Emission Sources - Maximum Allowable Emission Rates

Permit Number 37910

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)
See footnote (6)	Process VOC Emissions	VOC	---	13.99
VS/VSP	Vent Scrubber (R1, R2, R3, PT02, PT05, PT09, ST18-ST22, ST24, MT1, MT2, HT01-HT03, Stripper)	VOC	41.97	(6)
		HAPS	1.55	0.93
		H_2S	0.001	0.01
PT04	Process Tank PT04	VOC	0.02	(6)
SCR4-1 (7)	Reactor R4-1 & Process Tank PT12	VOC	2.00	(6)
		HAPS	0.09	0.04
		PM	0.55	0.34
		H_2S	0.001	0.01
R4-2	Reactor R4-2	VOC	0.15	(6)
PT11	Process Tank 11	VOC	0.01	(6)
ST01	Storage Tank ST01	VOC	9.44	0.08
ST02	Storage Tank ST02	VOC	9.44	0.08
ST03	Storage Tank ST03	VOC	9.44	0.08
ST04	Storage Tank ST04	VOC	9.44	0.08
ST05	Storage Tank ST05	VOC	9.44	0.08
		HAPS	0.08	0.001
ST06	Storage Tank ST06	VOC	9.44	0.08
		HAPS	0.08	0.001

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ST07	Storage Tank ST07	VOC	9.44	0.08
		HAPS	0.08	0.001
ST08	Storage Tank ST08	VOC	9.44	0.08
		HAPS	0.08	0.001
ST09	Storage Tank ST09	VOC	9.44	0.08
ST10	Storage Tank ST10	VOC	9.44	0.08
ST11	Storage Tank ST11	VOC	9.44	0.08
ST12	Storage Tank ST12	VOC	9.44	0.08
ST13	Storage Tank ST13	VOC	9.44	0.08
ST14	Storage Tank ST14	VOC	9.44	0.08
ST15	Storage Tank ST15	VOC	9.44	0.08
ST16	Storage Tank ST16	VOC	9.44	0.08
ST17	Storage Tank ST17	VOC	9.44	0.08
		HAPS	0.08	0.001
ST23	Brine Storage Tank ST23	VOC	1.92	0.30
		HAPS	1.91	0.30
ST31	Storage Tank ST31	VOC	9.44	0.18
ST32	Storage Tank ST32	VOC	9.44	0.18
ST33	Storage Tank ST33	VOC	9.44	0.18
ST34	Storage Tank ST34	VOC	9.44	0.18
B01	Boiler (2 MMBtu/hr)	VOC	0.01	0.05
		PM	0.01	0.07
		NO_x	0.20	0.86
		SO_2	0.01	0.005
		CO	0.16	0.72

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LOAD	Loading Operations	VOC	0.29	0.07
		HAPS	0.23	0.03
DR	Process Tanks PT06 & PT07	VOC	0.01	0.05
		HAPS	0.01	0.03
FUG-STF	Fugitive Emissions (5)	VOC	0.18	0.78
		HAPS	0.04	0.17
FUG-PRO	Fugitive Emissions (5)	VOC	0.34	1.49
		HAPS	0.21	0.93
FUG-ETF	Fugitive Emissions (5)	VOC	0.09	0.40
FUG-R4	Fugitive Emissions (5)	VOC	0.07	0.30
		HAPS	0.07	0.30
BH1	Baghouse for R2 & Repackaging Area	PM	0.05	0.01
ST50	Storage Tank 50	VOC	4.96	0.08
ST51	Storage Tank 51	VOC	4.96	0.08
ST52	Storage Tank 52	VOC	4.96	0.08
ST53	Storage Tank 53	VOC	4.96	0.08
ST54	Storage Tank 54	VOC	4.96	0.08
ST55	Storage Tank 55	VOC	4.96	0.12
ST56	Storage Tank 56	VOC	4.96	0.12
ST57	Storage Tank 57	VOC	4.96	0.12
Reactor 5 Line Project				
TO	Thermal Oxidizer (8)	VOC	0.54	0.35
		HAPS	0.50	0.27
		PM	0.05	0.23

Emission Sources - Maximum Allowable Emission Rates

		PM_{10}	0.05	0.23
		$PM_{2.5}$	0.05	0.23
		NO_x	0.69	3.01
		SO_2	0.01	0.02
		CO	0.58	2.52
ST59	Storage Tank 59	VOC	0.02	0.07
		HAPS	0.02	0.07
ST60	Storage Tank 60	VOC	0.02	0.09
		HAPS	0.02	0.09
ST61A	Storage Tank 61A	VOC	0.01	0.01
ST61B	Storage Tank 61B	VOC	0.01	0.01
ST62	Storage Tank 62	VOC	0.23	0.01
ST64	Storage Tank 64	VOC	0.03	0.12
ST65	Storage Tank 65	VOC	0.03	0.01
ST66	Storage Tank 66	VOC	0.03	0.01
STB	Storage Tank STB	VOC	3.68	0.63
		HAPS	3.68	0.63
STC	Storage Tank STC	VOC	2.17	0.65
		HAPS	2.17	0.65
STD	Storage Tank STD	VOC	0.84	0.23
		HAPS	0.84	0.23
STE1	Storage Tank STE1	VOC	0.01	0.01
STE2	Storage Tank STE2	VOC	0.01	0.01
STE3	Storage Tank STE3	VOC	0.01	0.01
STF	Storage Tank STF	VOC	1.66	0.35

Emission Sources - Maximum Allowable Emission Rates

		HAPS	0.02	0.01
BH2	Baghouse	PM	0.01	0.01
		PM_{10}	0.01	0.01
		$PM_{2.5}$	0.01	0.01
BH3	Baghouse	PM	0.01	0.01
		PM_{10}	0.01	0.01
		$PM_{2.5}$	0.01	0.01
FUG-R5TF	Fugitive Emissions (5)	VOC	0.10	0.44
		HAPS	0.05	0.21
FUG-R5	Fugitive Emissions (5)	VOC	0.22	0.96
		HAPS	0.17	0.74

(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
VOC emission rates include HAPS VOC emission rates
NO_x - total oxides of nitrogen
SO_2 - sulfur dioxide
PM - total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$
PM_{10} - 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
CO - carbon monoxide
HAPS - hazardous air pollutants as listed in § 112(b) of the Federal Clean Air Act or Title 40 Code of Federal Regulations Part 63, Subpart C
(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) Process emissions (not including the Reactors 5 Line Project) shall not exceed 13.99 tpy of VOC. Process emissions include VOC emissions from EPNs VS/VSP, SCR4-1 (R4-1), R4-2, PT04, PT11, and process related emissions from storage tanks such as transferring of intermediates, products, and brines.
(7) Emissions that are routed to SCR4-1 may be routed to VS/VSP.
(8) Process off gases from Reactors R5-A through R5-D, R5-EV, R5-MX1, and the Holding Tank, shall be vented to the Thermal Oxidizer.

Date: August 14, 2014