

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 21593

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, sources, and related activities. 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	
			lbs/hour	TPY (4)
BO-101	Turbines A, B, C and D and HRSGs 1 and 2, firing natural gas or ethane, and the HRSGs also combusting process stream exhaust	NO _x	4.06	17.78
		NO _x (6)	11.97	
		CO (Firing Natural Gas)	60.02	104.67
		CO (Firing Ethane)	84.35	
		SO ₂	1.14	4.98
		VOC	2.84	12.45
		PM	2.89	12.68
		PM ₁₀	2.89	12.68
		PM _{2.5}	2.89	12.68
		NH ₃	5.53	24.24
BO-102	Turbines A, B, C and D and HRSG 3 (Natural Gas - Fuel only)	NO _x	13.86	59.09
		CO	26.98	32.53
		SO ₂	0.35	1.52
		VOC	0.67	2.92
		PM	1.14	5.00
		PM ₁₀	1.14	5.00
		PM _{2.5}	1.14	5.00
BO-103	Auxiliary Boiler	NO _x	2.80	12.26
		CO	10.35	45.33

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		SO ₂	0.78	3.44
		VOC	1.12	4.91
		PM	1.40	6.13
		PM ₁₀	1.40	6.13
		PM _{2.5}	1.40	6.13
		NH ₃	1.26	5.51
ME-113	Flare	NO _x	2.93	9.57
		CO	5.97	18.95
		SO ₂	1.77	0.36
		VOC	2.08	6.83
		H ₂ S	0.02	<0.01
EP-101	Incinerator	NO _x	0.60	2.63
		CO	0.91	4.00
		SO ₂	8.25	36.14
		VOC	0.06	0.25
		PM	0.70	3.05
		PM ₁₀	0.70	3.05
		PM _{2.5}	0.70	3.05
		H ₂ S	<0.01	<0.01
EP-102	Turbine Lube Oil System	VOC	0.01	0.05
EP-103A	Cooling Tower CT-101	VOC	7.20	
		PM	0.11	
		PM ₁₀	0.11	
		PM _{2.5}	0.11	

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EP-103B	Cooling Tower CT-330	VOC	7.20	
		PM	0.11	
		PM ₁₀	0.11	
		PM _{2.5}	0.11	
EP-103A & EP-103B	Cooling Towers CT-101 & 330	VOC		5.60
		PM		0.84
		PM ₁₀		0.84
		PM _{2.5}		0.84
EP-103C	Cooling Tower CT-201	VOC	9.40	4.12
		PM	0.14	0.62
		PM ₁₀	0.14	0.62
		PM _{2.5}	0.14	0.62
EP-105	Methanol Tank	VOC	14.36	0.09
EP-106	Corrosion Inhibitor Tank	VOC	0.74	< 0.01
SV-109	MDEA Tank	VOC	<0.01	< 0.01
SV-110	Fresh Caustic Tank	Inorganics NaOH	< 0.01	< 0.01
SV-111	Spent Caustic Tank	VOC	20.20	0.58
SV-114	TEG Tank	VOC	< 0.01	<0.01
ME-210	Caustic Day Tank	Inorganics NaOH	< 0.01	< 0.01
SV-162	Water Neutralization Tank	Inorganics NaOH	< 0.01	< 0.01
SV-230	Caustic Water Blend Tank	Inorganics NaOH	< 0.01	< 0.01
BLEACH1	Bleach Tank 1	Inorganics NaClO	< 0.01	< 0.01
BLEACH2	Bleach Tank 2	Inorganics NaClO	< 0.01	< 0.01
DIESEL1	Diesel Tank 1	VOC	0.02	<0.01

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DIESEL2	Diesel Tank 2	VOC	0.02	<0.01
FLOC	Flocculant Tank	Inorganics AlClOH	0.01	<0.01
KEROSENE1	Kerosene Tank	VOC	0.03	<0.01
TRTCHEM1	Treatment Chemical Tank 1	Inorganics H ₃ PO ₄	<0.01	<0.01
TRTCHEM2	Treatment Chemical Tank 2	VOC	<0.01	<0.01
WATERTK1	Water Tank 1	VOC	0.01	0.01
WATERTK2	Water Tank 2	VOC	0.01	0.01
LOAD-01	Spent Caustic Loading	VOC	24.24	0.39
PM-120A	Fire Engine	NO _x	2.07	0.05
		CO	1.04	0.03
		VOC	0.11	<0.01
		SO ₂	0.26	0.01
		PM	0.17	<0.01
		PM ₁₀	0.17	<0.01
		PM _{2.5}	0.17	<0.01
NH3FUG	Ammonia Tank Fugitives (5)	NH ₃	0.01	0.05
Fugitives	Process Fugitives (5)	VOC	3.90	17.08

(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.

HRSG gas fired heat recovery steam generators

MDEA methyl diethanolamine

TEG triethylene glycol

(3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1

NO_x - total oxides of nitrogen

SO₂ - sulfur dioxide

PM total particulate matter, suspended in the atmosphere, including PM₁₀ and PM_{2.5}, as represented

PM₁₀ - total particulate matter equal to or less than 10 microns in diameter, including PM_{2.5}, as represented

PM_{2.5} - particulate matter equal to or less than 2.5 microns in diameter

CO - carbon monoxide

NH₃ - ammonia

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H ₂ S	- hydrogen sulfide
NaOH	sodium hydroxide
NaClO	sodium hypochlorite
AlClOH	aluminum chlorohydrate
H ₃ PO ₄	phosphoric acid

- (4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
- (5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
- (6) Emission rate is temporary until the NOx catalyst is replaced or December 31, 2019, whichever occurs first.

Date: April 10, 2019