

# Emission Sources - Maximum Allowable Emission Rates

Flexible Permit Number 6618

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) |
| Q4501                                      | Plant Flare           | NOx, CO, SO2             |                |         |
| Q4502                                      | Thermal Oxidizer      | NOx, CO, SO2             |                |         |
| F-1, FUG-DF, F-CDNZ                        | Dryer F               | NOx, CO, SO2             |                |         |
| G-1, FUG-DG, G-CDNZ                        | Dryer G               | NOx, CO, SO2             |                |         |
| J1, J2, J3, J4, J5, J6, J7, J8, J9, FUG-DJ | Dryer J               | NOx, CO, SO2             |                |         |
| K1, K2, K3, K4, K5, K6, K7, K8, K9, FUG-DK | Dryer K               | NOx, CO, SO2             |                |         |
| L1, L2, L3, L4, L5, L6, L7, L8, L9, FUG-DL | Dryer L               | NOx, CO, SO2             |                |         |
| M1, M2, M3, M4, M5, M6, M7, M8, M9, FUG-DM | Dryer M               | NOx, CO, SO2             |                |         |
| P1, P2, P3, P4, P5, P6, P7, P8, P9, FUG-DP | Dryer P               | NOx, CO, SO2             |                |         |
| NOx, CO, and SO2 Emission Caps:            |                       | NOx                      | 16.9           | 51.54   |
|                                            |                       | CO                       | 6.8            | 13.37   |
|                                            |                       | SO2                      | 1.6            | 7.04    |
| Planned MSS Emissions (7):                 |                       | NOx                      | 0.5            | 0.05    |
|                                            |                       | CO                       | 2.54           | 0.27    |
|                                            |                       | SO2                      | 0.01           | 0.01    |
| Q4502                                      | Thermal Oxidizer      | PM                       |                |         |
| F-1, F-7, FUG-DF, F-2A, F-2B, F-CDNZ       | Dryer F               | PM                       |                |         |
| G-1, G-7, FUG-DG, G-2A, G-2B, G-CDNZ       | Dryer G               | PM                       |                |         |
| J1, J2, J3, J4, J5, J6, J7, J8, J9, FUG-DJ | Dryer J               | PM                       |                |         |
| K1, K2, K3, K4, K5, K6, K7, K8, K9, FUG-DK | Dryer K               | PM                       |                |         |
| L1, L2, L3, L4, L5, L6, L7, L8, L9, FUG-DL | Dryer L               | PM                       |                |         |
| M1, M2, M3, M4, M5, M6, M7, M8, M9, FUG-DM | Dryer M               | PM                       |                |         |
| P1, P2, P3, P4, P5, P6, P7, P8, P9, FUG-DP | Dryer P               | PM                       |                |         |
| A5AF, FUG-ABRS, FUG-A5F, FUG-CU            | Miscellaneous Sources | PM                       |                |         |
| Particulate Emission Cap                   |                       | PM                       | 14.7           | 41.04   |

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|                                            |                       |     |      |      |
|--------------------------------------------|-----------------------|-----|------|------|
| Planned MSS Emissions (7):                 |                       | PM  | 0.13 | 0.01 |
| FUG E-849                                  | Ammonia Chiller       | NH3 |      |      |
| NH3FUGP2                                   | P2 NH3 Fugitives (5)  | NH3 |      |      |
| NH3FUGP3                                   | P3 NH3 Fugitives (5)  | NH3 |      |      |
| NH3FUGP5                                   | P5 NH3 Fugitives (5)  | NH3 |      |      |
| RCTFUGC2                                   | C-2 Polymer Area      | NH3 |      |      |
| RCTFUGC3                                   | C-3 Polymer Area      | NH3 |      |      |
| T-5001, T-5002, T-5003, T5004              | Cooling Towers        | NH3 |      |      |
|                                            | Emission Cap          | NH3 |      | 39.5 |
| F-1, F-7, FUG-DF, F-CDNZ, F-TRIAL          | Dryer F               | VOC |      |      |
| G-1, G-7, FUG-DG, G-CDNZ                   | Dryer G               | VOC |      |      |
| J1, J2, J3, J4, J5, J6, J7, J8, J9, FUG-DJ | Dryer J               | VOC |      |      |
| K1, K2, K3, K4, K5, K6, K7, K8, K9, FUG-DK | Dryer K               | VOC |      |      |
| L1, L2, L3, L4, L5, L6, L7, L8, L9, FUG-DL | Dryer L               | VOC |      |      |
| M1, M2, M3, M4, M5, M6, M7, M8, M9, FUG-DM | Dryer M               | VOC |      |      |
| P1, P2, P3, P4, P5, P6, P7, P8, P9, FUG-DP | Dryer P               | VOC |      |      |
| LC-VF                                      | Latex COAG Line F     | VOC |      |      |
| FUG-LCG                                    | Latex COAG Line G     | VOC |      |      |
| FUG-LCJ                                    | C and D - A3, J Dryer | VOC |      |      |
| FUG-LCK                                    | C and D - A3, K Dryer | VOC |      |      |
| FUG-LCL                                    | C and D - A3, L Dryer | VOC |      |      |
| FUG-LCM                                    | C and D - A3, M Dryer | VOC |      |      |
| FUG-LCP                                    | C and D - A6, P Dryer | VOC |      |      |
| FUG-A2F                                    | Packing and Shipping  | VOC |      |      |

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|                                                                                                 |                      |     |  |  |
|-------------------------------------------------------------------------------------------------|----------------------|-----|--|--|
| FUG-A3F                                                                                         | Packing and Shipping | VOC |  |  |
| FUG-A6F                                                                                         | Packing and Shipping | VOC |  |  |
| LTX-17                                                                                          | Seal Drum            | VOC |  |  |
| NLTXLDG                                                                                         | D8 Latex Loading     | VOC |  |  |
| ELTXULDG                                                                                        | Unloading            | VOC |  |  |
| Q4501                                                                                           | Plant Flare          | VOC |  |  |
| Q4502                                                                                           | Thermal Oxidizer     | VOC |  |  |
| FUG-B1A, FUG-B2, FUG-B3, RCTFUGC1A, RCTSAMPFUG, RCTFUGC2, RCTFUGC3, FUGJ1, FUGJ2, BIO-F, UNLDSM | VOC Fugitives (5)    | VOC |  |  |
| CLEAN-B1A, CLEAN-B2, CLEAN-B3, CLEAN-C1, CLEAN-C2, CLEAN-C3, CLEAN-D8, CLEAN-J1, CLEAN-J2       | Vessel Cleaning      | VOC |  |  |
| F401T                                                                                           | Latex Storage        | VOC |  |  |
| F402T                                                                                           | Latex Storage        | VOC |  |  |
| F403T                                                                                           | Latex Storage        | VOC |  |  |
| F410N                                                                                           | Latex Storage        | VOC |  |  |
| F420N                                                                                           | Latex Storage        | VOC |  |  |
| F430N                                                                                           | Latex Storage        | VOC |  |  |
| F440N                                                                                           | Latex Storage        | VOC |  |  |
| F450N                                                                                           | Latex Storage        | VOC |  |  |
| F400N                                                                                           | Tanks                | VOC |  |  |
| F401N                                                                                           | Tanks                | VOC |  |  |
| F600A                                                                                           | Latex Storage        | VOC |  |  |
| F600B                                                                                           | Latex Storage        | VOC |  |  |
| F600C                                                                                           | Latex Storage        | VOC |  |  |
| F600D                                                                                           | Latex Storage        | VOC |  |  |
| F600E                                                                                           | Latex Storage        | VOC |  |  |
| F600F                                                                                           | Latex Storage        | VOC |  |  |
| F600G                                                                                           | Latex Storage        | VOC |  |  |
| F600H                                                                                           | Latex Storage        | VOC |  |  |
| F600J                                                                                           | Latex Storage        | VOC |  |  |
| F600K                                                                                           | Latex Storage        | VOC |  |  |
| F600L                                                                                           | Latex Storage        | VOC |  |  |

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|        |                      |     |  |  |
|--------|----------------------|-----|--|--|
| F600M  | Latex Storage        | VOC |  |  |
| F600P  | Latex Storage        | VOC |  |  |
| F600T  | Latex Storage        | VOC |  |  |
| F600U  | Latex Storage        | VOC |  |  |
| F600W  | Latex Storage        | VOC |  |  |
| F600Q  | Latex Storage        | VOC |  |  |
| F600R  | Latex Storage        | VOC |  |  |
| F600X  | Latex Storage        | VOC |  |  |
| F600V1 | Latex Storage        | VOC |  |  |
| F600V2 | Latex Storage        | VOC |  |  |
| F601   | Latex Storage        | VOC |  |  |
| F601S  | Latex Storage        | VOC |  |  |
| F602   | Latex Blend Tank     | VOC |  |  |
| F602S  | Latex Storage        | VOC |  |  |
| F603   | Latex Blend Tank     | VOC |  |  |
| F603S  | Latex Storage        | VOC |  |  |
| F604   | Latex Blend Tank     | VOC |  |  |
| F604S  | Latex Storage        | VOC |  |  |
| F605   | Latex Blend Tank     | VOC |  |  |
| F606   | Latex Blend Tank     | VOC |  |  |
| F607   | Latex Blend Tank     | VOC |  |  |
| F608   | Latex Blend Tank     | VOC |  |  |
| F609   | Latex Blend Tank     | VOC |  |  |
| F610   | Latex Blend Tank     | VOC |  |  |
| F611   | Latex Blend Tank     | VOC |  |  |
| F612   | Latex Blend Tank     | VOC |  |  |
| F801A  | Primary Feed Latex A | VOC |  |  |
| F801B  | Utility Latex Tank   | VOC |  |  |
| F812   | Conc. Latex Product  | VOC |  |  |
| F816   | pH Adjustment        | VOC |  |  |
| F817   | pH Adjustment        | VOC |  |  |
| F850A  | Special Feed Latex   | VOC |  |  |

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|                                                                                     |                            |     |  |  |
|-------------------------------------------------------------------------------------|----------------------------|-----|--|--|
| F850B                                                                               | Special Feed Latex         | VOC |  |  |
| F825A                                                                               | Latex Interstage Surge     | VOC |  |  |
| F825B                                                                               | Latex Interstage Surge     | VOC |  |  |
| F825C                                                                               | Latex Interstage Surge     | VOC |  |  |
| F825D                                                                               | Latex Interstage Surge     | VOC |  |  |
| F852A                                                                               | Conc. Latex Product        | VOC |  |  |
| F852B                                                                               | Conc. Latex Product        | VOC |  |  |
| F852C                                                                               | Conc. Latex Product        | VOC |  |  |
| F852D                                                                               | Conc. Latex Product        | VOC |  |  |
| F852E                                                                               | Conc. Latex Product        | VOC |  |  |
| F852F                                                                               | Conc. Latex Product        | VOC |  |  |
| F851                                                                                | Conc. Latex Tank           | VOC |  |  |
| F855A                                                                               | Conc. Latex Product        | VOC |  |  |
| F855B                                                                               | Conc. Latex Product        | VOC |  |  |
| F855C                                                                               | Conc. Latex Product        | VOC |  |  |
| F855D                                                                               | Conc. Latex Product        | VOC |  |  |
| F870                                                                                | Conc. Latex Product        | VOC |  |  |
| F871                                                                                | Conc. Latex Product        | VOC |  |  |
| FUGFUEL                                                                             | Plant Fuel Transfers       | VOC |  |  |
| Insignificant Source List                                                           | 285 Vessels                | VOC |  |  |
| F119 (mercaptan), F122 (mercaptan), F131 (styrene), F132 (styrene), F133 (styrene), | Raw Material Storage Tanks | VOC |  |  |

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|                                                                                                                                               |                               |           |       |        |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----------|-------|--------|
| F134 (styrene), F243 (pinane hydroperoxide)                                                                                                   |                               |           |       |        |
| F360KA, F364C, F364D, F364E,, F364F, F410E,, F410F, F824A,, A4ADDSYFUG,, A2ADDSYFUG, and, A6ADDSYFUG                                          | Change, Feed, or Makeup Tanks |           |       |        |
| T-5001, T-5002, T-5003, and T-5004                                                                                                            | Cooling Towers (5)            |           |       |        |
| L1A, L2A, L3A, , L4A, L1B, and L2B, L3B, L4B, FLOCBSN,, LND FILL, BIOLGN                                                                      | Wastewater Treatment          |           |       |        |
| H2LBV, H4LBV, A1LAB1, A1LAB2, A1LAB3, A1LAB4, A1LAB5, A1LAB6, A1LAB7, LBS                                                                     | Laboratory Vents              |           |       |        |
| G-DEGR, SP1-DEGR, SP2-DEGR, N1-DEGR,, REF-DEGR, P-DEGR,, D8-DEGR, W5-DEGR,, X2-DEGR, H-DEGR                                                   | Degreasers                    |           |       |        |
| SUMP-A1, SUMP-A2, SUMP-A3, SUMP-A6, SUMP-B1, SUMP-B2, SUMP-B3, SUMP-D8, SUMP-D3                                                               | Water Separator               |           |       |        |
| VOC, Butadiene, Butenes, Styrene, and CS2 Emission Caps:                                                                                      |                               | VOC (6)   | 684.6 | 379.47 |
|                                                                                                                                               |                               | Butadiene | 11    | 17.1   |
|                                                                                                                                               |                               | Butenes   | 3.52  | 1.3    |
|                                                                                                                                               |                               | Styrene   | 202.3 | 194.83 |
|                                                                                                                                               |                               | CS2       | 5.5   | 21.48  |
| Planned MSS Emissions (7):                                                                                                                    |                               | VOC (6)   | 11.86 | 4.05   |
|                                                                                                                                               |                               | Butadiene | 6.05  | 0.67   |
|                                                                                                                                               |                               | Butenes   | 1.82  | 0.1    |
|                                                                                                                                               |                               | Styrene   | 1.05  | 0.55   |
| LC-VF, FUG-LCG, FUG-LCJ, FUG-LCK, FUG-LCL, FUG-LCM, FUG-LCP, FUG-LCQ                                                                          | Crumb Rubber Finishing        | H2SO4     | 0.01  | 0.05   |
| T-5111, T-5112, T5113                                                                                                                         | Chlorine Fugitives (5)        | Cl2       | 0.03  | 0.03   |
| MSS EMISSIONS VENTED TO ATMOSPHERE                                                                                                            |                               |           |       |        |
| SUMP-A1, SUMP-A2 SUMP-A3, SUMP-A6, SUMP-B1, SUMP-B2, SUMP-B3, SUMP-D3 SUMP-D8, FUG-DW, FUG-DF, FUG-DG, FUG-DJ, FUG-DK, FUG-DL, FUG-DM, FUG-DP | Planned MSS Emissions (7)     | VOC (6)   | 1.05  | 0.01   |
|                                                                                                                                               |                               | Butadiene | 0.01  | 0.01   |
|                                                                                                                                               |                               | Styrene   | 1     | 0.05   |
|                                                                                                                                               |                               | NOx       | 0.01  | 0.01   |
|                                                                                                                                               |                               | CO        | 0.16  | 0.01   |
|                                                                                                                                               |                               | PM        | 0.13  | 0.01   |
| 6618-MSS/MISC                                                                                                                                 | Miscellaneous                 | VOC (6)   | 2.73  | 2.78   |

MSS

Emission Sources - Maximum Allowable Emission Rates

|                |                         |                 |      |      |
|----------------|-------------------------|-----------------|------|------|
|                |                         | Butadiene       | 0.02 | 0.02 |
|                |                         | Butenes         | 0.01 | 0.01 |
|                |                         | Styrene         | 0.04 | 0.05 |
|                |                         | NO <sub>x</sub> | 0.01 | 0.01 |
|                |                         | CO              | 0.01 | 0.01 |
| 6618-MSS/DEGAS | Uncontrolled<br>MSS (8) | VOC (6)         | 2.89 | 0.24 |
|                |                         | Butadiene       | 0.46 | 0.04 |
|                |                         | Butenes         | 0.14 | 0.01 |
|                |                         | Styrene         | 2.29 | 0.19 |

- (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
- PM<sub>10</sub> - total particulate matter equal to or less than 10 microns in diameter, including PM<sub>2.5</sub>, as represented
- PM<sub>2.5</sub> - particulate matter equal to or less than 2.5 microns in diameter
- CO - carbon monoxide
- NH<sub>3</sub> - ammonia
- CS<sub>2</sub> - carbon disulfide
- H<sub>2</sub>SO<sub>4</sub> - sulfuric acid
- Cl<sub>2</sub> - chlorine
- (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.
- (6) VOC emissions include butadiene, butenes, styrene, and other organic compounds.
- (7) MSS Emissions are included in the Emission Caps.
- (8) Planned MSS Degassing Emissions venting to atmosphere after VOC concentration has been monitored and measured as equal to or less than 10,000 ppmv as specified in Special Condition No. 13.

Date: November 12, 2014