EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 5252

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**
201/219	Superheater HS-201/219	NO_x	42.00	166.31
		CO	84.08	48.56
		VOC	1.28	5.62
		SO_2	1.03	4.51
		PM	0.06	0.25
220	Steam Superheater HS-220	NO_x	1.49	6.51(8)
		CO	29.76	21.71(8)
		VOC	0.39	1.72
		SO_2	0.32	1.40
		PM	0.29	1.26
		NH_3	0.74	3.24
220	Steam Superheater HS-220 (maintenance)	NO_x	12.41	--
		CO	29.76	--
1301	Boiler HB-1301-P (5)	NO_x	15.10	66.10
		CO	54.05	47.21
		VOC	1.16	5.10
		SO_2	0.23	0.52
		PM	0.43	1.89
301-A	Boiler HB-301-A (5)	NO_x	32.65	143.00
		CO	59.09	4.60
		VOC	0.21	0.91
		SO_2	0.63	1.16
		PM	0.69	3.04

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	Emission Rates * TPY**
301-B	Boiler HB-301-B (5)	NO_x	38.70	169.70
		CO	59.09	4.60
		VOC	1.18	5.18
		SO_2	0.69	1.16
		PM	0.36	1.56
301-S	Boiler HB-301-S (5)	NO_x	49.90	205.00
		CO	61.46	4.60
		VOC	1.11	4.85
		SO_2	0.58	1.16
		PM	0.40	1.75
1301	Boiler HB-1301-P (6)	NO_x	17.83	-
		CO	54.05	-
		VOC	1.38	-
		SO_2	0.25	-
		PM	0.51	-
301-A	Boiler HB-301-A (6)	NO_x	34.76	-
		CO	59.09	-
		VOC	0.22	-
		SO_2	0.56	-
		PM	0.74	-
301-B	Boiler HB-301-B (6)	NO_x	40.20	-
		CO	59.09	-
		VOC	1.22	-
		SO_2	0.56	-
		PM	0.38	-

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	Emission Rates * TPY**
301-S	Boiler HB-301-S (6)	NO_x	53.14	-
		CO	61.46	-
		VOC	1.26	-
		SO_2	0.56	-
		PM	0.45	-
102	Clay Treater Decon. Heater HS-102	NO_x	2.86	12.51
		CO	7.45	10.51
		VOC	0.15	0.66
		SO_2	0.04	0.08
		PM	0.22	0.95
103	Benzene Recovery Column Reboiler HS-103	NO_x	10.95	47.95
		CO	23.30	1.04
		VOC	0.05	0.22
		SO_2	0.17	0.26
		PM	0.39	1.71
104	EB Recovery Column Reboiler HS-104	NO_x	7.22	25.89
		CO	40.84	34.51
		VOC	0.72	3.15
		SO_2	0.28	0.47
		PM	0.63	2.74
601	TDA Reactor Feed Heater HS-601	NO_x	1.30	5.68
		CO	3.60	0.04
		VOC	0.02	0.09
		SO_2	0.02	0.03
		PM	0.19	0.83
307	PEB Tank MT-307	VOC	0.01	0.01

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AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	Emission Rates * TPY**
308	Flux Oil Tank MT-308	VOC	0.01	0.01
FUG-BZ	Benzene Fugitives (4)	Styrene	0.12	0.51
		Ethylbenzene	0.18	0.77
		Toluene	0.18	0.77
		Benzene	0.70	3.08
FUG-VOC	VOC Fugitives (4)	Styrene	0.77	3.36
		Ethylbenzene	0.61	2.69
		Toluene	0.61	2.69
		Benzene	0.10	0.43
FUG-NH3	Ammonia Fugitives	NH_3	0.03	0.13
LR-1	Loading Rack (4)	Ethylbenzene	4.32	<0.01
CT-1	Cooling Tower-1 (4)	VOC	2.52	6.03
CT-2	Cooling Tower-2 (4)	VOC	0.01	0.01
FL	Flare	NO_x	0.39	0.73(8)
		SO_2	0.01	0.01(8)
		CO	2.81	5.28(8)
		Total VOC (7)	8.3	0.31(8)
		Benzene	7.89	0.29(8)
FL	Flare (maintenance)	NO_x	3.89	--
		SO_2	0.01	--
		CO	28.07	--
		Total VOC (7)	83.00	--
		Benzene	78.85	--
GY-347	Precoat	PM	0.01	0.01
115	Emergency Generator	NO_x	12.09	0.67
		SO_2	0.80	0.04
		PM	0.86	0.06
		CO	2.61	0.15

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	Emission Rates * TPY**
		VOC	0.96	0.06
802A, 802B, 802S, 805	Firewater Pumps	NO_x	42.16	3.37
		SO_2	2.80	0.22
		PM	3.00	0.24
		CO	9.08	0.73
		VOC	3.36	0.27
812	Stormwater Pump	NO_x	0.74	2.23
		CO	0.16	0.48
		VOC	0.06	0.18
		SO_2 0.05	0.15	
		PM	0.05	0.15
213	Ethylene Glycol Tank	Ethylene Glycol	0.01	0.01
GY308	GY308 Condensate Deaerator	VOC	0.70	0.33
CTOTANK	Catalytic Thermal Oxidizer	NO_x	-	-
		CO	-	-
		VOC	-	-
CTOVENT	Catalytic Thermal Oxidizer	NO_x	-	-
		CO	-	-
		VOC	-	-
Cap for CTOTANK and CTOVENT		NO_x	0.81	1.48
		CO 6.95	12.7	
		VOC 16.4	2.2	
REGEN	EB Regenerator	CO	5.00	0.20
Diesel Tanks	Diesel Tanks	VOC	0.11	0.03

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AIR CONTAMINANTS DATA

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

(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
SO_2 - sulfur dioxide
PM - particulate matter, suspended in the atmosphere, including PM_{10}.
PM_{10} - particulate matter 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
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
NH_3 - ammonia
(4) Fugitive emissions are an estimate and should not be considered a maximum allowable emission rate.
(5) Short-term allowable emission rates in effect when all four boilers (EPNs 1301, 301-A, 301-B, and 301-S) are operating simultaneously.
(6) Short-term allowable emission rates in effect when one boiler is out of service and the other three are operating. Annual allowables for each boiler are unchanged.
(7) Total VOC includes benzene.
(8) Annual emissions include both routine and maintenance emissions.

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

hrs/year 8,760

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

Dated July 19, 2005