Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 41996, PSDTX953, and N020

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)
Turbines, Duct Burners, and Auxiliary Boilers Hourly Limits				
CTG1	Turbine/HRSG No. 1 (Westinghouse 501F Turbine with 420 MMBtu/hr Duct Burner)	NO_X (5)	29.30	---
		CO	228.00	---
		PM_{10}	28.30	---
		VOC	24.80	---
		SO_2	28.20	---
		NH_3	30.90	---
		H_2SO_4	4.80	---
CTG2	Turbine/HRSG No. 2 (Westinghouse 501F Turbine with 420 MMBtu/hr Duct Burner)	NO_X (5)	29.30	---
		CO	228.00	---
		PM_{10}	28.30	---
		VOC	24.80	---
		SO_2	28.20	---
		NH_3	30.90	---
		H_2SO_4	4.80	---

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CTG3	Turbine/HRSG No. 3 (Westinghouse 501F Turbine with 420 MMBtu/hr Duct Burner)	NO_X (5)	29.30	---
		CO	228.00	---
		PM_{10}	28.30	---
		VOC	24.80	---
		SO_2	28.20	---
		NH_3	30.90	---
		H_2SO_4	4.80	---
B-1	Auxiliary Boiler No. 1 (465 MMBtu/hr)	NO_X	4.65	---
		CO	17.18	---
		PM_{10}	3.40	---
		VOC	1.40	---
		SO_2	0.28	---
		H_2SO_4	0.04	---
B-2	Auxiliary Boiler No. 2 (465 MMBtu/hr)	NO_X	4.65	---
		CO	17.18	---
		PM_{10}	3.40	---
		VOC	1.40	---
		SO_2	0.28	---
		H_2SO_4	0.04	---

Turbines, Duct Burners, and Auxiliary Boilers Planned Maintenance, Startup, and Shutdown (MSS) Hourly Limits (6)

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CTG1	Turbine/HRSG No. 1 (Westinghouse 501F Turbine with 420 MMBtu/hr Duct Burner)	NO_X	350.00	---
		CO	3200.00	---
		PM_{10}	28.30	---
		VOC	183.49	---
		SO_2	28.20	---
		NH_3	50.00	---
		H_2SO_4	4.80	---
CTG2	Turbine/HRSG No. 2 (Westinghouse 501F Turbine with 420 MMBtu/hr Duct Burner)	NO_X	350.00	---
		CO	3200.00	---
		PM_{10}	28.30	---
		VOC	183.49	---
		SO_2	28.20	---
		NH_3	50.00	---
		H_2SO_4	4.80	---
CTG3	Turbine/HRSG No. 3 (Westinghouse 501F Turbine with 420 MMBtu/hr Duct Burner)	NO_X	350.00	---
		CO	3200.00	---
		PM_{10}	28.30	---
		VOC	183.49	---
		SO_2	28.20	---
		NH_3	50.00	---
		H_2SO_4	4.80	---
B-1	Auxiliary Boiler No. 1 (465 MMBtu/hr)	NO_X	4.65	---
		CO	20.62	---
		PM_{10}	3.40	---

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		VOC	1.68	---
		SO_2	0.28	---
		H_2SO_4	0.04	---
B-2	Auxiliary Boiler No. 2 (465 MMBtu/hr)	NO_X	4.65	---
		CO	20.62	---
		PM_{10}	3.40	---
		VOC	1.68	---
		SO_2	0.28	---
		H_2SO_4	0.04	---
Turbines, Duct Burners, and Auxiliary Boilers Combined Annual Limits (7)(8)(9)(10)				
CTG No. 1-3, B-1, and B-2	Turbine/HRSG No. 1-3, B-1, and B-2 (Westinghouse 501F Turbines with 420 MMBtu/hr Duct Burners and Auxiliary Boilers)	NO_X (11)	---	344.06
		CO (11)	---	1,354.91
		PM_{10} (11)	---	273.84
		VOC (11)	---	103.83
		SO_2	---	35.79
		NH_3	---	325.00
		H_2SO_4	---	5.88
Additional Sources				
LOV-1	CTG-1 Lube Oil Vent (12)	PM/PM_{10}	0.1	0.4
LOV-2	CTG-2 Lube Oil Vent (12)	PM/PM_{10}	0.1	0.4
LOV-3	CTG-3 Lube Oil Vent (12)	PM/PM_{10}	0.1	0.4
LOV-4	Steam Turbine Lube Oil Vent (12)	PM/PM_{10}	0.1	0.4
CWT-1	Cooling Tower (12)	PM_{10}	1.9	8.3
FUG-NH3	Ammonia Fugitives (12)	NH_3	0.4	1.7

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FUG-NG	Natural Gas Fugitives (12)	VOC	0.11	0.5
MSSFUG	MSS-Related Fugitives (12)	NO_X	<0.01	<0.01
		CO	<0.01	<0.01
		SO_2	0.00	0.00
		VOC	3.52	0.02
		$PM_{10}/PM_{2.5}$	0.11	0.03
		NH_3	2.66	0.004

(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
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
$PM_{2.5}$ - total particulate matter equal to or less than 2.5 microns in diameter
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
SO_2 - sulfur dioxide
NH_3 - ammonia
H_2SO_4 - sulfuric acid mist
(4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
(5) The maximum lb/hr NO_X emission rate is based upon a rolling three hour average concentration.
(6) For each pollutant whose emissions during planned MSS activities are measured using a CEMS, the MSS lb/hr limits apply only during each clock hour that includes one or more minutes of MSS activities. During all other clock hours, the normal lb/hr limits apply.
(7) Emission rates of combustion turbines are based on and the facilities are limited by the following maximum operating schedule: 8,760 Hrs/year.
(8) Annual emission rates of duct burners are based on and the facilities are limited by the sum of the heat input to the duct burners of all three Cogeneration trains. The sum of the heat input shall not exceed 1,481,400 MMBtu per year.
(9) Emission rates of auxiliary boilers are based on and the facilities are limited by the following maximum operating schedule: 8,500 Hrs/year.
(10) The tpy emission limit specified in the MAERT for this facility includes emissions from the facility during both normal operations and planned MSS activities.
(11) NO_X, CO, and PM_{10} emissions are regulated under PSDTX953 permit authorization. NO_X and VOC emissions are regulated under N020 permit authorization.
(12) The lb/hr and tpy emission limit specified in the MAERT for this facility includes emissions from the facility during both normal operations and planned MSS activities.

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