

# EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Numbers 946A and PSD-TX-1025M1

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    |
| 1/2/3/4/5                 | Lines 92 and 93<br>Collectors and High<br>Energy Air Filtration<br>(HEAF) - Stacks | PM                          | 33.50            | 146.73 |
|                           |  | Total VOC                   | 21.61            | 94.64  |
|                           |  | NO <sub>x</sub>             | 11.76            | 51.51  |
|                           |  | SO <sub>2</sub>             | 6.53             | 28.65  |
|                           |  | CO                          | 57.46            | 251.67 |
|                           |  | NH <sub>3</sub>             | 36.00            | 157.68 |
|                           |  | Formaldehyde                | 8.50             | 37.23  |
|                           |  | Phenol                      | 4.12             | 18.05  |
|                           |  | Methyl Alcohol              | 3.69             | 16.15  |
| 15A                       | Glass Furnaces (1901 and<br>1902) ESP - Stack                                      | PM <sub>10</sub>            | 10.11            | 44.30  |
|                           |  | VOC                         | 0.24             | 1.07   |
|                           |  | NO <sub>x</sub>             | 17.52            | 76.75  |
|                           |  | SO <sub>2</sub>             | 5.38             | 23.59  |
|                           |  | CO                          | 1.10             | 4.80   |
|                           |  | HF                          | 0.16             | 0.70   |
| FHFUG                     | 1901 Forehearth (4)  | PM <sub>10</sub>            | 0.17             | 0.72   |
|                           |  | VOC                         | 0.07             | 0.32   |
|                           |  | NO <sub>x</sub>             | 1.32             | 5.79   |
|                           |  | SO <sub>2</sub>             | 0.01             | 0.03   |
|                           |  | CO                          | 1.11             | 4.87   |
| FHFUG2                    | 1902 Furnace Forehearth (4)  | PM <sub>10</sub>            | 0.25             | 1.10   |
|                           |  | NO <sub>x</sub>             | 1.46             | 6.40   |
|                           |  | SO <sub>2</sub>             | <0.01            | 0.05   |
|                           |  | CO                          | 1.10             | 4.80   |
| FMFUG                     | 1901 Forming Area (4)  | PM <sub>10</sub>            | 1.50             | 6.57   |
|                           |  | VOC                         | 0.59             | 2.58   |
|                           |  | NH <sub>3</sub>             | 0.60             | 2.63   |

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|---------------------------|--|-----------------------------|-------------------------|-------|
|                           |  |                             | lb/hr                   | TPY   |
| BFUG                      | 1901 Batch Plant (4)                             | PM <sub>10</sub>            | 0.06                    | 0.28  |
| MXBIN1                    | 1901 E-Glass Mixing<br>Bin (North) (4)           | PM <sub>10</sub>            | 0.014                   | 0.06  |
| MXBIN2                    | 1901 E-Glass Mixing<br>Bin (South) (4)           | PM <sub>10</sub>            | 0.014                   | 0.06  |
| 16                        | Line 91 Collection Wet<br>Scrubber No. 1 - Stack | PM <sub>10</sub>            | 4.50                    | 19.08 |
|                           |  | Total VOC                   | 3.84                    | 12.38 |
|                           |  | NO <sub>x</sub>             | 1.29                    | 5.63  |
|                           |  | SO <sub>2</sub>             | 0.01                    | 0.04  |
|                           |  | CO                          | 9.15                    | 40.17 |
|                           |  | NH <sub>3</sub>             | 4.20                    | 18.37 |
|                           |  | Formaldehyde                | 0.68                    | 2.97  |
|                           |  | Phenol                      | 0.75                    | 3.29  |
| 17                        | Line 91 Collection Wet<br>Scrubber No. 2 - Stack | PM <sub>10</sub>            | 4.50                    | 19.08 |
|                           |  | Total VOC                   | 3.84                    | 12.38 |
|                           |  | NO <sub>x</sub>             | 1.29                    | 5.63  |
|                           |  | SO <sub>2</sub>             | 0.01                    | 0.04  |
|                           |  | CO                          | 9.15                    | 40.17 |
|                           |  | NH <sub>3</sub>             | 4.20                    | 18.37 |
|                           |  | Formaldehyde                | 0.68                    | 2.97  |
|                           |  | Phenol                      | 0.75                    | 3.29  |
| 18                        | Line 91 Collection Wet<br>Scrubber No. 3 - Stack | PM <sub>10</sub>            | 4.50                    | 19.08 |
|                           |  | Total VOC                   | 3.84                    | 12.38 |
|                           |  | NO <sub>x</sub>             | 1.29                    | 5.63  |
|                           |  | SO <sub>2</sub>             | 0.01                    | 0.04  |
|                           |  | CO                          | 9.15                    | 40.17 |
|                           |  | NH <sub>3</sub>             | 4.20                    | 18.37 |
|                           |  | Formaldehyde                | 0.68                    | 2.97  |
|                           |  | Phenol                      | 0.75                    | 3.29  |

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| Emission<br>Point No. (1) | Source<br>Name (2)   | Air Contaminant<br>Name (3) | Emission Rates * |       |
|---------------------------|--|-----------------------------|------------------|-------|
|                           |  |                             | lb/hr            | TPY   |
| 19                        | Line 91 Collection Wet<br>Scrubber No. 4 - Stack                   | PM <sub>10</sub>            | 4.50             | 19.08 |
|                           |  | Total VOC                   | 3.84             | 12.38 |
|                           |  | NO <sub>x</sub>             | 1.29             | 5.63  |
|                           |  | SO <sub>2</sub>             | 0.01             | 0.04  |
|                           |  | CO                          | 9.15             | 40.17 |
|                           |  | NH <sub>3</sub>             | 4.20             | 18.37 |
|                           |  | Formaldehyde                | 0.68             | 2.97  |
|                           |  | Phenol                      | 0.75             | 3.29  |
| 20                        | Line 91 Oven Wet<br>Scrubber - Stack                               | PM <sub>10</sub>            | 4.51             | 18.96 |
|                           |  | Total VOC                   | 7.82             | 34.24 |
|                           |  | NO <sub>x</sub>             | 4.38             | 19.18 |
|                           |  | SO <sub>2</sub>             | 0.01             | 0.04  |
|                           |  | CO                          | 22.28            | 97.58 |
|                           |  | NH <sub>3</sub>             | 7.02             | 30.75 |
|                           |  | Formaldehyde                | 1.60             | 7.00  |
|                           |  | Phenol                      | 1.00             | 4.38  |
| 21                        | Line 91 Melters<br>Baghouse No. 1 - Stack                          | Total PM <sub>10</sub>      | 0.99             | 4.34  |
|                           |  | VOC                         | 0.32             | 1.39  |
|                           |  | NO <sub>x</sub>             | 0.11             | 0.50  |
|                           |  | SO <sub>2</sub>             | 2.51             | 10.97 |
|                           |  | CO                          | 4.13             | 18.08 |
|                           |  | Boron Oxide                 | 0.40             | 1.75  |
| 22                        | Line 91 Cold End/<br>Horizontal Band Saw<br>Baghouse No. 2 - Stack | PM <sub>10</sub>            | 0.06             | 0.26  |
| 23                        | Line 91 Batch Loading Shed<br>Baghouse No. 3 - Stack               | PM <sub>10</sub>            | 0.03             | 0.13  |
| 24                        | Line 91 Unload Shed<br>Baghouse No. 4 - Stack                      | PM <sub>10</sub>            | 0.03             | 0.13  |
| 25                        | Line 91 Melter Dust Refeed   | PM <sub>10</sub>            | 0.03             | 0.13  |

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|---------------------------|---|-----------------------------|-------------------------|-------|
|                           |   |                             | lb/hr                   | TPY   |
|                           | Baghouse No. 5 - Stack                                |                             |                         |       |
| 26                        | Line 91 Mixed Batch Day Bin<br>Baghouse No. 6 - Stack | PM <sub>10</sub>            | 0.03                    | 0.13  |
| 27                        | Line 91 Mixed Batch Day Bin<br>Baghouse No. 7 - Stack | PM <sub>10</sub>            | 0.03                    | 0.13  |
| 28                        | Line 91 Mixed Batch Day Bin<br>Baghouse No. 8 - Stack | PM <sub>10</sub>            | 0.03                    | 0.13  |
| 29                        | Line 91 Mixed Batch Day Bin<br>Baghouse No. 9 - Stack | PM <sub>10</sub>            | 0.03                    | 0.13  |
| 35                        | South Trim Waste<br>Re-Feed Baghouse                  | PM <sub>10</sub>            | 0.03                    | 0.12  |
| 36                        | North Trim Waste<br>Re-Feed Baghouse                  | PM <sub>10</sub>            | 0.03                    | 0.12  |
| 37                        | Off-Line Trim Waste<br>Re-Feed Baghouse               | PM <sub>10</sub>            | 0.08                    | 0.36  |
| RA901                     | 1901 E-Glass Reclaim Area (4)                         | PM <sub>10</sub>            | 0.62                    | 2.72  |
|                           |   | VOC                         | 0.45                    | 1.97  |
|                           |   | NO <sub>x</sub>             | 0.10                    | 0.44  |
|                           |   | SO <sub>2</sub>             | <0.01                   | 0.01  |
|                           |   | CO                          | 0.08                    | 0.35  |
|                           |   | NH <sub>3</sub>             | 0.10                    | 0.44  |
| DRYTUN                    | Gypsum Drying Tunnel<br>Scrubber Stack                | Total PM <sub>10</sub>      | 0.62                    | 2.72  |
|                           |   | Total VOC                   | 2.51                    | 11.00 |
|                           |   | NO <sub>x</sub>             | 0.15                    | 0.64  |
|                           |   | SO <sub>2</sub>             | <0.01                   | <0.01 |
|                           |   | CO                          | 0.12                    | 0.54  |

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|---------------------------|------------------------------|-----------------------------|------------------|------|
|                           |                              |                             | lb/hr            | TPY  |
| OGMFUG                    | Offline Grooving Machine (4) | PM <sub>10</sub>            | 0.14             | 0.61 |

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
- (2) Specific point source names. For fugitive sources use area name or fugitive source name.
- (3) PM - particulate matter, suspended in the atmosphere, including PM<sub>10</sub>  
PM<sub>10</sub> - particulate matter less than or equal to 10 microns in diameter. Where PM is not listed, it shall be assumed that no PM greater than PM<sub>10</sub> is equal to PM.
- 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
- CO - carbon monoxide
- NH<sub>3</sub> - ammonia
- HF - hydrogen fluoride
- (4) Fugitive emissions are an estimate only.

\* Emission rates are based on and the facilities are limited by the following maximum hourly production rates for each of the following lines:

|         |                     |
|---------|---------------------|
| Line 92 | (Confidential file) |
| Line 93 | (Confidential file) |
| Line 91 | (Confidential file) |
| E-Glass | (Confidential file) |

Annual emission rates are based on the following continuous operation schedule:

Hrs/day\_\_\_\_\_ Days/week\_\_\_\_\_ Weeks/year\_\_\_\_\_ or Hrs/year 8,760

Dated December 28, 2004