Emission Sources - Maximum Allowable Emission Rates

Permit Number 20041 and N196

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/hour	TPY (4)
TC1	Test Cell 1 Gas fuel firing	NO_x	106.9	-
		CO	84.8	-
		VOC	46.6	-
		PM	5.3	-
		PM_{10}	5.3	-
		$PM_{2.5}$	5.3	-
		SO_2	2.0	-
TC1	Test Cell 1 Liquid fuel firing	NO_x	181.5	-
		CO	88.8	-
		VOC	20.4	-
		PM	15.7	-
		PM_{10}	15.7	-
		$PM_{2.5}$	15.7	-
		SO_2	7.5	-
TC1	Test Cell 1 - Annual Emission Rate Gas and Liquid Fuel Firing	NO_x	-	100.2
		CO	-	27.7
		VOC	-	9.4
		PM	-	10.7
		PM_{10}	-	10.7
		$PM_{2.5}$	-	10.7
		SO_2	-	2.9

Emission Sources - Maximum Allowable Emission Rates

TC2	Test Cell 2 Gas Fuel Firing	NO_x	8.7	-
		CO	18.4	-
		VOC	4.7	-
		PM	0.7	-
		PM_{10}	0.7	-
		$PM_{2.5}$	0.7	-
		SO_2	0.4	-
TC2	Test Cell 2 Liquid Fuel Firing	NO_x	13.0	-
		CO	37.0	-
		VOC	4.7	-
		PM	3.5	-
		PM_{10}	3.5	-
		$PM_{2.5}$	3.5	-
		SO_2	1.5	-
TC2	Test Cell 2 – Annual Emission Rates Gas and Liquid Fuel Firing	NO_x	-	8.7
		CO	-	9.2
		VOC	-	0.9
		PM	-	1.9
		PM_{10}	-	1.9
		$PM_{2.5}$	-	1.9
		SO_2	-	0.8
TC3	Test Cell 3 Gas Fuel Firing	NO_x	80.0	-
		CO	84.8	-
		VOC	13.5	-
		PM	2.5	-
		PM_{10}	2.5	-
		$PM_{2.5}$	2.5	-

Emission Sources - Maximum Allowable Emission Rates

		SO_2	1.1	-
TC3	Test Cell 3 Liquid Fuel Firing	NO_x	120.0	-
		CO	45.6	-
		VOC	7.2	-
		PM	15.7	-
		PM_{10}	15.7	-
		$PM_{2.5}$	15.7	-
		SO_2	4.8	-
TC3	Test Cell 3 – Annual Emission Rates Gas and Liquid Fuel Firing	NO_x	-	35.9
		CO	-	19.4
		VOC	-	1.8
		PM	-	10.7
		PM_{10}	-	10.7
		$PM_{2.5}$	-	10.7
		SO_2	-	2.7
TC4	Test Cell4 Gas Fuel Firing	NO_x	106.9	-
		CO	84.8	-
		VOC	46.6	-
		PM	5.3	-
		PM_{10}	5.3	-
		$PM_{2.5}$	5.3	-
		SO_2	2.0	-
TC4	Test Cell 4 Liquid Fuel Firing	NO_x	181.5	-
		CO	41.3	-
		VOC	14.3	-
		PM	15.7	-
		PM_{10}	15.7	-

Emission Sources - Maximum Allowable Emission Rates

		$PM_{2.5}$	15.7	-
		SO_2	7.5	-
TC4	Test Cell 4 Gas and Liquid Fuel Firing	NO_x	-	100.2
		CO	-	27.7
		VOC	-	9.4
		PM	-	10.7
		PM_{10}	-	10.7
		$PM_{2.5}$	-	10.7
		SO_2	-	2.9
TC5	Test Cell 5 Gas Fuel Firing	NO_x	192.8	-
		CO	30.0	-
		VOC	8.8	-
		PM	8.5	-
		PM_{10}	8.5	-
		$PM_{2.5}$	8.5	-
		SO_2	3.8	-
TC5	Test Cell 5 Liquid Fuel Firing	NO_x	338.8	-
		CO	30.0	-
		VOC	8.8	-
		PM	12.1	-
		PM_{10}	12.1	-
		$PM_{2.5}$	12.1	-
		SO_2	14.1	-
TC5	Test Cell 5 – Annual Emission Rates Gas and Liquid Fuel Firing	NO_x	-	59.30
		CO	-	20.30
		VOC	-	4.60

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		PM	-	6.00
		PM_{10}	-	6.00
		$PM_{2.5}$	-	6.00
		SO_2	-	3.30
TC6	Test Cell 6 Gas Fuel Firing	NO_x	298.43	-
		CO	26.00	-
		VOC	1.49	-
		PM	4.21	-
		PM_{10}	4.21	-
		$PM_{2.5}$	4.21	-
		SO_2	0.35	-
TC6	Test Cell 6 Liquid Fuel Firing	NO_x	409.53	-
		CO	26.29	-
		VOC	7.50	-
		PM	13.60	-
		PM_{10}	13.60	-
		$PM_{2.5}$	13.60	-
		SO_2	3.04	-
TC6	Test Cell 6 – Annual Emission Rates Gas and Liquid Fuel Firing	NO_x	-	39.78
		CO	-	49.46
		VOC	-	4.03
		PM	-	9.88
		PM_{10}	-	9.88
		$PM_{2.5}$	-	9.88
		SO_2	-	5.24
F1	TC1, TC3-5 Process Fugitives (5)	VOC	0.6	0.3

Emission Sources - Maximum Allowable Emission Rates

F2	TC2 Process Fugitives (5)	VOC	0.3	0.1
F3	TC6 Process Fugitives (5)	VOC	0.01	0.01
S1	Oil/Water Separator	VOC	0.1	0.3
S2	TC6 Oil/Water Separator	VOC	0.01	0.05
CT1	Cooling Tower	VOC	0.08	0.37
		PM	0.60	2.63
		PM_{10}	0.15	0.66
		$PM_{2.5}$	0.01	0.03
		Cl_2	<0.01	<0.01
CT3	Cooling Tower	VOC	0.1	0.4
		PM	0.60	2.63
		PM_{10}	0.15	0.66
		$PM_{2.5}$	0.01	0.03
		Cl_2	<0.01	<0.01
CT4	TC6 Cooling Tower	VOC	0.08	0.37
		PM	0.60	0.26
		PM_{10}	0.02	0.09
		$PM_{2.5}$	<0.01	<0.01
		Cl_2	<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
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
SO_2 - sulfur dioxide
Cl_2 - chlorine
(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.

Emission Sources - Maximum Allowable Emission Rates

Date: April 27, 2018