

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 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 *	Source	Air Contaminant	Emission Rates	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY
201/219	Superheater HS-201/219	NO _x	37.97	166.31
		SO ₂	0.19	0.84
		PM	0.06	0.25
		CO	11.09	48.56
		VOC	1.28	5.62
1301	Boiler HB-1301-P	NO _x	15.10	66.10
		SO ₂	0.12	0.52
		PM	0.43	1.89
		CO	10.78	47.21
		VOC	1.16	5.10
301-A	Boiler HB-301-A	NO _x	32.65	143.00
		SO ₂	0.12	0.54
		PM	0.69	3.04
		CO	0.08	0.35
		VOC	0.21	0.91
301-B	Boiler HB-301-B	NO _x	38.70	169.70
		SO ₂	0.12	0.54
		PM	0.36	1.56
		CO	0.08	0.36
		VOC	1.18	5.18

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Emission *	Source	Air Contaminant	<u>Emission Rates</u>	
<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Name (3)</u>	<u>lb/hr</u>	<u>TPY</u>
301-S	Boiler HB-301-S	NO _x	49.90	205.00
		SO ₂	0.12	0.54
		PM	0.40	1.75
		CO	1.06	4.60
		VOC	1.11	4.85
1301	Alternate Boiler HB-1301-P (5)	NO _x	17.83	-
		SO ₂	0.14	-
		PM	0.51	-
		CO	11.89	-
		VOC	1.38	-
301-A	Alternate Boiler HB-301-A (5)	NO _x	34.76	-
		SO ₂	0.13	-
		PM	0.74	-
		CO	0.09	-
		VOC	0.22	-
301-B	Alternate Boiler HB-301-B (5)	NO _x	40.20	-
		SO ₂	0.13	-
		PM	0.38	-
		CO	0.08	-
		VOC	1.22	-
301-S	Alternate Boiler HB-301-S (5)	NO _x	53.14	-
		SO ₂	0.14	-
		PM	0.45	-
		CO	1.20	-
		VOC	1.26	-
101	Feed Preheater Heater HS-101	NO _x	7.80	34.17
		SO ₂	0.07	0.31
		PM	0.39	1.71
		CO	0.17	0.75

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates</u>	
			lb/hr	TPY
		VOC	0.10	0.44
102	Clay Treater Decon. Heater HS-102	NO _x	2.31	10.14
		SO ₂	0.02	0.08
		PM	0.39	1.71
		CO	1.74	7.63
		VOC	0.08	0.35
601	TDA Reactor Feed Heater HS-601	NO _x	1.30	5.68
		SO ₂	0.01	0.03
		PM	0.19	0.83
		CO	0.01	0.04
		VOC	0.02	0.09
109	EB Recovery Col. Reboiler HS-109	NO _x	10.95	47.95
		SO ₂	0.06	0.26
		PM	0.39	1.71
		CO	0.24	1.04
		VOC	0.05	0.22
108	Benzene Rec. Col. Reboiler HS-108	NO _x	17.14	75.07
		SO ₂	0.11	0.47
		PM	0.36	1.58
		CO	6.96	30.48
		VOC	0.72	3.15
308	Flux Oil Tank MT-308	VOC	<0.01	<0.01
FUG-BZ	Benzene Fugitives (4)	Styrene	0.07	0.31
		Ethylbenzene	0.11	0.47
		Toluene	0.11	0.47
		Benzene	0.43	1.87
FUG-VOC	VOC Fugitives (4)	Styrene	0.69	3.01
		Ethylbenzene	0.59	2.58

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Emission *	Source	Air Contaminant	<u>Emission Rates</u>	
<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Name (3)</u>	<u>lb/hr</u>	<u>TPY</u>
		Toluene	0.59	2.58
		Benzene	0.10	0.43

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
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	5.53	0.31
		SO ₂	0.07	<0.01
		CO	39.95	2.25
		Total VOC (6)	120.00	1.10
		Benzene	114.00	1.04
GY-347	Precoat	PM	<0.01	<0.01
115	Emergency Generator	NO _x	12.09	0.16
		SO ₂	0.80	0.01
		PM	0.86	0.01
		CO	2.61	0.03
		VOC	0.96	0.01
802A	Firewater Pump	NO _x	11.78	0.15
		SO ₂	0.78	0.01
		PM	0.84	0.01
		CO	2.54	0.03
		VOC	0.94	0.01
213	Ethylene Glycol Tank Tank MS-213-M	Ethylene Glycol	<0.01	<0.01
802S	Firewater Pump	NO _x	11.78	0.15
		SO ₂	0.78	0.01
		PM	0.84	0.01
		CO	2.64	0.03
		VOC	0.94	0.01

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Emission *	Source	Air Contaminant	<u>Emission Rates</u>	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY
805	Firewater Pump	NO _x	11.78	0.15
		SO ₂	0.78	0.01
		PM	0.84	0.01
		CO	2.54	0.03
		VOC	0.94	0.01
CTOTANK	Catalytic Thermal Oxidizer	NO _x	0.32	0.74
		CO	2.75	6.37
		VOC	4.08	0.73
CTOVENT	Catalytic Thermal Oxidizer	NO _x	0.49	0.74
		CO	4.20	6.33
		VOC	12.32	1.47

- (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
 SO₂ - sulfur dioxide
 PM - particulate matter, suspended in the atmosphere, including PM₁₀.
 CO - carbon monoxide
 VOC - volatile organic compounds as defined in 30 Texas Administrative Code Section 101.1
- (4) Fugitive emissions are an estimate and should not be considered a maximum allowable emission rate.
- (5) Alternate allowable emission rates for these sources. These emission rates are authorized only when one of these boilers is out of service and do not apply to whichever boiler may be out of service.
- (6) Total VOC includes benzene.

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

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Emission *	Source	Air Contaminant	<u>Emission Rates</u>	
<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Name (3)</u>	<u>lb/hr</u>	<u>TPY</u>
Hrs/day_____Days/week_____Weeks/year_____			or Hrs/year <u>8,760</u>	

Dated_____