

EMISSION SOURCES - EMISSIONS CAPS AND INDIVIDUAL EMISSION LIMITATIONS

Permit Numbers 9708 and PSDTX861M2

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.

(See Attachment I for Source Name and Emission Point Number Index)

AIR CONTAMINANTS DATA

| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | Emission Rates | |
|------------------------|---|--------------------------|----------------|---------|
| | | | lb/hr | TPY (4) |
| | VOC CAPS: Combustion Units, Tanks, Process Vents, Loading, Flares, Vapor Combustors, Fugitives (5), Wastewater, Cooling Towers, Engines, Relief Valves, and Maintenance | | 2114.00 | 1510.00 |
| | VOC SUBCAP: (7) Tanks (S-001, S-009, S-021, and S-229), New Railcar Rack (L-15), Vapor Combustor (FL-7), Fugitives (F-MSAT and F-MSATLOAD) (5) | | 25.30 | 43.39 |
| | NO_x CAPS: (8) Combustion Units, Flares, Vapor Combustors, Process Vents, Loading, Engines, and Maintenance | | 490.80 | 1701.00 |
| | NO_x SUBCAP: (7) Vapor Combustor (FL-7) | | 2.33 | 1.29 |
| | CO CAPS: Combustion Units, Flares, Vapor Combustors, Process Vents, Loading, Engines, and Maintenance | | 1408.00 | 3275.00 |
| | CO SUBCAP: (7) Vapor Combustor (FL-7) | | 7.17 | 4.22 |
| | SO₂ CAPS: Combustion Units, Flares, Vapor Combustors, Process Vents, Loading, Engines, and Maintenance | | 1120.00 | 2604.00 |

EMISSION SOURCES - INDIVIDUAL EMISSION RATE LIMITS AND SUBCAPS

AIR CONTAMINANTS DATA

| | | | | |
|--|---------------|------------------|---------|--------|
| SO₂ SUBCAP: (7) Vapor Combustor (FL-7) | | | 0.09 | 0.03 |
| PM CAPS: Combustion Units, Flares, Vapor Combustors, Process Vents, Engines, and Maintenance | | | 138.00 | 569.80 |
| BENZENE CAPS: Tanks, Cooling Towers, Loading, and Fugitives (5) | | | 11.90 | 18.34 |
| BENZENE SUBCAP: (7) Tanks (S-001, S-009, and S-021), New Railcar Rack (L-15), Vapor Combustor (VCU-2), Fugitives (F-MSAT and F-MSATLOAD) (5) | | | 9.51 | 11.94 |
| H₂S CAPS: Flares, Process Vents, Fugitives, and Maintenance | | | 7.60 | 0.70 |
| SULFURIC ACID CAPS (H₂SO₄): Process Vents | | | 12.40 | 54.10 |
| CHLORINE CAPS: Process Vents | | | 0.40 | 0.50 |
| HCl CAPS: Process Vents and Maintenance | | | 7.10 | 4.29 |
| NH₃ CAPS: Process Vents, Fugitives, and Maintenance | | | 800.40 | 164.80 |
| MAINTENANCE EMISSIONS CAPS: (6) | | VOC | 3671.97 | 46.52 |
| | | NO _x | 97.28 | 2.45 |
| | | CO | 646.55 | 7.40 |
| | | SO ₂ | 1768.80 | 6.13 |
| | | H ₂ S | 19.31 | 0.05 |
| | | HCl | 4.00 | 0.002 |
| | | NH ₃ | 700.00 | 0.95 |
| | | PM | 1.98 | 0.40 |
| INTERIM - MAINTENANCE, STARTUP, and SHUTDOWN EMISSIONS CAPS: (6) | | VOC | 6475.12 | 79.64 |
| | | NO _x | 97.28 | 2.45 |
| | | CO | 646.55 | 7.40 |
| | | SO ₂ | 1768.80 | 6.13 |
| | | H ₂ S | 19.31 | 0.05 |
| | | HCl | 4.00 | 0.002 |
| | | NH ₃ | 700.00 | 0.95 |
| | | PM | 1.98 | 0.40 |
| B-10 | No. 18 Boiler | NO _x | 57.88 | 132.51 |
| | | CO | 34.12 | 66.33 |
| | | VOC | 1.21 | 3.79 |

EMISSION SOURCES - INDIVIDUAL EMISSION RATE LIMITS AND SUBCAPS

AIR CONTAMINANTS DATA

| | | | | |
|------|----------------------|-----------------|--------|--------|
| | | SO ₂ | 4.92 | 6.77 |
| | | PM | 1.67 | 5.23 |
| B-11 | No. 19 Boiler | NO _x | 8.73 | 38.23 |
| | | CO | 18.93 | 82.93 |
| | | VOC | 1.21 | 3.24 |
| | | SO ₂ | 4.72 | 6.13 |
| | | PM | 1.67 | 4.47 |
| B-12 | 600# Boiler | NO _x | 492.85 | 172.69 |
| | | CO | 20.85 | 73.05 |
| | | VOC | 1.33 | 4.66 |
| | | SO ₂ | 5.84 | 11.91 |
| | | PM | 1.84 | 6.43 |
| B-19 | 300# Steam Boiler #1 | NO _x | 5.80 | 20.30 |
| | | CO | 13.50 | 47.31 |
| | | VOC | 0.89 | 3.11 |
| | | SO ₂ | 4.60 | 16.28 |
| | | PM | 1.20 | 4.30 |
| B-20 | 300# Steam Boiler #2 | NO _x | 5.80 | 20.30 |
| | | CO | 13.50 | 47.31 |
| | | VOC | 0.89 | 3.11 |
| | | SO ₂ | 4.60 | 16.28 |
| | | PM | 1.20 | 4.30 |
| B-21 | 300# Steam Boiler #3 | NO _x | 5.80 | 20.30 |
| | | CO | 13.50 | 47.31 |
| | | VOC | 0.89 | 3.11 |
| | | SO ₂ | 4.60 | 16.28 |
| | | PM | 1.20 | 4.30 |
| B-3 | No. 10 Boiler | NO _x | 23.65 | 82.85 |
| | | CO | 17.80 | 22.23 |
| | | VOC | 0.40 | 1.41 |
| | | SO ₂ | 2.09 | 3.53 |
| | | PM | 0.56 | 1.95 |

EMISSION SOURCES - INDIVIDUAL EMISSION RATE LIMITS AND SUBCAPS

AIR CONTAMINANTS DATA

| | | | | |
|------|--------------------------------------|-----------------|-------|-------|
| B-4 | No. 11 Boiler | NO _x | 17.01 | 59.59 |
| | | CO | 7.57 | 18.32 |
| | | VOC | 0.48 | 1.59 |
| | | SO ₂ | 1.78 | 2.35 |
| | | PM | 0.67 | 2.18 |
| B-6 | No. 13 Boiler | NO _x | 17.24 | 60.42 |
| | | CO | 6.95 | 17.59 |
| | | VOC | 0.44 | 1.55 |
| | | SO ₂ | 1.81 | 2.30 |
| | | PM | 0.61 | 2.14 |
| B-8 | No. 15 Boiler | NO _x | 40.53 | 65.89 |
| | | CO | 25.20 | 46.45 |
| | | VOC | 0.84 | 2.34 |
| | | SO ₂ | 3.22 | 4.05 |
| | | PM | 1.17 | 3.23 |
| B-9 | No. 16 Boiler | NO _x | 40.53 | 35.14 |
| | | CO | 12.78 | 46.45 |
| | | VOC | 0.84 | 2.96 |
| | | SO ₂ | 3.61 | 5.57 |
| | | PM | 1.17 | 4.08 |
| H-1 | No. 1 Crude Charge Heater | NO _x | 31.83 | 46.46 |
| | | CO | 22.44 | 91.10 |
| | | VOC | 1.43 | 6.26 |
| | | SO ₂ | 7.44 | 14.96 |
| | | PM | 1.98 | 8.66 |
| H-11 | No. 2 Crude Charge Heater (Anderson) | NO _x | 3.25 | 14.23 |
| | | CO | 6.54 | 14.11 |
| | | VOC | 0.42 | 1.83 |
| | | SO ₂ | 2.17 | 4.27 |
| | | PM | 0.58 | 2.52 |
| H-13 | Gas Oil Frac. Heater | NO _x | 15.69 | 68.72 |
| | | CO | 3.41 | 14.95 |
| | | VOC | 0.22 | 0.95 |
| | | SO ₂ | 1.13 | 1.97 |
| | | PM | 0.30 | 1.32 |
| H-14 | Unifiner Charge Heater | NO _x | 2.60 | 11.39 |
| | | CO | 2.24 | 9.83 |
| | | VOC | 0.14 | 0.63 |
| | | SO ₂ | 0.03 | 0.11 |
| | | PM | 0.20 | 0.87 |
| H-15 | No. 1 Hydrotreater Charge Heater | NO _x | 1.63 | 7.12 |
| | | CO | 3.06 | 12.00 |

EMISSION SOURCES - INDIVIDUAL EMISSION RATE LIMITS AND SUBCAPS

AIR CONTAMINANTS DATA

| | | | | |
|-------|--------------------------------------|-----------------|-------|-------|
| | | VOC | 0.19 | 0.70 |
| | | SO ₂ | 0.84 | 1.41 |
| | | PM | 0.27 | 0.96 |
| H-18 | C.C.R. Charge Heater | NO _x | 13.70 | 52.81 |
| | | CO | 11.30 | 19.80 |
| | | VOC | 1.48 | 6.47 |
| | | SO ₂ | 7.68 | 13.27 |
| | | PM | 2.04 | 8.94 |
| H-2 | No. 1 Vacuum Charge Heater | NO _x | 3.53 | 15.47 |
| | | CO | 6.36 | 12.75 |
| | | VOC | 0.41 | 1.77 |
| | | SO ₂ | 2.11 | 3.91 |
| | | PM | 0.56 | 2.45 |
| H-26 | No. 2 Vacuum Charge Heater | NO _x | 3.60 | 15.76 |
| | | CO | 6.92 | 30.30 |
| | | VOC | 0.44 | 1.93 |
| | | SO ₂ | 2.29 | 4.22 |
| | | PM | 0.61 | 2.67 |
| H-27 | "P/P" Mole Sieve Regeneration Heater | NO _x | 0.99 | 0.76 |
| | | CO | 0.60 | 0.65 |
| | | VOC | 0.04 | 0.04 |
| | | SO ₂ | 0.20 | 0.22 |
| | | PM | 0.05 | 0.06 |
| H-28 | Active Butane Oxygenate Heater | NO _x | 1.16 | 5.08 |
| | | CO | 1.00 | 3.25 |
| | | VOC | 0.06 | 0.28 |
| | | SO ₂ | 0.33 | 1.45 |
| | | PM | 0.09 | 0.39 |
| H-30 | Asphalt Tank Heaters (5501 and 5502) | NO _x | 2.54 | 11.12 |
| | | CO | 0.82 | 3.57 |
| | | VOC | 0.05 | 0.23 |
| | | SO ₂ | 0.27 | 1.18 |
| | | PM | 0.07 | 0.31 |
| H-31B | Tanks 27, 28 Heater | NO _x | 0.44 | 1.92 |
| | | CO | 0.14 | 0.62 |
| | | VOC | 0.01 | 0.04 |
| | | SO ₂ | 0.05 | 0.20 |
| | | PM | 0.01 | 0.05 |
| H-32 | Tank Heaters ("20MS" and "20M6") | NO _x | 0.80 | 3.50 |
| | | CO | 0.56 | 2.46 |
| | | VOC | 0.04 | 0.16 |
| | | SO ₂ | 0.19 | 0.82 |
| | | PM | 0.05 | 0.22 |

EMISSION SOURCES - INDIVIDUAL EMISSION RATE LIMITS AND SUBCAPS

AIR CONTAMINANTS DATA

| | | PM | | |
|-------|--|-----------------|-------|-------|
| H-32C | Asphalt Tank Heater "20M7" | NO _x | 0.33 | 1.43 |
| | | CO | 0.28 | 1.23 |
| | | VOC | 0.02 | 0.08 |
| | | SO ₂ | 0.09 | 0.41 |
| | | PM | 0.02 | 0.11 |
| H-33 | Tank Heaters 34, 551, 121, 141, and 552 | NO _x | 1.99 | 8.74 |
| | | CO | 1.40 | 6.16 |
| | | VOC | 0.09 | 0.39 |
| | | SO ₂ | 0.46 | 2.04 |
| | | PM | 0.12 | 0.54 |
| H-34 | C.C.D.R. Stabilizer Reboiler Heater | NO _x | 3.08 | 20.45 |
| | | CO | 2.17 | 8.68 |
| | | VOC | 0.14 | 0.59 |
| | | SO ₂ | 0.68 | 1.21 |
| | | PM | 0.19 | 0.81 |
| H-35 | Tank "300M2" Heaters (4 Stacks) | NO _x | 1.59 | 6.99 |
| | | CO | 1.12 | 4.93 |
| | | VOC | 0.07 | 0.31 |
| | | SO ₂ | 0.37 | 1.63 |
| | | PM | 0.10 | 0.43 |
| H-36 | No. 2 Naphtha Hydrotreater Charge Heater | NO _x | 1.78 | 7.80 |
| | | CO | 4.86 | 5.72 |
| | | VOC | 0.31 | 0.97 |
| | | SO ₂ | 1.11 | 1.70 |
| | | PM | 0.43 | 1.34 |
| H-37 | No. 2 Naphtha Hydrotreater Des2 Reboiler | NO _x | 6.40 | 15.97 |
| | | CO | 2.41 | 9.59 |
| | | VOC | 0.16 | 0.65 |
| | | SO ₂ | 0.30 | 1.21 |
| | | PM | 0.22 | 0.89 |
| H-38 | #2 Reformer Charge Heater | NO _x | 13.58 | 59.46 |
| | | CO | 29.45 | 81.85 |
| | | VOC | 1.88 | 5.02 |
| | | SO ₂ | 6.73 | 10.28 |
| | | PM | 2.59 | 6.93 |
| H-39 | #2 Reformer Stabilizer Reboiler Heater | NO _x | 2.92 | 12.78 |
| | | CO | 2.06 | 6.59 |
| | | VOC | 0.13 | 0.44 |
| | | SO ₂ | 0.63 | 0.89 |
| | | PM | 0.18 | 0.60 |
| H-40 | P.D.A. Asph. Htr. | NO _x | 8.49 | 37.17 |

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AIR CONTAMINANTS DATA

| | | | | |
|------|---|-----------------|-------|-------|
| | | CO | 5.61 | 5.11 |
| | | VOC | 0.36 | 1.00 |
| | | SO ₂ | 1.40 | 1.59 |
| | | PM | 0.49 | 1.37 |
| H-41 | No. 2 Crude Charge Heater | NO _x | 16.40 | 71.83 |
| | | CO | 26.18 | 13.21 |
| | | VOC | 1.67 | 6.99 |
| | | SO ₂ | 8.36 | 14.12 |
| | | PM | 2.31 | 9.66 |
| H-42 | Hydrocracker Recycle Heater | NO _x | 3.49 | 15.28 |
| | | CO | 7.20 | 12.64 |
| | | VOC | 0.46 | 1.98 |
| | | SO ₂ | 2.39 | 2.99 |
| | | PM | 0.63 | 2.73 |
| H-43 | Hydrocracker "DEC4" Reboiler Heater | NO _x | 3.31 | 14.49 |
| | | CO | 7.37 | 11.77 |
| | | VOC | 0.47 | 1.85 |
| | | SO ₂ | 2.36 | 3.84 |
| | | PM | 0.65 | 2.55 |
| H-45 | #1 Hydrotreater Charge Heater | NO _x | 2.66 | 11.67 |
| | | CO | 5.93 | 4.82 |
| | | VOC | 0.35 | 0.73 |
| | | SO ₂ | 0.89 | 1.44 |
| | | PM | 0.48 | 1.01 |
| H-46 | C.C.R. Interheater | NO _x | 7.48 | 32.77 |
| | | CO | 13.76 | 60.27 |
| | | VOC | 0.88 | 3.84 |
| | | SO ₂ | 4.56 | 8.79 |
| | | PM | 1.21 | 5.31 |
| H-47 | Asphalt Blowstill Heater | NO _x | 0.90 | 3.95 |
| | | CO | 1.02 | 2.89 |
| | | VOC | 0.06 | 0.21 |
| | | SO ₂ | 0.27 | 0.35 |
| | | PM | 0.09 | 0.28 |
| H-48 | Turbine Fuel HDSU Heater | NO _x | 3.78 | 16.55 |
| | | CO | 8.88 | 14.24 |
| | | VOC | 0.57 | 2.45 |
| | | SO ₂ | 2.94 | 4.26 |
| | | PM | 0.78 | 3.38 |
| H-51 | Asphalt Tank Heater 300M3 (4 Stacks) | NO _x | 0.53 | 2.33 |
| | | CO | 1.12 | 4.93 |
| | | VOC | 0.07 | 0.31 |

EMISSION SOURCES - INDIVIDUAL EMISSION RATE LIMITS AND SUBCAPS

AIR CONTAMINANTS DATA

| | | | | |
|------|--------------------------------------|-----------------|------|-------|
| | | SO ₂ | 0.37 | 1.63 |
| | | PM | 0.10 | 0.43 |
| H-6 | Dago Heater | NO _x | 3.39 | 14.87 |
| | | CO | 2.32 | 6.22 |
| | | VOC | 0.15 | 0.44 |
| | | SO ₂ | 0.60 | 0.71 |
| | | PM | 0.21 | 0.59 |
| H-64 | No. 4 Hydrotreater Charge Heater | NO _x | 1.26 | 5.54 |
| | | CO | 2.81 | 12.33 |
| | | VOC | 0.18 | 0.71 |
| | | SO ₂ | 0.86 | 1.34 |
| | | PM | 0.25 | 0.96 |
| H-70 | No. 2 Crude Charge Heater | NO _x | 4.25 | 18.63 |
| | | CO | 9.90 | 43.40 |
| | | VOC | 0.66 | 2.87 |
| | | SO ₂ | 3.40 | 14.90 |
| | | PM | 0.90 | 3.97 |
| H-71 | No. 3 Vacuum Heater | NO _x | 2.13 | 6.06 |
| | | CO | 5.00 | 14.10 |
| | | VOC | 0.30 | 0.90 |
| | | SO ₂ | 1.70 | 4.80 |
| | | PM | 0.45 | 1.29 |
| H-72 | PDA Asphalt Heater | NO _x | 1.55 | 6.78 |
| | | CO | 3.60 | 15.80 |
| | | VOC | 0.20 | 1.00 |
| | | SO ₂ | 1.20 | 5.40 |
| | | PM | 0.30 | 1.40 |
| H-73 | No. 3 Crude Heater-Petrochem (North) | NO _x | 3.80 | 16.52 |
| | | CO | 8.80 | 38.40 |
| | | VOC | 0.60 | 2.50 |
| | | SO ₂ | 3.00 | 13.20 |
| | | PM | 0.80 | 3.50 |
| H-74 | Hydrocracker Recycle Heater | NO _x | 4.20 | 15.25 |
| | | CO | 8.10 | 35.50 |
| | | VOC | 0.50 | 2.30 |
| | | SO ₂ | 2.80 | 12.20 |
| | | PM | 0.70 | 3.20 |
| H-75 | Hydrocracker "DEC4" Reboiler Heater | NO _x | 3.80 | 13.98 |
| | | CO | 7.40 | 32.50 |
| | | VOC | 0.50 | 2.20 |
| | | SO ₂ | 2.60 | 11.20 |
| | | PM | 0.70 | 3.00 |

EMISSION SOURCES - INDIVIDUAL EMISSION RATE LIMITS AND SUBCAPS

AIR CONTAMINANTS DATA

| | | | | |
|------|--------------------------------------|---|--|---|
| H-76 | Diesel Hydrotreater Charge Heater | NO _x CO VOC SO ₂ PM | 2.01 4.86 0.31 1.61 0.43 | 8.81 21.29 1.36 7.06 1.88 |
| H-77 | No. 1 Reformer Charge Heater | NO _x CO VOC SO ₂ PM | 12.29 28.60 1.89 9.83 2.62 | 53.82 125.26 8.29 43.04 11.46 |
| H-78 | No. 1 Reformer Interheaters | NO _x CO VOC SO ₂ PM | 3.67 8.55 0.57 2.94 0.78 | 16.09 37.46 2.48 12.87 3.43 |
| H-79 | No. 1 Ref. Stabilizer Reboiler | NO _x CO VOC SO ₂ PM | 1.16 2.70 0.18 0.93 0.25 | 5.08 11.83 0.78 4.06 1.08 |
| H-8 | HCU Fractionation Charge Heater | NO _x CO VOC SO ₂ PM | 4.69 7.22 0.48 1.93 0.66 | 20.52 28.77 1.42 3.69 1.96 |
| H-80 | FCC Gas HDS Charge Heater | NO _x CO VOC SO ₂ PM | 3.05 8.33 0.53 2.33 0.73 | 13.36 36.46 2.32 5.03 3.21 |
| H-81 | C4 ISOM Heater | NO _x CO VOC SO ₂ PM | 0.31 0.70 0.05 0.20 0.07 | 1.36 3.20 0.20 1.09 0.29 |
| H-82 | Coker Heater | NO _x CO VOC SO ₂ PM | 5.80 13.50 0.89 4.60 1.20 | 25.40 59.10 3.90 20.30 5.40 |
| H-83 | Polymer Modified Asphalt Heater | NO _x CO | 0.39 0.90 | 1.69 3.90 |

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AIR CONTAMINANTS DATA

| | | | | |
|------|--|-----------------|-------|-------|
| | | VOC | 0.06 | 0.26 |
| | | SO ₂ | 0.30 | 1.36 |
| | | PM | 0.08 | 0.36 |
| H-84 | No. 2 Reformer No. 1 Interheater | NO _x | 3.79 | 16.60 |
| | | CO | 8.80 | 38.60 |
| | | VOC | 0.58 | 2.56 |
| | | SO ₂ | 3.00 | 13.30 |
| | | PM | 0.80 | 3.50 |
| H-85 | No. 2 Ref. Stab. Reboiler | NO _x | 1.52 | 6.67 |
| | | CO | 3.50 | 15.50 |
| | | VOC | 0.20 | 1.00 |
| | | SO ₂ | 1.20 | 5.30 |
| | | PM | 0.30 | 1.40 |
| H-86 | No. 2 Naphtha Hydrotreater Charge Heater (Final) | NO _x | 2.00 | 8.81 |
| | | CO | 4.70 | 20.50 |
| | | VOC | 0.30 | 1.40 |
| | | SO ₂ | 1.60 | 7.00 |
| | | PM | 0.40 | 1.90 |
| H-87 | SRU No. 3 Hot Oil Heater | NO _x | 0.72 | 3.15 |
| | | CO | 1.70 | 7.30 |
| | | VOC | 0.10 | 0.49 |
| | | SO ₂ | 0.58 | 2.50 |
| | | PM | 0.15 | 0.67 |
| H-88 | Acid Plant Feed Heater | NO _x | 0.79 | 3.46 |
| | | CO | 0.48 | 0.43 |
| | | VOC | 0.03 | 0.03 |
| | | SO ₂ | 0.16 | 0.50 |
| | | PM | 0.04 | 0.04 |
| H-9 | No. 3 Crude Heater-Petrochem (South) | NO _x | 13.08 | 57.31 |
| | | CO | 7.48 | 6.99 |
| | | VOC | 0.37 | 1.22 |
| | | SO ₂ | 1.36 | 2.16 |
| | | PM | 0.51 | 1.68 |
| F-20 | No. 1 Refinery Cooling Tower | VOC | 2.62 | 11.46 |
| F-21 | Gasoline Plant Cooling Tower (4) | VOC | 1.75 | 7.68 |
| F-47 | No. 2 Refinery Cooling Tower | VOC | 1.29 | 5.63 |
| F-93 | No. 3 Refinery Cooling Tower | VOC | 1.89 | 8.28 |
| E-7 | Unifiner Engine (Clark) | NO _x | 4.56 | 19.98 |

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AIR CONTAMINANTS DATA

| | | | | |
|---|--------------------------------|------------------|--------|--------|
| | | CO | 0.56 | 2.44 |
| | | VOC | 0.17 | 0.76 |
| | | SO ₂ | 0.01 | 0.01 |
| | | PM | 0.07 | 0.29 |
| FL-9 | Brine Degas Drum Flare | NO _x | 8.21 | 0.99 |
| | | CO | 16.38 | 1.98 |
| | | VOC | 30.15 | 5.52 |
| | | SO ₂ | 0.01 | 0.01 |
| FL-8 | No. 2 Main Refinery Flare (10) | NO _x | 40.46 | 26.49 |
| | | CO | 210.06 | 147.95 |
| | | VOC | 352.09 | 141.07 |
| | | SO ₂ | 19.05 | 4.12 |
| | | H ₂ S | 6.07 | 0.27 |
| FL-1 | No.1 Main Refinery Flare (10) | NO _x | 40.46 | 26.49 |
| | | CO | 210.06 | 147.95 |
| | | VOC | 352.09 | 141.07 |
| | | SO ₂ | 19.05 | 4.12 |
| | | H ₂ S | 6.07 | 0.27 |
| FL-3 | FCCU Flare (10) | NO _x | 40.46 | 26.49 |
| | | CO | 210.06 | 147.95 |
| | | VOC | 352.09 | 141.07 |
| | | SO ₂ | 19.05 | 4.12 |
| | | H ₂ S | 6.07 | 0.27 |
| FL-4 | HCU Flare (10) | NO _x | 40.46 | 26.49 |
| | | CO | 210.06 | 147.95 |
| | | VOC | 352.09 | 141.07 |
| | | SO ₂ | 19.05 | 4.12 |
| | | H ₂ S | 6.07 | 0.27 |
| FL-6 | Wastewater Flare | NO _x | 1.90 | 4.17 |
| | | CO | 9.70 | 21.26 |
| | | VOC | 4.54 | 9.95 |
| | | SO ₂ | 3.41 | 1.21 |
| Combined Compliance Annual Caps for Flares FL-1, FL-3, FL-4, and FL-8 | | NO _x | | 26.49 |
| | | CO | | 147.95 |
| | | VOC | | 141.07 |
| | | SO ₂ | | 4.12 |
| | | H ₂ S | | 0.27 |
| FGR-SUMP | FGR Oily Water Sump | VOC | 0.03 | 0.07 |
| F-Coke PM | Coker PM Fugitives | PM | 0.41 | 1.35 |
| FL-7 | Loading Rack Vapor Combustor | NO _x | 9.53 | 11.06 |
| | | CO | 26.30 | 29.46 |
| | | VOC | 26.52 | 20.25 |

EMISSION SOURCES - INDIVIDUAL EMISSION RATE LIMITS AND SUBCAPS

AIR CONTAMINANTS DATA

| | | | | |
|------|--|--------------------------------|--------|--------|
| | | SO ₂ | | |
| L-11 | Truck Loading Rack | VOC | 11.05 | 2.12 |
| L-13 | Railcar Loading Rack | VOC | 0.25 | 0.10 |
| L-14 | North Railcar Rack | VOC | 18.35 | 0.81 |
| L-2 | Asphalt Truck Loading Rack | VOC | 4.49 | 2.28 |
| L-5 | Railcar Rack (Diesel) | VOC | 3.41 | 1.83 |
| L-7 | Asphalt Railcar Rack | VOC | 0.42 | 1.37 |
| V-29 | Sulfuric Acid Plant Vent | SO ₂ | 21.67 | 70.17 |
| V-22 | Asphalt Blowstill Vent | NO _x | 2.15 | 3.78 |
| | | CO | 42.37 | 74.33 |
| | | VOC | 2.15 | 3.78 |
| | | SO ₂ | 2.16 | 4.35 |
| | | PM | 7.18 | 12.60 |
| V-20 | F.C.C.U. (Fluidized Catalytic Cracking Unit) | NO _x | 220.11 | 163.36 |
| | | CO | 37.80 | 93.07 |
| | | VOC | 10.55 | 38.19 |
| | | SO ₂ | 459.69 | 138.69 |
| | | PM | 80.00 | 294.02 |
| | | NH ₃ (9) | 40.74 | 146.00 |
| | | H ₂ SO ₄ | 12.40 | 41.98 |
| V-18 | No. 1 Reformer Cat Regenerator Vent | CO | 3.27 | 14.31 |
| | | VOC | 0.62 | 2.72 |
| V-21 | No. 2 Reformer Cat Regenerator Vent | CO | 70.00 | 3.36 |
| | | VOC | 0.03 | 0.08 |
| V-13 | Soda Ash Silo | PM | 0.01 | 0.01 |
| V-14 | Lime Silo Vent | PM | 0.01 | 0.01 |
| V-17 | FCC Catalyst Silo Vent | PM | 0.01 | 0.01 |
| V-5 | SRU No. 1 Incinerator | NO _x | 0.40 | 1.75 |
| | | CO | 1.37 | 5.98 |
| | | VOC | 0.12 | 0.53 |
| | | SO ₂ | 6.87 | 21.54 |
| | | PM | 0.03 | 0.13 |
| V-16 | SRU No. 2 Incinerator | NO _x | 0.56 | 2.45 |
| | | CO | 13.66 | 59.82 |
| | | VOC | 0.20 | 0.87 |
| | | SO ₂ | 10.96 | 48.01 |
| | | PM | 0.04 | 0.18 |
| V-28 | SRU No. 3 Incinerator | NO _x | 1.60 | 7.01 |
| | | CO | 5.02 | 21.99 |
| | | VOC | 0.54 | 2.38 |
| | | SO ₂ | 28.69 | 125.64 |

EMISSION SOURCES - INDIVIDUAL EMISSION RATE LIMITS AND SUBCAPS

AIR CONTAMINANTS DATA

| | | | | |
|--|--|---------|--------|--------|
| | | PM | | |
| S-044 | Tank 144 | Caustic | 0.01 | 0.01 |
| S-142 | Tank 232 | Caustic | 0.01 | 0.01 |
| CARBON CAN | Carbon Canister System Fugitives (CAS1 - CAS7) | VOC | 5.04 | 11.04 |
| F-1CRUDE, F-REF_HT, F-2ALKY, F-2CRUDE, F-2REF_HT, F-CRUDE, F-4HT, F-85, F-HCU, F-ALKY_PDA, F-ASPHALT, F-BRINE, F-C4ISOM, F-CASING, F-CAVERN, F-FGR, F-COKE_VOC, F-DESALT, F-DHDSU, F-ETNKFRM, F-FCCU, F-GASBLD, F-GASPLT, F-GHDS, F-HDS_GOF, F-LPG, F-IOCTENE, F-NBULKLD, F-NTNKFRM, F-ORU, F-PENEX, F-PMA, F-PSA, F-PUMPSTA, F-RAILLOAD, F-RLE, F-SBULKLD, F-SRU1, F-SRU2, F-SRU3, F-SWS, F-UNIFINER, F-WTNKFRM, F-MSAT, F-WWTP, F-AMINE2, F-ALKY, F-MSATLOAD, FGR-SUMP | VOC Sub cap for Fugitives (5) | VOC | 159.90 | 700.35 |
| S-001, S-002, S-003, S-004, S-005, S-006, S-007, S-008, S-009, S-010, S-011, S-012, S-013, S-014, S-015, S-016, S-017, S-018, S-019, S-020, S-021, S-022, S-023, S-024, S-025, S-026, S-027, S-028, S-031, S-032, S-033, S-035, S-037, S- | Sub cap for Storage Tanks | VOC | 141.70 | 380.94 |

EMISSION SOURCES - INDIVIDUAL EMISSION RATE LIMITS AND SUBCAPS

AIR CONTAMINANTS DATA

| | | | | |
|--|--|--|--|--|
| 038, S-039, S-040, S-042, S-043, S-045, S-046, S-049, S-052, S-053, S-055, S-056, S-057, S-058, S-059, S-060, S-063, S-064, S-065, S-066, S-067, S-068, S-069, S-070, S-071, S-072, S-073, S-074, S-075, S-076, S-086, S-090, S-095, S-137, S-138, S-139, S-140, S-141, S-143, S-144, S-150, S-168, S-173, S-174, S-175, S-176, S-177, S-179, S-180, S-183, S-184, S-186, S-187, S-192, S-194, S-195, S-196, S-197, S-198, S-199, S-200, S-202, S-203, S-204, S-209, S-210, S-211, S-212, S-213, S-214, S-215, S-216, S-217, S-218, S-219, S-220, S-221, S-222, S-223, S-224, S-225, S-229 | | | | |
|--|--|--|--|--|

EMISSION SOURCES - EMISSIONS CAPS AND INDIVIDUAL EMISSION RATE LIMITS

- (1) Emission point identification - either specific equipment designation or emission point number (EPN) 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.
NO_x - total oxides of nitrogen
CO - carbon monoxide
SO₂ - sulfur dioxide
H₂S - hydrogen sulfide
H₂SO₄ - sulfuric acid
HCl - hydrogen chloride
NH₃ - ammonia
PM - particulate matter, suspended in the atmosphere, including PM₁₀ and PM_{2.5}
PM₁₀ - particulate matter equal to or less than 10 microns in diameter
PM_{2.5} - particulate matter equal to or less than 2.5 microns in diameter
- (4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period
- (5) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
- (6) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
In accordance with Special Condition No. 59, the maintenance emission caps become effective on December 15, 2010. The interim maintenance emission caps are effective from June 17, 2010 through December 15, 2010.
- (7) The emission rates listed for the VOC, NO_x, and CO subcaps are included in the total VOC, NO_x, and CO cap for the site. These subcaps were established to establish that the Benzene Concentrate Extraction System project was not subject to PSD review.
- (8) The emission caps have been carried forward from the flexible permit and do not include MSS emissions. The only emission caps that are limiting (lower than the sum of the subcaps and individual emission rate limits for that air contaminant) are those for NO_x.
- (9) FCCU contribution to the ammonia cap.
- (10) Short term emission rates are emissions caps and represent the combined emission rates from flare EPNs FL-1, FL-3, FL-4, and FL-8.

Dated: March 8, 2012