Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 40040 and PSDTX923

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)
STACK1	ABB GT24 - Natural Gas Firing, Normal Operations, including Hold Point 2 mode	NO_x	34	--
		CO	254	--
		VOC	17.6	--
		SO_2	4.2	--
		PM_{10}	20	--
		NH_3	25.2	--
	ABB GT24 - Natural Gas Firing, Steam Injection Mode	NO_x	34	--
		CO	105	--
		VOC	10	--
		SO_2	5.2	--
		PM_{10}	24.3	--
		NH_3	24.7	--
	ABB GT24 - Fuel Oil Firing	NO_x	77	--
		CO	310	--
		VOC	18	--
		SO_2	111	--
		PM_{10}	112	--
		NH_3	31.1	--
	ABB GT24 - Startup/Shutdown, Transient, and Online Turbine Washing Operation (5)(6)	NO_x	990	--
		CO	2,100	--
		VOC	132	--
	ABB GT24 - Maintenance/CT Tuning (5)(6)	CO	3,500	--
STACK2	ABB GT24 - Natural Gas Firing, Normal Operations, including Hold Point 2 mode	NO_x	34	--
		CO	254	--
		VOC	17.6	--
		SO_2	4.2	--
		PM_{10}	20	--
		NH_3	25.2	--
	ABB GT24 - Natural Gas Firing, Steam Injection Mode	NO_x	34	--
		CO	105	--
		VOC	10	--

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		SO_2	5.2	--
		PM_{10}	24.3	--
		NH_3	24.7	--
	ABB GT24 - Fuel Oil Firing	NO_x	77	--
		CO	310	--
		VOC	18	--
		SO_2	111	--
		PM_{10}	112	--
		NH_3	31.1	--
	ABB GT24 - Startup/Shutdown, Transient, and Online Turbine washing Operation (5)(6)	NO_x	990	--
		CO	2,100	--
		VOC	132	--
	ABB GT24 - Maintenance/CT Tuning (5)(6)	CO	3,500	--
STACK3	ABB GT24 - Natural Gas Firing, Normal Operations, including Hold Point 2 mode	NO_x	34	--
		CO	254	--
		VOC	17.6	--
		SO_2	4.2	--
		PM_{10}	20	--
		NH_3	25.2	--
STACK3	ABB GT24 - Natural Gas Firing, Steam Injection Mode	NO_x	34	--
		CO	105	--
		VOC	10	--
		SO_2	5.2	--
		PM_{10}	24.3	--
		NH_3	24.7	--
	ABB GT24 - Fuel Oil Firing	NO_x	77	--
		CO	310	--
		VOC	18	--
		SO_2	111	--
		PM_{10}	112	--
		NH_3	31.1	--
	ABB GT24 - Startup/Shutdown, Transient, and Online Turbine washing Operation (5)(6)	NO_x	990	--
		CO	2,100	--
		VOC	132	--

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	ABB GT24 - Maintenance/CT Tuning (5)(6)	CO	3,500	--
STACK4	ABB GT24 - Natural Gas Firing, Normal Operations, including Hold Point 2 mode	NO_x	34	--
		CO	254	--
		VOC	17.6	--
		SO_2	4.2	--
		PM_{10}	20	--
		NH_3	25.2	--
	ABB GT24 - Natural Gas Firing, Steam Injection Mode	NO_x	34	--
		CO	105	--
		VOC	10	--
		SO_2	5.2	--
		PM_{10}	24.3	--
		NH_3	24.7	--
STACK4	ABB GT24 - Fuel Oil Firing	NO_x	77	--
		CO	310	--
		VOC	18	--
		SO_2	111	--
		PM_{10}	112	--
		NH_3	31.1	--
	ABB GT24 – Startup/Shutdown, Transient, and Online Turbine washing Operation (5)(6)	NO_x	990	--
		CO	2,100	--
		VOC	132	--
	ABB GT24 - Maintenance/CT Tuning (5)(6)	CO	3,500	--
STACK1 STACK2 STACK3 STACK4	All Four Turbines Combined (Includes all fuels and modes of operation)	NO_x	--	611.2
		CO	--	865.9
		VOC	--	132.4
		SO_2	--	213.2
		PM_{10}	--	478.4
		NH_3	--	418.8
FUG	Site Fugitives (7)	VOC	0.29	1.27
		NH_3	0.03	0.12
Vent No. 1	Lube Oil Reservoir Vapor Extractor	VOC	0.003	0.01
		PM	0.003	0.01
		PM_{10}	0.003	0.01
		$PM_{2.5}$	0.003	0.01
pVent No. 2	Lube Oil Reservoir Vapor Extractor	VOC	0.003	0.01
		PM	0.003	0.01

Emission Sources - Maximum Allowable Emission Rates

		PM_{10}	0.003	0.01
		$PM_{2.5}$	0.003	0.01
Vent No. 3	Lube Oil Reservoir Vapor Extractor	VOC	0.003	0.01
		PM	0.003	0.01
		PM_{10}	0.003	0.01
		$PM_{2.5}$	0.003	0.01
Vent No. 4	Lube Oil Reservoir Vapor Extractor	VOC	0.003	0.01
		PM	0.003	0.01
		PM_{10}	0.003	0.01
		$PM_{2.5}$	0.003	0.01
MSS FUG	Inherently Low-Emitting Maintenance Activities (7)	NO_x	<0.01	<0.01
		CO	0.04	0.01
		VOC	21	1.1
		PM	4.5	0.1
		PM_{10}	4.5	0.1
		$PM_{2.5}$	4.5	0.1
		NH_3	6.6	0.1
IG1	Stack 1 Ammonia Injection Grid 1 (7)	NH_3	<0.01	0.02
V1	Stack 1 Ammonia Vaporizer 1 (7)	NH_3	<0.01	0.02
IG2	Stack 2 Ammonia Injection Grid 2 (7)	NH_3	<0.01	0.02
V2	Stack 2 Ammonia Vaporizer 2 (7)	NH_3	<0.01	0.02
IG3	Stack 3 Ammonia Injection Grid 3 (7)	NH_3	<0.01	0.02
V3	Stack 3 Ammonia Vaporizer 3 (7)	NH_3	<0.01	0.02
IG4	Stack 4 Ammonia Injection Grid 4 (7)	NH_3	<0.01	0.02
V4	Stack 4 Ammonia Vaporizer 4 (7)	NH_3	<0.01	0.02

Emission Sources - Maximum Allowable Emission Rates

(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
SO_2 - sulfur dioxide
PM - total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$
PM_{10} - 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
NH_3 - ammonia
(4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.
(5) Hourly emissions shown are the only emissions that are higher than emissions during normal operations. Normal operations emission limits apply to pollutants not shown that are emitted during transient operation, CT maintenance, startup, and shutdown (MSS).
(6) For CT MSS and transient operation CO emissions may exceed 2,100 lbs/hr no more than 50 hours per year for all turbines combined, but must never exceed 3,500 lbs/hr.
(7) Emission rate is an estimate and is enforceable through compliance with the applicable special conditions and permit application representations.

Date: March 7, 2019