

Emission Sources - Maximum Allowable Emission Rates

Permit Number 5572B

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)
31	Boiler A	VOC	0.27	1.18
		PM	0.37	1.63
		PM ₁₀	0.37	1.63
		PM _{2.5}	0.37	1.63
		NO _x	5.56	24.33
		SO ₂	0.03	0.13
		CO	4.12	18.04
33	Cooling Tower	VOC	0.46	2.01
		Hexane (6)	0.16	0.70
		PM	0.23	0.99
		PM ₁₀	0.11	0.49
		PM _{2.5}	<0.01	<0.01
43	Recovered Hexane/Oligomer Tank Truck Loading	VOC	0.36	<0.01
44	B Flare Normal Operations	VOC	42.49	21.98
		Hexane (6)	9.28	9.81
		NO _x	3.22	5.21
		SO ₂	0.01	0.04
		CO	23.15	37.23
44	B Flare Maintenance, Startup, and Shutdown (MSS) Activities	VOC	2151.62	2.02
		Hexane (6)	974.10	1.38
		NO _x	169.06	0.13
		SO ₂	0.01	0.01
		CO	1221.09	0.91

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44	B Flare Demonstration Plant Normal Operations and MSS Activities	VOC	3.66	1.36
		NO _x	5.82	2.84
		SO ₂	0.05	0.02
		CO	29.99	14.62
46A/B	Tank D-104 and Tank D-105(5)	VOC	20.64	0.18
49	B-line Fugitives (8)	VOC	4.70	20.57
		Hexane (6)	1.46	6.39
58	PF-311B Baghouse	PM	0.01	0.05
		PM ₁₀	0.01	0.05
		PM _{2.5}	0.01	0.01
		VOC	(7)	(7)
59	PF-435B Baghouse	PM	0.03	0.14
		PM ₁₀	0.03	0.14
		PM _{2.5}	0.01	0.03
		VOC	(7)	(7)
60	B-line Finishing Building Residual Emissions	PM	0.10	0.42
		PM ₁₀	0.10	0.42
		PM _{2.5}	0.02	0.08
		VOC	(7)	(7)
61	Powder Transport System 2, 3, and 4 Vent	PM	0.01	0.03
		PM ₁₀	0.01	0.03
		PM _{2.5}	0.01	0.01
		VOC	(7)	(7)
58/59/60/61	Finishing and Hopper Car Loading Residual VOC (7)	VOC	4.06	13.55
62	Aluminum Alkyl Metering Run	VOC	13.94	0.18
63	Alkyl Deactivator Storage Drum	VOC	27.87	0.05
64	Tank Truck Loading and Unloading Fugitives (8)	VOC	1.65	0.05
		Hexane	<0.01	<0.01
65	Hopper Car Unloading Vacuum System	PM	0.03	0.14
		PM ₁₀	0.03	0.14

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		PM _{2.5}	0.01	0.03
110	C-line Pellet Silo	PM ₁₀	0.017	0.19
		VOC	3.97	10.08
111	Pellet Blending Silo	PM	0.50	2.21
		PM ₁₀	0.50	2.21
		PM _{2.5}	0.09	0.40
112	Elutriator Bag Filter	PM	0.52	2.29
		PM ₁₀	0.52	2.29
		PM _{2.5}	0.09	0.41
114	Extrusion Vents	PM	0.062	0.27
		PM ₁₀	0.062	0.27
		PM _{2.5}	0.01	0.05
120	Boiler C	VOC	0.67	2.93
		PM	0.92	4.05
		PM ₁₀	0.92	4.05
		PM _{2.5}	0.92	4.05
		NO _x	4.46	10.86
		SO ₂	0.07	0.32
		CO	7.42	32.48
130	C Cooling Tower	VOC	0.48	1.05
		PM	0.72	3.16
		PM ₁₀	0.36	1.56
		PM _{2.5}	<0.01	0.01
		HOCl	<0.01	<0.01
140	C Flare Normal Operations	VOC	130.00	24.88
		NO _x	18.43	4.28
		SO ₂	0.01	0.01
		CO	94.95	21.92
140	C Flare MSS Activities	VOC (6)	176.25	2.70
		NO _x	17.50	0.30
		SO ₂	0.01	0.01

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		CO	123.75	1.78
		Propylene	176.25	2.70
		Hexane	0.01	0.01
150	C-line Fugitives (8)	VOC	1.78	7.77
170	Wastewater Fugitives	VOC	0.11	0.47
200	Demonstration Plant Fugitives (8)	VOC	0.03	0.14
202	D Line Totally Enclosed Ground Flare	CO	666.43	65.26
		NO _x	167.33	16.39
		SO ₂	0.01	0.06
		VOC	609.88	-
202 MSS	D Line Totally Enclosed Ground Flare MSS (9)	CO	565.24	1.77
		NO _x	141.51	0.45
		VOC	383.70	1.73
		SO ₂	0.16	<0.01
204	D Line Fugitives (8)	VOC	1.37	6.00
205	D Line Solid Additive Fill Station Baghouse	PM	<0.01	0.01
		PM ₁₀	<0.01	0.01
		PM _{2.5}	<0.01	<0.01
206	D Line Solid Additive Surge Bins Baghouse	PM	0.02	0.10
		PM ₁₀	0.02	0.10
		PM _{2.5}	<0.01	0.02
207	D Line Air Wash Vacuum Baghouse Stack	PM	0.38	1.67
		PM ₁₀	0.38	1.67
		PM _{2.5}	0.07	0.30
208	D-Line Rerun Silo Filter	PM	0.11	0.05
		PM ₁₀	0.11	0.05
		PM _{2.5}	0.02	0.01
209	D-Line Elutriator Filter	PM	0.46	2.02
		PM ₁₀	0.46	2.02
		PM _{2.5}	0.08	0.36
210	D-Line Railcar Cleaning Filter	PM	0.02	0.07

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		PM ₁₀	0.02	0.07
		PM _{2.5}	<0.01	0.01
211	D-Line Propylene Pellet Residual	Acetone	7.08	5.60
		VOC	9.79	-
202/211 Annual VOC Cap	Combined LPFLARE-3 and Residual Emissions	VOC	-	28.79
D Line MSS	MSS to atmosphere (10)	VOC	135.55	0.54
Vac_MSS	MSS Demonstration Plant Catalyst Removal with Vacuum Truck	PM	0.43	0.01
		PM ₁₀	0.43	0.01
		PM _{2.5}	0.21	0.01
Maint_MSS	MSS Activities (11)	VOC	2.07	0.06
		Propylene	0.08	0.04
		Hexane	1.99	0.02
		Ethylene	0.05	0.03
Vessel_MSS	MSS Vessel Degassing (11)	VOC	35.59	0.46
		Propylene	19.31	0.26
		Hexane	16.28	0.20
		Ethylene	12.87	0.17
Piping_MSS	MSS Pipe Openings (11)	VOC	0.66	0.11
		Ethylene	0.44	0.07
		Propylene	0.66	0.11
Heat Ex_MSS	MSS Heat Exchanger Degassing (11)	VOC	27.50	0.17
		Ethylene	0.01	0.01
		Propylene	0.01	0.01
		Hexane	27.49	0.16

- (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
 CO - carbon monoxide
 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
 HOCl - hypochlorous acid
- (4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.

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- (5) Tanks D-104 and D-105 shall not be filled simultaneously.
- (6) Hexane and propylene emission rates are included in the VOC emissions.
- (7) The compliance caps for EPNs 58, 59, 60, and 61 are limited to no more than 4.06 pounds per hour (lb/hr) and 13.55 tons per year (TPY) of VOC emissions.
- (8) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
- (9) D Line Totally Enclosed Ground Flare (EPN 202) includes emissions of inherently low emitting activities identified in the Special Conditions with 5.33 lbs VOC, 0.51 lbs NO_x, and 3.72 lbs CO emissions assumed to occur in any hour evaluated and 0.14 tons VOC, 0.01 tons NO_x, and 0.10 tons CO emissions assumed in any 12 month period evaluated.
- (10) Atmospheric D Line MSS emissions (EPN D Line MSS) includes emissions of inherently low emitting activities identified in the Special Conditions with 6.00 lbs VOC emission assumed to occur in any hour evaluated and 0.28 tons of VOC emissions assumed in any 12 month period evaluated.
- (11) VOC includes hexane and propylene only.

Date: January 26, 2023