EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 5682A/PSD-TX-103M2

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.

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	AIR CONTAMINANTS DATA Emission Rates * lb/hr	TPY
		SOUR CRUDE UNIT		
25.1-36-1	Crude Charge Heater	NO_x	93.40	409.09
		TSP/PM_{10}	2.34	10.23
		VOC	0.16	0.71
		CO	18.68	81.82
		SO_2	15.25	66.81
54-22-14	Cooling Tower	VOC	3.36	14.72
25.1-0-0	Sour Crude Unit Fugitives (4)	VOC	3.07	13.46
		H_2S	0.001	0.004
56-61-17	Expansion HP Flare (Emergency Only)	NO_x	0.11	0.49
		CO	0.96	4.20
		SO_2	0.07	0.33
		VACUUM UNIT (5)		

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
29.1-36-201	Vacuum Unit Heater	TSP/PM_{10}	1.13	3.97
		VOC	0.21	0.74
		NO_x	22.65	79.37
		CO	15.10	52.92
		SO_2	7.65	26.79

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
29.1-0-0	Vacuum Fugitives (4)	VOC	1.31	5.72
		H_2S	0.02	0.07
29-61-1	Flare	NO_x	0.11	0.50
		CO	0.83	3.64
		SO_2	0.06	0.25
29-22-1	Cooling Tower	VOC	1.60	6.99
	DELAYED COKER UNIT (5)			
29.2-36-101.1	Coker Heater A	TSP/PM_{10}	0.74	2.59
		VOC	0.04	0.14
		NO_x	14.77	51.74
		CO	9.84	34.49
		SO_2	5.85	20.49
29.2-36-101.2	Coker Heater B	TSP/PM_{10}	0.74	2.59
		VOC	0.04	0.14
		NO_x	14.77	51.74
		CO	9.84	34.49
		SO_2	5.85	20.49
29.2-0-0	Coker Fugitives (4)	VOC	2.51	10.98
		H_2S	0.03	0.13
29.2-0-1	Coke Handling Fugitives (4)	TSP	3.17	3.73
		PM_{10}	1.77	1.52

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AIR CONTAMINANTS DATA

Emission Point No. (1) *	Source Name (2)	Air Contaminant Name (3)	Emission Rates lb/hr	TPY
	ATMOSPHERIC RESIDUUM DESULFURIZATION UNIT			
26-CS	Charge Heater 1	NO_x	16.08	54.23
		TSP/PM_{10}	0.67	2.26
		VOC	0.05	0.16
		CO	5.36	18.08
		SO_2	4.38	19.17
26-CS	Charge Heater 2	NO_x	13.40	45.19
		TSP/PM_{10}	0.67	2.26
		VOC	0.05	0.16
		CO	5.36	18.08
		SO_2	4.38	19.17
26-CS	Recycle Gas Heater 1	NO_x	4.20	17.68
		TSP/PM_{10}	0.59	2.47
		VOC	0.05	0.21
		CO	2.56	10.78
		SO_2	1.37	6.01
26-CS	Recycle Gas Heater 2	NO_x	4.20	17.68
		TSP/PM_{10}	0.59	2.47
		VOC	0.05	0.21
		CO	2.56	10.78
		SO_2	1.37	6.01
26.1-0-0	ARDS Fugitives (4)	VOC	6.07	26.57
		H_2S	0.03	0.13
		NH_3	0.005	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
		HEAVY OIL CRACKING UNIT		
27.1-36-RE	HOC Regenerative Exhaust	NO_x	111.75	489.47
		TSP/PM_{10}	72.98	319.63
		VOC	7.50	32.85
		CO	608.91	1282.49
		SO_2	833.27	3649.74
		H_2SO_4	26.44	115.80
27.1-0-0	Heavy Oil Cracker Fugitives (4)	VOC	7.43	32.56
		H_2S	0.01	0.04
		Benzene	0.02	0.08
27.2-0-0	HOC Gas Plant Fugitives (4)	VOC	0.94	4.12
		H_2S	0.001	0.005
56-61-16	Expansion LP Flare	NO_x	0.06	0.30
		CO	0.12	0.50
		VOC	0.61	2.70
		R-SH	0.33	0.70
		SO_2	21.25	46.50
		DISTILLATE HYDRODESULFURIZATION UNIT 25		
25.2-CS	DHDS Reactor Charge Heater	TSP/PM_{10}	0.87	

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
	3.60			
		VOC	0.07	0.31
		NO_x	10.14	41.53
		CO	2.17	8.91
		SO_2	2.07	8.50

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
25.2-CS	DHDS Combo Tower Reboiler	TSP/PM_{10}	0.98	3.60
		VOC	0.08	0.31
		NO_x	11.39	41.53
		CO	2.44	8.91
		SO_2	2.33	8.50
25.2-0-0	DHDS Unit Fugitives (4)	VOC	2.24	9.81
		H_2S	<0.01	0.03
		NH_3	<0.01	<0.01
	SULFUR RECOVERY UNITS			
28.2-TGI	Incinerator Stack	TSP/PM_{10} (7)	2.50	6.95
		VOC	0.69	3.01
		NO_x	8.70	38.11
		CO	43.62	191.08
		SO_2	56.00	245.28
		H_2S	3.54	15.50
28.1-0-0	ARU/SWS Fugitives (4)	VOC	0.43	1.86
		H_2S	0.11	0.48
		NH_3	0.02	0.11
28.2-0-0	SRU Fugitives (4)	VOC	0.24	1.07
		H_2S	0.08	0.33
		NH_3	0.03	0.13
28.95-300	DEA Tank	VOC	<0.01	<0.01

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
28.95-306	MDEA Tank	VOC	<0.01	<0.01

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
28.1-61-9	DEA Stripper Flare (Emergency Only)	NO_x	0.03	0.13
		CO	0.25	1.10
		VOC	<0.01	<0.01
		H_2S	0.01	0.04
		SO_2	0.85	3.74
28.1-61-10	Sour Water Stripper Flare (Emergency Only)	NO_x	0.03	0.13
		CO	0.25	1.09
		VOC	<0.01	<0.01
		H_2S	<0.01	0.02
		SO_2	0.40	1.76
STORAGE TANKS				
68-95-61	Storage Tank	VOC	1.35	3.59
68-95-62	Storage Tank	VOC	1.35	3.59
68-95-98	Cat. Gasoline Storage Tk. 7.50	VOC	1.30	
68-95-99A (6)	Sweet Gas Oil Storage Tk. 7.40	VOC	1.69	
68-95-99B (6)	Sweet Gas Oil Storage Tk. 7.40	VOC	1.69	
68-95-99C (6)	Sour Gas Oil Storage Tk.	VOC	1.70	7.43
68-95-418 (6)	Vacuum Resid Storage Tk.	VOC	4.31	18.90

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

68-95-419 (6)	Sweet Gas Oil Storage Tk.	VOC	3.20	14.03
68-95-213	Alkylate Storage Tk.	VOC	3.36	10.46

(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_x - total oxides of nitrogen
TSP - total suspended particles, not 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.
VOC - volatile organic compounds as defined in General Rule 101.1
CO - carbon monoxide
SO_2 - sulfur dioxide
H_2S - hydrogen sulfide
NH_3 - ammonia
H_2SO_4 - sulfuric acid mist
Benzene - hazardous air pollutant
R-SH - mercaptan
(4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
(5) New unit incorporated into Permit 5682A.
(6) Heated for processing heavy liquids.
(7) Test method shall be method 201/201A, excluding sulfates.

* Emission rates are based on and the facilities are limited by the following maximum operating schedule:

_____Hrs/day ____Days/week ____Weeks/year or 8,760 Hrs/year

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Dated_____