

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Numbers 8780 and PSD-TX-416M1

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. 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 *	
			lb/hr	TPY**
E-6B	Waste Heat Boiler	PM ₁₀	24.34	***
		SO ₂	2073.60	***
		NO _x	169.78	***
		VOC	24.89	***
		CO	853.69	***
		H ₂ S	18.73	***
		COS	4.94	***
		CS ₂	7.39	***
		HCN	1.54	***
		Al	0.67	***
		CL	0.87	***
E-40HT	B-4 Pre-Heater	PM ₁₀	2.25	***
		SO ₂	192.08	***
		NO _x	15.73	***
		VOC	2.31	***
		CO	79.08	***
		H ₂ S	1.73	***
		COS	0.46	***
		CS ₂	0.68	***
		HCN	0.14	***
		Al	0.06	***
		Cl	0.08	***

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			<u>lb/hr</u>	<u>TPY**</u>

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**
E-10FL	Flare	PM ₁₀	9.13	***
		SO ₂	777.60	***
		NO _x	62.82	***
		VOC	9.33	***
		CO	320.13	***
		H ₂ S	7.02	***
		COS	1.85	***
		CS ₂	2.77	***
		HCN	0.58	***
		Al	0.25	***
		Cl	0.33	***
E-20FL	Flare	PM ₁₀	9.13	***
		SO ₂	777.60	***
		NO _x	62.82	***
		VOC	9.33	***
		CO	320.13	***
		H ₂ S	7.02	***
		COS	1.85	***
		CS ₂	2.77	***
		HCN	0.58	***
		Al	0.25	***
		Cl	0.33	***
E-40FL	Flare	PM ₁₀	9.13	***
		SO ₂	777.60	***
		NO _x	62.82	***
		VOC	9.33	***
		CO	320.13	***
		H ₂ S	7.02	***
		COS	1.85	***
		CS ₂	2.77	***
		HCN	0.58	***
		Al	0.25	***
		Cl	0.33	***

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**
***	Combined Sources (5)	PM ₁₀ (PSD)		78.44
		SO ₂ (PSD)		8476.88
		NO _x (PSD)		688.14
		VOC	101.07	
		CO	3577.04	
		H ₂ S	76.56	
		COS	20.19	
		CS ₂	30.20	
		HCN	6.27	
		Al	1.93	
		Cl	2.50	
E-10D/E-11D	B-1 Dryers	PM ₁₀	0.30	1.30
		SO ₂	0.02	0.10
		NO _x	3.80	16.64
		VOC	0.21	0.94
		CO	3.27	14.34
E-20D/E-21D	B-2 Dryers	PM ₁₀	0.30	1.30
		SO ₂	0.02	0.10
		NO _x	3.80	16.64
		VOC	0.21	0.94
		CO	3.27	14.34
E-40D/E-41D	B-4 Dryers	PM ₁₀	0.30	1.30
		SO ₂	0.02	0.10
		NO _x	3.80	16.64
		VOC	0.21	0.94
		CO	3.27	14.34
E-10DF, E-11DF	B-1 Dryer Bag Filter	PM ₁₀	1.54	6.76
		SO ₂	<0.01	0.01
		NO _x	0.38	1.66
		VOC	2.87	12.58
		CO	0.33	1.43

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			lb/hr	TPY**
E-20DF, E-21DF	B-2 Dryer Bag Filter	PM ₁₀	1.54	6.76
		SO ₂	<0.01	0.01
		NO _x	0.38	1.66
		VOC	3.19	13.97
		CO	0.33	1.43
E-41P, E-41DF	B-4 Dryer Bag Filter	PM ₁₀	1.54	6.76
		SO ₂	<0.01	0.01
		NO _x	0.38	1.66
		VOC	2.87	12.58
		CO	0.33	1.43
E-10CU	B-1 Clean Up Bag Filter	PM ₁₀	0.51	2.25
E-20CU	B-2 Clean Up Bag Filter	PM ₁₀	0.51	2.25
E-40CU	B-4 Clean Up Bag Filter	PM ₁₀	0.51	2.25
E-1VF	Furnace Vacuum Bag Filter	PM ₁₀	0.38	1.65
E-2VF	Furnace Vacuum Bag Filter	PM ₁₀	0.43	1.88
FURN-FUG	Furnace Area Fugitives	PM ₁₀	3.33	14.60
		VOC	1.29	5.64
E-50R	Unit T1 Reactor	PM ₁₀	7.86	20.04
		SO ₂	0.69	3.01
		NO _x	5.80	25.40
		CO	12.50	54.75
E-51R	Unit T1 Reactor	PM ₁₀	7.86	20.04
		SO ₂	0.69	3.01
		NO _x	5.80	25.40
		CO	12.50	54.75

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			lb/hr	TPY**
E-52R	Unit T2 Reactor	PM ₁₀	7.86	20.04
		SO ₂	0.69	3.01
		NO _x	5.80	25.40
		CO	12.50	54.75
E-53R	Unit T2 Reactor	PM ₁₀	7.86	20.04
		SO ₂	0.69	3.01
		NO _x	5.80	25.40
		CO	12.50	54.75
E-53P	TPE Bag Filter	PM ₁₀	1.30	5.69
		SO ₂	2.75	12.04
		NO _x	23.20	101.62
		CO	50.00	219.00
E-5B	Thermal Boiler	PM ₁₀	0.12	0.55
		SO ₂	0.01	0.04
		NO _x	1.64	7.19
		CO	1.38	6.04
		VOC	0.09	0.40
E-50DH	Thermal Dehumidifier Reactor No. 1 and No. 2	CO	2.94	12.89
E-51P	Thermal Bag Filter Screw Vent Filter	PM ₁₀	0.02	0.08
E-52P	Thermal Bag Filter Screw Vent Filter	PM ₁₀	0.02	0.08
E-3VF	Thermal Product Storage/ Loading Bag Filter	PM ₁₀	0.86	3.75
E-4VF	Thermal Cleanup Bag Filter	PM ₁₀	0.09	0.38

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E-5VF	Thermal Cleanup Bag Filter	PM ₁₀	0.09	0.38
THERM-FUG	Thermal Area Fugitives	PM ₁₀	0.58	2.56
E-10T	Oil Storage Tank No. 1	VOC	0.23	0.53
E-11T	Oil Storage Tank No. 2	VOC	0.17	0.35
E-12T	East Day Tank	VOC	0.02	0.05
E-13T	West Day Tank	VOC	0.02	0.05
E-20T	Day Tank No. 3	VOC	0.02	0.05
E-21T	Day Tank No. 4	VOC	0.02	0.06
E-22T	Day Tank No. 5	VOC	0.02	0.06
Oil-Fug	Oil Storage Fugitives	VOC	0.25	1.10

(1) Emission point identification - either specific equipment designation or emission point number from a plot plan.

(2) Specific point source names. For fugitive sources, use an 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

PM₁₀ - particulate matter (PM) equal to or less than 10 microns in diameter. Where PM is not listed, it shall

be assumed that no particulate matter greater than 10 microns is emitted.

CO - carbon monoxide

SO₂ - sulfur dioxide

H₂S - hydrogen sulfide

COS - carbonyl sulfide

CS₂ - carbon disulfide

HCN - hydrogen cyanide

Cl - chlorine

Al - aluminum

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- (4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
- (5) The total combined annual emissions of all sources combusting tail gas shall not exceed these allowable emission rates. The short-term emission rates for each source are listed separately.

* Emission rates are based on and the facilities are limited by the following maximum operating schedule:

_____ Hrs/day _____ Days/week _____ Weeks/year or 8,760 Hrs/year

** Compliance with annual emission limits is based on a rolling 12-month period.

Dated December 10, 2004