
	F-54-C2	Cool Twr (NGL Ecodyne No. 9)
	F-54-C20	Cooling Twr (ARDS No. 17)
	F-54-C3	Cooling Twr (NGL SF No. 11)
	F-54-C4	Cooling Twr (NGL Mar No. 13)
	F-54-C6	Cooling Twr (NGL Mar No. 10)

ATTACHMENT I - CONTAMINANTS, EMISSION POINT NUMBERS
AND SOURCE NAMES

Contaminant (3)	Emission Point No. (1)	Source Name (2)
	F-54-C7	Cooling Twr (Refy No. 2)
	F-54-C8	Cooling Twr (Refy No. 4)
	F-54-C9	Cooling Twr (Refy No. 7)
	F-56-1-1	NGL West Sump
	F-56-1-3	NGL North Sump
	F-56-1-4-A	Refy Oil/H2O Separators
	F-56-1-4-B	API Trap Fugitives
	F-56-1-6	Storm Water System
	F-56-2	Dixon Creek WWTP
	F-56-1-5	Hazardous Waste Impoundment
	0109	Tank Storage
	0110	Tank Storage
	0111	Tank Storage
	0202	Tank Storage
	0251	Tank Storage
	0253	Tank Storage
	0303	Tank Storage
	0401	Tank Storage
	0511	Tank Storage
	0512	Tank Storage
	0513	Tank Storage
	0514	Tank Storage
	0552	Tank Storage
	0562	Tank Storage
	0572	Tank Storage
	0573	Tank Storage
	1001	Tank Storage
	1002	Tank Storage

ATTACHMENT I - CONTAMINANTS, EMISSION POINT NUMBERS
AND SOURCE NAMES

<u>Contaminant (3)</u>	<u>Emission Point No. (1)</u>	<u>Source Name (2)</u>
	1003	Tank Storage
	1004	Tank Storage
	1005	Tank Storage
	1006	Tank Storage
	1007	Tank Storage
	1008	Tank Storage
	1011	Tank Storage
	1012	Tank Storage
	1013	Tank Storage
	1064	Tank Storage
	1067	Tank Storage
	1163	Tank Storage
	1164	Tank Storage
	1165	Tank Storage
	1522	Tank Storage
	2072	Tank Storage
	2510	Tank Storage
	2530	Tank Storage
	2553	Tank Storage
	2571	Tank Storage
	2572	Tank Storage
	2575	Tank Storage
	2576	Tank Storage
	2577	Tank Storage
	2578	Tank Storage
	2579	Tank Storage
	2580	Tank Storage
	2670	Tank Storage
	2672	Tank Storage
	2673	Tank Storage
	2674	Tank Storage

ATTACHMENT I - CONTAMINANTS, EMISSION POINT NUMBERS
AND SOURCE NAMES

Contaminant (3)	Emission Point No. (1)	Source Name (2)
	2675	Tank Storage
	2676	Tank Storage
	2677	Tank Storage
	2678	Tank Storage
	3001	Tank Storage
	3002	Tank Storage
	3003	Tank Storage
	4030	Tank Storage
	5505	Tank Storage
	5508	Tank Storage
	5511	Tank Storage
	5520	Tank Storage
	5521	Tank Storage
	5525	Tank Storage
	5531	Tank Storage
	5532	Tank Storage
	5536	Tank Storage
	5537	Tank Storage
	5538	Tank Storage
	5539	Tank Storage
	5540	Tank Storage
	5541	Tank Storage
	5542	Tank Storage
	5543	Tank Storage
	5544	Tank Storage
	5545	Tank Storage
	5548	Tank Storage
	5550	Tank Storage

ATTACHMENT I - CONTAMINANTS, EMISSION POINT NUMBERS
AND SOURCE NAMES

<u>Contaminant (3)</u>	<u>Emission Point No. (1)</u>	<u>Source Name (2)</u>
	5551	Tank Storage
	5553	Tank Storage
	5554	Tank Storage
	5555	Tank Storage
	5556	Tank Storage
	5557	Tank Storage
	5558	Tank Storage
	5559	Tank Storage
	5560	Tank Storage
	5577	Tank Storage
	5578	Tank Storage
	5580	Tank Storage
	5582	Tank Storage
	5583	Tank Storage
	5584	Tank Storage
	5587	Tank Storage
	5588	Tank Storage
	5589	Tank Storage
	5590	Tank Storage
	5591	Tank Storage
	5592	Tank Storage
	5593	Tank Storage
	5596	Tank Storage
	5597	Tank Storage
	5598	Tank Storage
	5599	Tank Storage
	8001	Tank Storage
	8002	Tank Storage

ATTACHMENT I - CONTAMINANTS, EMISSION POINT NUMBERS
AND SOURCE NAMES

Contaminant (3)	Emission Point No. (1)	Source Name (2)
	8010	Tank Storage
	8011	Tank Storage
	8012	Tank Storage
	8013	Tank Storage
	8014	Tank Storage
	8015	Tank Storage
	8031	Tank Storage
	8032	Tank Storage
	8033	Tank Storage
	8034	Tank Storage
	9200	Tank Storage
	9201	Tank Storage
	9202	Tank Storage
	9500	Tank Storage
	9501	Tank Storage
	9502	Tank Storage
	9503	Tank Storage
	9504	Tank Storage
	9700	Tank Storage
	9701	Tank Storage
	9702	Tank Storage

NO_x SOURCES:

2H1	Unit 2-2 HDS Charge Htr
2H2	NGL Deoiler Furnace
4H1	Unit 4 Feed Heater
4H2	Unit 4 Dehydrator Heater
5H1	Unit 5-A Feed Heater
6H3	BHU Reduction Furnace

ATTACHMENT I - CONTAMINANTS, EMISSION POINT NUMBERS
AND SOURCE NAMES

Contaminant (3)	Emission Point No. (1)	Source Name (2)
	6H1	Unit 6 Hydro Preheater
	6H2	Unit 6 Stripper Reboiler
	6H4	Unit 6 Dryer Regen Gas Heater
	6H5	HPU Charge Furnace
	7H1-4	Unit 7 Charge Furnace
	7H1-4	Unit 7 No. 1 Reheater
	7H1-4	Unit 7 No. 2 Reheater
	7H1-4	Unit 7 No. 3 Reheater
	9H1	Crude Oil Heater
	10H1	Crude Oil Heater
	11H1	Ethane Unit Superheater
	12H1	Mol Sieve Regen Gas Heater
	19H3	19.1 Naphtha HDS Chg Htr
	19H5	19.1 No. 1 Reboiler
	19H5	19.1 No. 2 Reboiler
	19B1/19H1	19.2 Charge Furnace
	19H6	19.2 Platformer Reheater No. 1
	19B1/19H2	19.2 No. 2 Reheater
	19B1/19H2	19.2 No. 3 Reheater
	19B2/19H4	19.3 Charge Furnace
	19B2/19H4	19.3 Frac Feed Furnace
	22H1	Alky Reboiler Furnace
	26H1	Unit 26 DeC4 Reboiler
	28H1	Unit 28 Charge Heater
	29H4	Unit 29 DeC4 Reboiler
	29H2	Unit 29 Preheater
	36H1	HDS Unit Charge Heater
	40H1	Unit 40 Superheater No. 1

ATTACHMENT I - CONTAMINANTS, EMISSION POINT NUMBERS
AND SOURCE NAMES

Contaminant (3)	Emission Point No. (1)	Source Name (2)
	40H2	Unit 40 Superheater No. 2
	41H1 (PSD)	Unit 41 Reformer Furnace
	42H1 (PSD)	Unit 42 Reactor Chg Htr
	42H2 (PSD)	Unit 42 Reactor Chg Htr
	42H3 (PSD)	Unit 42 Fract Feed Heater
	50H1	Unit 50 Charge Heater
	51H1	Unit 51 Charge Heater
	98H1	Unit 98 Reformer Furnace
	81B17	Refinery Boiler 2.4
	81B18	Refinery Boiler 2.2
	7E1	Unit 7 Plat Engine No. 1
	7E2	Unit 7 Plat Engine No. 2
	7E3	Unit 7 Plat Engine No. 3
	7E4	Unit 7 Plat Engine No. 4
	7E5	Unit 7 Plat Engine No. 5
	7E6	Unit 7 Plat Engine No. 6
	12E1	Engine
	12E2	Engine
	12E3	Engine
	12E4	Engine
	12E5	Engine
	12E6	Engine
	12E7	Engine
	55E1	Engine
	55E2	Engine
	55E3	Engine
	93E1	Engine No. 37
	93E2	Engine No. 38

ATTACHMENT I - CONTAMINANTS, EMISSION POINT NUMBERS
AND SOURCE NAMES

Contaminant (3)	Emission Point No. (1)	Source Name (2)
	93E3	Engine No. 39
	93E4	Engine No. 40
	85B1 (PSD)	Cat Cracker Regenerator (Unit 29 CO Boiler Stack)
	29P1	Unit 29 FCCU Stack
	85B2 (PSD)	Cat Cracker Regenerator (Unit 40 CO Boiler Stack)
	40P1	Unit 40 FCCU Stack
	34I1	SRU Incinerator
	43I1 (PSD)	SCOT Unit Incinerator
	66FL1	Refinery East HC Flare
	66FL2	Refinery West HC Flare
	66FL3	Refinery Cat Flare
	66FL4	NGL Non-Corrosive Flare
	66FL5	NGL Corrosive Flare
	66FL6	H ₂ S Emergency Flare
	66FL8	100M Sour Brine Flare Pit
	66FL9	55M Swt Brine Flare Pit
	66FL10	100M Swt Brine Flare Pit
	66FL11	30M Swt Brine Flare Pit
	66FL12	ARDS HC Flare
	66FL13	ARDS Emergency Sulfur Flare
	53FL1	Thermal Oxidation Unit

CO SOURCES:

2H1	Unit 2-2 HDS Charge Htr
2H2	NGL Deoiler Furnace
4H1	Unit 4 Feed Heater
4H2	Unit 4 Dehydrator Heater
5H1	Unit 5-A Feed Heater
6H3	BHU Reduction Furnace
6H1	Unit 6 Hydro Preheater
6H2	Unit 6 Stripper Reboiler
6H4	Unit 6 Dryer Regen Gas Heater

ATTACHMENT I - CONTAMINANTS, EMISSION POINT NUMBERS
AND SOURCE NAMES

Contaminant (3)	Emission Point No. (1)	Source Name (2)
	6H5	HPU Charge Furnace
	7H1-4	Unit 7 Charge Furnace
	7H1-4	Unit 7 No. 1 Reheater
	7H1-4	Unit 7 No. 2 Reheater
	7H1-4	Unit 7 No. 3 Reheater
	9H1	Crude Oil Heater
	10H1	Crude Oil Heater
	11H1	Ethane Unit Superheater
	12H1	Mol Sieve Regen Gas Heater
	19H3	19.1 Naphtha HDS Chg Htr
	19H5	19.1 No. 1 Reboiler
	19H5	19.1 No. 2 Reboiler
	19B1/19H1	19.2 Charge Furnace
	19H6	19.2 Platformer Reheater No. 1
	19B1/19H2	19.2 No. 2 Reheater
	19B1/19H2	19.2 No. 3 Reheater
	19B2/19H4	19.3 Charge Furnace
	19B2/19H4	19.3 Frac Feed Furnace
	22H1	Alky Reboiler Furnace
	26H1	Unit 26 DeC4 Reboiler
	28H1	Unit 28 Charge Heater
	29H4	Unit 29 DeC4 Reboiler
	29H2	Unit 29 Preheater
	36H1	HDS Unit Charge Heater
	40H1	Unit 40 Superheater No. 1
	40H2	Unit 40 Superheater No. 2
	41H1 (PSD)	Unit 41 Reformer Furnace
	42H1 (PSD)	Unit 42 Reactor Chg Htr
	42H2 (PSD)	Unit 42 Reactor Chg Htr
	42H3 (PSD)	Unit 42 Fract Feed Heater
	50H1	Unit 50 Charge Heater

ATTACHMENT I - CONTAMINANTS, EMISSION POINT NUMBERS
AND SOURCE NAMES

Contaminant (3)	Emission Point No. (1)	Source Name (2)
	51H1	Unit 51 Charge Heater
	98H1	Unit 98 Reformer Furnace
	81B17	Refinery Boiler 2.4
	81B18	Refinery Boiler 2.2
	70	Unit 7 Plat Engine No. 1
	7E2	Unit 7 Plat Engine No. 2
	7E3	Unit 7 Plat Engine No. 3
	7E4	Unit 7 Plat Engine No. 4
	7E5	Unit 7 Plat Engine No. 5
	7E6	Unit 7 Plat Engine No. 6
	12E1	Engine
	12E2	Engine
	12E3	Engine
	12E4	Engine
	12E5	Engine
	12E6	Engine
	12E7	Engine
	55E1	Engine
	55E2	Engine
	55E3	Engine
	93E1	Engine No. 37
	93E2	Engine No. 38
	93E3	Engine No. 39
	93E4	Engine No. 40
	85B1 (PSD)	Cat Cracker Regenerator (Unit 29 CO Boiler Stack)
	29P1	Unit 29 FCCU Stack
	85B2 (PSD)	Cat Cracker Regenerator (Unit 40 CO Boiler Stack)
	40P1	Unit 40 FCCU Stack

ATTACHMENT I - CONTAMINANTS, EMISSION POINT NUMBERS
AND SOURCE NAMES

Contaminant (3)	Emission Point No. (1)	Source Name (2)
	34I1	SRU Incinerator
	43I1 (PSD)	SCOT Unit Incinerator
	66FL1	Refinery East HC Flare
	66FL2	Refinery West HC Flare
	66FL3	Refinery Cat Flare
	66FL4	NGL Non-Corrosive Flare
	66FL5	NGL Corrosive Flare
	66FL6	H ₂ S Emergency Flare
	66FL8	100M Sour Brine Flare Pit
	66FL9	55M Swt Brine Flare Pit
	66FL10	100M Swt Brine Flare Pit
	66FL11	30M Swt Brine Flare Pit
	66FL12	ARDS HC Flare
	66FL13	ARDS Emergency Sulfur Flare
	53FL1	Thermal Oxidation Unit

PM SOURCES:

2H1	Unit 2-2 HDS Charge Htr
2H2	NGL Deoiler Furnace
4H1	Unit 4 Feed Heater
4H2	Unit 4 Dehydrator Heater
5H1	Unit 5-A Feed Heater
6H3	BHU Reduction Furnace
6H1	Unit 6 Hydro Preheater
6H2	Unit 6 Stripper Reboiler
6H4	Unit 6 Dryer Regen Gas Heater
6H5	HPU Charge Furnace
7E1	Unit 7 Plat Engine No. 1
7E2	Unit 7 Plat Engine No. 2

ATTACHMENT I - CONTAMINANTS, EMISSION POINT NUMBERS
AND SOURCE NAMES

Contaminant (3)	Emission Point No. (1)	Source Name (2)
	7E3	Unit 7 Plat Engine No. 3
	7E4	Unit 7 Plat Engine No. 4
	7E5	Unit 7 Plat Engine No. 5
	7E6	Unit 7 Plat Engine No. 6
	7H1-4	Unit 7 Charge Furnace
	7H1-4	Unit 7 No. 1 Reheater
	7H1-4	Unit 7 No. 2 Reheater
	7H1-4	Unit 7 No. 3 Reheater
	9H1	Crude Oil Heater
	10H1	Crude Oil Heater
	11H1	Ethane Unit Superheater
	12E1	Engine No. 41
	12E2	Engine No. 42
	12E3	Engine No. 43
	12E4	Engine No. 44
	12E5	Engine No. 45
	12E6	Engine No. 46
	12E7	Engine No. 47
	12H1	Mol Sieve Regen Gas Heater
	19H3	19.1 Naphtha HDS Chg Htr
	19H5	19.1 No. 1 Reboiler
	19H5	19.1 No. 2 Reboiler
	19B1/19H1	19.2 Charge Furnace
	19H6	19.2 Platformer Reheater No. 1
	19B1/19H2	19.2 No. 2 Reheater
	19B1/19H2	19.2 No. 3 Reheater
	19B2/19H4	19.3 Charge Furnace
	19B2/19H4	19.3 Frac Feed Furnace

ATTACHMENT I - CONTAMINANTS, EMISSION POINT NUMBERS
AND SOURCE NAMES

Contaminant (3)	Emission Point No. (1)	Source Name (2)
	22H1	Alky Reboiler Furnace
	26H1	Unit 26 DeC4 Reboiler
	28H1	Unit 28 Charge Heater
	29H4	Unit 29 DeC4 Reboiler
	29H2	Unit 29 Preheater
	36H1	HDS Unit Charge Heater
	40H1	Unit 40 Superheater No. 1
	40H2	Unit 40 Superheater No. 2
	41H1 (PSD)	Unit 41 Reformer Furnace
	42H1 (PSD)	Unit 42 Reactor Chg Htr
	42H2 (PSD)	Unit 42 Reactor Chg Htr
	42H3 (PSD)	Unit 42 Fract Feed Heater
	50H1	Unit 50 Charge Heater
	51H1	Unit 51 Charge Heater
	98H1	Unit 98 Reformer Furnace
	81B17	Refinery Boiler 2.4
	81B18	Refinery Boiler 2.2
	53R4	NGL Tank Car Track 5
	55E1	Engine No. 1 (East)
	55E2	Engine No. 2 (mid)
	55E3	Engine No. 3 (West)
	85B1 (PSD)	Cat Cracker Regenerator (Unit 29 CO Boiler Stack)
	29P1	Unit 29 FCCU Stack
	85B2 (PSD)	Cat Cracker Regenerator (Unit 40 CO Boiler Stack)
	40P1	Unit 40 FCCU Stack
	93E1	Engine No. 37
	93E2	Engine No. 38
	93E3	Engine No. 39

ATTACHMENT I - CONTAMINANTS, EMISSION POINT NUMBERS
AND SOURCE NAMES

Contaminant (3)	Emission Point No. (1)	Source Name (2)
	93E4	Engine No. 40
	34I1	SRU Incinerator
	43I1 (PSD)	SCOT Unit Incinerator
	F-50A	Coke Handling Fugitives
	F-54-C21	Cooling Twr (Vacuum Unit)

BENZENE SOURCES:

53T1	Refy Tank Truck Loading
53R2	NGL Tank Car Tracks 1 and 2
53R3	NGL Tank Car Tracks 3 and 4
53T2	NGL Tank Truck Loading
F-1	Unit 1 Fugitives
F-2-1	Unit 2 Fugitives
F-2-5	Process Fugitives
F-5	Pentane Isom Fugitives
F-6	Hexane Isom Fugitives
F-7	Platformer
F-9	Unit 9 Fugitives
F-10	Unit 10 Fugitives
F-11	NGL Deethanizer Unit Fug
F-12	Cryogenic Gas Plant Fug
F-13	NGL CLean-Up Unit Fug
F-19-1	Naphtha HDS Fugitives
F-19-2	Reformer Fugitives
F-23	St Run Fract Fugitives
F-26	HO FCCU Fract Fugitives
F-28	Unit 28 Fugitives
F-29	Gas Oil FCCU 29 Fugitives
F-32	Unit 32 Fugitives

ATTACHMENT I - CONTAMINANTS, EMISSION POINT NUMBERS
AND SOURCE NAMES

Contaminant (3)	Emission Point No. (1)	Source Name (2)
	F-40	Heavy Oil FCCU Fugitives
	F-42	ARDS Unit 42 Fugitives
	F-56-4	Unit 56 Fugitives
	F-56-1-1	NGL West Sump
	F-56-1-3	NGL North Sump
	F-56-1-4-A	Refy Oil/H2O Separators
	F-56-1-4-B	API Trap Fugitives
	F-56-1-6	Storm Water System
	F-56-2	Dixon Creek WWTP
	F-56-1-5	Hazardous Waste Impoundment
	0111	Tank Storage
	0202	Tank Storage
	0251	Tank Storage
	0253	Tank Storage
	0303	Tank Storage
	0401	Tank Storage
	0511	Tank Storage
	0512	Tank Storage
	0513	Tank Storage
	0514	Tank Storage
	0572	Tank Storage
	0573	Tank Storage
	1001	Tank Storage
	1002	Tank Storage
	1003	Tank Storage
	1005	Tank Storage
	1006	Tank Storage
	1007	Tank Storage
	1011	Tank Storage
	1012	Tank Storage
	1013	Tank Storage

ATTACHMENT I - CONTAMINANTS, EMISSION POINT NUMBERS
AND SOURCE NAMES

Contaminant (3)	Emission Point No. (1)	Source Name (2)
	1164	Tank Storage
	1165	Tank Storage
	2072	Tank Storage
	2510	Tank Storage
	2553	Tank Storage
	2575	Tank Storage
	2576	Tank Storage
	2577	Tank Storage
	2579	Tank Storage
	2580	Tank Storage
	2673	Tank Storage
	3003	Tank Storage
	4030	Tank Storage
	5505	Tank Storage
	5521	Tank Storage
	5532	Tank Storage
	5550	Tank Storage
	5551	Tank Storage
	5553	Tank Storage
	5554	Tank Storage
	5555	Tank Storage
	5556	Tank Storage
	5557	Tank Storage
	5558	Tank Storage
	5559	Tank Storage
	5577	Tank Storage
	5578	Tank Storage
	5580	Tank Storage
	5583	Tank Storage
	5584	Tank Storage
	5597	Tank Storage
	5599	Tank Storage

ATTACHMENT I - CONTAMINANTS, EMISSION POINT NUMBERS
AND SOURCE NAMES

Contaminant (3)	Emission Point No. (1)	Source Name (2)
	8001	Tank Storage
	8002	Tank Storage
	8031	Tank Storage
	8032	Tank Storage
	8034	Tank Storage
	9500	Tank Storage
	9501	Tank Storage
	9502	Tank Storage
	9503	Tank Storage

H₂S SOURCES:

53R4	NGL Tank Car Track 5
34I1	SRU Incinerator
43I1	SCOT Unit Incinerator
66FL1	Refinery East HC Flare
66FL2	Refinery West HC Flare
66FL3	Refinery Cat Flare
66FL4	NGL Non-Corrosive Flare
66FL5	NGL Corrosive Flare
66FL6	H ₂ S Emergency Flare
66FL8	100M Sour Brine Flare Pit
66FL9	55M Swt Brine Flare Pit
66FL10	100M Swt Brine Flare Pit
66FL11	30M Swt Brine Flare Pit
66FL12	ARDS HC Flare
66FL13	ARDS Emergency Sulfur Flare
F-1-6	Unit 1.6 Fugitives
F-2-1	Unit 2 Fugitives
F-5	Pentane Isom Fugitives

ATTACHMENT I - CONTAMINANTS, EMISSION POINT NUMBERS
AND SOURCE NAMES

Contaminant (3)	Emission Point No. (1)	Source Name (2)
	F-7	Platformer
	F-9	Unit 9 Fugitives
	F-10	Unit 10 Fugitives
	F-11	NGL Deethanizer Unit Fug
	F-12	Cryogenic Gas Plant Fug
	F-19-1	Naphtha HDS Fugitives
	F-23	St Run Fract Fugitives
	F-26	HO FCCU Fract Fugitives
	F-28	Unit 28 Fugitives
	F-29	Gas Oil FCCU 29 Fugitives
	F-32	Unit 32 Fugitives
	F-34	Sulfur Recovery Unit Fug
	F-35	Unit 35 Fugitives
	F-36	Unit 36 Fugitives
	F-40	Heavy Oil FCCU Fugitives
	F-41	Fugitives
	F-42	ARDS Unit 42 Fugitives
	F-43	Sulfur Handling/Storage
	F-44	Fugitives
	F-53-2	NGL Loading Rack
	F-56-1-4-A	Refy Oil/H2O Separators
	F-56-1-4-B	API Trap Fugitives
	F-56-2	Dixon Creek WWTP
	0309	Tank Storage
	KG47	Tank Storage
	2530	Tank Storage
	3003	Tank Storage
	5582	Tank Storage

ATTACHMENT I - CONTAMINANTS, EMISSION POINT NUMBERS
AND SOURCE NAMES

Contaminant (3)	Emission Point No. (1)	Source Name (2)
NH₃ SOURCES:		
	F-56-1-4-A	Refy Oil/H2O Separators
	F-56-2	Dixon Creek WWTP
	3003	Tank Storage
	F-29	Gas Oil FCCU 29 Fugitives
	F-32	Unit 32 Fugitives
	F-42	ARDS Unit 42 Fugitives
	F-43	Sulfur Handling/Storage
	F-44	Fugitives
	F-40	Heavy Oil FCCU Fugitives
	5582	Tank Storage
HCl SOURCES:		
	66FL5	NGL Corrosive Flare
	F-4	Butane Isom Fugitives
	F-6	Hexane Isom Fugitives
Cl₂ SOURCES:		
	F-54-C1	Cooling Towers (Marley No. 1-8, Fluor No. 3-5)
	F-54-C2	Cooling Tower (Ecodyne No. 9)
	F-54-C3	Cooling Tower (Santa Fe No. 11)
	F-54-C4	Cooling Tower (Marley No. 13)
	F-54-C6	Cooling Tower (Marley No. 10)
	F-54-C7	Cooling Tower (No. 2 Refinery)
	F-54-C8	Cooling Tower (No. 4 Refinery)
	F-54-C9	Cooling Tower (No. 7 Refinery)
	F-54-C10	Cooling Tower (No. 9 Refinery)
	F-54-C11	Cooling Tower (No. 3 Refinery)
	F-54-C12	Cooling Tower (Marley No. 12)

ATTACHMENT I - CONTAMINANTS, EMISSION POINT NUMBERS
AND SOURCE NAMES

Contaminant (3)	Emission Point No. (1)	Source Name (2)
	F-54-C13	Cooling Tower (Pritchard No. 14)
	F-54-C14	Cooling Tower (Marley No. 15)
	F-54-C15	Cooling Tower (Pritchard No. 16)
	F-54-C16	Cooling Tower (Pritchard No. 18)
	F-54-C17	Cooling Tower (No. 8 Refinery)
	F-54-C18	Cooling Tower (No. 9 Refinery)
	F-54-C19	Cooling Tower (No. 10 Refinery)
	F-54-C20	Cooling Tower (Ards No. 17)
	F-54-C21	Cooling Tower (Vacuum Unit)

HF SOURCES:

F-22 HF Alkylation Fugitives

- (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) SO₂ - sulfur dioxide
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
NO_x - total oxides of nitrogen
CO - carbon monoxide
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 PM greater than 10 microns is emitted.
H₂S - hydrogen sulfide
NH₃ - ammonia
HCl - hydrogen chloride
Cl₂ - chlorine
HF - hydrogen fluoride

Dated April 8, 2005