EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 19566/PSD-TX-768M1

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.

		AIR CONTAMINANTS DATA			
Emission Point No. (1)	Source Name (2)		Air Contaminant Name (3)	Emission Rates * lb/hr	TPY
Pretreater No. 3					
27FUG_001	PTR3 Fugitives (4)		VOC	0.20	0.80
Sulfur Recovery Unit					
32STK_001	SRU2/3 Thermal Oxidizer		CO	28.90	126.60
		H_2S	0.714	2.961	
			NO_x	13.50	47.30
			PM_{10}	0.60	2.10
			SO_2	128.00	560.60
			VOC	0.30	1.20
32VNT_002	SRU2/3 No. 2 Vent (5)		CO	36.80	
			COS	7.70	
			CS_2	0.80	
			H_2S	1.05	
			PM_{10}	0.10	
			SO_2	0.10	
32VNT_003	SRU2/3 No. 3 Vent (5)		CO	36.80	
			COS	7.70	
			CS_2	0.80	
			H_2S	1.05	
			PM_{10}	0.10	
			SO_2	0.10	
32VNT_002 and 32VNT_003	SRU2/3 No. 2 Vent and SRU2/3 No. 3 Vent (5)		CO		10.68
			COS		1.79
			CS_2		0.13
			H_2S		0.38
			PM_{10}		0.02
			SO_2		0.02

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1) *	Source Name (2)	Air Contaminant Name (3)	Emission Rates lb/hr	TPY
30VNT_003	SRU1 Sulfur Pit (5)	H_2S	0.04	0.01
		SO_2	1.67	0.28
32VNT_005	SRU2/3 Sulfur Truck Loading (5)	H_2S	0.058	0.246
		SO_2	1.29	0.11
32FUG_001	SRU 2/3 Fugitives (4)	H_2S	0.31	1.086
		NH_3	0.02	0.10
		SO_2	0.028	0.106
		VOC	0.927	4.068
30FUG_001	SRU 1 Fugitives (4)	H_2S	1.71	7.51
		SO_2	1.79	7.82
Crude Unit B				
05STK_001	Crude B Atm. Heater H-3101 Stack	CO	58.16	106.15
		NO_x	94.32	344.27
		PM_{10}	4.72	17.50
		SO_2	22.01	40.16
		VOC	1.10	4.02
05STK_002	Crude B Vacuum Heater H-3102 Stack	CO	11.01	8.20
		NO_x	17.90	62.50
		PM_{10}	0.80	2.70
		SO_2	4.00	13.90
		VOC	0.40	1.50
05STK_004	Crude B Heater H-2001 Stack	CO	8.80	6.60
		NO_x	14.40	50.60
		PM_{10}	0.60	2.20
		SO_2	3.20	11.20
		VOC	0.40	1.20

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1) *	Source Name (2)	Air Contaminant Name (3)	Emission Rates lb/hr	TPY
05FUG_001	Crude B Fugitives (4)	VOC	2.44	10.57
Hydrocracker				
20STK_001	HDC First Stage West Furnace H-3301 Stack	CO	0.11	0.36
		NO_x	1.36	4.38
		PM_{10}	0.18	0.59
		SO_2	0.99	1.53
		VOC	0.09	0.30
20STK_002	HDC First Stage East Furnace H-3302 Stack	CO	0.40	1.60
		NO_x	3.00	12.10
		PM_{10}	0.13	0.50
		SO_2	0.73	1.41
		VOC	0.08	0.30
20STK_003	HDC Second Stage Furnace H-3303 Stack	CO	0.40	1.60
		NO_x	3.00	12.10
		PM_{10}	0.13	0.50
		SO_2	0.73	1.41
		VOC	0.08	0.30
20STK_004	HDC Stabilizer Reboiler Heater H-3304 Stack	CO	4.61	19.56
		NO_x	11.76	49.93
		PM_{10}	1.18	4.99
		SO_2	5.68	11.65
		VOC	0.55	2.33
20STK_005	HDC Splitter Reboiler H-3305 Stack	CO	0.02	0.06
		NO_x	3.75	14.24
		PM_{10}	0.49	1.85
		SO_2	2.18	3.99
		VOC	0.20	0.74

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1) *	Source Name (2)	Air Contaminant Name (3)	Emission Rates lb/hr	TPY
20FUG_001	HDC Fugitives (4)	VOC	0.84	3.72
Pretreater No. 4				
28STK_001	PTR4 Rx Charge Heater B-7001 (Common Stack with B-7002)	CO	8.88	31.12
		NO_x	14.40	50.46
		PM_{10}	0.60	2.10
		SO_2	3.36	5.89
		VOC	0.40	1.20
28STK_001	PTR4 Depen. Reboiler Heater B-7002 (Common Stack with B-7001)	CO	10.73	37.60
		NO_x	17.40	60.97
		PM_{10}	0.80	2.69
		SO_2	4.06	7.11
		VOC	0.41	1.52
Reformer No. 4				
28STK_003	PTR4 Reformer Heater B-7101-4 (Common Stack with B-7201)	CO	13.84	42.91
		NO_x	105.16	326.14
		PM_{10}	8.76	27.16
		SO_2	23.35	36.12
		VOC	1.25	4.07
28STK_003	PTR4 Debut Reboiler B-7201 (Common Stack with B-7101-4)	CO	0.70	2.30
		NO_x	4.90	17.30
		PM_{10}	0.20	0.80
		SO_2	1.10	3.80
		VOC	0.10	0.40
28VNT_001	PTR4 Reactor Regeneration Vent	Cl_2	0.40	1.90
		CO	0.96	4.20
		HCl	0.03	0.10
		PM_{10}	0.01	0.04

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY
		SO_2	0.10	0.40
28FUG_001	PTR4 Fugitives (4) (includes Pretreater)	Cl_2	0.10	0.44
		VOC	13.84	60.60
Coker				
04STK_004	Coker Far West Furnace	CO	9.27	26.64
		NO_x	13.50	38.79
		PM_{10}	0.84	2.42
		SO_2	3.33	9.57
		VOC	0.61	1.75
04FUG_001	Coker Fugitives (4)	VOC	3.16	13.95
Amine Regeneration Unit				
18FUG_001	DEA3 Fugitives (4)	H_2S	0.20	0.70
		VOC	0.12	0.71
Sour Water Stripper Unit				
29FUG_001	SWS Fugitives (4)	H_2S	0.01	0.10
		NH_3	0.01	0.10
		VOC	0.38	1.70
Storage Tanks				
49TFX_0720	OMCC1 Fixed-Roof Tank 720	VOC	7.16	12.03
49TFX_0721	OMCC1 Fixed-Roof Tank 721	VOC	7.16	12.03
49TIF_0782	OMCC1 Int. Floating Roof	VOC	2.68	10.61

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY
	Tank 782			
48TEF_1150	Ethyl Ext. Floating Roof Tank 1150	VOC	4.09	15.14
48TEF_1151	Ethyl Ext. Floating Roof Tank 1151	VOC	4.09	15.11
48TEF_1158	Ethyl Ext. Floating Roof Tank 1158	VOC	2.42	7.86
48TEF_1165	Ethyl Ext. Floating Roof Tank 1165	VOC	2.20	9.16
48TEF_1212	Ethyl Ext. Floating Roof Tank 1212	VOC	2.52	8.56
48TEF_1213	Ethyl Ext. Floating Roof Tank 1213	VOC	2.44	8.24
49TEF_1215	OMCC1 Ext. Floating Roof Tank 1215	VOC	3.01	12.94
48TEF_1251	Ethyl Ext. Floating Roof Tank 1251	VOC	2.67	8.30
44TEF_1300	OMCC1 Ext. Floating Roof Tank 1300	VOC	2.67	8.48
49TEF_1314	OMCC1 Ext. Floating Roof Tank 1314	VOC	2.20	9.11
49TEF_1320	OMCC1 Ext. Floating Roof Tank 1320	VOC	2.93	9.38

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY
48TEF_1324	Ethyl Ext. Floating Roof Tank 1324	VOC	2.86	10.78
48TEF_1325	Ethyl Ext. Floating Roof Tank 1325	VOC	1.76	7.37
48TEF_1329	Ethyl Ext. Floating Roof Tank 1329	VOC	3.46	9.73
19TEF_1323	Dualayer Ext. Floating Roof Tank 1323	VOC	1.18	5.18
19TEF_1332	Dualayer Ext. Floating Roof Tank 1332	VOC	1.31	7.32
48TEF_1334	Ethyl Ext. Floating Roof Tank 1334	VOC	2.44	7.73
49TEF_1335	OMCC1 Ext. Floating Roof Tank 1335	VOC	2.37	9.07
48TEF_1338	Ethyl Ext. Floating Roof Tank 1338	VOC	2.43	7.73
48TEF_1350	Ethyl Ext. Floating Roof Tank 1350	VOC	2.50	7.65
48TEF_1361	Ethyl Ext. Floating Roof Tank 1361	VOC	1.09	4.78
48TEF_1362	Ethyl Ext. Floating Roof Tank 1362	VOC	3.45	13.93
48TEF_1389	Ethyl Ext. Floating Roof Tank 1389	VOC	3.24	11.72

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY
48TEF_1390	Ethyl Ext. Floating Roof Tank 1390	VOC	3.14	11.28
50TEF_2119	OMCC2 Ext. Floating Roof Tank 2119	VOC	4.54	6.91
50TEF_2202	OMCC2 Ext. Floating Roof Tank 2202	VOC	1.65	5.03
50TEF_2209	OMCC2 Ext. Floating Roof Tank 2209	VOC	3.60	5.49
50TEF_2210	OMCC2 Ext. Floating Roof Tank 2210	VOC	3.63	6.52
50TEF_2212	OMCC2 Ext. Floating Roof Tank 2212	VOC	3.63	5.61
50TEF_2213	OMCC2 Ext. Floating Roof Tank 2213	VOC	3.60	5.94
50TEF_2221	OMCC2 Ext. Floating Roof Tank 2221	VOC	2.20	8.61
50TEF_2223	OMCC2 Ext. Floating Roof Tank 2223	VOC	1.82	7.97
50TEF_2225	OMCC2 Ext. Floating Roof Tank 2225	VOC	3.17	5.00
49TEF_1377	OMCC1 Ext. Floating Roof Tank 1377	VOC	1.17	3.71
49TEF_1378	OMCC1 Ext. Floating Roof Tank 1378	VOC	1.15	3.63

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY
Fluid Catalytic Cracking Unit (Grandfathered)				
06STK_001	FCC CO Boiler	CO	457.00	2000.00
		NO_x	984.00	2650.00
		PM_{10}	155.00	675.00
		SO_2	4610.00	12833.75
		VOC	1.74	7.60
20CTL_005	Cooling Tower No. 5	VOC	1.51	6.62
Petroleum Coke Handling Facility				
04FUG002	Coke Pit (6)	PM_{10}	0.20	0.11
		PM	0.42	0.22
04FUG003	Stockpile (6)	PM_{10}	1.07	0.26
		PM	2.27	0.54
04FUG004	Conveyor System 1 (6)	PM_{10}	0.81	0.07
		PM	1.71	0.15
04FUG005	Conveyor System 2 (6)	PM_{10}	0.94	0.08
		PM	1.98	0.17
Dualayer Unit				
19CTL_025	Dualayer Cooling Tower No. 25	VOC	0.11	0.50
19FUG_001	Dualayer Fugitives (4)	VOC	6.93	30.34
FCC Gasoline Splitter Unit				

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1) *	Source Name (2)	Air Contaminant Name (3)	Emission Rates lb/hr	TPY
66FUG_001	FCC Gasoline Splitter Fugitives (4)	VOC	1.75	7.64
49FUG002	Low Sulfur Gasoline Project - Interconnecting Piping Fugitives (4)	VOC	1.60	7.03

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

(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 area name or fugitive source name.
(3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
CO - carbon monoxide
H_2S - hydrogen sulfide
NO_x - total oxides of nitrogen
PM - particulate matter, suspended in the atmosphere, including PM_{10}
PM_{10} - particulate matter (PM) 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_2 - sulfur dioxide
COS - carbonyl sulfide
CS_2 - carbon disulfide
Cl_2 - chlorine
HCl - hydrogen chloride
NH_3 - ammonia
(4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
(5) The annual emission rate in TPY is based on operating 336 hours/year (rolling annual basis) with the stack burner/thermal oxidizer down.
(6) The PM emissions include PM_{10} emissions. PM and TSP are considered interchangeable.

* 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 January 30, 2003