

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
102	Clay Treater Decon. Heater HS-102	NO _x	2.31	10.24
		SO ₂	0.02	0.08

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
		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
CTOTANK (new name)	Catalytic Thermal Oxidizer	NO _x	0.32	0.74
		CO	2.75	6.37
		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

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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>

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
CTOVENT (new name)	Catalytic Thermal Oxidizer	NO _x	0.49	0.74
		CO	4.20	6.33
		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
		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
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

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
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	0.60	0.01
		PM	0.86	0.01
		CO	2.64	0.03
		VOC	1.19	0.02
802A	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
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

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
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	0.02

- (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

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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>

Dated_____