

Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 103839 and PSDTX1298

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.

(GE F7FA Option)

Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
U1-STK	Model F7FA GE Combustion Turbine (CT) and 750 MMBtu/hr Duct Burner Normal Operation (5)	NO _x	21.90	-
		CO	13.30	-
		VOC	7.60	-
		SO ₂	8.60	-
		PM (6)	25.90	-
		PM ₁₀ (6)	25.90	-
		PM _{2.5} (6)	25.90	-
		H ₂ SO ₄	3.90	-
		(NH ₄) ₂ SO ₄	5.30	-
		NH ₃	28.40	-
U1-STK	Model F7FA GE CT and 750 MMBtu/hr Duct Burner MSS Operation (7)	NO _x	81.00	-
		CO	814.74	-
		VOC	109.89	-
		SO ₂	8.60	-
		PM (6)	25.90	-
		PM ₁₀ (6)	25.90	-
		PM _{2.5} (6)	25.90	-
		H ₂ SO ₄	3.9	-
		(NH ₄) ₂ SO ₄	5.30	-
		NH ₃	50.00	-
U1-STK	Model F7FA GE CT and 750 MMBtu/hr Duct Burner All Operation (Normal + MSS)	NO _x	-	102.69
		CO	-	179.73
		VOC	-	46.43
		SO ₂	-	17.80
		PM (6)	-	101.02
		PM ₁₀ (6)	-	101.02
		PM _{2.5} (6)	-	101.02
		H ₂ SO ₄	-	8.18
		(NH ₄) ₂ SO ₄	-	11.02
		NH ₃	-	123.69
U2-STK	Model F7FA GE CT and 750 MMBtu/hr Duct Burner Normal Operation (5)	NO _x	21.90	-
		CO	13.30	-
		VOC	7.60	-
		SO ₂	8.60	-
		PM (6)	25.90	-

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		PM ₁₀ (6)	25.90	-
		PM _{2.5} (6)	25.90	-
		H ₂ SO ₄	3.90	-
		(NH ₄) ₂ SO ₄	5.30	-
		NH ₃	28.40	-
U2-STK	Model F7FA GE CT and 750 MMBtu/hr Duct Burner MSS Operation (7)	NO _x	81.00	-
		CO	814.74	-
		VOC	109.89	-
		SO ₂	8.60	-
		PM (6)	25.90	-
		PM ₁₀ (6)	25.90	-
		PM _{2.5} (6)	25.90	-
		H ₂ SO ₄	3.9	-
		(NH ₄) ₂ SO ₄	5.30	-
		NH ₃	50.00	-
U2-STK	Model F7FA GE CT and 750 MMBtu/hr Duct Burner All Operation (Normal + MSS)	NO _x	-	102.69
		CO	-	179.73
		VOC	-	46.43
		SO ₂	-	17.80
		PM (6)	-	101.02
		PM ₁₀ (6)	-	101.02
		PM _{2.5} (6)	-	101.02
		H ₂ SO ₄	-	8.18
		(NH ₄) ₂ SO ₄	-	11.02
		NH ₃	-	123.69

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
U1-STK	Siemens SGT6-5000(F)(4) CT and 750 MMBtu/hr Duct Burner Normal Operation (5)	NO _x	21.8	-
		CO	13.5	-
		VOC	7.6	-
		SO ₂	8.5	-
		PM (6)	25.5	-
		PM ₁₀ (6)	25.5	-
		PM _{2.5} (6)	25.5	-
		H ₂ SO ₄	3.9	-
		(NH ₄) ₂ SO ₄	5.3	-
		NH ₃	28.2	-
U1-STK	Siemens SGT6-5000(F)(4) CT and 750 MMBtu/hr Duct Burner MSS Operation (7)	NO _x	171.9	-
		CO	2,480.1	-
		VOC	283.3	-
		SO ₂	8.5	-
		PM (6)	25.5	-
		PM ₁₀ (6)	25.5	-
		PM _{2.5} (6)	25.5	-
		H ₂ SO ₄	3.9	-
		(NH ₄) ₂ SO ₄	5.3	-
		NH ₃	50.0	-
U1-STK	Siemens SGT6-5000(F)(4) CT and 750 MMBtu/hr Duct Burner All Operation (Normal + MSS)	NO _x	-	118.8
		CO	-	201.3
		VOC	-	73.5
		SO ₂	-	17.2
		PM (6)	-	99.3
		PM ₁₀ (6)	-	99.3
		PM _{2.5} (6)	-	99.3
		H ₂ SO ₄	-	7.9
		(NH ₄) ₂ SO ₄	-	10.6
		NH ₃	-	120.0
U2-STK	Siemens SGT6-5000(F)(4) CT and 750 MMBtu/hr Duct Burner Normal Operation (5)	NO _x	21.8	-
		CO	13.5	-
		VOC	7.6	-
		SO ₂	8.5	-
		PM (6)	25.5	-
		PM ₁₀ (6)	25.5	-
		PM _{2.5} (6)	25.5	-
		H ₂ SO ₄	3.9	-

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U2-STK	Siemens SGT6-5000(F)(4) CT and 750 MMBtu/hr Duct Burner MSS Operation (7)	(NH ₄) ₂ SO ₄	5.3	-
		NH ₃	28.2	-
		NO _x	171.9	-
		CO	2,480.1	-
		VOC	283.3	-
		SO ₂	8.5	-
		PM (6)	25.5	-
		PM ₁₀ (6)	25.5	-
		PM _{2.5} (6)	25.5	-
		H ₂ SO ₄	3.9	-
		(NH ₄) ₂ SO ₄	5.3	-
		NH ₃	50.0	-
U2-STK	Siemens SGT6-5000(F)(4) CT and 750 MMBtu/hr Duct Burner All Operation (Normal + MSS)	NO _x	-	118.8
		CO	-	201.3
		VOC	-	73.5
		SO ₂	-	17.2
		PM (6)	-	99.3
		PM ₁₀ (6)	-	99.3
		PM _{2.5} (6)	-	99.3
		H ₂ SO ₄	-	7.9
		(NH ₄) ₂ SO ₄	-	10.6
		NH ₃	-	120.0

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
U1-STK	Siemens SGT6-5000(F)(5) CT and 750 MMBtu/hr Duct Burner Normal Operation (5)	NO _x	22.6	-
		CO	13.7	-
		VOC	7.9	-
		SO ₂	8.8	-
		PM (6)	26.2	-
		PM ₁₀ (6)	26.2	-
		PM _{2.5} (6)	26.2	-
		H ₂ SO ₄	4.1	-
		(NH ₄) ₂ SO ₄	5.5	-
		NH ₃	29.3	-
U1-STK	Siemens SGT6-5000(F)(5) CT and 750 MMBtu/hr Duct Burner MSS Operation (7)	NO _x	171.9	-
		CO	2,480.1	-
		VOC	283.3	-
		SO ₂	8.8	-
		PM (6)	26.2	-
		PM ₁₀ (6)	26.2	-
		PM _{2.5} (6)	26.2	-
		H ₂ SO ₄	4.1	-
		(NH ₄) ₂ SO ₄	5.5	-
		NH ₃	50.0	-
U1-STK	Siemens SGT6-5000(F)(5) CT and 750 MMBtu/hr Duct Burner All Operation (Normal + MSS)	NO _x	-	129.1
		CO	-	207.6
		VOC	-	77.1
		SO ₂	-	19.4
		PM (6)	-	102.9
		PM ₁₀ (6)	-	102.9
		PM _{2.5} (6)	-	102.9
		H ₂ SO ₄	-	9.0
		(NH ₄) ₂ SO ₄	-	12
		NH ₃	-	133.3
U2-STK	Siemens SGT6-5000(F)(5) CT and 750 MMBtu/hr Duct Burner Normal Operation (5)	NO _x	22.6	-
		CO	13.7	-
		VOC	7.9	-
		SO ₂	8.8	-
		PM (6)	26.2	-
		PM ₁₀ (6)	26.2	-
		PM _{2.5} (6)	26.2	-

Emission Sources - Maximum Allowable Emission Rates

U2-STK	Siemens SGT6-5000(F)(5) CT and 750 MMBtu/hr Duct Burner MSS Operation (7)	H ₂ SO ₄	4.1	-
		(NH ₄) ₂ SO ₄	5.5	-
		NH ₃	29.3	-
		NO _x	171.9	-
		CO	2,480.1	-
		VOC	283.3	-
		SO ₂	8.8	-
		PM (6)	26.2	-
		PM ₁₀ (6)	26.2	-
		PM _{2.5} (6)	26.2	-
		H ₂ SO ₄	4.1	-
		(NH ₄) ₂ SO ₄	5.5	-
		NH ₃	50.0	-
U2-STK	Siemens SGT6-5000(F)(5) CT and 750 MMBtu/hr Duct Burner All Operation (Normal + MSS)	NO _x	-	129.1
		CO	-	207.6
		VOC	-	77.1
		SO ₂	-	19.4
		PM (6)	-	102.9
		PM ₁₀ (6)	-	102.9
		PM _{2.5} (6)	-	102.9
		H ₂ SO ₄	-	9.0
		(NH ₄) ₂ SO ₄	-	12
		NH ₃	-	133.3

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
CT1LOV-VNT	CT 1 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
CT2LOV-VNT	CT 2 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
ST1LOV-VNT	Steam 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
COOLTWR1	Cooling Tower 250,000 gal/min	PM	8.76	38.38
		PM ₁₀	1.59	6.99
		PM _{2.5}	0.01	0.05
AUXBLR	Auxiliary Boiler 150 MMBtu/hr (8)	NO _x	3.00	1.31
		CO	8.25	3.61
		VOC	0.90	0.39
		PM	1.14	0.50
		PM ₁₀	1.14	0.50
		PM _{2.5}	1.14	0.50
		SO ₂	0.43	0.09
AUXBLRMSS	Auxiliary Boiler MSS Operation	NO _x	5.10	-
		CO	21.30	-
		VOC	0.90	-
		PM	1.14	-
		PM ₁₀	1.14	-
		PM _{2.5}	1.14	-
		SO ₂	0.43	-
NG-FUG	Natural Gas Fugitives (9)	VOC	0.05	0.2
NH3-FUG	Ammonia Fugitives (9)	NH ₃	0.12	0.51

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EMGEN1-STK	800 kW Emergency Generator Diesel Engine	NO _x	12.25	0.61
		CO	0.66	0.03
		VOC	0.07	0.004
		PM	0.06	0.003
		PM ₁₀	0.06	0.003
		PM _{2.5}	0.06	0.003
		SO ₂	0.01	0.001
FWP1-STK	Fire Water Pump 500 horsepower Diesel Engine	NO _x	2.83	0.14
		CO	0.74	0.04
		VOC	0.09	0.005
		PM	0.09	0.004
		PM ₁₀	0.09	0.004
		PM _{2.5}	0.09	0.004
		SO ₂	0.01	0.0003
DSL-TK1	Diesel Fuel Storage Tank 1	VOC	0.02	<0.01
DSL-TK2	Diesel Fuel Storage Tank 2	VOC	0.02	<0.01
TURB-MSS	Inherently Low-Emitting Maintenance Activities (9)	NO _x	<0.01	<0.01
		CO	<0.01	<0.01
		VOC	0.07	<0.01
		PM	0.09	0.02
		PM ₁₀	0.09	0.02
		PM _{2.5}	0.09	0.02
		NH ₃	<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) NO_x - total oxides of nitrogen
CO - carbon monoxide
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
SO₂ - sulfur dioxide
PM - total particulate matter, suspended in the atmosphere, including PM₁₀ and PM_{2.5}
PM₁₀ - total particulate matter equal to or less than 10 microns in diameter, including PM_{2.5}
PM_{2.5} - particulate matter equal to or less than 2.5 microns in diameter
NH₃ - ammonia
H₂SO₄ - sulfuric acid
(NH₄)₂SO₄ - ammonium sulfate
- (4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.

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- (5) Normal operation is defined in Special Condition No. 4.
- (6) PM/PM₁₀/PM_{2.5} includes H₂SO₄ and (NH₄)₂SO₄.
- (7) MSS operation is defined in Special Condition No. 23 and Attachment B.
- (8) Auxiliary boiler annual limits include both normal and MSS operation emissions.
- (9) Fugitive emission rates are estimates and are enforceable through compliance with the applicable special conditions and permit application representations.

Date: November 12, 2013