

# EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 49156

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<br>Point No. (1) | Source<br>Name (2)      | Air Contaminant<br>Name (3) | Emission Rates * |       |
|---------------------------|-------------------------|-----------------------------|------------------|-------|
|                           |                         |                             | lb/hr            | TPY** |
| 10.1-0-0                  | Unit 10.1 Fugitives (4) | VOC                         | 9.43             | 41.32 |
| 10.2-0-0                  | Unit 10.2 Fugitives (4) | VOC                         | 5.35             | 23.45 |
| 10.3-0-0                  | Unit 10.3 Fugitives (4) | VOC                         | 6.28             | 27.85 |
| 21-0-0                    | Unit 21 Fugitives (4)   | VOC                         | 2.94             | 12.88 |
| 54-22-6                   | Cooling Tower CT-6      | VOC                         | 1.03             | 4.51  |
|                           |                         | PM 0.12                     | 0.51             |       |
| 54-22-7                   | Cooling Tower CT-7      | VOC                         | 1.16             | 5.09  |
|                           |                         | PM 0.13                     | 0.57             |       |
| 54-22-9                   | Cooling Tower CT-9      | VOC                         | 1.41             | 6.18  |
|                           |                         | PM 0.16                     | 0.69             |       |
| 54-22-12                  | Cooling Tower CT-12     | VOC                         | 0.50             | 2.21  |
|                           |                         | PM 0.01                     | 0.01             |       |
| 56-61-4                   | Flare No. 4             | VOC                         | 38.14            | 6.22  |
|                           |                         | NO <sub>x</sub> 3.72        | 0.84             |       |
|                           |                         | CO 26.90                    | 4.37             |       |
|                           |                         | SO <sub>2</sub> 1.31        | 5.72             |       |
|                           |                         | H <sub>2</sub> S 0.01       | 0.06             |       |

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| Emission<br>Point No. (1) | Source<br>Name (2)                                       | Air Contaminant<br>Name (3)        | Emission Rates * |        |
|---------------------------|--|------------------------------------|------------------|--------|
|                           |  |                                    | lb/hr            | TPY**  |
| 56-61-8                   | Flare No. 8  | VOC                                | 0.53             | 2.34   |
|                           |  | NO <sub>x</sub>                    | 0.07             |        |
|                           |  | CO                                 | 0.37             |        |
|                           |  | SO <sub>2</sub>                    | 1.95             |        |
|                           |  | H <sub>2</sub> S                   | 0.02             |        |
|                           |  | Mercaptans                         | 0.01             | 0.02   |
| 56-61-9                   | Flare No. 9  | VOC                                | 0.53             | 2.34   |
|                           |  | NO <sub>x</sub>                    | 0.07             |        |
|                           |  | CO                                 | 0.37             |        |
|                           |  | SO <sub>2</sub>                    | 0.08             |        |
|                           |  | H <sub>2</sub> S                   | 0.01             |        |
|                           |  |                                    |                  |        |
| 56-61-10                  | Flare No. 10   | VOC                                | 34.80            | 6.42   |
|                           |  | NO <sub>x</sub>                    | 3.39             |        |
|                           |  | CO                                 | 24.46            |        |
|                           |  | SO <sub>2</sub>                    | 0.37             |        |
|                           |  | H <sub>2</sub> S                   | 0.01             |        |
|                           |  |                                    |                  |        |
| 22-7-1                    | Boiler No. 10<br>(Boiler and Turbine<br>Combined) (5)    | VOC                                | 3.62             | 15.84  |
|                           |  | NO <sub>x</sub> (prior to control) | 72.53            | 317.68 |
|                           |  | NO <sub>x</sub> (after control)    | 30.79            | 134.80 |
|                           |  | CO                                 | 38.39            | 168.20 |
|                           |  | SO <sub>2</sub>                    | 11.29            | 49.09  |
|                           |  | PM                                 | 3.92             | 17.17  |
| 22-16-120                 | Propylene Compressor<br>Turbine<br>(operating alone) (6) | VOC                                | 1.38             | 0.50   |
|                           |  | NO <sub>x</sub> (prior to control) | 26.88            | 9.68   |
|                           |  | NO <sub>x</sub> (after control)    | 14.30            | 5.15   |
|                           |  | CO                                 | 4.21             | 1.52   |
|                           |  | SO <sub>2</sub>                    | 0.43             | 0.15   |
|                           |  | PM                                 | 0.83             | 0.30   |

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- (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  
PM - particulate matter, suspended in the atmosphere, including PM<sub>10</sub>.  
PM<sub>10</sub> - particulate matter 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.  
NO<sub>x</sub> - total oxides of nitrogen  
CO - carbon monoxide  
SO<sub>2</sub> - sulfur dioxide  
H<sub>2</sub>S - hydrogen sulfide
- (4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
- (5) Boiler No. 10 shall be retrofitted with NO<sub>x</sub> controls that meet the requirements of permit Special Condition No. 7 no later than March 31, 2007. The "after control" emission rates apply after the NO<sub>x</sub> controls are installed, but not later than March 31, 2007.
- (6) The propylene compressor turbine shall start using NO<sub>x</sub> controls that meet the requirements of permit Special Condition No. 8 no later than March 31, 2007. The "after control" emission rates apply after the installation of NO<sub>x</sub> controls, but not later than March 31, 2007.

\* 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\_\_\_\_\_