

# Emission Sources - Maximum Allowable Emission Rates

Permit Number 5452

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) |
| B-08                   | Boiler-Normal Operations  | CO                       | 6.49           | 28.41   |
|                        |                           | NO <sub>x</sub>          | 4.10           | 17.96   |
|                        |                           | PM                       | 1.59           | 6.96    |
|                        |                           | PM <sub>10</sub>         | 1.59           | 6.96    |
|                        |                           | PM <sub>2.5</sub>        | 1.59           | 6.96    |
|                        |                           | SO <sub>2</sub>          | 0.12           | 0.53    |
|                        |                           | VOC                      | 1.15           | 5.04    |
| B-09                   | Boiler-Normal Operations  | CO                       | 7.95           | 34.82   |
|                        |                           | NO <sub>x</sub>          | 4.30           | 18.83   |
|                        |                           | PM                       | 1.60           | 7.02    |
|                        |                           | PM <sub>10</sub>         | 1.60           | 7.02    |
|                        |                           | PM <sub>2.5</sub>        | 1.60           | 7.02    |
|                        |                           | SO <sub>2</sub>          | 0.13           | 0.55    |
|                        |                           | VOC                      | 1.16           | 5.08    |
| B-08                   | Boiler-MSS operations (8) | CO                       | 12.97          | 0.93    |
|                        |                           | NO <sub>x</sub>          | 12.30          | 0.89    |

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| Emission Point No. (1) | Source Name (2)                           | Air Contaminant Name (3) | Emission Rates |         |
|------------------------|-------------------------------------------|--------------------------|----------------|---------|
|                        |                                           |                          | lbs/hour       | TPY (4) |
| F-B                    | Furnace B (8)                             | CO                       | 7.27           | 31.85   |
|                        |                                           | NO <sub>x</sub>          | 5.23           | 22.92   |
|                        |                                           | PM                       | 1.36           | 5.98    |
|                        |                                           | PM <sub>10</sub>         | 1.36           | 5.98    |
|                        |                                           | PM <sub>2.5</sub>        | 1.36           | 5.98    |
|                        |                                           | SO <sub>2</sub>          | 0.11           | 0.47    |
|                        |                                           | VOC                      | 0.99           | 4.33    |
| F-CD                   | Hydrotreater Oil and Feed Heaters (6) (8) | CO                       | 7.29           | 31.93   |
|                        |                                           | NO <sub>x</sub>          | 4.59           | 20.10   |
|                        |                                           | PM                       | 1.05           | 4.59    |
|                        |                                           | PM <sub>10</sub>         | 1.05           | 4.59    |
|                        |                                           | PM <sub>2.5</sub>        | 1.05           | 4.59    |
|                        |                                           | SO <sub>2</sub>          | 0.08           | 0.36    |
|                        |                                           | VOC                      | 0.76           | 3.32    |
| GLY-1                  | Glycol Unit Vent                          | VOC                      | 1.41           | 6.16    |
| FLR-LSNG               | Flare Emissions for normal operations     | CO                       | 0.57           | 2.51    |
|                        |                                           | H <sub>2</sub> S         | 0.01           | 0.01    |
|                        |                                           | NO <sub>x</sub>          | 0.03           | 1.26    |
|                        |                                           | SO <sub>2</sub>          | 0.01           | 0.01    |
|                        |                                           | VOC                      | 0.07           | 0.29    |

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|-----------|------------------------------------------|-------------------|------|-------|
| FLR-LSNG  | Flare Emissions for MSS operations (7)   | CO                | 4.07 | 0.01  |
|           |                                          | H <sub>2</sub> S  | 0.01 | 0.01  |
|           |                                          | NO <sub>x</sub>   | 2.04 | 0.01  |
|           |                                          | SO <sub>2</sub>   | 0.01 | 0.01  |
|           |                                          | VOC               | 9.93 | 0.01  |
| LSNG-MSS  | LSNG Vessel Cleaning                     | VOC               | 4.94 | 0.01  |
|           |                                          | H <sub>2</sub> S  | 0.01 | 0.01  |
| FUG-FRAC  | Frac Plant Fugitives (5)                 | VOC               | 2.60 | 11.39 |
| FUG-IMP   | Imports Unit Fugitives (5)               | VOC               | 0.52 | 2.29  |
| FUG-HYDRO | Hydrotreater Unit Fugitives (5)          | H <sub>2</sub> S  | 0.01 | 0.01  |
|           |                                          | VOC               | 1.85 | 8.11  |
| FUG-C6    | Stabilizer Project Process Fugitives (5) | VOC               | 0.33 | 1.45  |
| FUG-FGRU  | FGRU Fugitives (5)                       | VOC               | 0.11 | 0.50  |
| FUG       | Fugitives (5)                            | VOC               | 0.04 | 0.16  |
| AU-3      | Amine Unit                               | VOC               | 0.33 | 1.45  |
|           |                                          | H <sub>2</sub> S  | 1.00 | 4.39  |
| F-04      | Hot Oil Heater                           | VOC               | 0.09 | 0.38  |
|           |                                          | NO <sub>x</sub>   | 0.72 | 3.16  |
|           |                                          | CO                | 5.34 | 23.40 |
|           |                                          | SO <sub>2</sub>   | 0.08 | 0.37  |
|           |                                          | PM                | 0.58 | 2.53  |
|           |                                          | PM <sub>10</sub>  | 0.58 | 2.53  |
|           |                                          | PM <sub>2.5</sub> | 0.58 | 2.53  |
|           |                                          | NH <sub>3</sub>   | 0.45 | 1.99  |
| F-04      | Hot Oil Heater MSS                       | NO <sub>x</sub>   | 2.63 | 0.09  |

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|             |                                     |                   |       |       |
|-------------|-------------------------------------|-------------------|-------|-------|
|             |                                     | CO                | 42.73 | 1.54  |
| F-05        | Hot Oil Heater                      | VOC               | 0.09  | 0.38  |
|             |                                     | NO <sub>x</sub>   | 0.72  | 3.16  |
|             |                                     | CO                | 5.34  | 23.40 |
|             |                                     | SO <sub>2</sub>   | 0.08  | 0.37  |
|             |                                     | PM                | 0.58  | 2.53  |
|             |                                     | PM <sub>10</sub>  | 0.58  | 2.53  |
|             |                                     | PM <sub>2.5</sub> | 0.58  | 2.53  |
|             |                                     | NH <sub>3</sub>   | 0.45  | 1.99  |
| F-05        | Hot Oil Heater MSS                  | NO <sub>x</sub>   | 2.63  | 0.09  |
|             |                                     | CO                | 42.73 | 1.54  |
| FUG-FRAC2   | Equipment Fugitives (5)             | VOC               | 0.92  | 4.02  |
| FUG-CT-8    | Cooling Tower 8                     | VOC               | 0.81  | 3.56  |
|             |                                     | PM                | 0.55  | 2.43  |
|             |                                     | PM <sub>10</sub>  | 0.17  | 0.74  |
|             |                                     | PM <sub>2.5</sub> | <0.01 | <0.01 |
| Shutdown    | Shutdown Emissions to Atmosphere    | VOC               | 10.52 | 0.22  |
| Maintenance | Maintenance Emissions to Atmosphere | VOC               | 1.15  | 0.02  |
| TK-1        | Ucarsol Storage Tank                | VOC               | 0.01  | 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) CO - carbon monoxide

H<sub>2</sub>S - hydrogen sulfide

NO<sub>x</sub> - total oxides of nitrogen

PM - total particulate matter, suspended in the atmosphere, including PM<sub>10</sub> and PM<sub>2.5</sub>

PM<sub>10</sub> - particulate matter equal to or less than 10 microns in diameter, including PM<sub>2.5</sub>

PM<sub>2.5</sub> - particulate matter equal to or less than 2.5 microns in diameter

SO<sub>2</sub> - sulfur dioxide

NH<sub>3</sub> - Ammonia

VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1

(4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.

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- (5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
- (6) The Hydrotreater Oil and Feed Heater Stack (EPN F-CD) is a combined stack for Heater F-C (97 MMBtu/hr) and Heater F-D (38 MMBtu/hr).
- (7) Planned maintenance, startup, and shutdown (MSS) activities and emissions are authorized from these facilities. The MSS emissions are based on one process vessel cleaned per rolling 12-month period.
- (8) Related MSS emissions are included. They are based on 1 event per month, and 12 hours per event, for a total of 144 hours per year for each combustion device.

Date: April 20, 2023