

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Numbers 7799 and PSD-TX-860

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**
EH28A	B-2101A Furnace	CO	10.24	31.52
		NO <sub>x</sub>	9.94	43.12
		PM <sub>10</sub>	0.93	2.85
		SO <sub>2</sub>	0.07	0.23
		VOC	0.67	2.06
EH28B	B-2101B Furnace	CO	10.24	31.52
		NO <sub>x</sub>	9.94	43.12
		PM <sub>10</sub>	0.93	2.85
		SO <sub>2</sub>	0.07	0.23
		VOC	0.67	2.06
EH29C	B-2101C Furnace	CO	10.24	31.52
		NO <sub>x</sub>	9.94	43.12
		PM <sub>10</sub>	0.93	2.85
		SO <sub>2</sub>	0.07	0.23
		VOC	0.67	2.06
EH29D	B-2101D Furnace	CO	10.24	31.52
		NO <sub>x</sub>	9.94	43.12
		PM <sub>10</sub>	0.93	2.85
		SO <sub>2</sub>	0.07	0.23
		VOC	0.67	2.06
EH30E	B-2101E Furnace	CO	10.24	31.52
		NO <sub>x</sub>	9.94	43.12
		PM <sub>10</sub>	0.93	2.85
		SO <sub>2</sub>	0.07	0.23
		VOC	0.67	2.06

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>	
			lb/hr	TPY**
EH30F	B-2101F Furnace	CO	10.24	31.52
		NO <sub>x</sub>	9.94	43.12
		PM <sub>10</sub>	0.93	2.85
		SO <sub>2</sub>	0.07	0.23
		VOC	0.67	2.06
EH41	L.P. Flare (6)	CO		43.80
		H <sub>2</sub> S		0.01
		NO <sub>x</sub>		8.60
		SO <sub>2</sub>		0.37
		VOC		49.16
EH42	H.P. Flare (6)	CO		79.20
		H <sub>2</sub> S		0.01
		NO <sub>x</sub>		11.10
		SO <sub>2</sub>		0.33
		VOC		116.60
EH41/EH42	L.P. Flare/H.P. Flare Caps (6)	CO	234.26	
		H <sub>2</sub> S	0.35	
		NO <sub>x</sub>	33.98	
		SO <sub>2</sub>	32.92	
		VOC	258.57	
EH47	B-6901 A, B 1, and 500 psia Boilers	CO	8.40	20.80
		NO <sub>x</sub>	99.70	317.00
		PM <sub>10</sub>	5.00	12.20
		SO <sub>2</sub>	0.50	1.40
		VOC	1.50	3.60
EH48	B-6101A Furnace	CO	13.99	39.30
		NO <sub>x</sub>	13.59	53.77
		PM <sub>10</sub>	1.27	3.56
		SO <sub>2</sub>	0.10	0.40
		VOC	0.92	2.57
EH49	B-6101B Furnace	CO	13.99	39.30

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			lb/hr	TPY**
		NO <sub>x</sub>	13.59	53.77
		PM <sub>10</sub>	1.27	3.56
		SO <sub>2</sub>	0.10	0.40
		VOC	0.92	2.57
EH50	B-6101C Furnace	CO	13.99	39.30
		NO <sub>x</sub>	13.59	53.77
		PM <sub>10</sub>	1.27	3.56
		SO <sub>2</sub>	0.10	0.40
		VOC	0.92	2.57
EH51	B-6151A Furnace	CO	11.94	35.50
		NO <sub>x</sub>	11.60	48.57
		PM <sub>10</sub>	1.08	3.21
		SO <sub>2</sub>	0.09	0.36
		VOC	0.78	2.32
EH52	B-6151B Furnace	CO	11.94	35.50
		NO <sub>x</sub>	11.60	48.57
		PM <sub>10</sub>	1.08	3.21
		SO <sub>2</sub>	0.09	0.36
		VOC	0.78	2.32
EH54	B-6101D Furnace	CO	13.99	39.30
		NO <sub>x</sub>	13.59	53.77
		PM <sub>10</sub>	1.27	3.56
		SO <sub>2</sub>	0.10	0.40
		VOC	0.92	2.57
EH6301A	B-6301A Furnace	CO	12.73	44.59
		NO <sub>x</sub>	19.09	66.86
		PM <sub>10</sub>	1.59	5.57
		SO <sub>2</sub>	0.19	0.67
		VOC	0.45	1.11
EH6301B	B-6301B Furnace	CO	12.73	44.59

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>	
			lb/hr	TPY**
		NO <sub>x</sub>	19.09	66.86
		PM <sub>10</sub>	1.59	5.57
		SO <sub>2</sub>	0.19	0.67
		VOC	0.45	1.11
EM1	Cooling Tower No. 1	VOC	4.20	18.40
EM3	Cooling Tower No. 3	VOC	1.05	4.60
EM26	Cooling Tower No. 4	VOC	0.55	2.41
EM5	Cooling Tower No. 5	VOC	1.01	4.42
EM23	Decoking Vent B-6101A, B	CO	11.67	1.40
		PM <sub>10</sub>	6.67	0.80
		SO <sub>2</sub>	0.33	0.04
EM24	Decoking Vent B-6101C, D	CO	11.67	1.40
		PM <sub>10</sub>	6.67	0.80
		SO <sub>2</sub>	0.33	0.04
EM25	Decoking Vent B-6151A, B	CO	10.00	1.20
		PM <sub>10</sub>	5.83	0.70
		SO <sub>2</sub>	0.33	0.04
EM27	Decoking Vent B-2101A, B	CO	54.00	2.40
		PM <sub>10</sub>	31.00	1.40
		SO <sub>2</sub>	1.60	0.07
EM28	Decoking Vent B-2101C, D	CO	54.00	2.40
		PM <sub>10</sub>	31.00	1.40
		SO <sub>2</sub>	1.60	0.07
EM29	Decoking Vent B-2101E	CO	54.00	1.20
		PM <sub>10</sub>	31.00	0.70

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			<u>Emission Rates *</u>	
			lb/hr	TPY**
		SO <sub>2</sub>	1.60	0.04
EM30	Decoking Vent B-2101F	CO	54.00	1.20
		PM <sub>10</sub>	31.00	0.70
		SO <sub>2</sub>	1.60	0.04
EM31	USC I Carbon Canisters	VOC	0.64	2.78
EM32	USC II Carbon Canisters	VOC	0.39	1.73
EM33	Ethylene Unit Carbon Canisters	VOC (5)	0.49	2.16
EM34	Ethylene Unit Carbon Canisters	VOC (5)	0.49	
EM6301	Decoking Vent B-6301A, B	CO	27.06	2.41
		PM <sub>10</sub>	0.72	0.06
		SO <sub>2</sub>	0.81	0.07
EF1	Ethylene Unit Fugitives (4)	VOC	9.86	43.20
EF6	Rail Loading Fugitives (4)	VOC	0.67	2.95
EF7	USC II Fugitives (4)	VOC	6.00	26.28
EF8	USC-I Fugitives (4)	VOC	4.23	18.54
EF12	RGCB Fugitives (4)	VOC	4.55	19.94
EF14	Tank 36 Area Fugitives (4)	VOC	1.23	5.41
EF16	Off-Site Flare Fugitives (4)	VOC	0.63	2.74
EF18	P/P Splitter Fugitives (4)	VOC	1.24	5.43

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			lb/hr	TPY**

- (1) Emission point identification - either specific equipment designation or emission point number (EPN) from a plot plan.
- (2) Specific point source names. For fugitive sources use area name or fugitive source name.
- (3) CO - carbon monoxide  
 NO<sub>x</sub> - total oxides of nitrogen  
 PM<sub>10</sub> - 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.  
 SO<sub>2</sub> - sulfur dioxide  
 H<sub>2</sub>S - hydrogen sulfide  
 VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1.
- (4) Emission rate is an estimate and compliance is demonstrated by meeting the requirements of the applicable special conditions and permit application representations.
- (5) The total annual combined emission rate from EPNs EM33 and EM34 shall not exceed 2.16 tons per year.
- (6) The total hourly combined emissions rates from the Flares EH41 and EH42 shall not exceed the maximum allowable rates.

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

52 Weeks/year and 7 Days/week and 24 Hrs/day

\*\* Compliance with the annual limits shall be on a 12-month rolling basis.

Dated January 30, 2008