Emission Sources - Maximum Allowable Emission Rates

Permit Number 3505

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 (5) * | |
|---|---|---|---|---|
| | | | lbs/hour | TPY ** |
| 1 | Grinding Plant Baghouse Stack | $PM_{10}$ | 3.23 | 14.15 |
| 2 | Rotary Calciner Wet Scrubber Stack | $PM_{10}$ | 1.30 | 3.80 |
| | | $SO_2$ | 2.71 | 7.89 |
| | | $NO_x$ | 3.49 | 10.20 |
| | | VOC | 0.10 | 0.30 |
| | | CO | 5.70 | 16.30 |
| | | HCl | < 0.01 | < 0.01 |
| | | HF | 0.04 | 0.13 |
| 4 | Lingl Dryer Waste Heat Dump Stack | $PM_{10}$ | 17.40 | 0.44 |
| | | $SO_2$ | < 0.01 | < 0.01 |
| | | $NO_x$ | < 0.01 | < 0.01 |
| | | VOC | < 0.01 | < 0.01 |
| | | CO | < 0.01 | < 0.01 |
| | | HCl | 0.20 | 1.00 |
| | | HF | 0.20 | 1.00 |
| 5 | Lingl Dryer Stack | $PM_{10}$ | 0.45 | 1.97 |
| | | $SO_2$ | < 0.01 | < 0.01 |
| | | $NO_x$ | < 0.01 | < 0.01 |
| | | VOC | < 0.01 | < 0.01 |
| | | CO | < 0.01 | < 0.01 |
| | | HCl | 0.02 | 0.10 |
| | | HF | 0.02 | 0.10 |
| 6 | Lingl Dryer Stack | $PM_{10}$ | 0.45 | 1.97 |

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| | | | | |
|---|---|---|---|---|
| | | $SO_2$ | < 0.01 | < 0.01 |
| | | $NO_x$ | < 0.01 | < 0.01 |
| | | VOC | < 0.01 | < 0.01 |
| | | CO | < 0.01 | < 0.01 |
| | | HCl | 0.02 | 0.10 |
| | | HF | 0.02 | 0.10 |
| 7 | Lingl Dryer Stack | $PM_{10}$ | 0.45 | 1.97 |
| | | $SO_2$ | < 0.01 | < 0.01 |
| | | $NO_x$ | < 0.01 | < 0.01 |
| | | VOC | < 0.01 | < 0.01 |
| | | CO | < 0.01 | < 0.01 |
| | | HCl | 0.02 | 0.10 |
| | | HF | 0.02 | 0.10 |
| 8 | Lingl Dryer Stack | $PM_{10}$ | 0.45 | 1.97 |
| | | $SO_2$ | < 0.01 | < 0.01 |
| | | $NO_x$ | < 0.01 | < 0.01 |
| | | VOC | < 0.01 | < 0.01 |
| | | CO | < 0.01 | < 0.01 |
| | | HCl | 0.02 | 0.10 |
| | | HF | 0.02 | 0.10 |
| 9 | Lingl Dryer Stack | $PM_{10}$ | 0.45 | 1.97 |
| | | $SO_2$ | < 0.01 | < 0.01 |
| | | $NO_x$ | < 0.01 | < 0.01 |
| | | VOC | < 0.01 | < 0.01 |
| | | CO | < 0.01 | < 0.01 |
| | | HCl | 0.02 | 0.10 |
| | | HF | 0.02 | 0.10 |
| 11 | Lingl Dryer Stack | $PM_{10}$ | 0.45 | 1.97 |
| | | $SO_2$ | < 0.01 | < 0.01 |
| | | $NO_x$ | < 0.01 | < 0.01 |

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| | | | | |
|---|---|---|---|---|
| | | VOC | < 0.01 | < 0.01 |
| | | CO | < 0.01 | < 0.01 |
| | | HCl | 0.02 | 0.10 |
| | | HF | 0.02 | 0.10 |
| 12 | Lingl Dryer Stack | $PM_{10}$ | 0.45 | 1.97 |
| | | $SO_2$ | < 0.01 | < 0.01 |
| | | $NO_x$ | < 0.01 | < 0.01 |
| | | VOC | < 0.01 | < 0.01 |
| | | CO | < 0.01 | < 0.01 |
| | | HCl | 0.02 | 0.10 |
| | | HF | 0.02 | 0.10 |
| 13 | Lingl Dryer Stack | $PM_{10}$ | 0.45 | 1.97 |
| | | $SO_2$ | < 0.01 | < 0.01 |
| | | $NO_x$ | < 0.01 | < 0.01 |
| | | VOC | < 0.01 | < 0.01 |
| | | CO | < 0.01 | < 0.01 |
| | | HCl | 0.02 | 0.10 |
| | | HF | 0.02 | 0.10 |
| 14 | Lingl Dryer Stack | $PM_{10}$ | 0.45 | 1.97 |
| | | $SO_2$ | < 0.01 | < 0.01 |
| | | $NO_x$ | < 0.01 | < 0.01 |
| | | VOC | < 0.01 | < 0.01 |
| | | CO | < 0.01 | < 0.01 |
| | | HCl | 0.02 | 0.10 |
| | | HF | 0.02 | 0.10 |
| 15 | Lingl Dryer Stack | $PM_{10}$ | 0.45 | 1.97 |
| | | $SO_2$ | < 0.01 | < 0.01 |
| | | $NO_x$ | < 0.01 | < 0.01 |
| | | VOC | < 0.01 | < 0.01 |
| | | CO | < 0.01 | < 0.01 |

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| | | | | |
|---|---|---|---|---|
| | | HCl | 0.02 | 0.10 |
| | | HF | 0.02 | 0.10 |
| 16 | ENP Plant Kiln DIFF | $PM_{10}$ | 3.18 | 13.93 |
| | | $SO_2$ | 32.39 | 141.87 |
| | | $NO_x$ | 3.15 | 13.81 |
| | | VOC | 0.18 | 0.80 |
| | | CO | 4.16 | 18.22 |
| | | HCl | 3.04 | 13.32 |
| | | HF | 0.68 | 2.98 |
| 16A | ENP Plant Kiln Bypass | $PM_{10}$ | 8.80 | 1.54 |
| | | $SO_2$ | 35.63 | 6.24 |
| | | $NO_x$ | 3.15 | 0.55 |
| | | VOC | 0.18 | 0.03 |
| | | CO | 4.16 | 0.73 |
| | | HCl | 7.60 | 1.33 |
| | | HF | 7.57 | 1.33 |
| 17 | Mold Plant Pre-Heat Burner | $PM_{10}$ | 0.15 | 0.68 |
| | | $SO_2$ | 0.32 | 1.41 |
| | | $NO_x$ | 0.06 | 0.24 |
| | | VOC | < 0.01 | 0.01 |
| | | CO | 0.07 | 0.32 |
| 18 | Rotary Calciner Bypass | $PM_{10}$ | < 0.01 | < 0.01 |
| | | $SO_2$ | 1.96 | 0.02 |
| | | $NO_x$ | 1.99 | 0.02 |
| | | VOC | < 0.01 | < 0.01 |
| | | CO | 0.70 | 0.01 |
| | | HCl | < 0.01 | < 0.01 |
| | | HF | < 0.01 | < 0.01 |
| 19 | Swindell Holding Room Stack | $PM_{10}$ | 1.87 | 8.19 |
| | | $SO_2$ | < 0.01 | < 0.01 |

Emission Sources – Maximum Allowable Emission Rates

| | | | | |
|---|---|---|---|---|
| | | $NO_x$ | < 0.01 | < 0.01 |
| | | VOC | < 0.01 | < 0.01 |
| | | CO | < 0.01 | < 0.01 |
| | | HCl | < 0.01 | < 0.01 |
| | | HF | < 0.01 | < 0.01 |
| 23 | Shapes Dryer Stack | $PM_{10}$ | 0.02 | 0.09 |
| | | $SO_2$ | 0.08 | 0.34 |
| | | $NO_x$ | 0.01 | 0.05 |
| | | VOC | < 0.01 | < 0.01 |
| | | CO | 0.04 | 0.16 |
| | | HCl | < 0.01 | < 0.01 |
| | | HF | < 0.01 | < 0.01 |
| 24 | Smog Hog | $PM_{10}$ | 0.13 | 1.00 |
| | | VOC | 0.01 | 0.01 |
| 25 | Surge Bin Dust Collector | $PM_{10}$ | 2.40 | 11.00 |
| 26 | Extrusion Plant Transfer Point | PM | 0.03 | 0.01 |
| | | $PM_{10}$ | 0.01 | 0.01 |
| 27 | Sand Hopper | PM | < 0.01 | < 0.01 |
| | | $PM_{10}$ | < 0.01 | < 0.01 |
| 28 | Sand Screen No. 1 | PM | 0.13 | 0.07 |
| | | $PM_{10}$ | 0.01 | 0.01 |
| 29 | Sand Screen No. 2 | PM | 0.13 | 0.07 |
| | | $PM_{10}$ | 0.01 | 0.01 |
| 30 | Calcine Drop Point | PM | 0.18 | 0.70 |
| | | $PM_{10}$ | 0.01 | 0.03 |
| 31 | Conveyor Pile Drop Point No. 1 | PM | < 0.01 | < 0.01 |
| | | $PM_{10}$ | < 0.01 | < 0.01 |
| 32 | Conveyor Pile Drop Point No. 2 | PM | < 0.01 | < 0.01 |
| | | $PM_{10}$ | < 0.01 | < 0.01 |
| 33 | Screening Transfer | PM | < 0.01 | < 0.01 |

Emission Sources – Maximum Allowable Emission Rates

| | | | | |
|---|---|---|---|---|
| | Point No. 1 | $PM_{10}$ | < 0.01 | < 0.01 |
| 34 | Screening Transfer Point No. 2 | PM | < 0.01 | < 0.01 |
| | | $PM_{10}$ | < 0.01 | < 0.01 |
| 35 | Grandslam Transfer Point No. 1 | PM | 0.05 | 0.02 |
| | | $PM_{10}$ | 0.02 | 0.01 |
| 36 | Grandslam Transfer Point No. 2 | PM | 0.05 | 0.02 |
| | | $PM_{10}$ | 0.02 | 0.01 |
| 37 | Diesel Tank – 10,000 gallon | VOC | < 0.01 | < 0.01 |
| 38 | Gasoline Tank – 1000 gallon | VOC | < 0.01 | < 0.01 |
| 39 | Swindell Kiln | $PM_{10}$ | 9.93 | 43.50 |
| | | $SO_2$ | 7.65 | 33.50 |
| | | $NO_x$ | 4.00 | 17.50 |
| | | VOC | 0.27 | 1.20 |
| | | CO | 3.54 | 15.50 |
| | | HCl | 1.94 | 8.50 |
| | | HF | 4.22 | 18.50 |
| 40 | Extrusion Plant Transfer Point | PM | 0.02 | 0.01 |
| | | $PM_{10}$ | 0.01 | < 0.01 |
| 41 | Soft Mud Plant Transfer Point No. 1 | PM | 0.02 | 0.01 |
| | | $PM_{10}$ | 0.01 | < 0.01 |
| 42 | Soft Mud Plant Transfer Point No. 2 | PM | 0.02 | 0.01 |
| | | $PM_{10}$ | 0.01 | < 0.01 |
| 43 | Diesel Tank – 500 gallon | VOC | < 0.01 | < 0.01 |
| 56 | Farr Dust Collector – Source De-Hacker/Pkg | $PM_{10}$ | 0.86 | 1.29 |
| 64A | HI-VAC Dust Collector | $PM_{10}$ | 0.86 | 1.29 |
| 65A | ENP Plant Kiln Car Cleaner Dust Collector | $PM_{10}$ | 0.43 | 0.50 |

Emission Sources – Maximum Allowable Emission Rates

| | | | | |
|---|---|---|---|---|
| 92A | Farr Dust Collector – Dry Set | $PM_{10}$ | 0.86 | 1.29 |
| FUG1 | Rotary Calciner Building (4) | PM | 0.01 | 0.01 |
| | | $PM_{10}$ | 0.01 | 0.01 |
| FUG2 | Grandslam Crusher Building (4) | PM | 0.06 | 0.02 |
| | | $PM_{10}$ | 0.02 | 0.01 |
| FUG3 | Calcine Clay Storage Building (4) | PM | 0.02 | 0.01 |
| | | $PM_{10}$ | 0.01 | 0.01 |
| FUG4 | Raw Material Clay Storage (4) | PM | 0.08 | 0.04 |
| | | $PM_{10}$ | 0.02 | 0.01 |
| FUG5 | Shapes Operation Building (4) | PM | 0.10 | 0.03 |
| | | $PM_{10}$ | 0.04 | 0.01 |
| FUG6 | ENP Manufacturing Building (4) | PM | 1.05 | 0.50 |
| | | $PM_{10}$ | 0.80 | 0.40 |
| FUG7 | Swindell Coatings Storage Building (4) | PM | 0.16 | 0.10 |
| | | $PM_{10}$ | 0.13 | 0.10 |
| FUG8 | Harrop Building (4) | PM | < 0.01 | < 0.01 |
| | | $PM_{10}$ | < 0.01 | < 0.01 |
| FUG9 | Mold Plant Building (4) | PM | 0.10 | 0.04 |
| | | $PM_{10}$ | 0.04 | 0.02 |
| FUG10 | Grinding Plant Building (4) | PM | 1.42 | 0.45 |
| | | $PM_{10}$ | 0.14 | 0.04 |
| FUG11 | Stockpile (4) | PM | -- | 7.23 |
| | | $PM_{10}$ | -- | 3.61 |
| FUG13 | Raw Clay Hopper (4) | PM | < 0.01 | < 0.01 |
| | | $PM_{10}$ | < 0.01 | < 0.01 |

(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
HCl - hydrogen chloride
HF - hydrogen fluoride
$NO_x$ - total oxides of nitrogen

Emission Sources – Maximum Allowable Emission Rates

PM - total particulate matter, suspended in the atmosphere, including $PM_{10}$ and $PM_{2.5}$, as represented
$PM_{10}$ - total particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$, as represented
$SO_2$ - sulfur dioxide
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1

(4) Fugitive emissions are an estimate.

(5) Planned startup and shutdown emissions are included. Maintenance activities are not authorized by this permit.

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

5,840 Hrs/year for the Rotary Calciner,

5,000 Hrs/year for the Grinding and Screening, and

8,760 Hrs/year for all other permitted facilities. **(2/08)**

Maximum Allowable Production Rates: **(2/07)**

| | | | | |
|---|---|---|---|---|
| Rotary Calciner (EPN 2) | | | 40,000 | TPY |
| Grinding Plant (EPN 1) | 300 | TPH | 546,000 | TPY |
| ENP Plant Kiln (EPN 16) | 26.5 | TPH | 232,000 | TPY |
| Swindell Kiln (EPN 39) | | | 87,599 | TPY |

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

Date: February 7, 2013