Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 19166, HAP10 and PSDTX760M9

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)
7A	No.1 Gas Turbine 88 MW (ISO) GE Model PG7111 (EA) with 141.8 MMBtu/hr Duct Burner Firing Hydrogen, Natural Gas, Process Gas, Tail Gas	NO_x	119.02	459.97
		NO_x (6)	175.00	--
		CO	60.13	232.70
		CO (6)	250.00	--
		VOC	1.75	7.67
		VOC (6)	1.83	--
		PM	5.71	25.01
		PM_{10}	5.71	25.01
		$PM_{2.5}$	5.71	25.01
		SO_2	0.83	3.63
		H_2SO_4	0.07	0.31
7B	No.2 Gas Turbine 88 MW (ISO) GE Model PG7111 (EA) with 141.8 MMBtu/hr Duct Burner Firing Hydrogen, Natural Gas, Process Gas, Tail Gas	NO_x	119.02	459.97
		NO_x (6)	175.00	--
		CO	60.13	232.70
		CO (6)	250.00	--
		VOC	1.75	7.67
		VOC (6)	1.83	--
		PM	5.71	25.01
		PM_{10}	5.71	25.01
		$PM_{2.5}$	5.71	25.01
		SO_2	0.83	3.63
		H_2SO_4	0.07	0.31

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
7C	No.3 Gas Turbine 88 MW (ISO) GE Model PG7111 (EA) with 141.8 MMBtu/hr Duct Burner Firing Hydrogen, Natural Gas, Process Gas, Tail Gas	NO_x	119.02	459.97
		NO_x (6)	175.00	--
		CO	60.13	232.70
		CO (6)	250.00	--
		VOC	1.75	7.67
		VOC (6)	1.83	--
		PM	5.71	25.01
		PM_{10}	5.71	25.01
		$PM_{2.5}$	5.71	25.01
		SO_2	0.83	3.63
		H_2SO_4	0.07	0.31
7D	No.4 Gas Turbine 88 MW (ISO) GE Model PG7111 (EA) with 141.8 MMBtu/hr Duct Burner Firing Hydrogen, Natural Gas, Process Gas, Tail Gas	NO_x	132.02	530.05
		NO_x (6)	175.00	--
		CO	59.13	237.08
		CO (6)	250.00	--
		VOC	1.75	7.67
		VOC (6)	1.83	--
		PM	5.71	25.01
		PM_{10}	5.71	25.01
		$PM_{2.5}$	5.71	25.01
		SO_2	0.83	3.63
		H_2SO_4	0.07	0.31

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
7E	No.5 Gas Turbine 88 MW (ISO) GE Model PG7111 (EA) with 141.8 MMBtu/hr Duct Burner Firing Hydrogen, Natural Gas, Process Gas, Tail Gas	NO_x	132.02	530.05
		NO_x (6)	175.00	--
		CO	59.13	237.08
		CO (6)	250.00	--
		VOC	1.75	7.67
		VOC (6)	1.83	--
		PM	5.71	25.01
		PM_{10}	5.71	25.01
		$PM_{2.5}$	5.71	25.01
		SO_2	0.83	3.63
		H_2SO_4	0.07	0.31
7G	No.6 Gas Turbine 83 MW (ISO) GE Model PG7121 (EA), No Duct Burner	NO_x	38.00	166.44
		NO_x (6)	175.00	--
		CO	62.00	271.56
		CO (6)	250.00	--
		VOC	0.55	2.41
		VOC (6)	0.63	--
		PM	5.00	21.90
		PM_{10}	5.00	21.90
		$PM_{2.5}$	5.00	21.90
		SO_2	0.82	3.58
		H_2SO_4	0.07	0.30

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
7F	Package Boiler, 250 MMBTU/hr	NO_x	12.50	54.75
		NO_x (6)	22.50	--
		CO	25.00	109.50
		CO (6)	84.48	--
		VOC	1.32	5.80
		VOC (6)	1.38	---
		PM	1.25	5.48
		PM_{10}	1.25	5.48
		$PM_{2.5}$	1.25	5.48
		SO_2	0.17	0.75
7H	No.1 Package Boiler, 417 MMBTU/hr	NO_x	6.25	27.36
		NO_x (6)	41.65	--
		CO	15.41	67.50
		CO (6)	154.20	--
		VOC	2.52	10.03
		PM	3.12	13.68
		PM_{10}	3.12	13.68
		$PM_{2.5}$	3.12	13.68
		SO_2	0.70	3.05
		NH_3	3.40	9.92

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
7J	No. 2 Package Boiler, 417 MMBTU/hr	NO_x	6.25	27.36
		NO_x (6)	41.65	--
		CO	15.41	67.50
		CO (6)	154.20	--
		VOC	2.52	10.03
		PM	3.12	13.68
		PM_{10}	3.12	13.68
		$PM_{2.5}$	3.12	13.68
		SO_2	0.70	3.05
		NH_3	3.40	9.92
7A-LOVENT	No. 1 Gas Turbine Lube Oil Vent	VOC	0.09	0.40
		PM	0.09	0.40
		PM_{10}	0.09	0.40
		$PM_{2.5}$	0.09	0.40
7B-LOVENT	No. 2 Gas Turbine Lube Oil Vent	VOC	0.09	0.40
		PM	0.09	0.40
		PM_{10}	0.09	0.40
		$PM_{2.5}$	0.09	0.40
7C-LOVENT	No. 3 Gas Turbine Lube Oil Vent	VOC	0.09	0.40
		PM	0.09	0.40
		PM_{10}	0.09	0.40
		$PM_{2.5}$	0.09	0.40
7D-LOVENT	No. 4 Gas Turbine Lube Oil Vent	VOC	0.09	0.40
		PM	0.09	0.40
		PM_{10}	0.09	0.40
		$PM_{2.5}$	0.09	0.40

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
7E-LOVENT	No. 5 Gas Turbine Lube Oil Vent	VOC	0.09	0.40
		PM	0.09	0.40
		PM_{10}	0.09	0.40
		$PM_{2.5}$	0.09	0.40
7G-LOVENT	No. 6 Gas Turbine Lube Oil Vent	VOC	0.09	0.40
		PM	0.09	0.40
		PM_{10}	0.09	0.40
		$PM_{2.5}$	0.09	0.40
7A-NGVENT	No. 1 Gas Turbine Natural Gas Vent	VOC	6.95	0.03
7B-NGVENT	No. 2 Gas Turbine Natural Gas Vent	VOC	6.95	0.03
7C-NGVENT	No. 3 Gas Turbine Natural Gas Vent	VOC	6.95	0.03
7D-NGVENT	No. 4 Gas Turbine Natural Gas Vent	VOC	6.95	0.03
7E-NGVENT	No. 5 Gas Turbine Natural Gas Vent	VOC	6.95	0.03
7G-NGVENT	No. 6 Gas Turbine Natural Gas Vent	VOC	2.50	0.01
7A-DBVENT	No. 1 HRSG Duct Burner Natural Gas Vent	VOC	0.04	0.01
7B-DBVENT	No. 2 HRSG Duct Burner Natural Gas Vent	VOC	0.04	0.01
7C-DBVENT	No. 3 HRSG Duct Burner Natural Gas Vent	VOC	0.04	0.01
7D-DBVENT	No. 4 HRSG Duct Burner Natural Gas Vent	VOC	0.04	0.01
7E-DBVENT	No. 5 HRSG Duct Burner Natural Gas Vent	VOC	0.04	0.01
CWTP1	Combined Water Treatment Plant	VOC	12.50	27.30
XZ-OS01	Waste Oil Storage Tank	VOC	0.01	0.01
XZ-WS01	Oil-Water Separation System	VOC	0.11	0.25
TTT-50	CWTP 60% H_2SO_4 Storage Tank	H_2SO_4	0.01	1.01
TTW-15A	Diesel Storage Tank	VOC	0.08	0.01
TTW-15B	Diesel Storage Tank	VOC	0.08	0.01
TTW-15C	Diesel Storage Tank	VOC	0.08	0.01
TTW-15D	Diesel Storage Tank	VOC	0.08	0.01

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
TTW-15E	Diesel Storage Tank	VOC	0.08	0.01
UT-F02A	Diesel Storage Tank	VOC	0.08	0.01
UT-F02B	Diesel Storage Tank	VOC	0.08	0.01
UT-F02C	Diesel Storage Tank	VOC	0.08	0.01
FPM-02A	Diesel Fire Water Pump Engine	NO_x	8.36	0.33
		CO	3.19	0.12
		VOC	0.18	0.01
		PM	0.66	0.03
		PM_{10}	0.66	0.03
		$PM_{2.5}$	0.66	0.03
		SO_2	2.06	0.08
FPM-02B	Diesel Fire Water Pump Engine	NO_x	8.36	0.33
		CO	3.19	0.12
		VOC	0.18	0.01
		PM	0.66	0.03
		PM_{10}	0.66	0.03
		$PM_{2.5}$	0.66	0.03
		SO_2	2.06	0.08
FPM-02C	Diesel Fire Water Pump Engine	NO_x	8.36	0.33
		CO	3.19	0.12
		VOC	0.18	0.01
		PM	0.66	0.03
		PM_{10}	0.66	0.03
		$PM_{2.5}$	0.66	0.03
		SO_2	2.06	0.08

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
FPM-02D	Diesel Fire Water Pump Engine	NO_x	8.36	0.33
		CO	3.19	0.12
		VOC	0.18	0.01
		PM	0.66	0.03
		PM_{10}	0.66	0.03
		$PM_{2.5}$	0.66	0.03
		SO_2	2.06	0.08
FPM-02E	Diesel Fire Water Pump Engine	NO_x	8.36	0.33
		CO	3.19	0.12
		VOC	0.18	0.01
		PM	0.66	0.03
		PM_{10}	0.66	0.03
		$PM_{2.5}$	0.66	0.03
		SO_2	2.06	0.08
UP-F02A	Diesel Fire Water Pump Engine	NO_x	8.68	0.34
		CO	1.87	0.07
		VOC	0.69	0.03
		PM	0.62	0.02
		PM_{10}	0.62	0.02
		$PM_{2.5}$	0.62	0.02
		SO_2	1.42	0.06

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
UP-F02B	Diesel Fire Water Pump Engine	NO_x	8.68	0.34
		CO	1.87	0.07
		VOC	0.69	0.03
		PM	0.62	0.02
		PM_{10}	0.62	0.02
		$PM_{2.5}$	0.62	0.02
		SO_2	1.42	0.06
UP-F02C	Diesel Fire Water Pump Engine	NO_x	8.68	0.34
		CO	1.87	0.07
		VOC	0.69	0.03
		PM	0.62	0.02
		PM_{10}	0.62	0.02
		$PM_{2.5}$	0.62	0.02
		SO_2	1.42	0.06
PCDSLFUG	PC Plant Fire Water System Fugitives (5)	VOC	0.01	0.06
EXPDSLFUG	Expansion Plant Fire Water System Fugitives (5)	VOC	0.02	0.10
NG-FUG	Natural Gas and OL Tail Gas Fugitives (5)	VOC	0.07	0.31
NH_3-FUG	Ammonia Fugitives (5)	NH_3	0.16	0.69
COGEN-MSS	Cogeneration Area MSS (6)	NO_x	0.01	0.01
		CO	0.01	0.01
		VOC	0.47	0.02
		PM	1.53	0.01
		PM_{10}	1.53	0.01
		$PM_{2.5}$	1.53	0.01
		NH_3	75.72	0.76

(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.

Emission Sources - Maximum Allowable Emission Rates

(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
NH_3 - ammonia
H_2SO_4 - sulfuric 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) MSS-Maintenance, startup and shutdown emissions.

Date: March 11, 2020