

# EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Numbers 1302 and PSDTX1085

[409379] Draft 6 !!

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 ** |
| PH2                       | Start-Up Flare<br>Interim until 12/31/2011                                      | VOC                         | 577.88           | 15.60  |
|                           |   | CO                          | 322.44           | 16.82  |
|                           |   | NO <sub>x</sub>             | 60.74            | 4.86   |
|                           |   | NH <sub>3</sub>             | 393.16           | 25.02  |
|                           |   | SO <sub>2</sub>             | 0.12             | 0.01   |
| PH2                       | Start-Up Flare<br>After 12/31/2011  | VOC                         | 165.17           | 6.20   |
|                           |   | CO                          | 258.22           | 18.62  |
|                           |   | NO <sub>x</sub>             | 65.84            | 5.40   |
|                           |   | NH <sub>3</sub>             | 80.34            | 4.88   |
|                           |   | SO <sub>2</sub>             | 0.23             | 0.02   |
| PH3                       | ADN Operating Flare<br>Routine Operations                                       | VOC                         | 191.54           | 92.42  |
|                           |   | CO                          | 513.89           | 307.75 |
|                           |   | NO <sub>x</sub>             | 33.90            | 22.60  |
|                           |   | SO <sub>2</sub>             | 0.92             | 2.91   |
|                           |   | HCl                         | 0.07             | 0.19   |
|                           | ADN Operating Flare<br>Maintenance Startup and<br>Shutdown (MSS) Operations (5) | VOC                         | 565.80           |        |
|                           |   | NO <sub>x</sub>             | 139.52           |        |
|                           |   | SO <sub>2</sub>             |                  | 1.23   |
|                           |   |                             |                  |        |
|                           |   |                             |                  |        |

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| Emission<br>Point No. (1) | Source<br>Name (2)                 | Air Contaminant<br>Name (3) | Emission Rates * |        |
|---------------------------|------------------------------------|-----------------------------|------------------|--------|
|                           |                                    |                             | lb/hr            | TPY ** |
| PH70                      | Ammonia Flare                      | VOC                         | 4.68             | 0.34   |
|                           |                                    | CO                          | 64.88            | 4.24   |
|                           |                                    | NO <sub>x</sub>             | 64.41            | 3.91   |
|                           |                                    | NH <sub>3</sub>             | 112.67           | 6.76   |
|                           |                                    | SO <sub>2</sub>             | 0.01             | 0.01   |
| PH63                      | HCN Loading Flare                  | VOC                         | 10.22            | 3.07   |
|                           |                                    | CO                          | 14.81            | 8.10   |
|                           |                                    | NO <sub>x</sub>             | 1.73             | 0.94   |
|                           |                                    | NH <sub>3</sub>             | 0.20             | 0.02   |
|                           |                                    | SO <sub>2</sub>             | 0.01             | 0.01   |
| PA403                     | Building 3056 Fugitive (4)         | VOC                         | 0.45             | 1.99   |
| PA404                     | Building 3040 Fugitive (4)         | VOC                         | 4.95             | 21.68  |
| PA405                     | Building 3050 Fugitive (4)         | VOC                         | 5.27             | 23.09  |
| PA406                     | Building 3092 Fugitive (4)         | VOC                         | 0.08             | 0.37   |
| PA407                     | Building 3045/3055<br>Fugitive (4) | VOC                         | 0.61             | 2.66   |
|                           |                                    | HCl                         | 0.01             | 0.01   |
| PC408                     | Building 3065/3099<br>Fugitive (4) | VOC                         | 2.36             | 10.37  |
|                           |                                    | HCl                         | 0.03             | 0.13   |
| PC409                     | Building 3068 Fugitive (4)         | VOC                         | 0.86             | 3.77   |
|                           |                                    | HCl                         | 0.01             | 0.01   |
| PF410                     | 311 Tank Farm Fugitive (4)         | VOC                         | 0.13             | 0.55   |

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| Emission<br>Point No. (1) | Source<br>Name (2)                 | Air Contaminant<br>Name (3) | Emission Rates * |        |
|---------------------------|------------------------------------|-----------------------------|------------------|--------|
|                           |                                    |                             | lb/hr            | TPY ** |
| PF414                     | 3047 Rail Rack Fugitive (4)        | VOC                         | 0.19             | 0.82   |
| PH401                     | Building 3030/3032<br>Fugitive (4) | VOC                         | 3.09             | 13.56  |
|                           |                                    | NH <sub>3</sub>             | 3.60             | 15.75  |
| PH402                     | Building 3090 Fugitive (4)         | VOC                         | 0.02             | 0.10   |
| PH601                     | E HCN OD Stack                     | VOC                         | 0.01             | 0.01   |
|                           |                                    | NH <sub>3</sub>             | 0.01             | 0.01   |
| PH602                     | W HCN OD Stack                     | VOC                         | 0.01             | 0.01   |
|                           |                                    | NH <sub>3</sub>             | 0.01             | 0.01   |
| PC82                      | Dust Collector                     | PM                          | 0.03             | 0.01   |
| PT301                     | Tank                               | INORGANIC                   | 0.01             | 0.01   |
| PT302                     | Tank                               | INORGANIC                   | 0.01             | 0.01   |
| PT303                     | Tank                               | INORGANIC                   | 0.01             | 0.01   |
| PT304                     | Tank                               | VOC                         | 0.01             | 0.01   |
| PT305                     | Decanter                           | VOC                         | 0.01             | 0.01   |
| PT60                      | Absorber                           | VOC                         | 3.21             | 2.91   |

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|---------------------------|--|-----------------------------|------------------|--------|
|                           |  |                             | lb/hr            | TPY ** |
| PA39                      | Fume Abator<br>(Incinerator)                                       | VOC                         | 0.48             | 1.05   |
|                           |  | CO                          | 0.01             | 0.01   |
|                           |  | NO <sub>x</sub>             | 2.00             | 5.12   |
|                           |  | SO <sub>2</sub>             | 0.01             | 0.01   |
|                           |  | NH <sub>3</sub>             | 0.01             | 0.01   |
| PT326                     | Tank   | VOC                         | 0.01             | 0.01   |
| PT329                     | Tank   | VOC                         | 2.51             | 0.24   |
| PT335                     | Tank   | VOC                         | 0.03             | 0.01   |
| PT308                     | Tank   | VOC                         | 1.88             | 0.36   |
| PT10                      | HCL Scrubber/Tank  | HCl                         | 0.17             | 0.02   |
| PT10                      | HCL Scrubber/Tank -<br>Maintenance, startup, and<br>shutdown (MSS) | HCl                         | 0.16             | 0.01   |
| PT341                     | Tank   | VOC                         | 0.01             | 0.01   |
| PT342                     | Tank   | VOC                         | 0.13             | 0.08   |
| PT343                     | Tank   | VOC                         | 0.13             | 0.08   |
| PT342, PT343              | Annual Tanks PT342 and<br>PT342 Limit                              | VOC                         | --               | 0.08   |
| PT344                     | Tank   | VOC                         | 0.02             | 0.01   |

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| Emission<br>Point No. (1) | Source<br>Name (2)                    | Air Contaminant<br>Name (3) | Emission Rates * |        |
|---------------------------|---------------------------------------|-----------------------------|------------------|--------|
|                           |                                       |                             | lb/hr            | TPY ** |
| PT345                     | Tank                                  | VOC                         | 0.01             | 0.01   |
| PT347                     | Tank                                  | VOC                         | 0.01             | 0.01   |
| PT349                     | Tank                                  | VOC                         | 0.02             | 0.01   |
| PT369                     | Tank                                  | VOC                         | 0.01             | 0.01   |
| PT370                     | Tank                                  | VOC                         | 0.01             | 0.01   |
| PT371                     | Tank                                  | VOC                         | 0.01             | 0.01   |
| PT379                     | Tank                                  | VOC                         | 0.01             | 0.01   |
| PT380                     | Tank                                  | VOC                         | 0.01             | 0.01   |
| PT383                     | Tank                                  | VOC                         | 11.30            | 3.85   |
| PT384                     | Tank                                  | VOC                         | 11.30            | 3.85   |
| PT383, PT384              | Annual Tanks PT383 and<br>PT384 Limit | VOC                         | --               | 3.85   |
| PT387                     | Tank                                  | VOC                         | 0.01             | 0.01   |
| PT388                     | Tank                                  | VOC                         | 0.01             | 0.01   |
| PC83                      | Building Vent                         | PM                          | 6.00             | 0.75   |

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| Emission<br>Point No. (1) | Source<br>Name (2)                            | Air Contaminant<br>Name (3) | Emission Rates * |        |
|---------------------------|---|-----------------------------|------------------|--------|
|                           |   |                             | lb/hr            | TPY ** |
| PN628                     | ADN Analyzer Vent                             | VOC                         | 0.01             | 0.01   |
| PN601                     | NG Plant KO Pot                               | VOC                         | 0.05             | 0.22   |
| PH627                     | HCN Analyzer Vent                             | VOC                         | 0.01             | 0.01   |
| PN301                     | Tank  | VOC                         | 0.01             | 0.01   |
| PN302                     | Tank  | VOC                         | 0.01             | 0.01   |
| PT353                     | Tank  | VOC                         | 0.01             | 0.01   |
| PT354                     | Tank  | VOC                         | 0.01             | 0.01   |
| PT355                     | Tank  | VOC                         | 0.01             | 0.01   |
| PT353, PT354,<br>PT355    | Annual Tanks PT353, PT354,<br>and PT355 Limit | VOC                         | --               | 0.01   |
| PT381                     | Tank  | VOC                         | 5.31             | 2.08   |
| PT382                     | Tank  | VOC                         | 5.30             | 2.08   |
| PT381, PT382              | Annual Tanks PT381<br>and PT382 Limit         | VOC                         | --               | 2.08   |
| PN447                     | Gas Plant Fugitive (4)                        | VOC                         | 0.57             | 2.49   |
| PF412                     | 513 Tank Farm Fugitive (4)                    | VOC                         | 0.01             | 0.02   |

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| Emission<br>Point No. (1) | Source<br>Name (2)          | Air Contaminant<br>Name (3) | Emission Rates * |         |
|---------------------------|-----------------------------|-----------------------------|------------------|---------|
|                           |                             |                             | lb/hr            | TPY **  |
| PF413A                    | Cooling Tower Fugitive (4)  | INORGANIC                   | 0.08             | 0.32    |
| PF413                     | ADN Cooling Tower           | PM                          | 0.38             | 1.65    |
| PF415                     | 3058 Tank Farm Fugitive (4) | VOC                         | 0.23             | 1.01    |
| PF900                     | Parts Degreaser             | VOC                         | 0.025            | 0.01    |
| PF901                     | Dust Collector              | PM                          | 0.55             | 0.10    |
| PF40                      | South ADN Boiler            | VOC                         | 1.79***          | 5.26    |
|                           |                             | CO                          | 56.68***         | 151.34  |
|                           |                             | NO <sub>x</sub>             | 490.00***        | 2407.04 |
|                           |                             | PM                          | 13.69***         | 15.39   |
|                           |                             | HCl                         | 2.96***          | 4.38    |
|                           |                             | Cl <sub>2</sub>             | 0.72***          | 1.06    |
|                           |                             | SO <sub>2</sub>             | 0.23***          | 1.00    |
| PF41                      | North ADN Boiler            | VOC                         | 1.79***          | 5.26    |
|                           |                             | CO                          | 69.38***         | 151.34  |
|                           |                             | NO <sub>x</sub>             | 637.00***        | 2407.04 |
|                           |                             | PM                          | 13.69***         | 15.39   |
|                           |                             | HCl                         | 2.96***          | 4.38    |
|                           |                             | Cl <sub>2</sub>             | 0.72***          | 1.06    |
|                           |                             | SO <sub>2</sub>             | 0.23***          | 1.00    |

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| Emission<br>Point No. (1) | Source<br>Name (2)                          | Air Contaminant<br>Name (3) | Emission Rates * |         |
|---------------------------|---|-----------------------------|------------------|---------|
|                           |   |                             | lb/hr            | TPY **  |
| PF40/PF41                 | Annual South and North<br>ADN Boilers Limit | VOC                         | --               | 5.26    |
|                           |   | CO                          | --               | 151.34  |
|                           |   | NO <sub>x</sub>             | --               | 2407.04 |
|                           |   | PM                          | --               | 15.39   |
|                           |   | HCl                         | --               | 4.38    |
|                           |   | Cl <sub>2</sub>             | --               | 1.06    |
|                           |   | SO <sub>2</sub>             | --               | 1.00    |
| PF416                     | Boiler Fugitive (4)                         | VOC                         | 0.07             | 0.31    |
| PT399                     | Misc Tanks                                  | VOC                         | 0.01             | 0.01    |
| PW450                     | Wastewater Fugitive (4)                     | VOC                         | 0.05             | 0.01    |
| PC22                      | Carbon Drum                                 | VOC                         | 0.01             | 0.01    |
| PC425                     | Drum  | VOC                         | 0.03             | 0.01    |
| PC426                     | Drum  | VOC                         | 0.01             | 0.01    |
| PC23                      | Carbon Drum                                 | VOC                         | 0.01             | 0.01    |
| PF601                     | North ADN Boiler<br>Analyzer Vent           | VOC                         | 0.01             | 0.01    |
|                           |   | CO                          | 0.01             | 0.04    |
|                           |   | NO <sub>x</sub>             | 0.08             | 0.35    |
|                           |   | PM                          | 0.01             | 0.01    |
|                           |   | HCl                         | 0.01             | 0.01    |
|                           |   | Cl <sub>2</sub>             | 0.01             | 0.01    |
|                           |   | SO <sub>2</sub>             | 0.01             | 0.01    |



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## AIR CONTAMINANTS DATA

| Emission<br>Point No. (1) | Source<br>Name (2)                             | Air Contaminant<br>Name (3)            | Emission Rates * |        |
|---------------------------|--|--|------------------|--------|
|                           |  |  | lb/hr            | TPY ** |
| PF600                     | South ADN Boiler<br>Analyzer Vent              | VOC                                    | 0.01             | 0.01   |
|                           |  | CO                                     | 0.01             | 0.03   |
|                           |  | NO <sub>x</sub>                        | 0.06             | 0.27   |
|                           |  | PM                                     | 0.01             | 0.01   |
|                           |  | HCl                                    | 0.01             | 0.01   |
|                           |  | Cl <sub>2</sub>                        | 0.01             | 0.01   |
|                           |  | SO <sub>2</sub>                        | 0.01             | 0.01   |
| Nitrile TO                | Nitrile Thermal Oxidizer<br>(Scenario I) (5)   | CO                                     | 3.72             | 5.21   |
|                           |  | H <sub>2</sub> S                       | 0.01             | 0.01   |
|                           |  | NH <sub>3</sub>                        | 0.10             | 0.01   |
|                           |  | NO <sub>x</sub>                        | 6.04             | 9.04   |
|                           |  | PM/PM <sub>10</sub> /PM <sub>2.5</sub> | 0.22             | 0.49   |
|                           |  | SO <sub>2</sub>                        | 0.01             | 0.02   |
|                           |  | VOC                                    | 2.17             | 2.32   |
| Promoter TO               | Promoter Thermal Oxidizer<br>(Scenario I) (5)  | CO                                     | 2.96             | 2.08   |
|                           |  | H <sub>2</sub> S                       | 0.01             | 0.01   |
|                           |  | NO <sub>x</sub>                        | 4.00             | 2.63   |
|                           |  | PM/PM <sub>10</sub> /PM <sub>2.5</sub> | 0.13             | 0.11   |
|                           |  | SO <sub>2</sub>                        | 0.01             | 0.01   |
|                           |  | VOC                                    | 0.95             | 0.57   |
| Combined TO               | Combined Thermal Oxidizer<br>(Scenario II) (6) | CO                                     | 5.67             | 6.68   |
|                           |  | H <sub>2</sub> S                       | 0.01             | 0.01   |
|                           |  | NH <sub>3</sub>                        | 0.10             | 0.01   |
|                           |  | NO <sub>x</sub>                        | 6.50             | 10.51  |
|                           |  | PM/PM <sub>10</sub> /PM <sub>2.5</sub> | 0.27             | 0.37   |
|                           |  | SO <sub>2</sub>                        | 0.01             | 0.02   |
|                           |  | VOC                                    | 2.51             | 2.05   |

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| Emission<br>Point No. (1)                         | Source<br>Name (2)                           | Air Contaminant<br>Name (3) | Emission Rates * |        |
|---|--|-----------------------------|------------------|--------|
|   |  |                             | lb/hr            | TPY ** |
| CS-111  | Aqueous Sump                                 | VOC                         | 0.25             | 0.06   |
| K-101   | Tank   | VOC                         | 0.01             | 0.01   |
| FUG-VCSWS   | VCSWS Fugitives                              | VOC                         | 0.49             | 2.13   |
| TRKRL   | Tank Truck Loading                           | VOC                         | 0.07             | 0.04   |
| FT-331  | Tank FT-331                                  | VOC                         | 0.19             | 0.04   |
| Maintenance Startup and Shutdown (MSS) Activities |  |                             |                  |        |
| MSSFUG  | MSS fugitives                                | VOC                         | 3.19             | 0.23   |
|   |  | NH <sub>3</sub>             | 0.01             | 0.01   |
| PA39-MSS  | Fume Abator MSS Activities                   | NO <sub>x</sub>             | 0.02             | 0.01   |
|   |  | CO                          | 0.01             | 0.01   |
|   |  | VOC                         | 0.18             | 0.02   |
| TKCL-MSS  | Combustion Device for Tank<br>Cleaning       | NO <sub>x</sub>             | 0.62             | 0.07   |
|   |  | CO                          | 0.03             | 0.01   |
|   |  | VOC                         | 3.34             | 0.31   |
| TOFA-MSS  | Thermal Oxidizer for<br>Maintenance          | NO <sub>x</sub>             | 1.98             | 0.93   |
|   |  | CO                          | 1.13             | 1.31   |
|   |  | VOC                         | 32.30            | 0.68   |
| PT60-MSS  | VOC Absorber Emissions<br>During Maintenance | VOC                         | 3.09             | 0.05   |

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AIR CONTAMINANTS DATA

| Emission<br>Point No. (1) | Source<br>Name (2)                                 | Air Contaminant<br>Name (3) | Emission Rates * |        |
|---------------------------|--|-----------------------------|------------------|--------|
|                           |  |                             | lb/hr            | TPY ** |
| CCTEMP                    | Carbon Canister Promoter<br>Area MSS               | VOC                         | 0.11             | 0.03   |
| CBA                       | Carbon Canister during VOC<br>Absorber Maintenance | VOC                         | 2.85             | 1.05   |
| PT10-MSS                  | HCL Scrubber during MSS                            | VOC                         | 0.16             | 0.01   |
| ENGINE-MSS                | Portable Engines                                   | NO <sub>x</sub>             | 8.02             | 3.78   |
|                           |  | VOC                         | 0.16             | 0.43   |
|                           |  | CO                          | 3.61             | 2.01   |
|                           |  | SO <sub>2</sub>             | 0.01             | 0.01   |
|                           |  | PM <sub>10</sub>            | 0.10             | 0.34   |

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- (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
  - NO<sub>x</sub> - total oxides of nitrogen
  - NH<sub>3</sub> - ammonia
  - SO<sub>2</sub> - sulfur dioxide
  - HCl - hydrogen chloride
  - Cl<sub>2</sub> - chlorine
  - 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 PM greater than 10 microns is emitted.
  - PM<sub>2.5</sub> - particulate matter equal to or less than 2.5 microns in diameter.
  - 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) Emissions under Scenario I. If the holder of this permit chooses to operate under Scenario I, the emission rates for Scenario II cease to apply.
- (6) Emissions under Scenario II. If the holder of this permit chooses to operate under Scenario II, the emission rates for Scenario I cease to apply.

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

Hrs/day 24 Days/week 7 Weeks/year 52 or Hrs/year 8,760

\*\* Compliance with annual emission limits is based on a rolling 12-month period.

\*\*\* lb/hr limits for North and South ADN Boilers are based on a 30-day rolling average