

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	<u>Emission Rates</u>	
<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Name (3)</u>	<u>lb/hr</u>	<u>TPY</u>
201/219	Superheater HS-201/219	NO _x	37.97	199.31
		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
301-S	Boiler HB-301-S	NO _x	49.90	205.00
		SO ₂	0.12	0.54
		PM	0.40	1.75

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
		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
		VOC	0.10	0.44
601	TDA Reactor Feed	NO _x	1.30	5.68

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Point No. (1)	Name (2)	Name (3)	lb/hr	TPY
	Heater HS-601	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
CTOTANK (new name)	Regenerative Thermal Oxidizer	NO _x	1.63	0.15
		CO	0.41	1.29
		Total VOC	4.08	0.69
		Styrene	0.47	0.19
		Toluene	1.34	0.08
		Benzene	1.33	0.24
		Ethylbenzene	0.89	0.16
		Cumene	0.00	0.00
		Xylene	0.02	0.00
		Non-HAP VOC	0.02	0.00
CTOVENT (new name)	Catalytic Thermal Oxidizer	NO _x	0.49	0.40
		CO	4.16	3.40
		Total VOC	12.32	1.47
		Benzene	7.85	0.92
		Toluene	0.55	0.16
		Ethylbenzene	2.42	0.29
		Cumene	0.02	0.00

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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>
		Xylene	0.06	0.00
		Styrene	1.27	0.11
		Non-HAP VOC	0.13	0.00
213	Ethylene Glycol Tank Tank MS-213-M	Ethylene Glycol	<0.01	<0.01

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<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Name (3)</u>	<u>lb/hr</u>	<u>TPY</u>
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
		Toluene	0.59	2.58
		Benzene	0.10	0.43
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
		VOC, other	0.06	1.10
	N ₂ Purge	Benzene	7.35	0.09
GY-347	Precoat	PM	<0.01	<0.01
SWS	Storm Water Sump	Styrene	<0.01	<0.01
		Ethylbenzene	<0.01	<0.01
		Toluene	<0.01	<0.01
		Benzene	<0.01	<0.01
115	Emergency Generator	NO _x	12.26	0.16
		SO ₂	2.64	0.03
		PM	0.60	0.01

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
		CO	0.86	0.01
		VOC	1.19	0.02
802A	Firewater Pump	NO _x	12.26	0.16
		SO ₂	2.64	0.03
		PM	0.60	0.01
		CO	0.86	0.01
		VOC	1.19	0.02
802S	Firewater Pump	NO _x	12.26	0.16
		SO ₂	0.60	0.01
		PM	0.86	0.01
		CO	2.64	0.03
		VOC	1.19	0.02
805	Firewater Pump	NO _x	12.26	0.16
		SO ₂	0.60	0.01
		PM	0.86	0.01
		CO	2.64	0.03
		VOC	1.19	0.03

(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
 CO - carbon monoxide
 VOC - volatile organic compounds as defined in General Rule

101.1

N₂ - nitrogen
 Non-HAP VOC - non-hazardous air pollutant VOC

- (4) Fugitive emissions are an estimate only and should not be considered as 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.

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

Hrs/day_____Days/week_____Weeks/year_____ or Hrs/year____
8,760

Dated_____