Emission Sources - Maximum Allowable Emission Rates

Permit Number 7719A

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)
F-CT3	Cooling Tower	VOC	0.23	0.99
		PM	1.62	7.10
		PM_{10}	0.81	3.55
		$PM_{2.5}$	< 0.01	0.01
F-R1	Process Fugitives (5)	VOC	1.02	4.47
		H_2S	0.02	0.07
H-8	No. 1 Hot Oil Furnace	CO	2.64	11.54
		NO_x	2.16	9.46
		SO_2	0.02	0.10
		VOC	0.17	0.76
		PM	0.24	1.04
		PM_{10}	0.24	1.04
		$PM_{2.5}$	0.24	1.04
H-9	No. 2 Hot Oil Furnace	CO	2.64	11.54
		NO_x	2.16	9.46
		SO_2	0.02	0.10
		VOC	0.17	0.76
		PM	0.24	1.04
		PM_{10}	0.24	1.04
		$PM_{2.5}$	0.24	1.04
F-R4	Maintenance – Unplugging Reactor Dump Line	VOC	17.80	0.16
R-V1	Acetic Acid Scrubber	VOC	< 0.01	< 0.01
R-V2	Crude NMP Surge Tank Condenser Scrubber (Pre-Expansion Project) (6)	VOC	4.16	3.23
		H_2S	2.80	4.80
R-V2	Crude NMP Surge Tank Condenser Scrubber (Post-Expansion Project) (7)	VOC	0.36	0.43
		H_2S	0.28	1.23
R-V3	Cure Vessels 3 and 4 Vent Scrubber YA25 West	VOC	0.47	1.03
		PM	0.06	0.28
		PM_{10}	< 0.01	0.03

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		$PM_{2.5}$	< 0.01	0.03
R-V5	Cure Vessels 1 and 2 Vent Scrubber YA24 East	VOC	0.47	1.03
		PM	0.06	0.28
		PM_{10}	< 0.01	0.03
		$PM_{2.5}$	< 0.01	0.03
R-V8	A Dehydration Scrubber	VOC	< 0.01	0.03
		H_2S	< 0.01	0.01
R-V11	Heat Treater Scrubber Vent	H_2S	< 0.01	0.04
R-V12	Process Water Sump	VOC	0.01	0.05
		H_2S	0.06	0.25
R-V14	B Dryer Vent North	VOC	0.55	1.53
		PM	1.21	5.28
		PM_{10}	1.21	5.28
		$PM_{2.5}$	1.21	5.28
R-V15	A1 Belt Filter	H_2S	< 0.01	< 0.01
R-V16	A Dryer Vent	VOC	0.60	1.68
		PM	0.26	1.14
		PM_{10}	0.26	1.14
		$PM_{2.5}$	0.26	1.14
R-V17	B Dehydration Scrubber	VOC	< 0.01	0.03
		H_2S	< 0.01	0.01
R-V19	A2 Belt Filter Vent	H_2S	< 0.01	< 0.01
R-V20	B1 Belt Filter Vent	H_2S	< 0.01	< 0.01
R-V21	B2 Belt Filter Vent	H_2S	< 0.01	< 0.01
R-V22	Polymer Dryer Vent	VOC	0.11	0.48
R-V23	Caustic Scrubber 95-60020	VOC	1.01	4.42
		H_2S	1.84	2.94
R-V24	Wash System Scrubber	VOC	0.02	< 0.01
		H_2S	< 0.01	< 0.01
T-95-28	Lights Column Phase Separator	VOC	0.11	0.49
		H_2S	< 0.01	< 0.01
T-95-114	NMP Storage Tank	VOC	0.18	< 0.01
T-95-136	B1 Feed Filter Tank	H_2S	0.08	0.04
T-95-160	B Slurry Tank	H_2S	0.09	0.04
T-95-167	Crude NMP Tank (M-6) and	VOC	0.28	< 0.01

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	NMP Heavies Tank (M-5)			
T-95-168	A1 Feed Filter Tank	H_2S	0.08	0.04
T-95-169A	S. Fresh/Recycle NMP	VOC	0.18	< 0.01
T-95-169B	N. Fresh/Recycle NMP	VOC	0.18	< 0.01
T-95-170	NaHS Storage Tank	H_2S	0.27	0.20
T-95-YA15	A Slurry Tank	H_2S	0.09	0.04
T-95-182	NaSH Waste/Recycle Tank	H_2S	0.11	< 0.01
T-95-Y-044	No. 1 Supersack Silo	PM	0.02	0.08
		PM_{10}	0.02	0.08
		$PM_{2.5}$	0.02	0.08
T-95-Y-076	No. 2 Supersack Silo	PM	0.03	0.12
		PM_{10}	0.03	0.12
		$PM_{2.5}$	0.03	0.12
T-95-Y-084	No. 3 Supersack Silo	PM	0.03	0.12
		PM_{10}	0.03	0.12
		$PM_{2.5}$	0.03	0.12
T-95-Y-046	No. 1 Valve Bag Tank	PM	0.02	0.08
		PM_{10}	0.02	0.08
		$PM_{2.5}$	0.02	0.08
T-95-Y-091	No. 2 Valve Bag Tank	PM	0.02	0.08
		PM_{10}	0.02	0.08
		$PM_{2.5}$	0.02	0.08
T-95-40140	No. 4 Supersack Silo	PM	0.06	0.25
		PM_{10}	0.06	0.25
		$PM_{2.5}$	0.06	0.25
T-95-40141	No. 5 Supersack Silo	PM	0.11	0.49
		PM_{10}	0.11	0.49
		$PM_{2.5}$	0.11	0.49
T-95-40142	No. 6 Supersack Silo	PM	0.17	0.74
		PM_{10}	0.17	0.74
		$PM_{2.5}$	0.17	0.74
H-10	No. 3 Hot Oil Furnace	NO_x	2.94	12.86
		CO	8.65	27.98
		VOC	0.45	1.98
		SO_2	0.06	0.27

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		PM	0.63	2.74
		PM_{10}	0.63	2.74
		$PM_{2.5}$	0.63	2.74
R-LR2	Truck Loading at Quench Heavies Storage Tank	VOC	0.19	< 0.01
FWW8	Brine Filter Press	VOC	< 0.01	< 0.01
		H_2S	0.01	0.01
FWW8A	Brine Filter Press 2	VOC	< 0.01	< 0.01
		H_2S	0.01	0.01
FWW9	Dry Weather Sump	H_2S	0.03	0.10
T-95-80014	Hot Oil Quench Storage Tank	VOC	0.19	< 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) CO - carbon monoxide
H_2S - hydrogen sulfide
NO_x - total oxides of nitrogen
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
SO_2 - sulfur dioxide
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
(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) These emission rates are effective until the Crude NMP Surge Tank Condenser Scrubber is replaced, as specified in the permit amendment application dated February 10. 2020.
(7) These emission rates are effective upon replacement of the Crude NMP Surge Tank Condenser Scrubber.

Date: October 21, 2022