

# Emission Sources - Maximum Allowable Emission Rates

Permit Number 20057

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.<br>(1)                           | Source Name (2)            | Air Contaminant Name (3) | Emission Rates |         |
|   |                            |                          | lbs/hour       | TPY (4) |
| APPLICABLE TO BOTH DMTA OPERATION AND HMP OPERATION |                            |                          |                |         |
| K-1798  | Flare Stack                | PM                       | 0.01           | 0.01    |
|   |                            | VOC                      | 0.01           | 0.01    |
|   |                            | NO <sub>x</sub>          | 0.02           | 0.07    |
|   |                            | SO <sub>2</sub>          | 0.01           | 0.01    |
|   |                            | CO                       | 0.02           | 0.07    |
| WB-1769   | J-1765 WW Tank Scrubber    | VOC                      | 0.10           | 0.03    |
|   |                            | Formaldehyde             | 0.01           | 0.01    |
|   |                            | MEK                      | 0.01           | 0.01    |
|   |                            | MeOH                     | 0.01           | 0.01    |
| K-502C  | WB-502C Storage Tank       | VOC                      | 0.01           | 0.01    |
| PK-1901   | Cooling Tower (5)          | VOC                      | 0.40           | 1.76    |
| K-1970  | DMTA Generator             | VOC                      | 1.59           | 0.02    |
|   |                            | PM                       | 1.39           | 0.02    |
|   |                            | CO                       | 4.24           | 0.06    |
|   |                            | SO <sub>2</sub>          | 1.30           | 0.02    |
|   |                            | NO <sub>x</sub>          | 19.65          | 0.26    |
| S582F-1   | Tank Farm Fugitives (5)    | VOC                      | 0.07           | 0.29    |
|   |                            | Formaldehyde             | 0.01           | 0.03    |
|   |                            | MeOH                     | 0.01           | 0.03    |
|   |                            | HCl                      | 0.01           | 0.05    |
| S582F-2   | Process Unit Fugitives (5) | VOC                      | 0.91           | 3.98    |
|   |                            | Formaldehyde             | 0.02           | 0.07    |
|   |                            | MeOH                     | 0.09           | 0.39    |

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|   |                                     |                               |        |        |
|---|-------------------------------------|-------------------------------|--------|--------|
|   |                                     | HCl                           | 0.09   | 0.37   |
|   |                                     | Cl <sub>2</sub>               | 0.06   | 0.28   |
|   |                                     | H <sub>2</sub> O <sub>2</sub> | < 0.01 | 0.01   |
|   |                                     | H <sub>2</sub> S              | 0.05   | 0.22   |
| S582F-3   | Wastewater Fugitives (5)            | VOC                           | < 0.01 | 0.01   |
|   |                                     | Formaldehyde                  | < 0.01 | < 0.01 |
|   |                                     | MeOH                          | < 0.01 | 0.01   |
| DMTA OPERATION ONLY   |                                     |                               |        |        |
| K-1790  | Vent Stack                          | PM                            | 0.01   | 0.01   |
|   |                                     | VOC                           | 0.40   | 1.74   |
|   |                                     | NO <sub>x</sub>               | 2.06   | 9.05   |
|   |                                     | SO <sub>2</sub>               | 0.52   | 2.29   |
|   |                                     | CO                            | 0.05   | 0.23   |
|   |                                     | Cl <sub>2</sub>               | 0.01   | 0.09   |
|   |                                     | HCl                           | 0.10   | 0.44   |
|   |                                     | H <sub>2</sub> S              | 0.01   | 0.02   |
| D-1868  | HCl/Cl <sub>2</sub> Scrubber        | HCl                           | 0.01   | 0.01   |
| HMP OPERATION ONLY  |                                     |                               |        |        |
| K-1790  | Vent Stack                          | VOC                           | 0.49   | 0.93   |
|   |                                     | NO <sub>x</sub>               | 0.72   | 1.19   |
|   |                                     | SO <sub>2</sub>               | 0.011  | 0.013  |
|   |                                     | CO                            | 3.92   | 5.26   |
|   |                                     | PM                            | 0.02   | 0.017  |
|   |                                     | Formaldehyde                  | 0.02   | 0.03   |
|   |                                     | MEK                           | 0.01   | 0.01   |
|   |                                     | MeOH                          | 0.04   | 0.10   |
| D-1868  | HCl/Cl <sub>2</sub> Scrubber        | VOC                           | 0.01   | 0.01   |
| PLANNED MAINTENANCE, STARTUP, AND SHUTDOWN (MSS) EMISSION RATE LIMITS |                                     |                               |        |        |
| MSS-DMTA  | Maintenance, Start-Up and Shut-Down | VOC                           | 38.88  | 2.43   |

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|          |  |                  |      |      |
|----------|--|------------------|------|------|
| MSS-DMTA | Small and Large Equipment Purging (DMTA) | Cl <sub>2</sub>  |      |      |
|          | Filter Clearing (DMTA)                   | Cl <sub>2</sub>  |      |      |
|          | Maintenance, Start-Up and Shut-Down      | Cl <sub>2</sub>  | 4.50 | 0.10 |
| MSS-DMTA | Small and Large Equipment Purging (HMP)  | HCl              |      |      |
|          | Filter Clearing (HMP)                    | HCl              |      |      |
|          | Maintenance, Start-Up and Shut-Down      | HCl              | 1.87 | 0.04 |
| MSS-DMTA | Small and Large Equipment Purging (DMTA) | H <sub>2</sub> S |      |      |
|          | Maintenance, Start-Up and Shut-Down      | H <sub>2</sub> S | 0.01 | 0.01 |
| MSS-DMTA | Surface Coating (Aerosol)                | PM               |      |      |
|          | Maintenance, Start-Up and Shut-Down      | PM               | 0.06 | 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) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1  
NO<sub>x</sub> - total oxides of nitrogen  
SO<sub>2</sub> - sulfur dioxide  
PM - total particulate matter, suspended in the atmosphere, including PM<sub>10</sub> and PM<sub>2.5</sub>, as represented  
CO - carbon monoxide  
Cl<sub>2</sub> - chlorine  
HCl - hydrochloric acid mist  
H<sub>2</sub>S - hydrogen sulfide  
MeOH - methyl alcohol
- (4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
- (5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.

Date: March 16, 2018