

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 Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
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
		CO	1.06	4.60
		VOC	1.11	4.85

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
1301	Alternate Boiler HB-1301-P (5)	NO _x	17.83	-
		SO ₂	0.14	-
		PM	0.51	-
		CO	11.89	-
		VOC	1.38	-
01-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	Reactor Feed 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	Regenerating Gas Heater HS-102	NO _x	0.75	3.22
		SO ₂	0.01	0.02
		PM	0.04	0.16
		CO	0.16	0.64
		VOC	0.04	0.17

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
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
103	Benzene Recovery Reboiler HS-103	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
104	EB Recovery Reboiler HS-104	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
355/315	Styrene Monomer Tanks MT-315 and MT-355	Styrene	2.94	2.57
322	Crude Styrene Tank MT-322	Styrene	6.31	0.96
		Ethylbenzene	5.50	0.84
		Benzene	1.49	0.24
		Toluene	0.91	0.14
		Xylene (p-)	0.06	0.01
		Xylene (m-)	0.15	0.03
307	PEB Tank MT-307	Polyethylbenzene	0.27	0.02
311	EB Tank MT-311	Xylene (mixed)	0.03	0.01
		Toluene	0.11	0.03
		Ethylbenzene	22.16	7.11

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
		Benzene	0.12	0.04
312	Benzene Tank MT-312	Benzene	0.46	0.36
306	Off-spec EB Tank MT-306	Benzene	7.72	0.87
		Toluene	0.07	0.01
		Diethylbenzene	0.33	0.03
		Ethylbenzene	5.04	0.51
		Cumene	0.03	<0.01
316	Residue Fuel Tank MT-316	Styrene	1.73	0.15
		DPM	<0.01	nil
		TEB	<0.01	nil
		DPE	<0.01	nil
		Cumene	<0.01	nil
310	Toluene Tank MT-310	Toluene	46.47	3.93
		Ethylbenzene	0.03	<0.01
		Benzene	<0.01	<0.01
317	Off-spec Styrene Tank MT-317	Benzene	10.55	0.35
		Toluene	5.70	0.19
		Ethylbenzene	5.07	0.16
		Styrene	3.93	0.13
		Cumene	0.17	<0.01
		Xylene (p-)	0.11	<0.01
318	Slop Oil Tank MT-318	Benzene	1.88	0.17
		Toluene	0.10	0.01
		Ethylbenzene	0.57	0.05
		Styrene	0.54	0.05
		Cumene	0.01	<0.01
		Xylene (p-)	0.01	<0.01

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
		Diethylbenzene	0.01	<0.01
213	Etylene Glycol Tank Tank MS-213-M	Etylene Glycol	<0.01	<0.01
221	Oil/Water Separator MS-221	Styrene	<0.01	<0.01
		Toluene	<0.01	<0.01
		Ethylbenzene	<0.01	<0.01
		Benzene	<0.01	<0.01
		Diethylbenzene	<0.01	<0.01
OWS	Storm Water Oil Water Separator GV350	Styrene	<0.01	<0.01
		Toluene	<0.01	<0.01
		Ethylbenzene	<0.01	<0.01
		Benzene	<0.01	<0.01
		Diethylbenze	<0.01	<0.01
364	Wastewater Storage Tank MT-364	Ethylbenzene	<0.01	<0.01
		Styrene	<0.01	<0.01
		Toluene	<0.01	<0.01
		Benzene	<0.01	<0.01
365	Wastewater Storage Tank MT-365	Benzene	<0.01	<0.01
		Toluene	<0.01	<0.01
		Ethylbenzene	<0.01	<0.01
		Styrene	<0.01	<0.01
374	Flux Oil Tank MT-374	VOC	<0.01	<0.01
PSS	Process Sewer Sump MS-338	Styrene	<0.01	<0.01
		Ethylbenzene	<0.01	<0.01
		Toluene	<0.01	<0.01
		Benzene	<0.01	<0.01

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
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	0.58	2.58
		Toluene	0.58	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	11.04
CT-2	Cooling Tower-2 (4)	VOC	<0.01	<0.01
FL	Flare	NO _x	5.53	0.05
		SO ₂	0.07	<0.01
		CO	39.95	0.36
		VOC	0.06	1.10
REGEN	EB Catalyst Regen.	CO	0.04	<0.01
GY-347	Wastewater Sludge	PM	<0.01	<0.01
SWS	Stormwater 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

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
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
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
- (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 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. The total out-of-service period for all four boilers shall not exceed sixty days in any 12 month period.
- (6) The total emissions from these two sources shall not exceed the combined allowable emissions.

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			<u>lb/hr</u>	<u>TPY</u>

* 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_____