EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 19296

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**
1	Molecular Sieve Heater (11.72 MMBtu/hr fired duty)	CO	0.70	3.08
		NO_x	1.18	5.13
		PM_{10}	0.09	0.39
		SO_2	0.17	0.73
		VOC	0.05	0.22
2	Regen. Heater (6.07 MMBtu/hr fired duty)	CO	0.36	1.60
		NO_x	0.61	2.66
		PM_{10}	0.05	0.20
		SO_2	0.09	0.38
		VOC	0.03	0.10
3	No. 1 Boiler 95 MMBtu/hr	CO	5.70	
		NO_x	11.40	
		PM_{10}	0.71	
		SO_2	1.33	
		VOC	0.40	
4	SRU Incinerator	CO	0.25	0.99
		H_2S	0.01	0.01
		NO_x	0.15	0.59
		PM_{10}	0.03	0.09
		SO_2	0.43	1.87
		VOC	0.02	0.07
5	Flare	CO	0.39	1.69
		H_2S	1.30	0.36

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AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
		NH_3	0.02	0.07
		NO_x	0.21	0.89
		SO_2	120.00	34.98
		VOC	0.32	1.39
5	Flare MSS	NO_x	58.65	13.30
		CO	117.09	26.56
		VOC	0.01	0.01
		SO_2	0.35	0.08
		H_2S	0.01	0.01
7	Cooling Tower	VOC	1.32	5.78
8	Butylene Converter Steam Super Heater 3.1 MMBtu/hr	CO	0.25	1.10
		NO_x	0.30	1.30
		PM_{10}	0.02	0.10
		SO_2	0.01	0.01
		VOC	0.02	0.08
BLR-21	No. 2 Boiler 81 MMBtu/hr	CO	5.79	
		NO_x	2.84	
		PM_{10}	0.62	
		SO_2	1.13	
		VOC	0.45	
BLR-22	No. 3 Boiler 81 MMBtu/hr	CO	5.79	
		NO_x	2.84	
		PM_{10}	0.62	
		SO_2	1.13	
		VOC	0.45	
3 and BLR-21, and BLR-22	No. 1, 2, and 3 Boilers Combined Annual ***	CO		39.48
		NO_x		42.98
		PM_{10}		3.87
		SO_2		8.31

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
		VOC		2.94
FUG-6	Process Fugitives (4)	VOC	9.22	40.38
HP-1	Reformer Flue Gas Stack	NO_x	2.17	8.63
		CO	2.59	10.29
		VOC	4.40	17.46
		SO_2	0.05	0.22
		PM_{10}	2.91	11.56
		NH_3	1.61	6.38
HP-1	Reformer Flue Gas Stack MSS	NO_x	13.10	2.36
HP-2	Deaerator	CO	0.67	
		NH_3	0.05	
		Methanol	0.16	
HP-5	Steam Vent MSS	CO	0.67	
		NH_3	0.05	
		Methanol	0.16	
HP-2 & HP-5	Deaerator and Steam Vent	CO		2.92
		NH_3		0.22
		Mehtanol		0.71
HP-3	Hydrodesulfurization Rector MSS	PM_{10}	0.04	0.01
HP-4	Hydrogen Plant Cooling Tower	PM_{10}	0.14	0.61
HP-FUG	Fugitives Hydrogen Plant	VOC	0.03	0.11
		NH_3	0.05	0.23

(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 an area name or fugitive source name.

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AIR CONTAMINANTS DATA

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

(3) CO - carbon monoxide
H_2S - hydrogen sulfide
NH_3 - ammonia
NO_x - total oxides of nitrogen
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
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1

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

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

24 Hrs/day 7 Days/week 52 Weeks/year

** Compliance with annual emission limits is based on a rolling 12-month period.

*** Combined annual limits were calculated based upon all three boilers operating at maximum firing rates for 2,160 hours per year (hrs/yr) plus EPN 3, and either BLR-21 or BLR-22 firing at 48 MMBtu/hr each for 6,600 hrs/yr. A year is defined as January through December.

Dated November 4, 2008