Emission Sources - Maximum Allowable Emission Rates

Permit Number 107153, PSDTX1328M2, and N260

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)
OC2H121	Cracking Furnace, F-121 (a.k.a. Heater H-121)	CO	21.51	--
		NO_X	8.97	--
		SO_2	8.50	--
		PM	2.50	--
		PM_{10}	2.50	--
		$PM_{2.5}$	2.50	--
		VOC (6)	1.73	--
		Ethylene	1.36	--
		NH_3	2.62	--
		H_2SO_4	0.52	--
OC2H122	Cracking Furnace, F-122 (a.k.a. Heater H-122)	CO	21.51	--
		NO_X	8.97	--
		SO_2	8.50	--
		PM	2.50	--
		PM_{10}	2.50	--
		$PM_{2.5}$	2.50	--
		VOC (6)	1.73	--
		Ethylene	1.36	--
		NH_3	2.62	--
		H_2SO_4	0.52	--
OC2H123	Cracking Furnace, F-123 (a.k.a. Heater H-123)	CO	21.51	--
		NO_X	8.97	--
		SO_2	8.50	--
		PM	2.50	--

Emission Sources - Maximum Allowable Emission Rates

		PM_{10}	2.50	--
		$PM_{2.5}$	2.50	--
		VOC (6)	1.73	--
		Ethylene	1.36	--
		NH_3	2.62	--
		H_2SO_4	0.52	--
OC2H124	Cracking Furnace, F-124 (a.k.a. Heater H-124)	CO	21.51	--
		NO_X	8.97	--
		SO_2	8.50	--
		PM	2.50	--
		PM_{10}	2.50	--
		$PM_{2.5}$	2.50	--
		VOC (6)	1.73	--
		Ethylene	1.36	--
		NH_3	2.62	--
		H_2SO_4	0.52	--
C2H125	Cracking Furnace, F-125 (a.k.a. Heater H-125)	CO	21.51	--
		NO_X	8.97	--
		SO_2	8.50	--
		PM	2.50	--
		PM_{10}	2.50	--
		$PM_{2.5}$	2.50	--
		VOC (6)	1.73	--
		Ethylene	1.36	--
		NH_3	2.62	--
		H_2SO_4	0.52	--
OC2H126	Cracking Furnace, F-126 (a.k.a. Heater H-126)	CO	21.55	--
		NO_X	8.99	--
		SO_2	8.51	--

Emission Sources - Maximum Allowable Emission Rates

		PM	2.50	--
		PM_{10}	2.50	--
		$PM_{2.5}$	2.50	--
		VOC (6)	1.73	--
		Ethylene	1.36	--
		NH_3	2.63	--
		H_2SO_4	0.52	--
OC2H127	Cracking Furnace, F-127 (a.k.a. Heater H-127)	CO	21.55	--
		NO_X	8.99	--
		SO_2	8.51	--
		PM	2.50	--
		PM_{10}	2.50	--
		$PM_{2.5}$	2.50	--
		VOC (6)	1.73	--
		Ethylene	1.36	--
		NH_3	2.63	--
		H_2SO_4	0.52	--
OC2H128	Cracking Furnace, F-128 (a.k.a. Heater H-128)	CO	21.55	--
		NO_X	8.99	--
		SO_2	8.51	--
		PM	2.50	--
		PM_{10}	2.50	--
		$PM_{2.5}$	2.50	--
		VOC (6)	1.73	--
		Ethylene	1.36	--
		NH_3	2.63	--
		H_2SO_4	0.52	--
OC2MEH120-OC2MEH125	Cracking Furnaces F-120 – F-125 (a.k.a. Heaters H-120 – H-125) Maintenance,	NO_X	20.00	--

Emission Sources - Maximum Allowable Emission Rates

		CO	291.13	--
OC2MEH126-OC2MEH129	Cracking Furnaces F-126 – F-129 (a.k.a. Heaters H-126 – H-129) MSS	NO_X	20.00	--
		CO	291.13	--
OC2H121 – OC2H128	Cracking Furnace (a.k.a. Heaters) Source Group Cap	CO	--	261.35
		NO_X	47.60	194.29
		SO_2	40.00	10.19
		PM	14.85	73.26
		PM_{10}	14.85	73.26
		$PM_{2.5}$	14.85	73.26
		VOC (6)	--	29.14
		Ethylene	--	7.30
		NH_3	--	79.72
		H_2SO_4	3.52	0.62
OC2H120	Cracking Furnace, F-120 (a.k.a. Heater H-120)	CO	21.51	--
		NO_X	8.97	--
		SO_2	8.50	--
		PM	2.50	--
		PM_{10}	2.50	--
		$PM_{2.5}$	2.50	--
		VOC (6)	1.73	--
		Ethylene	1.36	--
		NH_3	2.62	--
		H_2SO_4	0.52	--
OC2H129	Cracking Furnace, F-129 (a.k.a. Heater H-129)	CO	21.55	--
		NO_X	8.99	--
		SO_2	8.51	--
		PM	2.50	--
		PM_{10}	2.50	--

Emission Sources - Maximum Allowable Emission Rates

		$PM_{2.5}$	2.50	--
		VOC (6)	1.73	--
		Ethylene	1.36	--
		NH_3	2.63	--
		H_2SO_4	0.52	--
OC2H120, OC2H129	Cracking Furnace (a.k.a. Heaters) Source Group Cap	CO	--	66.00
		NO_X	--	49.07
		SO_2	--	2.57
		PM	--	18.50
		PM_{10}	--	18.50
		$PM_{2.5}$	--	18.50
		VOC (6)	--	7.36
		Ethylene	--	1.84
		NH_3	--	20.13
		H_2SO_4	--	0.16
OC2F596	Pressure-Assisted Flare (a.k.a. Multipoint Ground Flare), GF-596 (Routine)	CO	13.14	--
		NO_X	2.53	--
		SO_2	0.24	--
		VOC (7)	3.14	--
		Ethylene	0.93	--
		Propylene	0.22	--
OC2F596	Pressure-Assisted Flare (a.k.a. Multipoint Ground Flare), GF-596 (MSS)	CO	1756.39	--
		NO_X	879.52	--
		SO_2	0.88	--
		VOC (7)	1801.87	--
		Ethylene	808.14	--
		Propylene	93.18	--
OC2F597	Low Pressure Flare, FS-597	CO	35.35	--
		NO_X	6.94	--

Emission Sources - Maximum Allowable Emission Rates

		SO_2	1.03	--
		VOC (7)	29.03	--
		Ethylene	0.68	--
		Propylene	0.17	--
OC2TOX	Thermal Oxidizer (TOX) LHC-9	CO	1.10	--
		NO_X	0.67	--
		SO_2	0.16	--
		PM	0.08	--
		PM_{10}	0.08	--
		$PM_{2.5}$	0.08	--
		VOC (7)	1.54	--
OC2F596, OC2F597, and OC2TOX	Flare / TOX Source Group Cap	CO	--	248.50
		NO_X	--	70.55
		SO_2	--	0.17
		PM	--	0.20
		PM_{10}	--	0.20
		$PM_{2.5}$	--	0.20
		VOC (7)	--	58.21
		Ethylene	--	22.13
		Propylene	--	1.76
OC2CT936	Cooling Tower CT-936	VOC (7)	4.53	19.85
		Ethylene	2.52	7.35
		Propylene	2.56	6.81
		PM	2.03	5.32
		PM_{10}	0.70	2.88
		$PM_{2.5}$	0.01	0.02
OC2FU2	Process Area Fugitives (5)	CO	0.01	0.03
		VOC (7)	4.59	20.11
		Ethylene	2.96	12.96

Emission Sources - Maximum Allowable Emission Rates

		Propylene	0.27	1.18
		Cl_2	0.01	0.02
		HCl	0.38	1.66
		NH_3	0.30	1.30
OC2GE1	Backup Diesel Generator No. 1	CO	0.55	0.03
		NO_X	2.88	0.14
		SO_2	0.11	0.01
		PM	0.07	0.01
		PM_{10}	0.07	0.01
		$PM_{2.5}$	0.07	0.01
		VOC	0.21	0.01
OC2GE2	Backup Diesel Generator No. 2	CO	0.55	0.03
		NO_X	2.88	0.14
		SO_2	0.11	0.01
		PM	0.07	0.01
		PM_{10}	0.07	0.01
		$PM_{2.5}$	0.07	0.01
		VOC	0.21	0.01
OC2ST921	15% HCL Storage Tank, V-921	HCl	0.01	0.01
OC2MEFP120	H-120 Fuel Purge	VOC	0.60	0.01
OC2MEFP121	H-121 Fuel Purge	VOC	0.60	0.01
OC2MEFP122	H-122 Fuel Purge	VOC	0.60	0.01
OC2MEFP123	H-123 Fuel Purge	VOC	0.60	0.01
OC2MEFP124	H-124 Fuel Purge	VOC	0.60	0.01
OC2MEFP125	H-125 Fuel Purge	VOC	0.60	0.01
OC2MEFP126	H-126 Fuel Purge	VOC	0.60	0.01
OC2MEFP127	H-127 Fuel Purge	VOC	0.60	0.01
OC2MEFP128	H-128 Fuel Purge	VOC	0.60	0.01
OC2MEFP129	H-129 Fuel Purge	VOC	0.60	0.01

Emission Sources - Maximum Allowable Emission Rates

OC2MEFU2	Equipment Opening Fugitives (MSS)	CO	0.03	0.01
		VOC (7)	385.23	0.62
		Ethylene	170.91	0.16
		Propylene	123.00	0.15
	MSS Activities (Attachment A)	VOC (7)	0.74	0.10
		Ethylene	0.13	0.02
		Propylene	0.20	0.03

(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) Exempt Solvent - Those carbon compounds or mixtures of carbon compounds used as solvents which have been excluded from the definition of volatile organic compound.
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
Cl_2 - Chlorine gas
HCl - Hydrochloric Acid
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.

Date: August 19, 2019