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	TPY
N-1	Recycle Ethane Cracking Furnace	NO_x (7)	24.16	79.37
		SO_2 (7)	1.12	4.89
		CO (7)	23.25	101.85
		PM_{10} (7)	1.51	6.61
		VOC (7)	0.57	2.51
N-2	Fresh Feed Cracking Heater	NO_x (7)	35.34	116.08
		SO_2 (7)	1.61	7.07
		CO (7)	34.01	148.97
		PM_{10} (7)	2.21	9.67
		VOC (7)	0.84	3.68
N-3	Fresh Feed Cracking Heater	NO_x (7)	35.34	116.08
		SO_2 (7)	1.61	7.07
		CO (7)	34.01	148.97
		PM_{10} (7)	2.21	9.67
		VOC (7)	0.84	3.68
N-4	Fresh Feed Cracking Heater	NO_x (7)	35.34	116.08
		SO_2 (7)	1.61	7.07
		CO (7)	34.01	148.97
		PM_{10} (7)	2.21	9.67
		VOC (7)	0.84	3.68
N-5	Fresh Feed Cracking Heater	NO_x (7)	35.34	116.08
		SO_2 (7)	1.61	7.07
		CO (7)	34.01	148.97
		PM_{10} (7)	2.21	9.67
		VOC (7)	0.84	3.68

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	NO_x (7)	35.34	116.08
		SO_2 (7)	1.61	7.07
		CO (7)	34.01	148.97
		PM_{10} (7)	2.21	9.67
		VOC (7)	0.84	3.68
N-7	Fresh Feed Cracking Heater	NO_x (7)	35.34	116.08
		SO_2 (7)	1.61	7.07
		CO (7)	34.01	148.97
		PM_{10} (7)	2.21	9.67
		VOC (7)	0.84	3.68
N-8	Fresh Feed Cracking Heater	NO_x (7)	35.34	116.08
		SO_2 (7)	1.61	7.07
		CO (7)	34.01	148.97
		PM_{10} (7)	2.21	9.67
		VOC (7)	0.84	3.68
N-9	Fresh Feed Cracking Heater	NO_x (7)	35.34	116.08
		SO_2 (7)	1.61	7.07
		CO (7)	34.01	148.97
		PM_{10} (7)	2.21	9.67
		VOC (7)	0.84	3.68
N-10	Catalyst Regeneration Effluent	VOC (7)	<0.001	<0.001
N-11	Reactor Regeneration Effluent	VOC (7)	<0.001	<0.001
N-12	DP Reactor Feed Heater	NO_x (7)	5.01	13.71
		SO_2 (7)	0.22	0.95
		CO (7)	0.69	3.02
		PM_{10} (7)	0.38	1.64
		VOC (7)	0.17	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
N-13	DP Reactor Regeneration Heater	NO_x (7)	1.73	1.42
		SO_2 (7)	0.07	0.10
		CO (7)	0.24	0.31
		PM_{10} (7)	0.13	0.17
		VOC (7)	0.06	0.08
N-14	Supplemental Boiler	NO_x (7)	13.65	16.20
		SO_2 (7)	0.61	0.73
		CO (7)	15.70	18.63
		PM_{10} (7)	1.59	1.89
		VOC (7)	1.59	1.89
N-15	Flare	VOC (7)	5.23	5.02
		NO_x (7)	0.45	1.27
		CO (7)	3.30	9.21
		SO_2 (7)	0.03	0.14
N-17	Condensate Splitter Heater	NO_x (7)	16.89	46.22
		SO_2 (7)	5.99	7.22
		CO (7)	2.32	10.17
		PM_{10} (7)	1.27	5.55
		VOC (7)	0.57	2.50
N-18	Decoking Drum	CO (7)	720.00	27.88
		PM_{10} (7)	78.73	3.04
N-19	Thermal Oxidizer	VOC (7)	0.024	0.107
		NO_x (7)	0.24	0.88
		CO (7)	0.51	1.86
		SO_2 (7)	0.08	0.28
		PM_{10} (7)	0.04	0.13
N-20A	CTG HRSG Unit 1 GE Frame 6B 310.4 MMBtu/hr Duct Burner	NO_x (7)	44.94	102.62
		SO_2 (7)	2.27	6.50
		CO (7)	56.94	165.18
		VOC (7)	4.21	11.65
		PM_{10} (7)	5.55	19.31
N-20B	CTG HRSG Unit 2 GE Frame 6B	NO_x (7)	26.96	61.57
		SO_2 (7)	2.27	6.50

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
	310.4 MMBtu/hr Duct Burner (with SCR)	CO (7)	56.94	165.18
		VOC (7)	4.21	11.65
		PM_{10} (7)	5.55	19.31
		NH_3	7.94	22.57
N-21A	Fire Pump Diesel Engine (6)	VOC (7)	1.26	0.016
		NO_x (7)	15.81	0.21
		CO (7)	3.41	0.04
		SO_2 (7)	1.05	0.014
		PM_{10} (7)	1.12	0.015
N-21B	Fire Pump Diesel Engine (6)	VOC (7)	1.26	0.016
		NO_x (7)	15.81	0.21
		CO (7)	3.41	0.04
		SO_2 (7)	1.05	0.014
		PM_{10} (7)	1.12	0.015
TK-2501	IFR Spent Caustic	VOC (7)	0.26	1.03
TK-8001	IFR WW Equalization	VOC (7)	0.37	0.66
TK-8101	EFR Contaminated Stormwater	VOC (7)	<0.001	<0.001
TK-7702	Sulfuric Acid Tank	H_2SO_4	<0.001	<0.001
		SO_3	<0.001	<0.001
TK-800	EFR Tank	VOC (7)	4.05	6.22
TK-801	EFR Tank	VOC (7)	4.16	6.22
TK-802	EFR Tank	VOC (7)	4.16	6.22
TK-805	EFR Tank	VOC (7)	2.78	4.05
TK-807	IFR Tank	VOC (7)	1.26	3.08
TK-811	IFR Tank (Toluene)	VOC (7)	0.61	0.13

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
TK-812	IFR Tank (Toluene)	VOC (7)	0.51	0.13
TK-813	IFR Tank (Toluene)	VOC (7)	0.51	0.13
F-1	Fugitives (4)	VOC (7)	2.06	9.10
40 CSPLTFUG	Fugitives (4)	VOC (7)	0.38	1.67
F-2	Cooling Tower	VOC (5) (7)	12.6	55.19
		Benzene	0.45	1.99
		PM_{10} (7)	1.9	2.76
F-4	Benzene/Toluene Process	VOC (7)	0.25	1.12
22BZTNKFUG	Fugitives(4)	Benzene (7)	0.03	0.12
22BZNTKFLR	Vapor Combustion Unit	NO_x (7)	0.03	0.15
		CO (7)	0.29	1.28
		SO_2 (7)	<0.01	<0.01
		VOC (7)	0.04	0.04

(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 defined in 30 Texas Administrative Code Section 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
NH_3 - ammonia

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

(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 12.6 pounds per hour and 55.19 tons per year, including benzene. The VOC emission rates are for total VOC.
(6) Emissions from the Fire Pump Diesel Engines are based on 26 hours per year operation. Non-emergency fire pump operations shall only occur between the hours of 8:00 a.m. and 5:00 p.m..
(7) These emissions are permitted under PSD or Nonattainment review in addition to State.

* 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 _____