Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 139479 and PSDTX1496

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	
			lb/hr	TPY(4)
TRB4-1	Propane Refrigeration Turbine	VOC	0.68	-
		CO	17.84	-
		NO_X	29.37	-
		PM	0.74	-
		PM_{10}	0.74	-
		$PM_{2.5}$	0.74	-
		H_2S	<0.01	-
		SO_2	0.33	-
TRB4-2	Propane Refrigeration Turbine	VOC	0.68	-
		CO	17.84	-
		NO_X	29.37	-
		PM	0.74	-
		PM_{10}	0.74	-
		$PM_{2.5}$	0.74	-
		H_2S	<0.01	-
		SO_2	0.33	-
TRB4-3, TRB4-3A	Ethylene Refrigeration Turbine	VOC	0.73	-
		CO	19.28	-
		NO_X	31.68	-
		PM	0.80	-

Emission Sources - Maximum Allowable Emission Rates

		PM_{10}	0.80	-
		$PM_{2.5}$	0.80	-
		H_2S	<0.01	-
		SO_2	0.35	-
TRB4-4, TRB4-4A	Ethylene Refrigeration Turbine	VOC	0.73	-
		CO	19.28	-
		NO_X	31.68	-
		PM	0.80	-
		PM_{10}	0.80	-
		$PM_{2.5}$	0.80	-
		H_2S	<0.01	-
		SO_2	0.35	-
TRB4-5	Methane Refrigeration Turbine	VOC	0.68	-
		CO	18.00	-
		NO_X	29.69	-
		PM	0.75	-
		PM_{10}	0.75	-
		$PM_{2.5}$	0.75	-
		H_2S	<0.01	-
		SO_2	0.33	-
TRB4-6	Methane Refrigeration Turbine	VOC	0.68	-
		CO	18.00	-
		NO_X	29.69	-
		PM	0.75	-
		PM_{10}	0.75	-

Emission Sources - Maximum Allowable Emission Rates

		$PM_{2.5}$	0.75	-
		H_2S	<0.01	-
		SO_2	0.33	-
TRB5-1	Propane Refrigeration Turbine	VOC	0.68	-
		CO	17.84	-
		NO_X	29.37	-
		PM	0.74	-
		PM_{10}	0.74	-
		$PM_{2.5}$	0.74	-
		H_2S	<0.01	-
		SO_2	0.33	-
TRB5-2	Propane Refrigeration Turbine	VOC	0.68	-
		CO	17.84	-
		NO_X	29.37	-
		PM	0.74	-
		PM_{10}	0.74	-
		$PM_{2.5}$	0.74	-
		H_2S	<0.01	-
		SO_2	0.33	-
TRB5-3, TRB5-3A	Ethylene Refrigeration Turbine	VOC	0.73	-
		CO	19.28	-
		NO_X	31.68	-
		PM	0.80	-
		PM_{10}	0.80	-
		$PM_{2.5}$	0.80	-

Emission Sources - Maximum Allowable Emission Rates

		H_2S	<0.01	-
		SO_2	0.35	-
TRB5-4, TRB5-4A	Ethylene Refrigeration Turbine	VOC	0.73	-
		CO	19.28	-
		NO_X	31.68	-
		PM	0.80	-
		PM_{10}	0.80	-
		$PM_{2.5}$	0.80	-
		H_2S	<0.01	-
		SO_2	0.35	-
TRB5-5	Methane Refrigeration Turbine	VOC	0.68	-
		CO	18.00	-
		NO_X	29.69	-
		PM	0.75	-
		PM_{10}	0.75	-
		$PM_{2.5}$	0.75	-
		H_2S	<0.01	-
		SO_2	0.33	-
TRB5-6	Methane Refrigeration Turbine	VOC	0.68	-
		CO	18.00	-
		NO_X	29.69	-
		PM	0.75	-
		PM_{10}	0.75	-
		$PM_{2.5}$	0.75	-
		H_2S	<0.01	-

Emission Sources - Maximum Allowable Emission Rates

		SO_2	0.33	-
TRB#-#	Annual Refrigeration Turbine Cap	VOC	-	35.56
		CO	-	931.52
		NO_X	-	1534.72
		PM	-	38.72
		PM_{10}	-	38.72
		$PM_{2.5}$	-	38.72
		H_2S	-	0.11
		SO_2	-	17.20
TO-4	Thermal Oxidizer	VOC	0.03	0.13
		CO	0.06	0.22
		NO_X	1.86	7.40
		PM	0.23	0.92
		PM_{10}	0.23	0.92
		$PM_{2.5}$	0.23	0.92
		H_2S	<0.01	0.02
		SO_2	0.74	2.93
TO-5	Thermal Oxidizer	VOC	0.03	0.13
		CO	0.06	0.22
		NO_X	1.86	7.40
		PM	0.23	0.92
		PM_{10}	0.23	0.92
		$PM_{2.5}$	0.23	0.92
		H_2S	<0.01	0.02
		SO_2	0.74	2.93

Emission Sources - Maximum Allowable Emission Rates

WTDYFLR3	Wet/Dry Gas Flare (Continuous)	VOC	6.56	-
		CO	11.81	-
		NO_X	2.97	-
		H_2S	<0.01	-
		SO_2	<0.01	-
WTDYFLR4	Wet/Dry Gas Flare (Continuous)	VOC	6.56	-
		CO	11.81	-
		NO_X	2.97	-
		H_2S	<0.01	-
		SO_2	<0.01	-
WTDYFLR3-4	Wet/Dry Gas Flare (Continuous)	VOC	-	26.11
		CO	-	45.54
		NO_X	-	11.44
		H_2S	-	<0.01
		SO_2	-	<0.01
WTDYFLR3	Wet/Dry Gas Flare (MSS)	VOC	1067.88	-
		CO	3221.11	-
		NO_X	808.80	-
		H_2S	0.04	-
		SO_2	4.26	-
WTDYFLR4	Wet/Dry Gas Flare (MSS)	VOC	1067.88	-
		CO	3221.11	-
		NO_X	808.80	-
		H_2S	0.04	-
		SO_2	4.26	-

Emission Sources - Maximum Allowable Emission Rates

WTDYFLR3-4	Wet/Dry Gas Flare (MSS)	VOC	-	25.57
		CO	-	667.99
		NO_X	-	167.73
		H_2S	-	<0.01
		SO_2	-	0.86
FUG	Piping Fugitives (5)	VOC	4.71	20.63
		H_2S	<0.01	<0.01
GEN5	Emergency Generator	VOC	0.62	0.03
		CO	2.48	0.11
		NO_X	8.18	0.37
		PM	0.16	<0.01
		PM_{10}	0.16	<0.01
		$PM_{2.5}$	0.16	<0.01
		SO_2	0.02	<0.01
GEN6	Emergency Generator	VOC	0.62	0.03
		CO	2.48	0.11
		NO_X	8.18	0.37
		PM	0.16	<0.01
		PM_{10}	0.16	<0.01
		$PM_{2.5}$	0.16	<0.01
		SO_2	0.02	<0.01
GEN7	Emergency Generator	VOC	0.62	0.03
		CO	2.48	0.11
		NO_X	8.18	0.37
		PM	0.16	<0.01

Emission Sources - Maximum Allowable Emission Rates

		PM_{10}	0.16	<0.01
		$PM_{2.5}$	0.16	<0.01
		SO_2	0.02	<0.01
FWPUMP4	Firewater Pump	VOC	0.08	<0.01
		CO	0.69	0.03
		NO_X	2.90	0.13
		PM	0.10	<0.01
		PM_{10}	0.10	<0.01
		$PM_{2.5}$	0.10	<0.01
		SO_2	<0.01	<0.01
FWPUMP5	Firewater Pump	VOC	0.08	<0.01
		CO	0.69	0.03
		NO_X	2.90	0.13
		PM	0.10	<0.01
		PM_{10}	0.10	<0.01
		$PM_{2.5}$	0.10	<0.01
		SO_2	<0.01	<0.01
FWPUMP6	Firewater Pump	VOC	0.08	<0.01
		CO	0.69	0.03
		NO_X	2.90	0.13
		PM	0.10	<0.01
		PM_{10}	0.10	<0.01
		$PM_{2.5}$	0.10	<0.01
		SO_2	<0.01	<0.01

Emission Sources - Maximum Allowable Emission Rates

DSLTK5	Diesel Tank	VOC	0.08	<0.01
DSLTK6	Diesel Tank	VOC	0.08	<0.01
DSLTK7	Diesel Tank	VOC	0.08	<0.01
FWPTK4	Diesel Tank	VOC	0.05	<0.01
FWPTK5	Diesel Tank	VOC	0.05	<0.01
FWPTK6	Diesel Tank	VOC	0.05	<0.01
AMNSRG4	Amine Surge Tank (MSS)	VOC	<0.01	<0.01
AMNSRG5	Amine Surge Tank (MSS)	VOC	<0.01	<0.01

(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) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
NO_x - total oxides of nitrogen
SO_2 - sulfur dioxide
PM - total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$, as represented
PM_{10} - 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
H_2S - hydrogen sulfide
MSS - maintenance, startup, and shutdown emissions
(4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period. Annual emission rates for each source include planned MSS emissions, unless otherwise noted.
(5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.

Date: February 14, 2017

Emission Sources - Maximum Allowable Emission Rates

Permit Number GHGPSDTX157

This table lists the maximum allowable emission rates of greenhouse gas (GHG) emissions, as defined in Title 30 Texas Administrative Code § 101.1, for sources of GHG air contaminants on the applicant's property authorized by this permit. 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 TPY (4)
TRB#-#	Annual Refrigeration Turbine Cap	CO_2	1,791,728
		N_2O	3.36
		CH_4	33.80
		CO_2e	1,793,574
TO-4	Thermal Oxidizer	CO_2	197,429
		N_2O	0.03
		CH_4	4.88
		CO_2e	197,560
TO-5	Thermal Oxidizer	CO_2	197,429
		N_2O	0.03
		CH_4	4.88
		CO_2e	197,560
WTDYFLR3-4	Wet/Dry Gas Flare (Continuous)	CO_2	10,588
		N_2O	0.02
		CH_4	26.40
		CO_2e	11,254
WTDYFLR3-4	Wet/Dry Gas Flare (MSS)	CO_2	141,549
		N_2O	0.30
		CH_4	1,033.50
		CO_2e	167,476
GEN5	Emergency Generator	CO_2	129.00
		N_2O	<0.01
		CH_4	0.01
		CO_2e	129.00
GEN6	Emergency Generator	CO_2	129.00
		N_2O	<0.01
		CH_4	0.01
		CO_2e	129.00
GEN7	Emergency Generator	CO_2	129.00
		N_2O	<0.01
		CH_4	0.01
		CO_2e	129.00
FWPUMP4	Firewater Pump	CO_2	24.10

Emission Sources - Maximum Allowable Emission Rates

		N_2O	<0.01
		CH_4	<0.01
		CO_2e	24.20
FWPUMP5	Firewater Pump	CO_2	24.10
		N_2O	<0.01
		CH_4	<0.01
		CO_2e	24.20
FWPUMP6	Firewater Pump	CO_2	24.10
		N_2O	<0.01
		CH_4	<0.01
		CO_2e	24.20
FUG	Fugitive Emissions (5)	CO_2	0.42
		N_2O	-
		CH_4	199.04
		CO_2e	4,976
MSS-BOG	BOG Compressor MSS Venting	CO_2	-
		N_2O	-
		CH_4	0.75
		CO_2e	19.00

(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) CO_2 - carbon dioxide
N_2O - nitrous oxide
CH_4 - methane
CO_2e - carbon dioxide equivalents, based on the following Global Warming Potentials from 40 CFR Part 98, subpart A, Table A-1, as published on November 29, 2013 (78 FR71904): CO_2 (1), CH_4 (25), and N_2O (298)
(4) Compliance with annual CO_{2e} emission limits (tons per year) is based on a 12-month rolling period. Annual emission limits includes normal and planned maintenance, startup, and shutdown (MSS) emissions. For all non-CO_{2e} GHG emissions, listed emission rates are given for informational purposes only and do not constitute an enforceable limit.
(5) Fugitive emission rates are estimates and are enforceable through compliance with the applicable special conditions and permit application representations.

Date: February 14, 2017