

Emission Sources - Maximum Allowable Emission Rates

Permit Number 6580 and PSDTX151M2

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)
SF-1	Secondary Filter	PM ₁₀	2.40	10.50
SF-2	Secondary Filter	PM ₁₀	1.50	6.60
SF-3	Secondary Filter	PM ₁₀	1.40	6.10
DF-1A	Dryer Filter Unit No. 1	PM ₁₀	0.10	0.20
DF-1B	Dryer Filter Unit No. 1	PM ₁₀	0.10	0.20
DF-2	Dryer Filter Units Nos. 2 & 3	PM ₁₀	0.20	0.80
7A	Dryer Stack Units Nos. 1 & 2	NO _x	41.60	182.30
		CO	739.00	3237.00
		PM ₁₀	25.00	109.50
		SO ₂	815.20	3175.10
		H ₂ S	3.60	14.00
		C ₂ H ₂	8.50	37.20
		COS	1.40	5.40
		CS ₂	5.00	19.40
12A	Dryer Stack Units No. 3	NO _x	20.00	87.60
		CO	420.00	1840.00
		PM ₁₀	11.80	51.90
		SO ₂	333.40	1297.90
		H ₂ S	1.50	5.70
		C ₂ H ₂	4.00	17.50
		COS	0.60	2.20
		CS ₂	2.00	7.90
13A	Incinerator + HRSG	NO _x	132.00	175.70
		CO	501.00	2194.40

Emission Sources - Maximum Allowable Emission Rates

		PM	17.76	74.42
		PM ₁₀	14.57	60.43
		PM _{2.5}	13.82	57.14
		SO ₂	2201.60	8571.70
		H ₂ SO ₄	12.70	52.21
		H ₂ S	8.70	34.00
		C ₂ H ₂	21.60	94.60
		COS	0.70	2.80
		CS ₂	4.60	17.90
		NH ₃	2.39	9.29
BHU1RRN	Unit 1 Rerun Bag Filter	PM ₁₀	0.26	1.12
		PM _{2.5}	0.26	1.12
BHU2SHIP	Unit 2 Rerun Bag Filter	PM ₁₀	0.18	0.81
		PM _{2.5}	0.18	0.81
BHVACBAG	Vacuum Bag Filter	PM ₁₀	0.03	0.15
		PM _{2.5}	0.03	0.15
OIL SAMPLE	Carbon Black Oil Feedstock Sampling	VOC	0.01	0.01
BLACK SAMPLE	In-situ Carbon Black Sampling	PM	0.02	0.02
		PM ₁₀	0.01	0.01
		PM _{2.5}	0.01	0.01
SCR FUG	SCR Fugitives (6)	NH ₃	0.19	0.84
TG FUG	Tail Gas Fugitive	CO	8.85	35.23
		SO ₂	<0.01	<0.01
		H ₂ S	0.06	0.26
		HCN	0.02	0.07
		CS ₂	0.02	0.07
		COS	0.01	0.04
CB FUG	Carbon Black Fugitive	PM	0.43	1.73
		PM ₁₀	0.02	0.06

Emission Sources - Maximum Allowable Emission Rates

		PM _{2.5}	<0.01	<0.01
Maintenance, Startup, and Shutdown Emissions				
Flare-1	Flare 1 (5)	NO _x	8.30	3.30
		CO	103.30	40.90
		PM ₁₀	1.90	0.70
		SO ₂	595.00	236.00
		H ₂ S	1.50	0.60
		C ₂ H ₂	5.70	2.30
		COS	0.51	0.20
		CS ₂	1.50	0.60
Flare-2	Flare 2 (5)	NO _x	6.70	2.70
		CO	78.30	31.00
		PM ₁₀	1.40	0.60
		SO ₂	477.00	189.00
		H ₂ S	1.20	0.50
		C ₂ H ₂	4.10	1.60
		COS	0.50	0.20
		CS ₂	1.20	0.50
Flare-3	Flare 3 (5)	NO _x	5.60	2.20
		CO	69.30	27.40
		PM ₁₀	1.20	0.50
		SO ₂	449.00	178.00
		H ₂ S	1.20	0.50
		C ₂ H ₂	2.70	1.10
		COS	0.40	0.20
		CS ₂	1.20	0.50
13A	Incinerator Stack MSS	NO _x	10.00	0.35
		CO	8.40	0.29
		VOC	0.55	0.02

Emission Sources - Maximum Allowable Emission Rates

		PM	0.93	0.04
		PM ₁₀	0.76	0.03
		PM _{2.5}	0.76	0.03
		SO ₂	0.06	0.01
7A/12A	MSS Cap for Dryers 7A & 12A	NO _x	0.21	0.01
		CO	0.20	0.01
		VOC	0.02	0.01
		PM ₁₀	0.02	0.01
		PM _{2.5}	0.02	0.01
		SO ₂	0.01	0.01
RVS	Cap for the 13 Reactor Vents	NO _x	2.50	8.31
		CO	2.10	6.98
		VOC	0.14	0.46
		PM ₁₀	0.192	0.63
		PM _{2.5}	0.192	0.63
		SO ₂	0.02	0.05
CanMSS	Solvent/Aerosol Can Usage >64 oz./day	VOC	3.38	1.80
ORIFICE	Orifice Changeout	VOC	0.01	0.02
REFRACTORY	Recasting furnace refractory	PM	0.03	0.01
		PM ₁₀	0.02	0.01
		PM _{2.5}	0.02	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) NO_x - total oxides of nitrogen
CO - carbon monoxide
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
PM - total particulate matter, suspended in the atmosphere, including PM₁₀ and PM_{2.5},
PM₁₀ - total 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
SO₂ - sulfur dioxide
H₂SO₄ - sulfuric acid
H₂S - hydrogen sulfide
C₂H₂ - acetylene (ethyne)
COS - carbonyl sulfide
CS₂ - carbon disulfide

Emission Sources - Maximum Allowable Emission Rates

NH₃ - ammonia
HCN - hydrogen cyanide
MSS - maintenance, startup, and shutdown

- (4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.
- (5) Only the MSS emissions due to the boiler or steam turbine (or associated equipment and ductwork) which is less than or equal to these flare maximum allowable emission rates are authorized. MSS emissions from the flares due to the failure of a process, process equipment, or pollution control equipment to operate in a normal or usual manner are not authorized by this permit. **(8/11)**
- (6) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.

Date: November 23, 2021