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 |
| | | $NO_x$ | 9.94 | 43.12 |
| | | $PM_{10}$ | 0.93 | 2.85 |
| | | $SO_2$ | 0.07 | 0.23 |
| | | VOC | 0.67 | 2.06 |
| EH28B | B-2101B Furnace | CO | 10.24 | 31.52 |
| | | $NO_x$ | 9.94 | 43.12 |
| | | $PM_{10}$ | 0.93 | 2.85 |
| | | $SO_2$ | 0.07 | 0.23 |
| | | VOC | 0.67 | 2.06 |
| EH29C | B-2101CFurnace | CO | 10.24 | 31.52 |
| | | $NO_x$ | 9.94 | 43.12 |
| | | $PM_{10}$ | 0.93 | 2.85 |
| | | $SO_2$ | 0.07 | 0.23 |
| | | VOC | 0.67 | 2.06 |
| EH29D | B-2101D Furnace | CO | 10.24 | 31.52 |
| | | $NO_x$ | 9.94 | 43.12 |
| | | $PM_{10}$ | 0.93 | 2.85 |
| | | $SO_2$ | 0.07 | 0.23 |
| | | VOC | 0.67 | 2.06 |
| EH30E | B-2101E Furnace | CO | 10.24 | 31.52 |
| | | $NO_x$ | 9.94 | 43.12 |
| | | $PM_{10}$ | 0.93 | 2.85 |
| | | $SO_2$ | 0.07 | 0.23 |
| | | VOC | 0.67 | 2.06 |

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | Emission Rates * lb/hr | TPY** |
|---|---|---|---|---|
| EH30F | B-2101F Furnace | CO | 10.24 | 31.52 |
| | | $NO_x$ | 9.94 | 43.12 |
| | | $PM_{10}$ | 0.93 | 2.85 |
| | | $SO_2$ | 0.07 | 0.23 |
| | | VOC | 0.67 | 2.06 |
| EH41 | L.P. Flare (6) | CO | | 43.80 |
| | | $H_2S$ | | 0.01 |
| | | $NO_x$ | | 8.60 |
| | | $SO_2$ | | 0.37 |
| | | VOC | | 49.16 |
| EH42 | H.P. Flare (6) | CO | | 79.20 |
| | | $H_2S$ | | 0.01 |
| | | $NO_x$ | | 11.10 |
| | | $SO_2$ | | 0.33 |
| | | VOC | | 116.60 |
| EH41/EH42 | L.P. Flare/H.P. Flare Caps (6) | CO | 245.26 | |
| | | $H_2S$ | 0.35 | |
| | | $NO_x$ | 33.98 | |
| | | $SO_2$ | 32.92 | |
| | | VOC | 258.57 | |
| EH47 | B-6901 A, B 1, and 500 psia Boilers | CO | 8.40 | 20.80 |
| | | $NO_x$ | 99.70 | 317.00 |
| | | $PM_{10}$ | 5.00 | 12.20 |
| | | $SO_2$ | 0.50 | 1.40 |
| | | VOC | 1.50 | 3.60 |
| EH48 | B-6101A Furnace | CO | 13.99 | 39.30 |
| | | $NO_x$ | 13.59 | 53.77 |
| | | $PM_{10}$ | 1.27 | 3.56 |
| | | $SO_2$ | 0.10 | 0.40 |
| | | VOC | 0.92 | 2.57 |

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | Emission Rates * lb/hr | TPY** |
|---|---|---|---|---|
| EH49 | B-6101B Furnace | CO | 13.99 | 39.30 |
| | | $NO_x$ | 13.59 | 53.77 |
| | | $PM_{10}$ | 1.27 | 3.56 |
| | | $SO_2$ | 0.10 | 0.40 |
| | | VOC | 0.92 | 2.57 |
| EH50 | B-6101C Furnace | CO | 13.99 | 39.30 |
| | | $NO_x$ | 13.59 | 53.77 |
| | | $PM_{10}$ | 1.27 | 3.56 |
| | | $SO_2$ | 0.10 | 0.40 |
| | | VOC | 0.92 | 2.57 |
| EH51 | B-6151A Furnace | CO | 11.94 | 35.50 |
| | | $NO_x$ | 11.60 | 48.57 |
| | | $PM_{10}$ | 1.08 | 3.21 |
| | | $SO_2$ | 0.09 | 0.36 |
| | | VOC | 0.78 | 2.32 |
| EH52 | B-6151B Furnace | CO | 11.94 | 35.50 |
| | | $NO_x$ | 11.60 | 48.57 |
| | | $PM_{10}$ | 1.08 | 3.21 |
| | | $SO_2$ | 0.09 | 0.36 |
| | | VOC | 0.78 | 2.32 |
| EH54 | B-6101D Furnace | CO | 13.99 | 39.30 |
| | | $NO_x$ | 13.59 | 53.77 |
| | | $PM_{10}$ | 1.27 | 3.56 |
| | | $SO_2$ | 0.10 | 0.40 |
| | | VOC | 0.92 | 2.57 |
| EH6301A | B-6301A Furnace | CO | 12.73 | 44.59 |
| | | $NO_x$ | 19.09 | 66.86 |
| | | $PM_{10}$ | 1.59 | 5.57 |
| | | $SO_2$ | 0.19 | 0.67 |
| | | VOC | 0.45 | 1.11 |

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | Emission Rates * lb/hr | TPY** |
|---|---|---|---|---|
| EH6301B | B-6301B Furnace | CO | 12.73 | 44.59 |
| | | $NO_x$ | 19.09 | 66.86 |
| | | $PM_{10}$ | 1.59 | 5.57 |
| | | $SO_2$ | 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 |
| EM23 | B-6101A and B Decoking Vent (7) | CO | 1017.99 | 12.55 |
| | | PM (8) | 56.62 | 0.80 |
| | | $PM_{10}$ | 22.08 | 0.46 |
| | | $SO_2$ | 0.11 | 0.01 |
| EM24 | B-6101 C and D Decoking Vent (7) | CO | 1017.99 | 12.55 |
| | | PM (8) | 56.62 | 0.80 |
| | | $PM_{10}$ | 22.08 | 0.46 |
| | | $SO_2$ | 0.11 | 0.01 |
| EM25 | B-6151 A and B Decoking Vent (7) | CO | 856.94 | 10.38 |
| | | PM (8) | 45.70 | 0.66 |
| | | $PM_{10}$ | 17.82 | 0.38 |
| | | $SO_2$ | 0.09 | 0.01 |
| EM27 | B-2101 A, B, and C Decoking Vent (7) | CO | 1285.42 | 16.65 |
| | | PM (8) | 69.44 | 1.03 |
| | | $PM_{10}$ | 27.08 | 0.57 |
| | | $SO_2$ | 0.15 | 0.01 |

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | Emission Rates * lb/hr | TPY** |
|---|---|---|---|---|

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | Emission Rates * lb/hr | TPY** |
|---|---|---|---|---|
| EM30 | B-2101 D, E, and F Decoking Vent (7) | CO | 1285.42 | 16.65 |
| | | PM (8) | 69.44 | 1.03 |
| | | $PM_{10}$ | 27.08 | 0.57 |
| | | $SO_2$ | 0.15 | 0.01 |
| 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 | B-6301 A and B Decoking Vent (7) | CO | 2120.82 | 42.55 |
| | | PM (8) | 115.74 | 2.65 |
| | | $PM_{10}$ | 45.14 | 1.46 |
| | | $SO_2$ | 0.23 | 0.01 |
| EF1 | Ethylene Unit Fugitives (4) | VOC | 9.92 | 43.45 |
| EF6 | Rail Loading Fugitives (4) | VOC | 0.67 | 2.95 |
| EF7 | USC II Fugitives (4) | VOC | 6.03 | 26.43 |
| EF8 | USC-I Fugitives (4) | VOC | 4.35 | 19.05 |
| 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 | |

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

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(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
$NO_x$ - total oxides of nitrogen
PM - particulate matter (PM) suspended in the atmosphere, including $PM_{10}$
$PM_{10}$ - PM equal to or less than 10 microns in diameter.
$SO_2$ - sulfur dioxide
$H_2S$ - 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.
(7) Planned maintenance, startup and shutdown activities and emissions from each decoking EPN.
(8) PM and $PM_{10}$ emissions emitted from this EPN.

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

24 Hrs/day 7 days/week and 52 weeks/year

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

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Dated ____