

## EMISSION SOURCES - EMISSIONS CAPS

Flexible Permit Numbers 9708 and PSD-TX-861M2

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)

### EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

#### AIR CONTAMINANTS DATA

Emission *	Source		Emission Rates	
Point No. (1)	Name (2)	Year	lb/hr	TPY**
<b><u>VOC CAPS:</u></b>				
Combustion Units, Tanks, Process Vents, Loading, Flares, Fugitives, Wastewater, Cooling Towers, Engines, Relief Valves, and Maintenance (4)	Initial	2202.9	1283.9	
	Final	2333.9	1741.0	
<b><u>NO<sub>x</sub> CAPS:</u></b>				
Combustion Units, Flares, Process Vents, Loading, Engines, and Maintenance	Initial	961.0	3536.6	
	Final	574.8	2001.4	
<b><u>CO CAPS:</u></b>				
Combustion Units, Flares, Process Vents, Loading, Engines, and Maintenance	Initial	1413.0	3129.3	
	Final	1607.1	3841.9	
<b><u>SO<sub>2</sub> CAPS:</u></b>				
Combustion Units, Flares, Process Vents, Loading, Engines, and Maintenance	Initial	1648.4	4732.5	
	Final	1243.1	2919.7	
<b><u>PM CAPS:</u></b>				
Combustion Units, Flares, Process Vents, Engines, and Maintenance	Initial	365.9	1567.6	
	Final	156.7	644.2	
<b><u>BENZENE CAPS:</u></b>				
Tanks, Cooling Towers, and Loading, Fugitives (4)	Initial	1.3	4.9	
	Final	2.4	6.6	
<b><u>H<sub>2</sub>S CAPS:</u></b>				
Flares, Process Vents, Fugitives, and	Initial	10.4	19.6	

ATTACHMENT I - SOURCE CATEGORIES, EMISSION POINT NUMBERS  
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AIR CONTAMINANTS DATA

Emission * Point No. (1)	Source Name (2)	Year	Emission Rates	
			lb/hr	TPY**
Maintenance (4)		Final	7.6	7.1
<b><u>SULFURIC ACID CAPS:</u></b>				
Process Vents		Initial	10.6	46.6
		Final	12.4	54.1
<b><u>CHLORINE CAPS:</u></b>				
Process Vents		Initial	4.3	0.4
		Final	0.4	0.5
<b><u>HCl CAPS:</u></b>				
Process Vents and Maintenance		Initial	20.4	4.0
		Final	7.1	4.3
<b><u>NH<sub>3</sub> CAPS:</u></b>				
Process Vents, Fugitives, and Maintenance (4)		Initial	800.3	164.6
		Final	800.4	164.8
<b><u>MAINTENANCE EMISSIONS CAPS:</u></b> (5)				
		<u>Year</u>	<u>lb/hr</u>	<u>TPY**</u>
	VOC	(5)	1102.6	3.21
	NO <sub>x</sub>	(5)	54.8	0.09
	CO	(5)	383.6	0.66
	SO <sub>2</sub>	(5)	504.8	1.22
	H <sub>2</sub> S	(5)	6.3	0.01
	HCl	(5)	4.0	0.002
	NH <sub>3</sub>	(5)	700	0.95

- (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 an area name or fugitive source name.
- (3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1.  
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 PM greater than 10 microns is emitted.

ATTACHMENT I - SOURCE CATEGORIES, EMISSION POINT NUMBERS  
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AIR CONTAMINANTS DATA

<u>Emission</u> *	<u>Source</u>	<u>Emission Rates</u>	
		<u>lb/hr</u>	<u>TPY**</u>
<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Year</u>	

CO - carbon monoxide

NH<sub>3</sub> - ammonia

H<sub>2</sub>S - hydrogen sulfide

HCl - hydrogen chloride

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

(5) Emissions from maintenance activities authorized by this permit shall not exceed these rolling 12-month caps. These emissions are also included, where noted, in the preceding individual contaminant category caps. The maintenance emissions are the same from year to year - no difference between initial and final.

\* Emission rates are based on operating 8,760 hrs/year.

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

Dated August 27, 2007

# ATTACHMENT I

## SOURCE CATEGORIES, EMISSION POINT NUMBERS AND SOURCE NAMES

Flexible Permit Numbers 9708 and PSD-TX-861M2

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.

Source Category	Emission Point No. (1)	Source Name (2)
<b>COMBUSTION SOURCES:</b>		
	B-10	No. 18 Boiler
	B-11	No. 19 Boiler
	B-12	600# Boiler
	B-19	New 300# Steam Boiler No. 1
	B-20	New 300# Steam Boiler No. 2
	B-21	New 300# Steam Boiler No. 3
	B-3	No. 10 Boiler
	B-4	No. 11 Boiler
	B-5	No. 12 Boiler
	B-6	No. 13 Boiler
	B-7	No. 14 Boiler
	B-8	No. 15 Boiler
	B-9	No. 16 Boiler
	H-1	No. 1 Crude Charge Heater
	H-11	No. 2 Crude Charge-Anderson
	H-13	GO Fractionator Heater
	H-14	Unifiner Charge Heater
	H-15	No. 1 Nap. Hydrotreater DeS <sub>2</sub> Reboiler
	H-17	No. 3 Hydrotreater Charge Heater
	H-18	No. 1 Reformer Charge Heater (Charge, 3, 4
	H-2	No. 1 Vacuum Heater
	H-21	No. 1 H <sub>2</sub> Primary Reformer Heater
	H-22	No. 2 H <sub>2</sub> Primary Reformer Heater
	H-24	TAME Unit NRU Regeneration Heater

ATTACHMENT I - SOURCE CATEGORIES, EMISSION POINT NUMBERS  
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AIR CONTAMINANTS DATA

Emission *	Source		Emission Rates	
Point No. (1)	Name (2)	Year	lb/hr	TPY**
	H-26	No. 2 Vacuum Heater		
	H-27	PP Mol. Sieve Regeneration Heater		
	H-28	Active Butane Oxygenate Heater		
	H-29	Asphalt Circulation Heater (Tks. 5501, 5502, 5503)		
	H-30	Asphalt Tank Heaters 5501, 5502, 5503 (6 stacks)		
	H-31B	Asphalt Tank Heaters 27, 28 (2 stacks)		
	H-32	Asphalt Tank Heaters 20M5, 20M6 (6 stacks)		
	H-32C	Asphalt Tank Heaters 20M7		
	H-33	Asphalt Tank Htrs. 34, 121, 141, 551, 552 (7 stacks)		
	H-34	No. 1 Reformer Stabilizer Reboiler		
	H-35	Asphalt Tank Heater 300M2 (4 stacks)		
	H-36	No. 2 Naphtha Hydrotreater DeS <sub>2</sub> Reboiler		
	H-37	No. 4 Hydrotreater Stripper Reboiler Heater		
	H-38	No. 2 Reformer Charge Heater (Charg, 3, 4		
	H-39	No. 2 Reformer Stabilizer Reboiler		
	H-4	Asphalt Tank Heater for 5503		
	H-40	No. 1 PDA Asphalt Heater (Asphalt-South)		
	H-41	No. 2 Crude Charge-Born		
	H-42	HCU Recycle Heater		
	H-43	HCU DeC <sub>4</sub> Reboiler Heater		
	H-45	No. 1 Naphtha Hydrotreater Charge Heater		
	H-46	No. 1 Reformer No. 1 Interheater		
	H-47	Asphalt Blowstill Heater		
	H-48	Turbine Fuel HDSU Heater		
	H-51	Asphalt Tank Heater 300M3 (4 stacks)		
	H-52	Trash Incinerator		
	H-55	No. 1 Hydrogen Plant Startup Heater		

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AIR CONTAMINANTS DATA

Emission * Point No. (1)	Source Name (2)	Year	Emission Rates	
			lb/hr	TPY**
	H-56	No. 2 Hydrogen Plant Startup Heater		
	H-6	DAGO Heater		
	H-64	No. 4 Hydrotreater Charge Heater		
	H-65	No. 4 Hydrotreater Splitter Reboiler Heater		
	H-70	No. 2 Crude Charge Heater		
	H-71	No. 3 Vacuum Heater		
	H-72	PDA Asphalt Heater		
	H-73	HCU Fractionator Charge Heater		
	H-74	HCU Recycle Gas Heater		
	H-75	HCU DeC <sub>4</sub> Reboiler Heater		
	H-76	Diesel Hydrotreater Charge Heater		
	H-77	No. 1 Reformer Charge Heater		
	H-78	No. 1 Reformer Interheaters		
	H-79	No. 1 Ref. Stabilizer Reboiler		
	H-8	No. 3 Crude Heater-PetroChem (North)		
	H-80	FCC Gas HDS Charge Heater		
	H-81	C <sub>4</sub> Isom Heater		
	H-82	Coker Heater		
	H-83	Polymer Modified Asphalt Heater		
	H-84	No. 2 Reformer No. 1 Interheater		
	H-85	No. 2 Ref. Stab. Reboiler		
	H-86	No. 2 Naptha Hydrotreater Charge Heater		
	H-87	SRU No. 3 Hot Oil Heater		
	H-9	No. 3 Crude Heater-PetroChem (South)		

**STORAGE TANKS**

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AIR CONTAMINANTS DATA

Emission * Point No. (1)	Source Name (2)	Year	Emission Rates	
			lb/hr	TPY**
	S-001	Tank 120M1		
	S-002	Tank 133		
	S-003	Tank 134		
	S-004	Tank 139		
	S-005	Tank 150M1		
	S-006	Tank 157		
	S-007	Tank 168		
	S-008	Tank 1001		
	S-009	Tank 1003		
	S-010	Tank 1501		
	S-011	Tank 1502		
	S-012	Tank 3001		
	S-013	Tank 3002		
	S-014	Tank 6701		
	S-015	Tank 6702		
	S-016	Tank 31		
	S-017	Tank 138		
	S-018	Tank 161		
	S-019	Tank 163		
	S-020	Tank 167		
	S-021	Tank 101		
	S-022	Tank 120M2		
	S-023	Tank 120M3		
	S-024	Tank 126		
	S-025	Tank 151		
	S-026	Tank 165		

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AIR CONTAMINANTS DATA

Emission * Point No. (1)	Source Name (2)	Year	Emission Rates	
			lb/hr	TPY**
	S-027	Tank 166		
	S-028	Tank 2		
	S-031	Tank 100M2		
	S-032	Tank 140		
	S-033	Tank 145		
	S-034	Tank 146		
	S-035	Tank 147		
	S-037	Tank 21		
	S-038	Tank 22		
	S-039	Tank 130		
	S-040	Tank 148		
	S-042	Tank 162		
	S-043	Tank 164		
	S-044	Tank 144		
	S-045	Tank 127		
	S-046	Tank 142		
	S-048	Tank 154		
	S-049	Tank 155		
	S-052	Tank 128		
	S-053	Tank 222		
	S-055	Tank 1		
	S-056	Tank 137		
	S-057	Tank 441		
	S-058	Tank 442		
	S-059	Tank 23		
	S-060	Tank 24		



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AIR CONTAMINANTS DATA

Emission * Point No. (1)	Source Name (2)	Year	Emission Rates	
			lb/hr	TPY**
	S-063	Tank 27		
	S-064	Tank 28		
	S-065	Tank 29		
	S-066	Tank 30		
	S-067	Tank 32		
	S-068	Tank 33		
	S-069	Tank 34		
	S-070	Tank 121		
	S-071	Tank 141		
	S-072	Tank 551		
	S-073	Tank 552		
	S-074	Tank 5501		
	S-075	Tank 5502		
	S-076	Tank 5503		
	S-086	Tank 143		
	S-090	Tank 4		
	S-095	Tank 100		
	S-137	Tank 20M5		
	S-138	Tank 20M6		
	S-139	Tank 125		
	S-140	Tank 181		
	S-141	Tank 182		
	S-142	Tank 232		
	S-143	Tank 5505		
	S-144	Tank 5504		
	S-150	Tank 300M1		

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Emission * Point No. (1)	Source Name (2)	Year	Emission Rates	
			lb/hr	TPY**
	S-168	N Lube Tank (T-9)		
	S-173	3rd from S Lube Tank (T-3)		
	S-174	2nd from S Lube Tank (T-2)		
	S-175	S. Lube Tank (T-1)		
	S-176	Tank 200M1		
	S-177	Tank 300M2		
	S-179	Latex Tank 1		
	S-180	Latex Tank 2		
	S-183	Tank 120M4		
	S-184	Tank 940T1		
	S-186	Tank 80M1		
	S-187	Tank 150M2		
	S-192	Tank 20M7		
	S-194	Tank 300M3		
	S-195	Tank T101		
	S-196	Tank T102		
	S-197	Tank T109		
	S-198	DGF Effluent (Tank T111)		
	S-199	WW Holding (Tank T115)		
	S-200	Tank 5506		
	S-202	Tank 100M3		
	S-203	Tank 150M3		
	S-204	Tank 150M4		
	S-209	Tank 200M2		
	S-210	Tank 200M3		
	S-211	Tank 150M5		

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**AIR CONTAMINANTS DATA**

<u>Emission</u> <u>*</u>	<u>Source</u>	<u>Emission Rates</u>	
<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Year</u>	<u>lb/hr</u> <u>TPY**</u>
	S-212	Tank 150M6	
	S-213	Tank 100M4	
	S-214	Tank 100M5	
	S-215	Tank 100M6	
	S-216	Tank 100M7	
	S-217	Tank 100M8	
	S-218	Tank 100M9	
	S-219	Tank 100M10	
	S-220	Tank 50M1	
	S-221	Tank 50M2	
	S-222	Tank 25M1	
	S-223	Tank 25M2	
	S-224	Tank 940T2	
	S-225	PMA Wetting Tank	

**PIPING COMPONENT FUGITIVES**

F-1CRUDE	No. 1 Crude/Vacuum Unit Fugitives
F-1NH3	No. 1 H <sub>2</sub> /NH <sub>3</sub> Plant Fugitives
F-1REF_HT	No. 1 Naphtha HDS/Reformer Fugitives
F-2ALKY	No. 2 Alky Unit Fugitives
F-2CRUDE	No. 2 Crude/Vacuum Unit Fugitives
F-2NH3	No. 2 H <sub>2</sub> /NH <sub>3</sub> Plant Fugitives
F-2REF_HT	No. 2 Naphtha HDS/Reformer Fugitives
F-3CRUDE	No. 3 Crude/Vacuum Unit Fugitives
F-3HT	No. 3 Hydrotreater
F-4HT	No. 4 Naphtha Hydrotreater Fugitives

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Emission *	Source	<u>Emission Rates</u>	
<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Year</u>	<u>lb/hr</u> <u>TPY**</u>
	F-85	Cleaning Slab	
	F-ALKY_PDA	Alky and PDA Unit Fugitives	
	F-ASPHALT	Heavy Oil Blending	
	F-BRINE	Brine Pond Fugitives	
	F-C4ISOM	C <sub>4</sub> Isom Unit Fugitives	
	F-CASING	Cavern Well Casing Maintenance	
	F-CAVERN	Storage Cavern Wellhead Fugitives	
	F-COKE_VOC	Coker Fugitives	
	F-DESALT	Desalter Water Stripper	
	F-DHDSU	Diesel HDS Unit	
	F-ETNKFRM	East Tank Farm Fugitives	
	F-FCCU	FCCU Fugitives	
	F-GASBLD	Gasoline Blending Fugitives	
	F-GASPLT	Gas Plant Fugitives	
	F-GHDS	Gasoline HDS Fugitives	
	F-HCU	HCU Fugitives	
	F-HDS_GOF	GOF Fugitives	
	F-LPG	LPG Storage Fugitive	
	F-MTBE	MTBE Fugitives	
	F-NBULKLD	Loading Fugitives	
	F-NTNKFRM	North Tank Farm Fugitives	
	F-ORU	Oil Recovery Unit Fugitives	
	F-PENEX	Isomerization Unit Fugitives	
	F-PMA	Polymer Modified Asphalt Fugitives	
	F-PSA	Hydrogen Pressure Swing Absorption	
	F-PUMPSTA	Pump Station Fugitives	

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Emission * Point No. (1)	Source Name (2)	Year	Emission Rates	
			lb/hr	TPY**
	F-RAILLOAD	Railroad Loading Rack Fugitives		
	F-RLE	Light Ends Unit Fugitives		
	F-SBULKLD	Bulk Loading Terminal Fugitives		
	F-SRU1	No. 1 SRU Fugitives		
	F-SRU2	No. 2 SRU Fugitives		
	F-SRU3	No. 3 SRU Fugitives		
	F-SWS	Sour Water Stripper Fugitives		
	F-TAME	TAME Unit Fugitives		
	F-UNIFINER	Unifiner Unit Fugitives		
	F-WTNKFRM	West Tank Farm Fugitives		
	F-WWTP	Wastewater Treatment Fugitives		
<b>PRODUCT LOADING</b>				
	L-11	Truck Loading Rack		
	L-13	Railcar Loading Rack		

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Emission *	Source	<u>Emission Rates</u>	
<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Year</u>	<u>lb/hr</u> <u>TPY**</u>

L-2	Asphalt Truck Loading Rack (Asphalts)
L-5	Railcar Rack (Diesel)
L-7	Asphalt Railcar Rack

**MAINTENANCE**

All Flares, All Storage Tanks (in VOC service <0.5 psia vapor pressure materials), and Piping Component Fugitive Areas (pump seal maintenance)

**PROCESS VENTS**

V-10	CO <sub>2</sub> Plant Vent (CO <sub>2</sub> release only)
V-11	MEA Still CO <sub>2</sub> Plant Vent
V-13	Soda Ash Silo
V-14	Water Treater Lime Silo
V-15	Boiler House Lime Silo
V-16	SRU No. 2 Incinerator
V-17	FCC Catalyst Silo Vent
V-18	No. 1 Reformer Regeneration Vent
V-20	FCC Stack Vent
V-21	No. 2 Reformer Regeneration Vent
V-22	Asphalt Blowstill Vent
V-26	Enviroguard Silo Vent
V-28	SRU No. 3 Incinerator
V-29	Sulfuric Acid Plant Stack
V-30	PMA Scrubber Stack

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Emission * Point No. (1)	Source Name (2)	Year	Emission Rates	
			lb/hr	TPY**

V-5	SRU No. 1 Incinerator			
V-6	Acid Plant Mist Eliminator Vent			
V-8	No.1 NH <sub>3</sub> Plant CO <sub>2</sub> Stripper Vent (regeneration)			
V-9	No.2 NH <sub>3</sub> Plant CO <sub>2</sub> Stripper Vent (regeneration)			

**RELIEF VALVES**

Tank 326	Relief Valve on LPG Tank			
Tank 327	Relief Valve on LPG Tank			
Tank 328	Relief Valve on LPG Tank			
Tank 329	Relief Valve on LPG Tank			
Tank 330	Relief Valve on LPG Tank			

**CAS SUMPS**

CAS1	Oily Sump #7 CAS			
CAS2	Crude Sump CAS			
CAS3	Tank Farm CAS (150M2)			
CAS4	Tank Farm CAS (150M1)			
CAS5	P&T Crude Sump 1			
CAS6	P&T Crude Sump 2			
CAS7	Railcar Sump			

**ENGINES**

E-1	No. 1 RLE Compressor Engine			
E-2	No. 2 RLE Compressor Engine			
E-5	PDA Propane Compressor Engine			
E-7	Unifiner (Clark) Compressor Engine			
E-8	Diesel H.T. #1 Compressor Engine			

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Emission * Point No. (1)	Source Name (2)	Year	Emission Rates	
			lb/hr	TPY**
	E-9	Diesel H.T. #2 Compressor Engine		
<b>FLARES</b>				
	FL-1	No. 1 Main Refinery Flare		
	FL-3	FCCU Flare		
	FL-4	HCU Flare		
	FL-6	Wastewater Flare		
	FL-7	Loading Rack Vapor Combustor		
	FL-8	No. 2 Main Refinery Flare		
	FL-9	Brine Flare		
<b>COOLING TOWERS</b>				
	F-20	No. 1 Refinery Cooling Tower		
	F-47	No. 2 Refinery Cooling Tower		
	F-93	No. 3 Refinery Cooling Tower		
	F-22	No. 3 NH <sub>3</sub> Plant Cooling Tower		
	F-21	Gasoline Plant Cooling Tower		
<b>COKE HANDLING</b>				
	F-COKE_PM	Coke Handling 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.

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