Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 1176 and PSDTX782

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)
HF-201	PX-1 ISOM Heater H-101	CO	10.29	45.08
		NO_x	6.64	29.08
		PM_{10}	1.25	5.45
		SO_2	0.10	0.44
		VOC	0.90	3.93
HF-203	PX-1 Reboilers H-103/104	CO	8.39	36.74
		NO_x	11.84	51.85
		PM_{10}	1.01	4.44
		SO_2	0.08	0.36
		VOC	0.73	3.20
HF-451	PX-2 ISOM Heater H-1101	CO	11.72	51.32
		NO_x	5.67	24.83
		PM_{10}	1.42	6.21
		SO_2	0.12	0.51
		VOC	1.02	4.47
HF-453	PX-2 H-Reboilers 1103/1104	CO	8.99	39.38
		NO_x	6.51	28.50
		PM_{10}	1.09	4.76
		SO_2	0.09	0.39
		VOC	0.78	3.43

Emission Sources - Maximum Allowable Emission Rates

HF-204	PX-1 LAF/TDP Furnace H-501	CO	0.68	2.99
		NO_x	1.08	4.72
		PM_{10}	0.08	0.36
		SO_2	0.01	0.03
		VOC	0.06	0.26
HF-601	MX-2 Heater H-102	CO	2.60	11.41
		NO_x	1.26	5.52
		PM_{10}	0.32	1.38
		SO_2	0.03	0.11
		VOC	0.23	0.99
HF-602	MX-2 Heater H-201	CO	8.74	38.29
		NO_x	4.23	18.53
		PM_{10}	1.06	4.63
		SO_2	0.09	0.38
		VOC	0.76	3.33
FL-201	PX-1 Flare	CO	18.02	78.92
		NO_x	3.53	15.46
		SO_2	0.03	0.15
		H_2S	0.01	0.01
		VOC	8.75	26.13
		Benzene	5.00	9.72
FL-401 FL-351	PX-2 Flare and POLYB Flare (6)	CO	24.61	69.49
		NO_x	4.82	13.61

Emission Sources - Maximum Allowable Emission Rates

		SO_2	0.05	0.13
		H_2S	0.01	0.01
		VOC	11.37	32.02
		Benzene	0.21	0.59
CT-451	PX-2 Cooling Tower	VOC	0.27	1.18
		PM_{10}	1.37	6.02
CT-351	PX-1, PX-3, MX2, PCU, Utilities Cooling Tower	VOC	0.29	1.25
		PM_{10}	1.46	6.39
FS-201	PX-1 Separator	VOC	1.00	3.60
S-451	PX-2 Separator	VOC	1.14	4.50
SP-50 SP-51 SP-52	Loading – Recovery Docks 50, 51, and 52 (6)	Mixed xylenes	19.16	5.87
		Styrene	19.70	18.40
SP-54	HAB Truck Loading 54	VOC	0.29	0.01
SP-201	PX-1 Truck Loading	VOC	0.62	0.26
FU-201	PX-1 Fugitives (5)	VOC	15.71	68.80
		Benzene	0.03	0.14
FU-451	PX-2 Fugitives (5)	VOC	18.00	78.82
		Benzene	0.01	0.02
FU-551	PX-3 Fugitives (5)	VOC	4.00	17.53
		Benzene	0.01	0.04
FU-152	Dock Fugitives (5)	VOC	0.26	1.12
		Styrene	0.05	0.23
ST-201	PX-1 Tank TF-111	VOC	27.32	1.88
		Benzene	2.53	0.17
ST-202	PX-1 Tank TF-112	VOC	27.42	1.91

Emission Sources - Maximum Allowable Emission Rates

		Benzene	2.53	0.18
ST-203	PX-1 Tank TF-113	VOC	0.18	0.78
		Benzene	0.01	0.03
ST-204	PX-1 Tank TF-114	VOC	0.21	0.92
		Benzene	0.01	0.02
ST-205	PX-1 Tank TF-115	VOC	0.02	0.09
		Benzene	0.01	0.01
ST-206	PX-1 Tank TF-117	VOC	0.12	0.54
		Benzene	0.01	0.01
ST-207	PX-1 Tank TF-118	VOC	0.12	0.54
		Benzene	0.01	0.01
ST-208	PX-1 Tank TF-120	VOC	1.36	0.06
		Benzene	0.22	0.01
ST-209	PX-1 Tank TF-121	VOC	48.13	7.47
		Benzene	2.55	0.41
ST-210	PX-1 Tank TF-116	VOC	0.03	0.13
		Benzene	0.01	0.06
ST-451	PX-2 Tank TF-1117	VOC	0.19	0.84
		Benzene	0.01	0.05
ST-452	PX-2 Tank TF-1111	VOC	27.53	2.99
		Benzene	2.54	0.28
ST-453	PX-2 Tank TF-1112	VOC	29.84	2.99
		Benzene	2.78	0.27
ST-454	PX-2 Tank TF-1113	VOC	0.43	1.86
		Benzene	0.03	0.13

Emission Sources - Maximum Allowable Emission Rates

ST-455	PX-2 Tank TF-1114	VOC	0.46	2.00
		Benzene	0.01	0.04
ST-457	PX-2 Tank TF-1118	VOC	0.20	0.86
		Benzene	0.01	0.01
ST-2113	PX-3 Tank TF-2113	VOC	0.12	0.51
		Benzene	0.01	0.01
ST-2118	PX-3 Tank TF-2118	VOC	0.19	0.82
		Benzene	0.01	0.01
ST-151	Dock Tank TK-201	VOC	0.14	0.63
		Benzene	0.01	0.01
ST-152	Dock Tank TK-202	VOC	19.70	7.83
		Styrene	19.70	7.83
ST-153	Dock Tank TK-203	VOC	0.14	0.63
		Benzene	0.01	0.01
ST-154	Dock Tank TK-204	VOC	0.15	0.65
		Benzene	0.01	0.01
ST-155	Dock Tank TK-205	VOC	0.13	0.58
		Benzene	0.01	0.01
ST-156	Dock Tank TK-206	VOC	78.99	6.00
		Benzene	0.89	0.06
		Styrene	19.70	6.00
ST-157	Dock Tank TK-207	VOC	0.23	1.01
		Benzene	0.01	0.01
ST-159	Dock Tank TK-208	VOC	0.09	0.39
		Benzene	0.01	0.01

Emission Sources - Maximum Allowable Emission Rates

ST-161	Dock Tank TK-401	VOC	0.54	0.02
		Benzene	0.09	0.01
ST-162	Dock Tank TK-402	VOC	0.90	0.04
		Benzene	0.08	0.01

Emission Sources - Maximum Allowable Emission Rates

Emission Caps	Air Contaminant Name (3)	Emission Rates	
		lbs/hour	TPY (4)
Non-Maintenance, Startup, and Shutdown (MSS) Emission Caps (7)	CO	86.01	388.54
	NO_x	39.00	158.54
	PM_{10}	9.06	39.68
	SO_2	0.51	2.23
	VOC	261.23	321.29
	Benzene	19.67	29.71
	Styrene	19.85	31.56
MSS Emission Caps – Controlled (8)	CO	601.77	10.57
	NO_x	110.03	2.07
	SO_2	0.25	0.01
	VOC	1125.80	6.35
	Benzene	177.19	2.69
	Styrene	1.16	0.01
MSS Emission Caps – Uncontrolled (9)	VOC	181.1	15.67
	Benzene	1.52	0.01
	Styrene	1.50	0.04

(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) 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_{10} - total particulate matter equal to or less than 10 microns in diameter, suspended in the atmosphere, including $PM_{2.5}$, as represented
$PM_{2.5}$ - particulate matter equal to or less than 2.5 microns in diameter
CO - carbon monoxide

Emission Sources - Maximum Allowable Emission Rates

(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.
(6) Emission limits apply to combined total emissions from the listed emission points.
(7) Emission caps apply to the combined total emission from all the preceding emissions points listed on the Emission Sources - Maximum Allowable Emission Rates table.
(8) Activities, control devices, and EPNs identified in Permit Attachment C.
(9) Emissions occur at EPN MSSATM and activities identified in Permit Attachment C.

Date: _____