EMISSION SOURCES, EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

Flexible Permit Numbers 6308 and PSD-TX-137M2

This table lists the maximum allowable emission caps 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.

$NO_x$ EMISSION CAP

| Facility/Emission Point Categories | Year | lb/hr | TPY ** |
|---|---|---|---|
| Fired Units | 2000 through 2005 | 431.86 | 921.08 |
| Fired Units, Boilers | 2006 | 455.46 | 1024.08 |

CO EMISSION CAP

| Facility/Emission Point Categories | Year | lb/hr | TPY ** |
|---|---|---|---|
| Fired Units | 2000 through 2005 | 300.53 | 488.16 |
| Fired Units, Boilers | 2006 | 328.83 | 612.06 |

$SO_2$ EMISSION CAP

| Facility/Emission Point Categories | Year | lb/hr | TPY ** |
|---|---|---|---|
| Fired Units | 2000 through 2005 | 277.10 | 160.29 |
| Fired Units, Boilers | 2006 | 289.09 | 191.89 |

PM EMISSION CAP

| Facility/Emission Point Categories | Year | lb/hr | TPY ** |
|---|---|---|---|
| Fired Units | 2000 through 2005 | 50.84 | 192.97 |
| Fired Units, Boilers, Cooling Towers (7) | 2006 | 53.74 | 205.77 |

## EMISSION SOURCES, EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

### VOC EMISSION CAP

| Facility/Emission Source Categories | Year | lb/hr | TPY ** |
|---|---|---|---|
| Fired Units, Cooling Towers, Tanks, Fugitives, Wastewater, Miscellaneous (4) | 2000 through 2005 | 648.29 | 507.21 |
| Fired Units, Cooling Towers, Tanks, Fugitives, Wastewater, Miscellaneous, Boilers (4) | 2006 | 641.89 | 479.31 |

### $Cl_2$ EMISSION CAP

| Facility/Emission Source Categories | Year | lb/hr | TPY ** |
|---|---|---|---|
| Cooling Towers (7) | 2000 through 2005 | 0.00015 | 0.0007 |
| Cooling Towers (7) | 2006 | 0.00015 | 0.0007 |

### Toluene EMISSION CAP

| Facility/Emission Point Categories | Year | lb/hr | TPY ** |
|---|---|---|---|
| Tanks E11TKS23, E11TKR17, and E11TKR18 | 2000 | 0.96 | 2.53 |

### Xylene EMISSION CAP

| Facility/Emission Point Categories | Year | lb/hr | TPY ** |
|---|---|---|---|
| Tanks E11TKS32, E11TKR9, and E11TKR11 | 2000 | 11.92 | 13.06 |

### Benzene EMISSION CAP

| Facility/Emission Point Categories | Year | lb/hr | TPY ** |
|---|---|---|---|
| Tanks E11TKR5 and E11TKR7 | 2000 | 1.34 | 2.77 |

### Cyclohexane EMISSION CAP

EMISSION SOURCES, EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

| Facility/Emission Point Categories | Year | lb/hr | TPY ** |
|---|---|---|---|
| Tanks E11TKS21, E11TKR34, and E11TKR40 | 2000 | 0.78 | 2.67 |

MTBE EMISSION CAP

| Facility/Emission Point Categories | Year | lb/hr | TPY ** |
|---|---|---|---|
| Tanks E11TKS21, E12TK146, E18TK125, and E18TK140 | 2000 | 3.79 | 6.16 |

INDIVIDUAL EMISSION LIMITATIONS

AIR CONTAMINANTS DATA

| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | Emission Rates * lb/hr | TPY ** |
|---|---|---|---|---|
| FL-97/FL-28/ FL-27 | Main Flare, West Flare and East Flare | VOC | 29.50 | 99.17l |
| | | $NO_x$ | 3.30 | 11.49 |
| | | CO | 16.97 | 59.16 |
| | | $SO_2$ | 7.30 | 31.27 |
| | | $H_2S$ | 0.08 | 0.34 |
| 22 | Boiler No. HA-5 (5) | VOC | 0.65 | 2.84 |
| | | $NO_x$ | 33.0 | 145.0 |
| | | CO | 9.90 | 43.40 |
| | | $SO_2$ | 3.68 | 9.67 |
| | | $PM_{10}$ | 0.90 | 3.92 |
| 23 | Boiler No. HA-6 (5) | VOC | 0.65 | 2.84 |
| | | $NO_x$ | 33.0 | 145.0 |
| | | CO | 9.90 | 43.40 |
| | | $SO_2$ | 3.68 | 9.67 |
| | | $PM_{10}$ | 0.90 | 3.92 |
| 24 | Boiler No. HA-7 (5) | VOC | 0.65 | 2.84 |
| | | $NO_x$ | 33.0 | 145.0 |
| | | CO | 9.90 | 43.40 |
| | | $SO_2$ | 3.68 | 9.67 |

EMISSION SOURCES, EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

AIR CONTAMINANTS DATA

| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | Emission Rates * lb/hr | TPY ** |
|---|---|---|---|---|
| | | $PM_{10}$ | 0.90 | 3.92 |
| C-108 | BTX Cooling Tower (8) | PM | 0.17 | 0.74 |
| | | $Cl_2$ | 0.00005 | 0.0002 |
| C-109 | CrudeII Cooling Tower (8) | PM | 0.24 | 1.05 |
| | | $Cl_2$ | 0.00008 | 0.0003 |
| C-110 | Hydrobon Cooling Tower (8) | PM | 0.29 | 1.26 |
| | | $Cl_2$ | 0.00007 | 0.0003 |
| SULFUR RECOVERY UNIT NO. 1 (6) | | | | |
| E29H417 | SRU No. 1 Heater | VOC | 0.02 | 0.09 |
| | | $NO_x$ | 0.58 | 2.53 |
| | | CO | 0.31 | 1.36 |
| | | PM | 0.03 | 0.12 |
| | | $SO_2$ | 0.12 | 0.31 |
| F-SRU1 | SRU No. 1 Fugitives (4) | VOC | 0.05 | 0.21 |
| | | CO | 0.03 | 0.13 |
| | | $H_2S$ | 0.05 | 0.20 |
| F-AMINE1 | ARU No 1 Fugitives (4) | VOC | 0.07 | 0.31 |
| | | CO | 0.01 | 0.03 |
| | | $H_2S$ | 0.02 | 0.09 |
| FL-87 | SRU No. 1 Flare | VOC | 0.10 | 0.22 |
| | | $NO_x$ | 0.08 | 0.18 |
| | | CO | 0.71 | 1.55 |
| | | $SO_2$ | <0.01 | 0.01 |
| S-84, S-85 | SRU No. 1 and No. 2 Tail Gas Incinerator Stacks (TGI) | VOC | 0.13 | 0.58 |
| | | $NO_x$ | 2.41 | 10.60 |
| | | CO | 14.00 | 61.20 |
| | | PM | 0.18 | 0.80 |

EMISSION SOURCES, EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

AIR CONTAMINANTS DATA

| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | Emission Rates * lb/hr | TPY ** |
|---|---|---|---|---|
| | | $SO_2$ | 39.04 | 171.01 |
| | | $H_2S$ | 0.42 | 1.82 |
| SULFUR RECOVERY UNIT NO. 2 | | | | |
| ARU2SUMP | ARU No. 2 Sump | VOC | 0.02 | <0.01 |
| F-SRU2 | SRU No. 2 Fugitives | VOC | 0.05 | 0.21 |
| | | CO | 0.03 | 0.13 |
| | | $H_2S$ | 0.05 | 0.20 |
| F-AMINE2 | ARU No. 2 Fugitives | VOC | 0.07 | 0.31 |
| | | CO | 0.01 | 0.03 |
| | | $H_2S$ | 0.02 | 0.09 |
| FL-88 | SRU No. 2 Acid Gas Flare | VOC | 0.10 | 0.22 |
| | | $NO_x$ | 0.08 | 0.18 |
| | | CO | 0.71 | 1.55 |
| | | $SO_2$ | <0.01 | <0.01 |
| SRU2SUMP | SRU No. 2 Sump | VOC | 0.02 | <0.01l |
| F-SWS2 | SWS No. 2 | $H_2S$ | 0.01 | 0.02 |
| MAINTENANCE AND START-UP EMISSIONS | | | | |
| FL-97/FL-28/ FL-27 | Main Flare, West Flare and East Flare | VOC | 561.58 | 1.24 |
| | | $NO_x$ | 46.03 | 0.23 |
| | | CO | 236.91 | 1.17 |
| | | $SO_2$ | 589.46 | 4.75 |
| | | $H_2S$ | 3.43 | 0.09 |
| BTX REGEN | BTX Regenerator Vent | $NO_x$ | 46.00 | 2.73 |
| | | CO | 13.65 | 0.82 |
| | | $SO_2$ | 0.61 | 0.06 |
| | | HCl | 0.58 | 0.03 |



EMISSION SOURCES, EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

(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 area name or fugitive source name.

(3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
$NO_x$ - total oxides of nitrogen
$SO_2$ - sulfur dioxide
PM - particulate matter, suspended in the atmosphere, including $PM_{10}$
$PM_{10}$ - 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.
CO - carbon monoxide
$C1_2$ - chlorine
MTBE - methyl-tert-butyl ether
$H_2S$ - hydrogen sulfide
HCl - hydrogen chloride

(4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.

(5) Boilers HA-5, HA-6, and HA-7 emission rates are valid through 2005 or until Low-$NO_x$ burners have been installed. After 2005, the boilers are in the emission caps.

(6) Permit Number 1413 which authorized SRU No. 1 was consolidated into Permit Number 6308 in August 2002.

(7) Only the FCCU and Sulfolane Cooling Towers are included in the PM and $Cl_2$ emission caps.

(8) These emission rates are effective after 2006.

* 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-calendar-month period.

Dated March 11, 2005