

Emission Sources - Maximum Allowable Emission Rates

Permit Number 51A

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)
04CHRGHTR	Naphtha HDS Charge Heater	SO ₂	0.63	0.63
		H ₂ S	0.01	<0.01
		VOC	0.12	0.53
		PM	0.16	0.70
		PM ₁₀	0.16	0.70
		PM _{2.5}	0.16	0.70
		NO _x	2.09	9.15
		CO	1.37	6.61
04DEC5HTR	Naphtha HDS Depentanizer Reboiler	SO ₂	2.29	2.28
		H ₂ S	0.02	<0.01
		VOC	0.42	1.84
		PM	0.59	2.58
		PM ₁₀	0.59	2.58
		PM _{2.5}	0.59	2.58
		NO _x	2.73	11.96
		CO	5.66	22.56
05CHRGHTR	Reformer Charge Heater and Re-Heater stack	SO ₂	1.47	1.36
		H ₂ S	0.01	<0.01
		VOC	0.27	1.10
		PM	0.38	1.53
		PM ₁₀	0.38	1.53
		PM _{2.5}	0.38	1.53
		NO _x	5.00	20.41
		CO	1.77	7.27
05CHRGHTR	Reformer No.1	SO ₂	1.21	1.20

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		H ₂ S	0.01	<0.01
		VOC	0.22	0.96
		PM	0.31	1.36
		PM ₁₀	0.31	1.36
		PM _{2.5}	0.31	1.36
		NO _x	4.10	17.96
		CO	1.45	6.39
05CHRGHTR	Reformer No.2 Reactor Reheater	SO ₂	2.67	1.84
		H ₂ S	0.02	<0.01
		VOC	0.48	1.49
		PM	0.68	2.06
		PM ₁₀	0.68	2.06
		PM _{2.5}	0.68	2.06
		NO _x	9.08	27.55
05CHRGHTR	Reformer No.3 Reactor Reheater	CO	3.21	9.81
		SO ₂	1.17	1.16
		H ₂ S	0.01	<0.01
		VOC	0.22	0.96
		PM	0.30	1.31
		PM ₁₀	0.30	1.31
		PM _{2.5}	0.30	1.31
05DEC5HTR	Reformer Depentanizer Reboiler	NO _x	3.99	17.48
		CO	1.42	6.22
		SO ₂	1.70	1.69
		H ₂ S	0.01	<0.01
		VOC	0.31	1.36
		PM	0.44	1.93
		PM ₁₀	0.44	1.93
		PM _{2.5}	0.44	1.93

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		NO _x	2.03	8.89
		CO	4.09	8.98
05REFMRFLR	Reformer Flare	SO ₂	0.55	0.22
		H ₂ S	<0.01	<0.01
		VOC	0.10	0.17
		PM	0.14	0.24
		PM ₁₀	0.14	0.24
		PM _{2.5}	0.14	0.24
		NO _x	1.78	2.97
		CO	0.76	1.26
05REFRMFUG	HDS & Reformer Fugitives (4)	VOC	4.14	18.14
		H ₂ S	<0.01	0.04
37TANKTP07	Tank TP07	VOC	5.49	9.47
37TANK0326	Tank 326	VOC	0.29	0.57

- (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
 SO₂ - sulfur dioxide
 PM - total particulate matter, suspended in the atmosphere, including PM₁₀ and PM_{2.5}, as represented
 PM₁₀ - 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
 H₂S - hydrogen sulfide
- (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: March 20, 2019