

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 2487

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>*        | Source                                  | Air Contaminant  | <u>Emission Rates</u> |       |
|----------------------|---|------------------|-----------------------|-------|
| <u>Point No. (1)</u> | <u>Name (2)</u>                         | <u>Name (3)</u>  | <u>lb/hr</u>          |       |
| <u>TPY</u>           |   |                  |                       |       |
| HPC-2                | HNO <sub>3</sub> Tank                   | HNO <sub>3</sub> | 0.87                  | 0.04  |
| HPC-12A              | Spray Dryer (d)                         | NO <sub>x</sub>  | 2.30                  | 9.68  |
|                      |   | PM <sub>10</sub> | 3.09                  | 13.00 |
|                      |   | CO               | 0.82                  | 3.44  |
|                      |   | VOC              | 0.14                  | 0.57  |
|                      |   | SO <sub>2</sub>  | 0.01                  | 0.06  |
| HPC-12B              | NO <sub>x</sub> Scrubber (d)            | NO <sub>x</sub>  | 15.20                 | 44.60 |
|                      |   | PM <sub>10</sub> | 0.52                  | 2.18  |
|                      |   | NH <sub>3</sub>  | 0.74                  | 3.11  |
| HPC-12C              | SCR Stack (d)                           | NO <sub>x</sub>  | 11.21                 | 47.08 |
|                      |   | PM <sub>10</sub> | 0.58                  | 2.43  |
|                      |   | SO <sub>2</sub>  | <0.01                 | 0.01  |
|                      |   | NH <sub>3</sub>  | 0.95                  | 4.00  |
| HCK-8                | HCK-8 Stack                             | NO <sub>x</sub>  | 0.35                  | 1.42  |
|                      |   | PM <sub>10</sub> | 0.60                  | 2.43  |
|                      |   | CO               | 0.07                  | 0.28  |
|                      |   | VOC              | 0.02                  | 0.07  |
|                      |   | SO <sub>2</sub>  | <0.01                 | <0.01 |
| HPC-14               | Solution Tank                           | NH <sub>3</sub>  | 0.02                  | <0.01 |
| HPC-15               | CO <sub>2</sub> (NO <sub>3</sub> ) Tank | HNO <sub>3</sub> | 0.04                  | <0.01 |

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|---------------|---|------------------|------------------|-------|
| Point No. (1) | Name (2)                                | Name (3)         | lb/hr            | TPY   |
| HPC-16        | NI (NO <sub>3</sub> ) <sub>2</sub> Tank | HNO <sub>3</sub> | 0.04             | <0.01 |
| HPC-17        | HEPA Filter for Molox<br>Bin (b)        | PM <sub>10</sub> | <0.01            | <0.01 |
| HPC-18        | Dust Conveyor Bag Filter<br>1.04        |                  | PM <sub>10</sub> | 0.25  |
| HPC-23        | Belt Dryer Stack (a)                    | NO <sub>x</sub>  | 1.96             | 8.16  |
|               |   | PM <sub>10</sub> | 0.10             | 0.42  |
|               |   | CO               | 0.70             | 2.94  |
|               |   | VOC              | 0.12             | 0.50  |
|               |   | SO <sub>2</sub>  | 0.01             | 0.05  |
| HPC-24        | Calciner 1A Bypass Stack (a)<br>4.08    |                  | NO <sub>x</sub>  | 0.97  |
|               |   | PM <sub>10</sub> | 0.05             | 0.21  |
|               |   | CO               | 0.35             | 1.47  |
|               |   | VOC              | 0.06             | 0.25  |
|               |   | SO <sub>2</sub>  | 0.01             | 0.03  |
| HPC-24A       | Calciner 1B Bypass Stack (a)<br>4.08    |                  | NO <sub>x</sub>  | 0.97  |
|               |   | PM <sub>10</sub> | 0.05             | 0.21  |
|               |   | CO               | 0.35             | 1.47  |
|               |   | VOC              | 0.06             | 0.25  |
|               |   | SO <sub>2</sub>  | 0.01             | 0.03  |
| HPC-24B       | Calciner 2                              | NO <sub>x</sub>  | 0.97             | 4.08  |
|               |   | PM <sub>10</sub> | 0.05             | 0.21  |
|               |   | CO               | 0.35             | 1.47  |
|               |   | VOC              | 0.06             | 0.25  |
|               |   | SO <sub>2</sub>  | <0.01            | 0.03  |

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|---------------|----------------------------------|------------------|----------|-------|
| Point No. (1) | Name (2)                         | Name (3)         | lb/hr    | TPY   |
| HPC-26        | Dryer Bypass (a)                 | NO <sub>x</sub>  | 0.83     | 3.45  |
|               |                                  | PM <sub>10</sub> | 0.04     | 0.18  |
|               |                                  | CO               | 0.30     | 1.24  |
|               |                                  | VOC              | 0.05     | 0.21  |
|               |                                  | SO <sub>2</sub>  | <0.01    | 0.02  |
| HPC-29        | Boiler                           | NO <sub>x</sub>  | 2.20     | 9.64  |
|               |                                  | PM <sub>10</sub> | 0.10     | 0.43  |
|               |                                  | CO               | 0.68     | 2.99  |
|               |                                  | VOC              | 0.11     | 0.50  |
|               |                                  | SO <sub>2</sub>  | 0.01     | 0.05  |
| HPC-30        | Mix Dose Tank 2                  | HNO <sub>3</sub> | <0.01    | <0.01 |
| HPC-31        | Base Storage Hopper<br>Bagfilter | PM <sub>10</sub> | 0.03     | 0.14  |
| HPC-32        | Base Bin A Bagfilter             | PM <sub>10</sub> | <0.01    | 0.02  |
| HPC-33        | Base Bin B Bagfilter             | PM <sub>10</sub> | <0.01    | 0.02  |
| HPC-34        | Base Bin C Bagfilter             | PM <sub>10</sub> | <0.01    | 0.02  |
| HPC-35        | Dust Bin A Bagfilter             | PM <sub>10</sub> | <0.01    | 0.02  |
| HPC-36        | Dust Bin B Bagfilter             | PM <sub>10</sub> | <0.01    | 0.02  |
| HPC-37        | Scale Hopper Bagfilter           | PM <sub>10</sub> | <0.01    | 0.02  |
| HPC-38        | Extruder I Bagfilter             | PM <sub>10</sub> | <0.01    | 0.02  |

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|---------------|--|------------------|------------------|-------|
| Point No. (1) | Name (2)   | Name (3)         | lb/hr            | TPY   |
| HPC-39        | Extruder II Bagfilter                            | PM <sub>10</sub> | <0.01            | 0.02  |
| HPC-40        | Extruder III Bagfilter                           | PM <sub>10</sub> | <0.01            | 0.02  |
| HPC-42        | ADM Storage Tank                                 | NH <sub>3</sub>  | 0.15             | <0.01 |
| HPC-43        | Ribbon Mixer Bagfilter                           | PM <sub>10</sub> | <0.01            | 0.02  |
| HPC-46        | CO (NO <sub>3</sub> ) <sub>2</sub>               | HNO <sub>3</sub> | 0.04             | <0.01 |
| HPC-47        | HEPA Filter for Solution<br><0.01<br>Reactor (c) |                  | PM <sub>10</sub> | <0.01 |
| HPC-48A       | Final Product Loadout<br>Bagfilter               | PM <sub>10</sub> | <0.01            | <0.01 |
| HPC-48B       | Final Product Loadout<br>Bagfilter Maintenance   | PM <sub>10</sub> | <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) PM<sub>10</sub> - particulate matter less than 10 microns

VOC - volatile organic compounds as defined in General Rule 101.1

NO<sub>x</sub> - total oxides of nitrogen

SO<sub>2</sub> - sulfur dioxide

CO - carbon monoxide

NH<sub>3</sub> - ammonia

HNO<sub>3</sub> - nitric acid

\* Emission rates are based on and the facilities are limited by the

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|---------------|----------|-----------------|----------|-------|
| Point No. (1) | Name (2) | Name (3)        | lb/hr    | TPY   |

maximum operating schedules represented in the permit renewal application of December 1992.

- (a) Emissions from Calciners 1A and 1B are vented through one or more of the following emission points depending upon manufacturing process requirements: HPC-24, HPC-24A, HPC-26, and HPC-23. The total emissions from these sources will not exceed the quantities shown for HPC-23.
- (b) The hourly and annual emission values for the molox bin assume to contain a maximum of 67 percent molybdenum.
- (c) The hourly and annual emission values for the solution reactor assume to contain a maximum of 67 percent molybdenum, 50 percent nickel, and 50 percent cobalt.
- (d) Emissions of the Main Stack (HPC 12) are a combination of emissions from the NO<sub>x</sub> Scrubber (HPC-12B) and the Spray Dryer (HPC-12A). The combined total NO<sub>x</sub> emissions from HPC-12B and HPC-12C shall not exceed 15.20 lbs/hr and 47.08 tpy.

Dated\_\_\_\_\_