EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Nos. 36644, PSD-TX-903, and N-007

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	Emission Rates TPY
N-1	Recycle Ethane Cracking Furnace	NO_x	27.40	94.52
		SO_2	1.19	5.21
		CO	26.37	115.22
		PM_{10}	1.71	7.50
		VOC	0.65	2.85
N-2	Fresh Feed Cracking Heater	NO_x	35.63	122.91
		SO_2	1.55	6.77
		CO	34.30	150.22
		PM_{10}	2.23	9.75
		VOC	0.85	3.71
N-3	Fresh Feed Cracking Heater	NO_x	35.63	122.91
		SO_2	1.55	6.77
		CO	34.30	150.22
		PM_{10}	2.23	9.75
		VOC	0.85	3.71
N-4	Fresh Feed Cracking Heater	NO_x	35.63	122.91
		SO_2	1.55	6.77
		CO	34.30	150.22
		PM_{10}	2.23	9.75
		VOC	0.85	3.71
N-5	Fresh Feed Cracking Heater	NO_x	35.63	122.91
		SO_2	1.55	6.77
		CO	34.30	150.22
		PM_{10}	2.23	9.75

VOC	0.85	3.71

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
N-6	Fresh Feed Cracking Heater 122.91	NO_x	35.63	
		SO_2	1.55	6.77
		CO	34.30	150.22
		PM_{10}	2.23	9.75
		VOC	0.85	3.71
N-7	Fresh Feed Cracking Heater 122.91	NO_x	35.63	
		SO_2	1.55	6.77
		CO	34.30	150.22
		PM_{10}	2.23	9.75
		VOC	0.85	3.71
N-8	Fresh Feed Cracking Heater 122.91	NO_x	35.63	
		SO_2	1.55	6.77
		CO	34.30	150.22
		PM_{10}	2.23	9.75
		VOC	0.85	3.71
N-9	Fresh Feed Cracking Heater 122.91	NO_x	35.63	
		SO_2	1.55	6.77
		CO	34.30	150.22
		PM_{10}	2.23	9.75
		VOC	0.85	3.71
N-10	Catalyst Regeneration Effluent	VOC	<0.001	<0.001
N-11	Reactor Regeneration Effluent	VOC	<0.001	<0.001

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AIR CONTAMINANTS DATA

Emission Point No. (1) *	Source Name (2)	Air Contaminant Name (3)	Emission Rates lb/hr	TPY
N-12	DP Reactor Feed Heater	NO_x	5.01	13.71
		SO_2	0.22	0.95
		CO	0.69	3.02
		PM_{10}	0.38	1.64
		VOC	0.17	0.74
N-13	DP Reactor Regeneration Heater	NO_x	1.73	1.42
		SO_2	0.07	0.10
		CO	0.24	0.31
		PM_{10}	0.13	0.17
		VOC	0.06	0.08
N-14A	Auxillary Boiler	NO_x	24.96	91.10
		SO_2	1.44	6.32
		CO	28.70	125.72
		PM_{10}	2.91	12.75
		VOC	2.91	12.75
N-14B	Auxillary Boiler	NO_x	24.96	91.10
		SO_2	1.44	6.32
		CO	28.70	125.72
		PM_{10}	2.91	12.75
		VOC	2.91	12.75
N-15	Flare	VOC	4.61	6.45
		NO_x	0.49	2.12
		CO	3.50	15.34
		SO_2	0.01	0.03
N-16	Emergency Generator	NO_x	36.68	2.86

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates lb/hr	TPY
		SO_2	2.43	0.19
		CO	7.90	0.62
		PM_{10}	2.60	0.20
		VOC	2.97	0.23
N-17	Condensate Splitter Heater 46.22	NO_x	16.89	
		SO_2	0.73	3.21
		CO	2.32	10.17
		PM_{10}	1.27	5.55
		VOC	0.57	2.50
N-18	Decoking Drum	CO	720.00	27.88
		PM_{10}	78.73	3.04
TK-2501	IFR Spent Caustic	VOC	0.29	1.16
TK-8001	IFR WW Equalization	VOC	0.39	1.72
TK-8101	EFR Contaminated Stormwater <0.001	VOC	<0.001	
TK-8010	EFR Contaminated Stormwater <0.001	VOC	<0.001	
TK-7702	Sulfuric Acid Tank	H_2SO_4	<0.001	<0.001
		SO_3	<0.001	<0.001
D-7703	IFR Wash Oil Day Tank	VOC	0.04	0.05
D-7705	IFR Tank	VOC	0.09	0.06

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		AIR CONTAMINANTS DATA		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY
TK-3005	IFR Tank	VOC	0.68	1.58
TK-3002	EFR Tank	VOC	0.33	0.90
TK-3003	EFR Tank	VOC	0.33	0.90
TK-3004	EFR Tank	VOC	0.43	0.46
TK-3006	IFR Tank	VOC	0.26	0.56
TK-3007	IFR Tank	VOC	0.57	2.37
TK-3000	IFR Tank	VOC	0.92	3.68
TK-3001	IFR Tank	VOC	0.92	3.68
F-1	Fugitives (4)	VOC	2.44	10.77
F-2	Cooling Tower	VOC (5)	10.08	44.15
		Benzene	0.45	1.99
		PM_{10}	2.50	2.59
TBN (6)	Cogen	NO_x	86.6	185.06
		SO_2	5.31	12.83
		CO	65.3	252.06
		PM_{10}	8.42	25.7
		VOC	8.79	25.73

(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) VOC - volatile organic compounds as

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

defined in General Rule 101.1
NO_x - total oxides of nitrogen
SO_2 - sulfur dioxide
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.
CO - carbon monoxide
H_2SO_4 - sulfuric acid
SO_3 - sulfur trioxide

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

(5) The VOC emissions rates from the cooling tower are 10.08 pounds per hour and 44.15 tons per year, including benzene. The VOC emission rates are for total VOC.

(6) Place holder for cogeneration unit emissions. The cogeneration unit includes two turbines equipped with duct burners, and a supplemental boiler. The holder of this permit may choose the Auxiliary Boilers and Emergency Generator (EPN's N-14A, N-14B, and N-16, respectively) or a cogeneration unit and supplemental boiler. The applicant may supply additional information, EPN's for each specific piece of equipment, etc., as required by Special Condition No. 26 of this permit.

* 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

Dated_____