

# EMISSION SOURCES - EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

Permit No. 2167

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.

## AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates*	
			lb/hr	TPY

### NO<sub>x</sub> SOURCES:

536-F1A	Atmospheric Tower Heater	NO <sub>x</sub>
536-F1B	Atmospheric Tower Heater	NO <sub>x</sub>
536-F2	Vacuum Tower Heater	NO <sub>x</sub>
537-HC-1	Crude Heater No. 1	NO <sub>x</sub>
537-HV-1	Vacuum Heater No. 1	NO <sub>x</sub>
633-PFR	633 Reactor Feed Heater	NO <sub>x</sub>
633-HR	633 Fractionator ReBoiler	NO <sub>x</sub>
634-HR	634 Reactor Feed Heater	NO <sub>x</sub>
635-HR	635 Reactor Feed Heater	NO <sub>x</sub>
636FDHTR	636 Reactor Feed Heater	NO <sub>x</sub>
636FRHTR	636 Fractionator Feed Heater	NO <sub>x</sub>
735-HH10	735 Reactor Charge Heater	NO <sub>x</sub>
735-HH5	735 No. 4 Reactor Heater	NO <sub>x</sub>
735-HH6	735 Unifiner Stripper ReBoiler	NO <sub>x</sub>
735-HH7	735 Stabilizer Heater	NO <sub>x</sub>
COK-HE	East Coker Heater	NO <sub>x</sub>
COK-HW	West Coker Heater	NO <sub>x</sub>
737-HEAT	Heater F001	NO <sub>x</sub>
737-HEAT	Heater F002	NO <sub>x</sub>
ISOMII-F5	Isom II East Reactor Feed Heater	NO <sub>x</sub>
BOILER-14	Boiler No. 14	NO <sub>x</sub>
BOILER-15	Boiler No. 15	NO <sub>x</sub>
732-COB	FCCU CO Boiler	NO <sub>x</sub>
TGU-ICN	Tail Gas Thermal Oxidizer	NO <sub>x</sub>
TGU-ICN2	Tail Gas Thermal Oxidizer	NO <sub>x</sub>
MVC-ICN	Marine Vapor Combustor	NO <sub>x</sub>
FL-3-COK	736 Coker Flare	NO <sub>x</sub>

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates*	
			lb/hr	TPY
FL44SRUSO	SRU South Flare	NO <sub>x</sub>		
FL38	Merox Flare	NO <sub>x</sub>		
P-FL-1	No. 1 Plant Flare	NO <sub>x</sub>		
P-FL-2	No. 2 Plant Flare	NO <sub>x</sub>		
P-FL-3	No. 3 Plant Flare	NO <sub>x</sub>		
P-FL-4	No. 4 Plant Flare	NO <sub>x</sub>		
533-H1	533 Atmospheric Tower Heater	NO <sub>x</sub>		
533-H2	533 Vacuum Tower Heater	NO <sub>x</sub>		
533DHN-H1	533 H1 Heater	NO <sub>x</sub>		
533DHN-H2	533 Duotreater Heater	NO <sub>x</sub>		
533HF-H101	533 Hydrofinisher Reactor Heater	NO <sub>x</sub>		
533HT-H102	533 Hydrotreater Reactor-Fired Heater	NO <sub>x</sub>		
534-F5	Depentanizer Tower Heater	NO <sub>x</sub>		
631A-F1	SR Heater	NO <sub>x</sub>		
631B-F2	LCO Feed Heater	NO <sub>x</sub>		
632-F1	632 Reactor Feed Heater	NO <sub>x</sub>		
632-F2	632 LEF ReBoiler	NO <sub>x</sub>		
732-H1A	732 East Heater	NO <sub>x</sub>		
732-H1B	732 West Heater	NO <sub>x</sub>		
733-B5	Heater B5 - 733 LEF Fired ReBoiler	NO <sub>x</sub>		
733-B7	733 REF Fractionator ReBoiler	NO <sub>x</sub>		
735-HH1	735 Unifiner Heater	NO <sub>x</sub>		
735-HH2	735 No. 1 Reactor Heater	NO <sub>x</sub>		
735-HH3	735 No. 2 Reactor Heater(A)	NO <sub>x</sub>		
(same)	735 No. 2 Reactor Heater(B)	NO <sub>x</sub>		
(same)	735 No. 2 Reactor Heater(C)	NO <sub>x</sub>		
735-HH4	735 No. 3 Reactor Heater(A)	NO <sub>x</sub>		
(same)	735 No. 3 Reactor Heater(B)	NO <sub>x</sub>		
(same)	735 No. 3 Reactor Heater(C)	NO <sub>x</sub>		
(same)	735 No. 3 Reactor Heater(D)	NO <sub>x</sub>		
(same)	735 No. 3 Reactor Heater(E)	NO <sub>x</sub>		
(same)	735 No. 3 Reactor Heater(F)	NO <sub>x</sub>		
735-HH8	735 Naphtha Feed Heater	NO <sub>x</sub>		
735-HH9	Naphtha Fractionator ReBoiler	NO <sub>x</sub>		

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates*</u>	
			lb/hr	TPY
ARU-H501	Benzene Stabilizer Heater	NO <sub>x</sub>		
BTU-HF101	Btu-Depent Heater	NO <sub>x</sub>		
BTU-HF102	HDS Reactor Heater	NO <sub>x</sub>		
BTU-HF103	No. 1 Reactor Feed Heater	NO <sub>x</sub>		
BTU-HF104	Btu-No. 2 Reactor Feed Heater	NO <sub>x</sub>		
BTU-HF105	Btu-No. 3 Reactor Feed Heater	NO <sub>x</sub>		
BTU-HF106	Btu-No. 4 Reactor Feed Heater	NO <sub>x</sub>		
BTU-HF107	Btu-Reformate Stabilizer ReBoiler	NO <sub>x</sub>		
BTU-HF108	Btu-Reformate Splitter ReBoiler	NO <sub>x</sub>		
BTU-HF111	Btu-Extract Stripper ReBoiler	NO <sub>x</sub>		
ISOMII-F1	Isom II West Reactor Feed Heater	NO <sub>x</sub>		
ISOMII-F2	Isom II Combination Splitter Heater	NO <sub>x</sub>		
ISOMII-F3	Isom II Xylene Rerun Tower Heater	NO <sub>x</sub>		
ORTHOI-H1	Orthoxylene I Heater	NO <sub>x</sub>		
ORTHOII-H2	Orthoxylene II Heater	NO <sub>x</sub>		
UDEX-H1	Heartcut Fractionator Heater	NO <sub>x</sub>		
BOILER-12	Boiler No. 12	NO <sub>x</sub>		
BOILER-13	Boiler No. 13	NO <sub>x</sub>		
HOUST-FL	Houston Street Flare	NO <sub>x</sub>		
	EMISSIONS CAP: through 2004	NO <sub>x</sub>	1452.8	4499.2
	EMISSIONS CAP: 2005-2006	NO <sub>x</sub>	1328.6	3997.9
	EMISSIONS CAP: 2007	NO <sub>x</sub>	1186.4	3426.6

**CO SOURCES (SAME AS NO<sub>x</sub> SOURCES PLUS):**

SRU-FE	Sulfur Plant Fugitives (4)			
	EMISSIONS CAP:	CO	1436.1	3180.1

**SO<sub>2</sub> SOURCES (SAME AS NO<sub>x</sub> SOURCES PLUS):**

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates*</u>	
			<u>lb/hr</u>	<u>TPY</u>

SRU-FE	Sulfur Plant Fugitives (4)			
	EMISSIONS CAP:	SO <sub>2</sub>	1435.9	3091.2

**PM SOURCES (SAME AS NO<sub>x</sub> SOURCES PLUS):**

COK-LL	Coke Loading Fugitives (4)	PM		
737-CL	Coke Loading Fugitives (4)	PM		
737-CP	Coke Pit	PM		
	EMISSIONS CAP:	PM	159.5	632.3

**VOC SOURCES:**

TK011A	EFR Tank No. 11A	VOC
TK012A	Fixed-Roof Tank No. 12A	VOC
TK017A	EFR Tank No. 17A	VOC
TK030A	IFR Tank No. 30A	VOC
TK414	EFR Tank No. 414	VOC
TK416	EFR Tank No. 416	VOC
TK418	EFR Tank No. 418	VOC
TK422A	Fixed-Roof Tank No. 422A	VOC
TK423	EFR Tank No. 423	VOC
TK425	EFR Tank No. 425	VOC
TK441	EFR Tank No. 441	VOC
TK442	EFR Tank No. 442	VOC
TK554	EFR Tank No. 554	VOC
TK555	EFR Tank No. 555	VOC
TK556	EFR Tank No. 556	VOC
TK557	EFR Tank No. 557	VOC
TK558	EFR Tank No. 558	VOC
TK559	EFR Tank No. 559	VOC
TK560	EFR Tank No. 560	VOC
TK561	EFR Tank No. 561	VOC
TK562	EFR Tank No. 562	VOC
TK563	EFR Tank No. 563	VOC
TK564	EFR Tank No. 564	VOC

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates*</u>	
			lb/hr	TPY
TK565A	EFR Tank No. 565A	VOC		
TK570	EFR Tank No. 570	VOC		
TK571	Fixed-Roof Tank No. 571	VOC		
TK572	Fixed-Roof Tank No. 572	VOC		
TK573	EFR Tank No. 573	VOC		
TK574	Fixed-Roof Tank No. 574	VOC		
TK576	EFR Tank No. 576	VOC		
TK577	EFR Tank No. 577	VOC		
TK578	EFR Tank No. 578	VOC		
TK579	EFR Tank No. 579	VOC		
TK583	EFR Tank No. 583	VOC		
TK584	EFR Tank No. 584	VOC		
TK594	EFR Tank No. 594	VOC		
TK597A	EFR Tank No. 597A	VOC		
TK599A	EFR Tank No. 599A	VOC		
TK600	EFR Tank No. 600	VOC		
TK601	Fixed-Roof Tank No. 601	VOC		
TK604	Fixed-Roof Tank No. 604	VOC		
TK607	Fixed-Roof Tank No. 607	VOC		
TK613A	IFR Tank No. 613A	VOC		
TK618	EFR Tank No. 618	VOC		
TK619A	EFR Tank No. 619A	VOC		
TK674	EFR Tank No. 674	VOC		
TK687	IFR Tank No. 687	VOC		
TK693	IFR Tank No. 693	VOC		
TK694	IFR Tank No. 694	VOC		
TK774	EFR Tank No. 774	VOC		
TK775	EFR Tank No. 775	VOC		
TK776	EFR Tank No. 776	VOC		
TK777	EFR Tank No. 777	VOC		
TK793	EFR Tank No. 793	VOC		
TK797	EFR Tank No. 797	VOC		
TK801	Fixed-Roof Tank No. 801	VOC		
TK802	EFR Tank No. 802	VOC		
TK803	EFR Tank No. 803	VOC		
TK804	EFR Tank No. 804	VOC		

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## AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates*</u>	
			lb/hr	TPY
TK805	EFR Tank No. 805	VOC		
TK806	EFR Tank No. 806	VOC		
TK807	EFR Tank No. 807	VOC		
TK808	EFR Tank No. 808	VOC		
TK809	EFR Tank No. 809	VOC		
TK810	EFR Tank No. 810	VOC		
TK811	EFR Tank No. 811	VOC		
TK813	Fixed-Roof Tank No. 813	VOC		
TK814	Fixed-Roof Tank No. 814	VOC		
TK816	IFR Tank No. 816	VOC		
TK817	EFR Tank No. 817	VOC		
TK834A	IFR Tank No. 834A	VOC		
TK835	EFR Tank No. 835	VOC		
TK838	EFR Tank No. 838	VOC		
TK850	EFR Tank No. 850	VOC		
TK854	IFR Tank No. 854	VOC		
TK855	IFR Tank No. 855	VOC		
TK861	IFR Tank No. 861	VOC		
TK865	IFR Tank No. 865	VOC		
TK867	IFR Tank No. 867	VOC		
TK868	IFR Tank No. 868	VOC		
TK869	IFR Tank No. 869	VOC		
TK870	Fixed-Roof Tank No. 870	VOC		
TK871	Fixed-Roof Tank No. 871	VOC		
TK872	IFR Tank No. 872	VOC		
TK873	IFR Tank No. 873	VOC		
TK874	IFR Tank No. 874	VOC		
TK875	IFR Tank No. 875	VOC		
TK876	IFR Tank No. 876	VOC		
TK878	IFR Tank No. 878	VOC		
TK879	IFR Tank No. 879	VOC		
TK880	IFR Tank No. 880	VOC		
TK881	IFR Tank No. 881	VOC		
TK882	IFR Tank No. 882	VOC		
TK883	IFR Tank No. 883	VOC		
TK884	IFR Tank No. 884	VOC		

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### AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates*</u>	
			lb/hr	TPY
TK885	EFR Tank No. 885	VOC		
TK886	EFR Tank No. 886	VOC		
TK887	EFR Tank No. 887	VOC		
TK888	EFR Tank No. 888	VOC		
TK890	EFR Tank No. 890	VOC		
TK891	Fixed-Roof Tank No. 891	VOC		
TK892	EFR Tank No 892	VOC		
TK893	EFR Tank No 893	VOC		
TK897	Fixed-Roof Tank No. 897	VOC		
TK911	Fixed-Roof Tank No. 911	VOC		
TK920	IFR Tank No. 920	VOC		
TK921	EFR Tank No. 921	VOC		
TK922	EFR Tank No. 922	VOC		
536-F1A	Atmospheric Tower Heater	VOC		
536-F1B	Atmospheric Tower Heater	VOC		
536-F2	Vacuum Tower Heater	VOC		
537-HC-1	Crude Heater No. 1	VOC		
537-HV-1	Vacuum Heater No. 1	VOC		
633-PFR	633 Reactor Feed Heater	VOC		
633-HR	633 Fractionator ReBoiler	VOC		
634-HR	634 Reactor Feed Heater	VOC		
635-HR	635 Reactor Feed Heater	VOC		
636FDHTR	636 Reactor Feed Heater	VOC		
636FRHTR	636 Fractionator Feed Heater	VOC		
735-HH10	735 Reactor Charge Heater	VOC		
735-HH5	735 No. 4 Reactor Heater	VOC		
735-HH6	735 Unifiner Stripper ReBoiler	VOC		
735-HH7	735 Stabilizer Heater	VOC		
COK-HE	East Coker Heater	VOC		
COK-HW	West Coker Heater	VOC		
737-HEAT	Heater F001	VOC		
737-HEAT	Heater F002	VOC		
ISOMII-F5	Isom II East Reactor Feed Heater	VOC		
BOILER-14	Boiler No. 14	VOC		
BOILER-15	Boiler No. 15	VOC		

## EMISSION SOURCES - EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

## AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates*</u>	
			<u>lb/hr</u>	<u>TPY</u>
732-COB	FCCU CO Boiler	VOC		
TGU-ICN	Tail Gas Thermal Oxidizer	VOC		
TGU-ICN2	Tail Gas Thermal Oxidizer	VOC		
MVC-ICN	Marine Vapor Combustor	VOC		
FL-3-COK	736 Coker Flare	VOC		
FL44SRUSO	SRU South Flare	VOC		
FL38	Merox Flare	VOC		
P-FL-1	No. 1 Plant Flare	VOC		
P-FL-2	No. 2 Plant Flare	VOC		
P-FL-3	No. 3 Plant Flare	VOC		
P-FL-4	No. 4 Plant Flare	VOC		
LOAD-FUG	Marine Loading Fugitives (A, B, C)	VOC		
TK001A	Fixed-Roof Tank No. 1A	VOC		
T-1	Fixed-Roof Tank No. T-1	VOC		
TK006A	EFR Tank No. 6A	VOC		
TK026A	EFR Tank No. 26A	VOC		
TK027A	Fixed-Roof Tank No. 27A	VOC		
TK069	Fixed-Roof Tank No. 69	VOC		
TK070	Fixed-Roof Tank No. 70	VOC		
TK071	Fixed-Roof Tank No. 71	VOC		
TK073	Fixed-Roof Tank No. 73	VOC		
TK078A	Fixed-Roof Tank No. 78A	VOC		
TK081	Fixed-Roof Tank No. 81	VOC		
TK082	Fixed-Roof Tank No. 82	VOC		
TK084	Fixed-Roof Tank No. 84	VOC		
TK085	Fixed-Roof Tank No. 85	VOC		
TK091	Fixed-Roof Tank No. 91	VOC		
TK092	Fixed-Roof Tank No. 92	VOC		
TK093	Fixed-Roof Tank No. 93	VOC		
TK095	Fixed-Roof Tank No. 95	VOC		
TK096	Fixed-Roof Tank No. 96	VOC		
TK097	Fixed-Roof Tank No. 97	VOC		
TK098	Fixed-Roof Tank No. 98	VOC		
TK099	Fixed-Roof Tank No. 99	VOC		
TK110	Fixed-Roof Tank No. 110	VOC		



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### AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates*</u>	
			<u>lb/hr</u>	<u>TPY</u>
TK111	Fixed-Roof Tank No. 111	VOC		
TK112	Fixed-Roof Tank No. 112	VOC		
TK113	Fixed-Roof Tank No. 113	VOC		
TK114	Fixed-Roof Tank No. 114	VOC		
TK115	Fixed-Roof Tank No. 115	VOC		
TK116	Fixed-Roof Tank No. 116	VOC		
TK117	Fixed-Roof Tank No. 117	VOC		
TK118	Fixed-Roof Tank No. 118	VOC		
TK119	Fixed-Roof Tank No. 119	VOC		
TK137	Fixed-Roof Tank No. 137	VOC		
TK138	Fixed-Roof Tank No. 138	VOC		
TK139	Fixed-Roof Tank No. 139	VOC		
TK140	Fixed-Roof Tank No. 140	VOC		
TK163	Fixed-Roof Tank No. 163	VOC		
TK164	Fixed-Roof Tank No. 164	VOC		
TK165	Fixed-Roof Tank No. 165	VOC		
TK166	Fixed-Roof Tank No. 166	VOC		
TK167	Fixed-Roof Tank No. 167	VOC		
TK168	Fixed-Roof Tank No. 168	VOC		
TK169	Fixed-Roof Tank No. 169	VOC		
TK170	Fixed-Roof Tank No. 170	VOC		
TK171	Fixed-Roof Tank No. 171	VOC		
TK172	Fixed-Roof Tank No. 172	VOC		
TK176	Fixed-Roof Tank No. 176	VOC		
TK180	Fixed-Roof Tank No. 180	VOC		
TK181	Fixed-Roof Tank No. 181	VOC		
TK182	Fixed-Roof Tank No. 182	VOC		
TK183	Fixed-Roof Tank No. 183	VOC		
TK193	Fixed-Roof Tank No. 193	VOC		
TK194	Fixed-Roof Tank No. 194	VOC		
TK195	Fixed-Roof Tank No. 195	VOC		
TK200	Fixed-Roof Tank No. 200	VOC		
TK201	Fixed-Roof Tank No. 201	VOC		
TK202	Fixed-Roof Tank No. 202	VOC		
TK203	Fixed-Roof Tank No. 203	VOC		
TK204	Fixed-Roof Tank No. 204	VOC		

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### AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates*</u>	
			lb/hr	TPY
TK244	Fixed-Roof Tank No. 244	VOC		
TK247	Fixed-Roof Tank No. 247	VOC		
TK257	Fixed-Roof Tank No. 257	VOC		
TK259	Fixed-Roof Tank No. 259	VOC		
TK263	Fixed-Roof Tank No. 263	VOC		
TK264	Fixed-Roof Tank No. 264	VOC		
TK265	Fixed-Roof Tank No. 265	VOC		
TK266	Fixed-Roof Tank No. 266	VOC		
TK267	Fixed-Roof Tank No. 267	VOC		
TK268	Fixed-Roof Tank No. 268	VOC		
TK269	Fixed-Roof Tank No. 269	VOC		
TK270	Fixed-Roof Tank No. 270	VOC		
TK271	Fixed-Roof Tank No. 271	VOC		
TK272	Fixed-Roof Tank No. 272	VOC		
TK273	Fixed-Roof Tank No. 273	VOC		
TK274	Fixed-Roof Tank No. 274	VOC		
TK275	Fixed-Roof Tank No. 275	VOC		
TK276	Fixed-Roof Tank No. 276	VOC		
TK278	Fixed-Roof Tank No. 278	VOC		
TK282	Fixed-Roof Tank No. 282	VOC		
TK283	Fixed-Roof Tank No. 283	VOC		
TK402A	EFR Tank No. 402A	VOC		
TK410	Fixed-Roof Tank No. 410	VOC		
TK412A	IFR Tank No. 412A	VOC		
TK420A	EFR Tank No. 420A	VOC		
TK424A	EFR Tank No. 424A	VOC		
TK445	Fixed-Roof Tank No. 445	VOC		
TK446	Fixed-Roof Tank No. 446	VOC		
TK476	EFR Tank No. 476	VOC		
TK477	EFR Tank No. 477	VOC		
TK509	Fixed-Roof Tank No. 509	VOC		
TK541	Fixed-Roof Tank No. 541	VOC		
TK543	Fixed-Roof Tank No. 543	VOC		
TK553	Fixed-Roof Tank No. 553	VOC		
TK580	EFR Tank No. 580	VOC		
TK581	EFR Tank No. 581	VOC		

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates*</u>	
			lb/hr	TPY
TK582	EFR Tank No. 582	VOC		
TK590	EFR Tank No. 590	VOC		
TK591	EFR Tank No. 591	VOC		
TK598	EFR Tank No. 598	VOC		
TK609A	Fixed-Roof Tank No. 609A	VOC		
TK633	Fixed-Roof Tank No. 633	VOC		
TK647	Fixed-Roof Tank No. 647	VOC		
TK649	Fixed-Roof Tank No. 649	VOC		
TK650	Fixed-Roof Tank No. 650	VOC		
TK651	Fixed-Roof Tank No. 651	VOC		
TK652	Fixed-Roof Tank No. 652	VOC		
TK653	Fixed-Roof Tank No. 653	VOC		
TK654	Fixed-Roof Tank No. 654	VOC		
TK655	Fixed-Roof Tank No. 655	VOC		
TK656	Fixed-Roof Tank No. 656	VOC		
TK657	Fixed-Roof Tank No. 657	VOC		
TK658	Fixed-Roof Tank No. 658	VOC		
TK659	Fixed-Roof Tank No. 659	VOC		
TK660	Fixed-Roof Tank No. 660	VOC		
TK661	Fixed-Roof Tank No. 661	VOC		
TK662	Fixed-Roof Tank No. 662	VOC		
TK663	Fixed-Roof Tank No. 663	VOC		
TK664	Fixed-Roof Tank No. 664	VOC		
TK665	Fixed-Roof Tank No. 665	VOC		
TK666	Fixed-Roof Tank No. 666	VOC		
TK667	IFR Tank No. 667	VOC		
TK668	IFR Tank No. 668	VOC		
TK669	IFR Tank No. 669	VOC		
TK670	IFR Tank No. 670	VOC		
TK671	Fixed-Roof Tank No. 671	VOC		
TK672	IFR Tank No. 672	VOC		
TK673	IFR Tank No. 673	VOC		
TK675	Fixed-Roof Tank No. 675	VOC		
TK677	IFR Tank No. 677	VOC		
TK685	IFR Tank No. 685	VOC		
TK686	IFR Tank No. 686	VOC		

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates*</u>	
			<u>lb/hr</u>	<u>TPY</u>
TK688	IFR Tank No. 688	VOC		
TK689	IFR Tank No. 689	VOC		
TK690	IFR Tank No. 690	VOC		
TK691	IFR Tank No. 691	VOC		
TK692	IFR Tank No. 692	VOC		
TK697	Fixed-Roof Tank No. 697	VOC		
TK698	Fixed-Roof Tank No. 698	VOC		
TK699	Fixed-Roof Tank No. 699	VOC		
TK700	Fixed-Roof Tank No. 700	VOC		
TK724	Fixed-Roof Tank No. 724	VOC		
TK726	Fixed-Roof Tank No. 726	VOC		
TK729	Fixed-Roof Tank No. 729	VOC		
TK732	Fixed-Roof Tank No. 732	VOC		
TK744	Fixed-Roof Tank No. 744	VOC		
TK747	Fixed-Roof Tank No. 747	VOC		
TK759	Fixed-Roof Tank No. 759	VOC		
TK760	Fixed-Roof Tank No. 760	VOC		
TK762	Fixed-Roof Tank No. 762	VOC		
TK763	Fixed-Roof Tank No. 763	VOC		
TK764	Fixed-Roof Tank No. 764	VOC		
TK765	Fixed-Roof Tank No. 765	VOC		
TK767	Fixed-Roof Tank No. 767	VOC		
TK768	Fixed-Roof Tank No. 768	VOC		
TK769	Fixed-Roof Tank No. 769	VOC		
TK771	Fixed-Roof Tank No. 771	VOC		
TK772	Fixed-Roof Tank No. 772	VOC		
TK778	Fixed-Roof Tank No. 778	VOC		
TK779	Fixed-Roof Tank No. 779	VOC		
TK780	Fixed-Roof Tank No. 780	VOC		
TK781	Fixed-Roof Tank No. 781	VOC		
TK782	Fixed-Roof Tank No. 782	VOC		
TK783	Fixed-Roof Tank No. 783	VOC		
TK784	Fixed-Roof Tank No. 784	VOC		
TK785	Fixed-Roof Tank No. 785	VOC		
TK786	Fixed-Roof Tank No. 786	VOC		
TK787	Fixed-Roof Tank No. 787	VOC		

## EMISSION SOURCES - EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

### AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates*</u>	
			lb/hr	TPY
TK788	Fixed-Roof Tank No. 788	VOC		
TK789	Fixed-Roof Tank No. 789	VOC		
TK790	EFR Tank No. 790	VOC		
TK791	EFR Tank No. 791	VOC		
TK792	Fixed-Roof Tank No. 792	VOC		
TK793	EFR Tank No. 793	VOC		
TK794	EFR Tank No. 794	VOC		
TK795	EFR Tank No. 795	VOC		
TK796	EFR Tank No. 796	VOC		
TK798	EFR Tank No. 798	VOC		
TK799	EFR Tank No. 799	VOC		
TK800	EFR Tank No. 800	VOC		
TK812	Fixed-Roof Tank No. 812	VOC		
TK815	IFR Tank No. 815	VOC		
TK818	EFR Tank No. 818	VOC		
TK819	EFR Tank No. 819	VOC		
TK821	IFR Tank No. 821	VOC		
TK822	IFR Tank No. 822	VOC		
TK825	Fixed-Roof Tank No. 825	VOC		
TK826	Fixed-Roof Tank No. 826	VOC		
TK827	Fixed-Roof Tank No. 827	VOC		
TK836	Fixed-Roof Tank No. 836	VOC		
TK839	Fixed-Roof Tank No. 839	VOC		
TK841	Fixed-Roof Tank No. 841	VOC		
TK842	Fixed-Roof Tank No. 842	VOC		
TK843	Fixed-Roof Tank No. 843	VOC		
TK851	Fixed-Roof Tank No. 851	VOC		
TK852	Fixed-Roof Tank No. 852	VOC		
TK856	Fixed-Roof Tank No. 856	VOC		
TK857	Fixed-Roof Tank No. 857	VOC		
TK860	Fixed-Roof Tank No. 860	VOC		
TK862	Fixed-Roof Tank No. 862	VOC		
TK863	Fixed-Roof Tank No. 863	VOC		
TK866A	Fixed-Roof Tank No. 866A	VOC		
TK894	Fixed-Roof Tank No. 894	VOC		
TK895	Fixed-Roof Tank No. 895	VOC		

## EMISSION SOURCES - EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

## AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates*</u>	
			lb/hr	TPY
TK896	Fixed-Roof Tank No. 896	VOC		
TK898	Fixed-Roof Tank No. 898	VOC		
TK901	Horizontal Tank No. 901	VOC		
TK902	Horizontal Tank No. 902	VOC		
TK7601	Fixed-Roof Tank No. 7601	VOC		
TK7701	Fixed-Roof Tank No. 7701	VOC		
FUGITIVE	Tank-Truck/Rail-Car Loading	VOC		
533-H1	533 Atmospheric Tower Heater	VOC		
533-H2	533 Vacuum Tower Heater	VOC		
533DHN-H1	533 H1 Heater	VOC		
533DHN-H2	533 Duotreater Heater	VOC		
533HF-H101	533 Hydrofinisher Reactor Heater	VOC		
533HT-H102	533 Hydrotreater Reactor-Fired Heater	VOC		
534-F5	Depentanizer Tower Heater	VOC		
631A-F1	SR Heater	VOC		
631B-F2	LCO Feed Heater	VOC		
632-F1	632 Reactor Feed Heater	VOC		
632-F2	632 LEF ReBoiler	VOC		
732-H1A	732 East Heater	VOC		
732-H1B	732 West Heater	VOC		
733-B5	Heater B5 - 733 LEF Fired ReBoiler	VOC		
733-B7	733 REF Fractionator ReBoiler	VOC		
735-HH1	735 Unifiner Heater	VOC		
735-HH2	735 No. 1 Reactor Heater	VOC		
735-HH3	735 No. 2 Reactor Heater(A)	VOC		
(same)	735 No. 2 Reactor Heater(B)	VOC		
(same)	735 No. 2 Reactor Heater(C)	VOC		
735-HH4	735 No. 3 Reactor Heater(A)	VOC		
(same)	735 No. 3 Reactor Heater(B)	VOC		
(same)	735 No. 3 Reactor Heater(C)	VOC		
(same)	735 No. 3 Reactor Heater(D)	VOC		
(same)	735 No. 3 Reactor Heater(E)	VOC		

## EMISSION SOURCES - EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

## AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates*</u>	
			lb/hr	TPY
(same)	735 No. 3 Reactor Heater(F)	VOC		
735-HH8	735 Naphtha Feed Heater	VOC		
735-HH9	Naphtha Fractionator ReBoiler	VOC		
ARU-H501	Benzene Stabilizer Heater	VOC		
BTU-HF101	Btu-Depent Heater	VOC		
BTU-HF102	HDS Reactor Heater	VOC		
BTU-HF103	No. 1 Reactor Feed Heater	VOC		
BTU-HF104	Btu-No. 2 Reactor Feed Heater	VOC		
BTU-HF105	Btu-No. 3 Reactor Feed Heater	VOC		
BTU-HF106	Btu-No. 4 Reactor Feed Heater	VOC		
BTU-HF107	Btu-Reformate Stabilizer ReBoiler	VOC		
BTU-HF108	Btu-Reformate Splitter ReBoiler	VOC		
BTU-HF111	Btu-Extract Stripper ReBoiler	VOC		
ISOMII-F1	Isom II West Reactor Feed Heater	VOC		
ISOMII-F2	Isom II Combination Splitter Heater	VOC		
ISOMII-F3	Isom II Xylene Rerun Tower Heater	VOC		
ORTHOI-H1	Orthoxylene I Heater	VOC		
ORTHOII-H2	Orthoxylene II Heater	VOC		
UDEX-H1	Heartcut Fractionator Heater	VOC		
BOILER-12	Boiler No. 12	VOC		
BOILER-13	Boiler No. 13	VOC		
HOUST-FL	Houston Street Flare	VOC		
FUGITIVES	Fugitives	VOC		
533-CT	533 C.T. Return	VOC		
534-CT	534 C.T. Return	VOC		
537-N	535 New C.T. Return	VOC		
537-O	535 Old C.T. Return	VOC		
536-CT	536 C.T. Return	VOC		
732-CT	732 C.T. Return	VOC		
537-X	733 C.T. Return (2 north cells)	VOC		
733-CT	733 C.T. Return	VOC		
735-CT	735 C.T. Return	VOC		
ARU-CT	ARU C.T. Return	VOC		

## EMISSION SOURCES - EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

## AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates*	
			lb/hr	TPY
BRU-CT	BRU C.T. Return	VOC		
FCT-COKE	Coker C.T. Return (736)	VOC		
737-CT	Coker C.T. Return (737)	VOC		
SRU-CT	SRU C.T. Return (439 TGU)	VOC		
LCT-SULF	SRU C.T. Return (439 Claus)	VOC		
FU-SEWER	Wastewater collection system	VOC		
FU-API	API Separator (EPN FU-API)	VOC		
FU-EQSUMP	EQ Sump (EPN FU-EQSUMP)	VOC		
FU-GCLS	GCWDA Lift Station	VOC		
	(EPN FU-GCLS)			
	EMISSIONS CAP: through 2000	VOC	4367.1	3906.0
	EMISSIONS CAP: 2001	VOC	2493.6	3385.3

**BENZENE SOURCES: (SAME AS VOC SOURCES)**

EMISSIONS CAP: through 2000	BENZENE	72.2
EMISSIONS CAP: 2001	BENZENE	58.5

**INDIVIDUAL EMISSION LIMITATIONS:**

633-FUG	633 DHT Fugitives (4)	H <sub>2</sub> S	0.01	0.03
633-FUG	633 DHT Fugitives (4)	NH <sub>3</sub>	<0.01	<0.01
TGU-ICN	Tail Gas Thermal Oxidizer	H <sub>2</sub> S	0.06	(6)
TGU-ICN2	Tail Gas Thermal Oxidizer	H <sub>2</sub> S	0.06	(6)
LL19DOCKD	Barge Loading	H <sub>2</sub> S	7.79	3.26
LL11TT	Tank Truck Loading	H <sub>2</sub> S	3.19	2.50
TK921	Sour Water Tank	H <sub>2</sub> S	0.04	0.11
TK921	Sour Water Tank	NH <sub>3</sub>	0.08	0.21
TK922	Sour Water Tank	H <sub>2</sub> S	0.04	0.11
TK922	Sour Water Tank	NH <sub>3</sub>	0.08	0.21
TK870	Molten Sulfur	H <sub>2</sub> S	<0.001	<0.001
	Storage Tank			
TK871	Molten Sulfur	H <sub>2</sub> S	<0.001	<0.001



## EMISSION SOURCES - EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

## AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates*</u>	
			<u>lb/hr</u>	<u>TPY</u>
TK2163	Storage Tank Anhydrous Ammonia	NH <sub>3</sub>	<0.001	<0.001
VES202	Storage Tank Sulfuric Acid	H <sub>2</sub> SO <sub>4</sub>	<0.001	<0.001
VES203	Storage Tank Sulfuric Acid	H <sub>2</sub> SO <sub>4</sub>	<0.001	<0.001
SRU-FE	Storage Tank Sulfur Plant Fugitives (4)	H <sub>2</sub> S	0.51	2.22
SRU-FE	Sulfur Plant Fugitives (4)	COS	<0.01	<0.01
SRU-FE	Sulfur Plant Fugitives (4)	CS <sub>2</sub>	<0.01	<0.01
SRU-FE	Sulfur Plant Fugitives (4)	NH <sub>3</sub>	0.02	0.11
SWS-FE	Sour Water System Fugitives (4)	H <sub>2</sub> S	<0.01	<0.01
SWS-FE	Sour Water System Fugitives (4)	NH <sub>3</sub>	<0.01	<0.01
1415-FE	Amine Treating Units No. 14 and 15 Fugitives (4)	H <sub>2</sub> S	0.23	0.99
AMINE-FE	New Amine Treating Unit Fugitives (4)	H <sub>2</sub> S	0.11	0.49
50TN-FE	50-Ton Amine Treating Unit Fugitives (4)	H <sub>2</sub> S	0.15	0.66
100TN-FE	100-Ton Amine Treating Unit Fugitives (4)	H <sub>2</sub> S	<0.01	<0.01
732-COB	FCCU CO Boiler Wet Gas Scrubber	SO <sub>3</sub>	33.70	52.80
732-COB	FCCU CO Boiler Wet Gas Scrubber	Antimony	0.02	0.09
737-FUG	Fugitives (4)	H <sub>2</sub> S	0.02	0.08
FU66HDS	636 Fugitives (4)	H <sub>2</sub> S	0.01	0.05
FU66HDS	636 Fugitives (4)	NH <sub>3</sub>	0.01	0.01
537-FUG	Fugitives (4)	H <sub>2</sub> S	<0.01	0.01
599A	Tank 599A (5)	H <sub>2</sub> S	0.37	1.61
885	Tank 885 (5)	H <sub>2</sub> S	0.37	1.58
886	Tank 886 (5)	H <sub>2</sub> S	0.37	1.58
887	Tank 887 (5)	H <sub>2</sub> S	0.37	1.58

888	Tank 888 (5)	H <sub>2</sub> S	0.37	1.58
FE	Fugitives (5)	H <sub>2</sub> S	0.02	0.09
FL-3-COK	736 Coker Flare	H <sub>2</sub> S	<0.01	<0.01
P-FL-1	No. 1 Plant Flare	SO <sub>3</sub>	0.04	0.02
P-FL-1	No. 1 Plant Flare	H <sub>2</sub> S	3.95	2.0
FL38	Merox Flare	H <sub>2</sub> S	<0.01	<0.01
P-FL-2	No. 2 Plant Flare	H <sub>2</sub> S	1.99	2.17
P-FL-3	No. 3 Plant Flare	H <sub>2</sub> S	0.03	0.02
P-FL-4	No. 4 Plant Flare	H <sub>2</sub> S	<0.01	<0.01
HOUST-FL	Houston Street Flare	H <sub>2</sub> S	<0.01	<0.01

- (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)
  - NO<sub>x</sub> - nitrogen oxide
  - VOC - volatile organic compounds as defined in 30 Texas Administrative Section 101.1
  - H<sub>2</sub>S - hydrogen sulfide
  - NH<sub>3</sub> - ammonia
  - SO<sub>2</sub> - sulfur dioxide
  - H<sub>2</sub>SO<sub>4</sub>- sulfuric acid
  - CO - carbon monoxide
  - COS - carbon sulfide
  - CS<sub>2</sub> - carbon disulfide
  - 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 particulate matter greater than 10 microns is emitted.
  - SO<sub>3</sub> - sulfur trioxide

EMISSION SOURCES - EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

- (4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate
  - (5) H<sub>2</sub>S emissions from crude oil are an estimate only and should not be considered as a maximum allowable emission rate. However, at no time shall the emissions cause a nuisance condition.
  - (6) Total for both sources is 0.28 TPY.
- \* 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

11, 2000

Dated December