



Louisville Metro Air Pollution Control District
701 West Ormsby Avenue, Suite 303
Louisville, Kentucky 40203-3137



Title V Construction Permit

Permit No.: C-0187-20-0022-V

Plant ID: 0187

Effective Date: 06/01/2021

Expiration Date: 06/30/2022

Permission is hereby given by the Louisville Metro Air Pollution Control District to operate the process(es) and equipment described herein which are located at:

Source: **Eckart America Corporation**
4101 Camp Ground Road
Louisville, KY 40211

Owner: **Eckart America Corporation**
4101 Camp Ground Road
Louisville, KY 40211

is authorized to install and modify the described process equipment by the Louisville Metro Air Pollution Control District. Authorization is based on information provided with the application submitted by the company and in accordance with applicable regulations and the conditions specified herein.

Process equipment description:

U2: E3, Furnace, increased aluminum process weight throughput rate to 5000 lb/hr and addition of secondary control devices, baghouses, C10 and C11. E4, M-7 Screen Room and E6, M-8 Screen Room increased aluminum process rate to 2500 lb/hr each. Addition of E5b, Filter Container Loading at the aluminum process rate to 20 lb/hr. Addition of E-7b, Filter Container Loading at the aluminum process rate to 20 lb/hr.

U3: E-8a, Buhler A Storage Tank, E-8b, Buhler A Weigh Tank, and E-8c, Buhler A Conveyor Pod increased aluminum process rate to 7000 lb/hr each.

U4: E-12a, Large Powder Storage Tank 2 and E-15, Tote/Drum Filling Station #2 increased aluminum process rate to 7000 lb/hr each.

U7: Addition of the following emission points: E-343, Supersack unloader, E-344, Drum unloader, E-345, Air Blender, E-346, Feed Hopper, and E-347, Product containers.

U8: E-158, Repack Drum/Tote Unloading, E-160, Repack Staging Vessel, and E-164, Repack Drum Loading increased aluminum process rate to 5000 lb/hr each.

Permit writer: Martin J Hazelett

DocuSigned by:

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Air Pollution Control Officer
6/1/2021

Table of Contents

| | |
|---|----|
| Construction Permit Revisions and Changes | 4 |
| Application and Related Documents | 4 |
| Abbreviations and Acronyms | 6 |
| Plantwide Requirements | 10 |
| Facility Description..... | 10 |
| Plantwide Applicable Regulations | 10 |
| Plantwide Specific Conditions..... | 11 |
| Emission Unit U2: Hot Air Furnace | 14 |
| U2 Applicable Regulations | 14 |
| U2 Equipment | 14 |
| U2 Control Devices..... | 15 |
| U2 Specific Conditions | 16 |
| Emission Unit U3: Hot Air Direct Convey and Air Slide System..... | 23 |
| U3 Applicable Regulations | 23 |
| U3 Equipment | 23 |
| U3 Control Devices..... | 24 |
| U3 Specific Conditions | 25 |
| Emission Unit U4: Hot Air Bin Fill..... | 32 |
| U4 Applicable Regulations | 32 |
| U4 Equipment | 32 |
| U4 Control Devices..... | 33 |
| U4 Specific Conditions | 34 |
| Emission Unit U7: Blending/Repack..... | 40 |
| U7 Applicable Regulations | 40 |
| U7 Equipment | 40 |
| U7 Control Devices..... | 41 |
| U7 Specific Conditions | 42 |
| Emission Unit U8: Rescreens | 45 |
| U8 Applicable Regulations | 45 |
| U8 Equipment | 45 |

| | |
|--|----|
| U8 Control Devices..... | 46 |
| U8 Specific Conditions..... | 47 |
| Insignificant Activities..... | 54 |
| Attachment A – Calculation Methodology..... | 56 |
| Attachment B – Determination of Benchmark Ambient Concentration (BAC)..... | 58 |
| Fee Comment..... | 59 |

Construction Permit Revisions and Changes

| Permit No. | Public Notice Date | Issue Date | Change Type | Description/Scope |
|------------------|--------------------|------------|-------------|--|
| C-0187-20-0022-V | 04/29/2021 | 06/01/2021 | Initial | Initial construction permit issuance. This project includes increases of aluminum process throughput rate for multiple emission points in U2, U3, U4, U8 and installation of multiple new emission points in U2 and U7 |

Application and Related Documents

| Document Number | Date Received | Description |
|--------------------|---------------|--|
| OB180238, OB180272 | 12/11/2020 | Construction Application 100A, 100B, 100E, and 200A. |
| OB182240 | 01/19/2021 | Email regarding amendment to Construction Application |
| OB182352 | 01/20/2021 | Amendment to Construction Application (U8) |
| OB183563 | 01/20/2021 | District agreement that filters do not need construction permit |
| OB184136 | 01/27/2021 | Construction PTE correspondence |
| OB186388 | 02/01/2021 | Information on the new filters; does not need construction permit (filters) |
| OB185553 | 02/01/2021 | Updated U8 construction application |
| OB186943 | 02/03/2021 | Information on filter efficiency |
| OB187496 | 02/04/2021 | Approved construction PTE |
| OB192980 | 02/24/2021 | Eckart construction permit: request for CAM plan for U8 (E-158, E-160, E-164) |
| OB196741 | 03/05/2021 | Eckart construction permit: Request for equipment clarification C-E-12 |
| OB197679 | 03/05/2021 | Eckart construction permit: Response request for CAM plan for U8 (E-158, E-160, E-164) |
| OB197680 | 03/08/2021 | Eckart construction permit: Response for equipment clarification C-E-12 |

| Document Number | Date Received | Description |
|------------------------|----------------------|--|
| OB213899 | 04/22/2021 | Company comments and District response |

Abbreviations and Acronyms

| | |
|-------------------|--|
| AP-42 | - AP-42 , <i>Compilation of Air Pollutant Emission Factors</i> , published by U.S.EPA |
| APCD | - Louisville Metro Air Pollution Control District |
| BAC | - Benchmark Ambient Concentration |
| BACT | - Best Available Control Technology |
| Btu | - British thermal unit |
| CEMS | - Continuous Emission Monitoring System |
| CFR | - Code of Federal Regulations |
| CO | - Carbon monoxide |
| District | - Louisville Metro Air Pollution Control District |
| EA | - Environmental Acceptability |
| gal | - U.S. fluid gallons |
| GHG | - Greenhouse Gas |
| HAP | - Hazardous Air Pollutant |
| Hg | - Mercury |
| hr | - Hour |
| in. | - Inches |
| lbs | - Pounds |
| l | - Liter |
| LMAPCD | - Louisville Metro Air Pollution Control District |
| mmHg | - Millimeters of mercury column height |
| MM | - Million |
| (M)SDS | - (Material) Safety Data Sheet |
| NAICS | - North American Industry Classification System |
| NO _x | - Nitrogen oxides |
| PM | - Particulate Matter |
| PM ₁₀ | - Particulate Matter less than 10 microns |
| PM _{2.5} | - Particulate Matter less than 2.5 microns |
| ppm | - parts per million |
| PSD | - Prevention of Significant Deterioration |
| psia | - Pounds per square inch absolute |
| QA | - Quality Assurance |
| RACT | - Reasonably Available Control Technology |
| SIC | - Standard Industrial Classification |
| SIP | - State Implementation Plan |
| SO ₂ | - Sulfur dioxide |
| STAR | - Strategic Toxic Air Reduction |
| TAC | - Toxic Air Contaminant |
| UTM | - Universal Transverse Mercator |
| VOC | - Volatile Organic Compound |
| w.c. | - Water column |
| year | - Any period of twelve consecutive months, unless "calendar year" is specified |
| yr | - Year, or any 12 consecutive-month period, as determined by context |

Preamble

This permit covers only the provisions of Kentucky Revised Statutes Chapter 77 Air Pollution Control, the regulations of the Louisville Metro Air Pollution Control District (District) and, where appropriate, certain federal regulations. The issuance of this permit does not exempt any owner or operator to whom it has been issued from prosecution on account of the emission or issuance of any air contaminant caused or permitted by such owner or operator in violation of any of the provisions of KRS 77 or District regulations. Any permit shall be considered invalid if timely payment of annual fees is not made. The permit contains general permit conditions and specific permit conditions. General conditions are applicable unless a more stringent requirement is specified elsewhere in the permit.

General Conditions

- G1. The owner or operator of the affected facility covered by this permit shall notify the District of any process change, equipment changes, material change, or change in method or hours of operation. This requirement is applicable to those changes (except equipment changes) that may have the potential for increasing the emission of air contaminants to a level in excess of the applicable limits or standards specified in this permit or District regulations.
- G2. The owner or operator shall obtain new or revised permits from the District in accordance with District Regulation 2.16 for Title V sources, District Regulation 2.17 for FEDOOP sources or District Regulation 2.03 for other sources including:
- a. The company relocates to a different physical address.
 - b. The ownership of the company is changed.
 - c. The name of the company as shown on the permit is changed.
 - d. Permits are nearing expiration or have expired.
- G3. The owner or operator shall submit a timely application for changes according to G2. Timely renewal is not always achievable; therefore, the company is hereby authorized to continue operation in compliance with the latest District permit(s) until the District issues the renewed permit(s).
- G4. The owner or operator shall not be authorized to transfer ownership or responsibility of the permit. The District may transfer permits after appropriate notification (Form AP- 100A) has been received and review has been made.
- G5. The owner or operator shall pay the required permit fees within 45 days after issuance of the SOF by the District, unless other arrangements have been proposed and accepted by the District.
- G6. This permit allows operation 8,760 hours per year unless specifically limited elsewhere in this permit.
- G7. The owner or operator shall submit emission inventory reports as required by Regulation 1.06.
- G8. The owner or operator shall timely report abnormal conditions or operational changes, which may cause excess emissions as required by Regulation 1.07.
- G9. Unless specified elsewhere in this permit, the owner or operator shall complete required monthly record keeping within 30 days following the end of each calendar month.
- G10. If a change in the Responsible Official (RO) occurs during the term of this permit, the owner or operator shall provide written notification (Form AP-100A) to the District within 30 calendar days of the date the RO change occurs.
- G11. **Other Applicable Regulations** - The owner or operator shall comply with all applicable requirements of the following:

| Regulation | Title |
|-------------------|--|
| 1.01 | General Application of Regulations and Standards |
| 1.02 | Definitions |
| 1.03 | Abbreviations and Acronyms |
| 1.04 | Performance Tests |
| 1.05 | Compliance with Emissions Standards and Maintenance Requirements |
| 1.06 | Source Self-Monitoring, Emission Inventory Development and Reporting |
| 1.07 | Excess Emissions During Startups, Shutdowns, and Upset Conditions |
| 1.08 | Administrative Procedures |
| 1.09 | Prohibition of Air Pollution |
| 1.10 | Circumvention |
| 1.11 | Control of Open Burning |
| 1.14 | Control of Fugitive Particulate Emissions |
| 1.18 | Rule Effectiveness |
| 1.19 | Administrative Hearings |
| 2.01 | General Application (Permit Requirements) |
| 2.02 | Air Pollution Regulation Requirements and Exemptions |
| 2.03 | Authorization to Construct or Operate; Demolition/Renovation Notices and Permit Requirements |
| 2.04 | Construction or Modification of Major Sources in or Impacting Upon Non-Attainment Areas (Emission Offset Requirements) |
| 2.05 | Prevention of Significant Deterioration |
| 2.06 | Permit Requirements – Other Sources |
| 2.07 | Public Notification for Title V, PSD, and Other Offset Permits; SIP Revisions; and Use of Emission Reduction Credits |
| 2.09 | Causes for Permit Modification, Revocation, or Suspension |
| 2.10 | Stack Height Considerations |
| 2.11 | Air Quality Model Usage |
| 3.01 | Ambient Air Quality Standards |
| 4.01 | General Provisions for Emergency Episodes |
| 4.02 | Episode Criteria |
| 4.03 | General Abatement Requirements |
| 4.04 | Particulate and Sulfur Dioxide Reduction Requirements |
| 4.05 | Hydrocarbon and Nitrogen Oxides Reduction Requirements |
| 4.06 | Carbon Monoxide Reduction Requirements |
| 4.07 | Episode Reporting Requirements |
| 6.01 | General Provisions (Existing Affected Facilities) |
| 6.02 | Emission Monitoring for Existing Sources |
| 7.01 | General Provisions (New Affected Facilities) |

District Only Enforceable Regulations:

| Regulation | Title |
|-------------------|---|
| 1.12 | Control of Nuisances |
| 1.13 | Control of Objectionable Odors |
| 2.08 | Emission Fee, Permit Fees and Permit Renewal Procedures |
| 2.16 | Title V Operating Permits |
| 5.00 | Definitions |
| 5.01 | General Provisions |
| 5.02 | Adoption and Incorporation by Reference of National Emission Standards for Hazardous Air Pollutants |
| 5.14 | Hazardous Air Pollutants and Source Categories |
| 5.15 | Chemical Accident Prevention Provisions |
| 5.20 | Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant |
| 5.21 | Environmental Acceptability for Toxic Air Contaminants |
| 5.22 | Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant |
| 5.23 | Categories of Toxic Air Contaminants |
| 7.02 | Adoption and Incorporation by Reference of Federal New Source Performance Standards |

Plantwide Requirements

Facility Description

The source produces aluminum powder and paste.

Plantwide Applicable Regulations

| DISTRICT ONLY ENFORCEABLE REGULATIONS | | |
|---|---|----------------------------|
| Regulation | Title | Applicable Sections |
| 5.00 | Definitions | 1, 2 |
| 5.01 | General Provisions | 1 through 2 |
| 5.20 | Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant | 1 through 6 |
| 5.21 | Environmental Acceptability for Toxic Air Contaminants | 1 through 5 |
| 5.22 | Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant | 1 through 5 |
| 5.23 | Categories of Toxic Air Contaminants | 1 through 6 |
| STAR regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23 | | |

Plantwide Specific Conditions

S1. Standards

[Regulation 2.03, section 6.1]

a. TAC

- i. The owner or operator shall not allow emissions of any TAC to exceed environmentally acceptable (EA) levels, whether specifically established by modeling or determined by the District to be *de minimis*.
[Regulations 5.00 and 5.21]
- ii. The owner or operator shall perform a new Environmental Acceptability (EA) Demonstration or *de minimis* determination when the following events occur and submit the EA Demonstration on the schedule noted in the reporting section:¹
 - (1) An application to construct or modify a process or process equipment is submitted to the District pursuant to Regulation 2.03, 2.04 or 2.05. [Regulation 5.21, section 4.22.1]
 - (2) A modification of any physical modeling parameters such as fence lines or building heights that are not otherwise subject to the requirements in this permit that affects the demonstration of compliance. [Regulation 5.21, section 4.22.2]; or
 - (3) A change occurs in the process or process equipment, including raw material or fuel type substitution [Regulation 5.21, section 4.22.3].
- iii. When a new TAC is introduced or for any existing TAC which does not have an established BAC or *de minimis* value, the owner or operator shall calculate and report these values as part of any aforementioned EA Demonstration. The form, located in Attachment B, may be used for determining BAC and *de minimis* values.
[Regulation 5.20, sections 3 and 4]

¹ Changes to the air dispersion modeling program or meteorological data used in the most recent Environmental Acceptability Demonstration do not trigger the requirement to perform a new Environmental Acceptability Demonstration.

S2. Monitoring and Record Keeping
[Regulation 2.03, section 6.1]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. TAC

- i. The owner or operator shall maintain sufficient records to demonstrate environmental acceptability, including, but not limited to, (M)SDS, analysis of emissions, and/or modeling results.

S3. Reporting
[Regulation 2.03, section 6.1]

The owner or operator shall submit semi-annual compliance reports that include the information in this section. All reports shall include the company name, plant ID number, and the beginning and ending date of the reporting period. The compliance reports shall clearly identify any deviation from a permit requirement or a declaration that there were no such deviations. The compliance reports shall be postmarked within 60 days following the end of each reporting period. All compliance reports shall include the following certification statement per Regulation 2.16, section 3.5.11.

- “Based on information and belief formed after reasonable inquiry, I certify that the statements and information in this document are true, accurate, and complete”.
- Signature and title of the responsible official of the company.

The compliance reports are due on or before the following dates of each calendar year:

| <u>Reporting Period</u> | <u>Report Due Date</u> |
|--|-------------------------|
| January 1 st through June 30 th | August 29 th |
| July 1 st through December 31 st | March 1 st |

a. TAC

- i. The owner or operator shall submit new EA Demonstrations involving applications to construct or modify with the construction permit application. [Regulation 5.21, section 4.22.1]
- ii. The owner or operator shall submit new EA Demonstrations involving modification of any physical modeling parameter, such as fence lines or building heights, that are not otherwise subject to the permit requirements for that facility that affects the demonstration of compliance with the operating permit renewal application. [Regulation 5.21, section 4.22.2]
- iii. The owner or operator shall submit new EA Demonstrations involving a change in a process or process equipment, including raw material or fuel

type substitution before making the change.
[Regulation 5.21, section 4.22.3]

- (1) Prior approval by the District is not required if the change does not result in emissions that exceed an EA goal, does not cause emissions of a TAC to no longer be de minimis, and a permit modification is not required. In this case, the new EA Demonstration shall be submitted within 6 months of the change.

Emission Unit U2: Hot Air Furnace**U2 Applicable Regulations**

| FEDERALLY ENFORCEABLE REGULATIONS | | |
|--|---|----------------------------|
| Regulation | Title | Applicable Sections |
| 2.05 | Prevention of Significant Deterioration of Air Quality | 1 |
| 6.28 | Standard of Performance for Existing Hot Air Aluminum Atomization Processes | 1, 2, 3 |
| 7.08 | Standards of Performance for New Process Operations | 1, 2, 3.1.1, 3.3.1 |
| 40 CFR Part 64 | Compliance Assurance Monitoring | 64.1 through 64.10 |

| DISTRICT ONLY ENFORCEABLE REGULATIONS | | |
|---|---|----------------------------|
| Regulation | Title | Applicable Sections |
| 5.00 | Definitions | 1, 2 |
| 5.01 | General Provisions | 1 through 2 |
| 5.20 | Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant | 1 through 6 |
| 5.21 | Environmental Acceptability for Toxic Air Contaminants | 1 through 5 |
| 5.22 | Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant | 1 through 5 |
| 5.23 | Categories of Toxic Air Contaminants | 1 through 6 |
| STAR regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23 | | |

U2 Equipment

| Emission Point | Description | Install Date | Applicable Regulations | Control ID | Release ID |
|-----------------------|--|---------------------|-------------------------------|------------------------|-------------------|
| E-3 | Atomization Furnace, make PLIBRICO, model: Custom, capacity 5,000 lb/hr ² , rated pot capacity of 40,000 lb, 8 MMBTU/hr natural gas fired furnace | 1955 | 2.05, STAR, 6.28, 40 CFR 64 | C-E-5, C-E-7, C10, C11 | S-3, S-4, S-5 |

²Existing equipment modification (2021): increased aluminum process rate from 3000 lb/hr to 5000 lb/hr.

| Emission Point | Description | Install Date | Applicable Regulations | Control ID | Release ID |
|----------------|--|--------------|------------------------|------------|------------|
| E-4 | M-7 Screen Room, make Rotex, model 42AAASS, capacity 2,500 lb/hr ³ (Insignificant Activity – de minimis for STAR) | 1989 | 2.05, STAR, 7.08 | N/A | N/A |
| E-6 | M-8 Screen Room, make Rotex, model 42AAASS, capacity 2,500 lb/hr ³ (Insignificant Activity – de minimis for STAR) | 1996 | | N/A | N/A |
| E-5a | Multicyclone Drum Loading, make Dustex, capacity 100 lb/hr (Insignificant Activity – de minimis for STAR) | 1999 | 2.05, STAR, 7.08 | N/A | N/A |
| E-5b | Filter Container Loading, capacity 20 lb/hr ⁴ (Insignificant Activity – de minimis for STAR) | 2021 | | N/A | N/A |
| E-7a | Multicyclone Drum Loading, make Dustex, model M-14, capacity 100 lb/hr (Insignificant Activity – de minimis for STAR) | 2011 | | N/A | N/A |
| E-7b | Filter Container Loading, capacity 20 lb/hr ⁴ (Insignificant Activity – de minimis for STAR) | 2021 | | N/A | N/A |

U2 Control Devices

| Control ID | Description | Control Efficiency |
|------------|--|--------------------|
| C-E-5 | M-13 Dustex 1 Multicyclone to control emissions from Emission Point E-3, rated capacity of 11,000 scfm, installed in 1999. | 87% |
| C-E-7 | M-14 Dustex 2 Multicyclone to control emissions from Emission Point E-3, rated capacity of 10,800 scfm, installed in 2011. | 88.69% |
| C10 | Induced draft baghouse, Herding, model RESIST 2250-46/9, capacity 11,772 cfm, with Teflon coated polyester cartridge filters | 99.9% |
| C11 | Induced draft baghouse, Herding, model RESIST 2250-46/9, capacity 11,772 cfm, with Teflon coated polyester cartridge filters | 99.9% |

³Existing equipment modification (2021): increased aluminum process rate from 1500 lb/hr to 2500 lb/hr.

⁴ New equipment installation (2021), construction application 12/11/2020.

U2 Specific Conditions

S1. Standards

[Regulation 2.03, section 6.1]

a. Opacity

- i. For Emission Point E-3, no owner or operator subject to this regulation shall cause to be discharged into the atmosphere from any affected facility, or from any air pollution control equipment installed on any affected facility, any gases that may contain particulate matter that is equal to or greater than 20% opacity. [Regulation 6.28, section 3.1]
- ii. For Emission Points E-4, E-6, E-5a, E-5b, E-7a, and E-7b, the owner or operator shall not cause or permit the discharge of emissions equal to or in excess of 20% opacity. [Regulation 7.08, section 3.1.1]

b. PM/PM₁₀/PM_{2.5}

- i. For Emission Points [U2 (E-3, E-4, E-5b, E-6, E-7b), U3 (E-8a-c), U4 (E-12a, E-15), U7 (E-343, E344, E345, E346, E347), and U8 (E-158, E-160, E-164)] combined, the owner or operator shall not allow PM emissions to exceed 25 tons per 12 consecutive month period. [Regulation 2.05]
- ii. For Emission Points [U2 (E-3, E-4, E-5b, E-6, E-7b), U3 (E-8a-c), U4 (E-12a, E-15), U7 (E-343, E344, E345, E346, E347), and U8 (E-158, E-160, E-164)] combined, the owner or operator shall not allow PM₁₀ emissions to exceed 15 tons per 12 consecutive month period. [Regulation 2.05]
- iii. For Emission Points [U2 (E-3, E-4, E-5b, E-6, E-7b), U3 (E-8a-c), U4 (E-12a, E-15), U7 (E-343, E344, E345, E346, E347), and U8 (E-158, E-160, E-164)] combined, the owner or operator shall not allow PM_{2.5} emissions to exceed 10 tons per 12 consecutive month period. [Regulation 2.05]
- iv. For Emission Point E-3, no owner or operator subject to this regulation shall cause to be discharged into the atmosphere from any affected facility, or from any air pollution control equipment installed on any affected facility, any gases that may contain particulate matter that is in excess of 13.76 pounds per ton of aluminum powder atomized. [Regulation 6.28, section 3.2]
- v. For Emission Point E-3, the owner or operator shall at all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. [Regulation 1.05, section 5]

- vi. For Emission Points E-4 and E-6, the owner or operator shall not allow PM emissions to exceed 4.12 lb/hr per piece of equipment based on actual operating hours in a calendar day⁵. [Regulation 7.08, section 3.1.2]
- vii. For Emission Points E-5a, E-5b, E-7a, and E-7b, the owner or operator shall not allow PM emissions to exceed 2.34 lb/hr per piece of equipment based on actual operating hours in a calendar day⁵. [Regulation 7.08, section 3.1.2]

c. TAC

- i. See Plantwide Emission Unit.
- ii. The owner or operator shall not allow aluminum emissions to exceed the emission standards listed in the following table. [Regulation 5.21, section 4.2 and 4.3]

Table 1 – Aluminum Emission Standards⁶

| Stack ID | Emission Point | Description | lb/hr | (lb/8-hr) | Basis of Limit |
|----------|----------------|---------------------|-------|-----------|-----------------------|
| S-4 | E-3 | Atomization Furnace | 1.0 | 1.0 | De Minimis controlled |
| S-5 | E-3 | Atomization Furnace | 1.0 | 1.0 | De minimis controlled |

S2. Monitoring and Record Keeping
[Regulation 2.03, section 6.1]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. Opacity

- i. For Emission Points E-4, E-6, E-5a, E-5b, E-7a, and E-7b, there are no opacity monitoring or record keeping requirements.
- ii. For Emission Point E-3 to demonstrate compliance with the opacity standard:
 - (1) The owner or operator shall, monthly, conduct a one-minute visible emissions survey during normal operation. No more than four emission points shall be observed simultaneously. The opacity

⁵ Using an AP-42 emission factor (Chapter 11.19, Crushed Stone Processing and Pulverized Mineral Processing) Emission Points E-4, E-6, E-5a, E-5b, E-7a, and E-7b should meet the lb/hr emission standards uncontrolled.

⁶ Emission Point E-3 has potential controlled TAC emissions, 0.013 lb/hr (S-4) and 0.012 lb/hr (S-5), 0.11 lb/8-hr (S-4) and 0.09 lb/8-hr (S-5) based on the construction application and are De minimis controlled. The additional control devices (C10 and C11) make EA demonstration modeling unnecessary. Emission Points E-4, E-6, E-5a, E-5b, E-7a, and E-7b are Insignificant Activities and therefore by definition are *de minimis* for STAR.

surveys can be performed on the building exhaust points if the process is inside an enclosure.

- (2) At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation.
- (3) The owner or operator shall maintain records, monthly, of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include the date of the survey, the name of the person conducting the survey, whether or not visible emissions were observed, and what if any corrective action was performed. If an emission point is not being operated during a given month, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

b. PM/PM₁₀/PM_{2.5}

- i. For Emission Points [U2 (E-3, E-4, E-5b, E-6, E-7b), U3 (E-8a-c), U4 (E-12a, E-15), U7 (E-343, E344, E345, E346, E347), and U8 (E-158, E-160, E-164)], the owner or operator shall, daily, keep records of all production rates and hours of operation.
- ii. For Emission Points [U2 (E-3, E-4, E-5b, E-6, E-7b), U3 (E-8a-c), U4 (E-12a, E-15), U7 (E-343, E344, E345, E346, E347), and U8 (E-158, E-160, E-164)], the owner or operator shall monthly calculate and record the previous 12 consecutive month PM, PM₁₀, and PM_{2.5} emissions, based on the hours of actual operation of the processes during each day and the design collection efficiency of any filtration devices used, in order to demonstrate the status of compliance with the tons per 12 consecutive month period limits.
- iii. The owner or operator shall use the emission factors in Attachment A unless alternative calculation methods or factors are approved by the District to demonstrate compliance.
- iv. For Control Devices C-E-5 and C-E-7, the owner or operator shall monthly perform a visual inspection of the structural and mechanical integrity of the dust collectors for signs of damage, air leakage, corrosion, or other equipment defects, and repair and/or replace defective components as needed. The owner or operator shall maintain monthly records of the results. [40 CFR 64.3(b)(4)(iii)]
- v. For Control Devices C-E-5 and C-E-7, the owner or operator shall monitor and record the pressure drop across the multicyclones at least once per each

operating day, the normal pressure drop range across the multicyclones is 10 to 18 inches of water column.⁷ [40 CFR 64.3(b)(4)(iii)]

Table 2 – Multicyclone Pressure Drop Range

| Control ID | Description | Performance Indicator | Operating Range |
|------------|-------------------|-----------------------|---------------------|
| C-E-5 | M-13 Multicyclone | Pressure drop | 10-18" water column |
| C-E-7 | M-14 Multicyclone | Pressure drop | 10-18" water column |

- vi. For Control Devices C-10 and C-11: The owner or operator shall, monthly, perform a visual inspection of the structural and mechanical integrity of the dust collectors for signs of damage, air leakage, corrosion, or other equipment defects, and repair and/or replace defective components as needed. The owner or operator shall maintain monthly records of the results.
- vii. For Control Devices C-10 and C-11: The owner or operator shall monitor and record the pressure drop across the baghouses at least once per each operating day.

Table 3 – Baghouse Pressure Drop Range

| Control ID | Description | Performance Indicator | Operating Range |
|------------|-------------|-----------------------|-----------------|
| C-10 | Baghouse | Pressure drop | 0.06 – 2 psi |
| C-11 | Baghouse | Pressure drop | 0.06 – 2 psi |

- viii. For Emission Point E-3:
 - (1) The owner or operator shall maintain daily records of any periods of time where the process was operating and the control device was not operating or a declaration that the control device operated at all times that day when the process was operating.
- ix. For Emission Point E-3, if there is any time that the control device is bypassed or not in operation when the process is operating, then the owner or operator shall keep a record of the following for each bypass event:
 - (1) Date;

⁷ The 40 CFR 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources Plan was received January 15, 2013. The revised CAM Plan was received May 16, 2014. According to the CAM Plan, Eckart America Corporation has established the appropriate pressure drop range across the multicyclones and submitted the report on February 23, 2015.

- (2) Start time and stop time;
- (3) Identification of the control device and process equipment;
- (4) Calculate PM emissions during the bypass in lb/ton of aluminum powder atomized using the most recent emission factor;
- (5) Summary of the cause or reason for each bypass event;
- (6) Corrective action taken to minimize the extent or duration of the bypass event; and
- (7) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.
- (8) If this event is due to an upset condition, you must report as specified in District regulation 1.07, section 4.

✕ For Emission Points E-4, E-6, E-5a, E-5b, E-7a, and E-7b, there are no PM monitoring or record keeping requirements related to the lb/hr emission limit.

c. TAC

- i. See Plantwide monitoring and record keeping section for additional requirements.
- ii. For Emission Point E-3:
 - (1) The owner or operator shall monthly calculate and record TAC emissions for this point in order to demonstrate compliance with the TAC emission standards.

S3. Reporting

[Regulation 2.03, section 6.1]

The owner or operator shall submit semi-annual compliance reports that include the information in this section. All reports shall include the company name, plant ID number, and the beginning and ending date of the reporting period. The compliance reports shall clearly identify any deviation from a permit requirement or a declaration that there were no such deviations. The compliance reports shall be postmarked within 60 days following the end of each reporting period. All compliance reports shall include the following certification statement per Regulation 2.16, section 3.5.11:

- “Based on information and belief formed after reasonable inquiry, I certify that the statements and information in this document are true, accurate, and complete”.
- Signature and title of the responsible official of the company.

The compliance reports are due on or before the following dates of each calendar year:

| <u>Reporting Period</u> | <u>Report Due Date</u> |
|--|-------------------------|
| January 1 st through June 30 th | August 29 th |
| July 1 st through December 31 st | March 1 st |

a. Opacity

- i. For Emission Point E-3:
 - (1) Any deviation from the requirement to perform daily and monthly visible emission (VE) surveys;
 - (2) Any deviation from the requirement to record the results of each VE survey;
 - (3) The number, date, and time of each VE survey where visible emissions were observed;
 - (4) Identification of all periods of exceedance of the opacity standard; and
 - (5) Description of any corrective action taken for each exceedance.
- ii. For Emission Points E-4, E-6, E-5a, E-5b, E-7a, and E-7b, there are no opacity compliance reporting requirements.

b. PM/PM₁₀/PM_{2.5}

- i. For Emission Point E-3: The owner or operator shall report the following information regarding bypasses in the semi-annual compliance reports.
 - (1) Number of times the vent stream bypasses the control device and is vented to the atmosphere;
 - (2) Duration of each bypass to the atmosphere;
 - (3) Calculated pound per ton PM emissions for each bypass.
- ii. For Emission Points [U2 (E-3, E-4, E-5b, E-6, E-7b), U3 (E-8a-c), U4 (E-12a, E-15), U7 (E-343, E344, E345, E346, E347), and U8 (E-158, E-160, E-164)]:
 - (1) Identification of all periods of exceedances of the emission standard including the quantity of excess emissions; and
 - (2) Description of any corrective action taken for each exceedance.
- iii. For Emission Points E-4, E-6, E-5a, E-5b, E-7a, and E-7b, there are no PM compliance reporting requirements related to the lb/hr emission limit.
- iv. For Control Devices C-E-5, C-E-7, C-10, and C-11:
 - (1) Any deviation from the requirement to record the results of visual inspections of the control devices;

- (2) Any deviation from the requirement to record the results of the pressure drop readings;
- (3) Identification of all periods when the pressure drop was outside the operating range; and
- (4) Description of any corrective action taken for each exceedance.

c. TAC

- i. See Plantwide reporting section.
- ii. For Emission Point E-3: The owner or operator shall identify all periods of exceeding a TAC emission standard during a reporting period. The report shall include the following:
 - (1) Emission Unit ID number and emission point ID number;
 - (2) Identification of all periods during which a deviation occurred;
 - (3) A description, including the magnitude, of the deviation;
 - (4) If known, the cause of the deviation; and
 - (5) A description of all corrective actions taken to abate the deviation.

Emission Unit U3: Hot Air Direct Convey and Air Slide System

U3 Applicable Regulations

| FEDERALLY ENFORCEABLE REGULATIONS | | |
|--|--|----------------------------|
| Regulation | Title | Applicable Sections |
| 2.05 | Prevention of Significant Deterioration of Air Quality | 1 |
| 7.08 | Standards of Performance for New Process Operations | 1, 2, 3.1.1, 3.3.1 |
| 40 CFR Part 64 | Compliance Assurance Monitoring | 64.1 through 64.10 |

| DISTRICT ONLY ENFORCEABLE REGULATIONS | | |
|---|---|----------------------------|
| Regulation | Title | Applicable Sections |
| 5.00 | Definitions | 1, 2 |
| 5.01 | General Provisions | 1 through 2 |
| 5.20 | Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant | 1 through 6 |
| 5.21 | Environmental Acceptability for Toxic Air Contaminants | 1 through 5 |
| 5.22 | Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant | 1 through 5 |
| 5.23 | Categories of Toxic Air Contaminants | 1 through 6 |
| STAR regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23 | | |

U3 Equipment

| Emission Point | Description | Install Date | Applicable Regulations | Control ID | Release ID |
|-----------------------|--|---------------------|-------------------------------|-------------------|-------------------|
| E-8a | Buhler A Storage Tank, make Kirk & Blum, model: Custom, capacity 7000 lb/hr ⁸ | 1995 | 2.05, STAR, 7.08, 40 CFR 64 | C-E-8 C-F-007 | S-6 |

⁸ Existing equipment modification (2021): increased aluminum process rate from 3500 lb/hr to 7000 lb/hr.

| Emission Point | Description | Install Date | Applicable Regulations | Control ID | Release ID |
|-----------------------|--|---------------------|-------------------------------|-------------------|-------------------|
| E-8b | Buhler A Weigh Tank, make Kirk & Blum, model: Custom, capacity: 7000 lb/hr ⁹ (Insignificant Activity – <i>de minimis</i> for STAR) | 1995 | 2.05, STAR, 7.08 | | |
| E-8c | Buhler A Conveyor Pod, make Kirk & Blum, model: Custom, capacity 7000 lb/hr ⁹ (Insignificant Activity – <i>de minimis</i> for STAR) | 1995 | 2.05, STAR, 7.08 | C-E-8 C-F-007 | S-6 |

U3 Control Devices

| Control ID | Description | Control Efficiency |
|-------------------|--|---------------------------|
| C-E-8 | Cyclone, make Kirk & Blum, model: Custom ¹⁰ | 75% |
| C-F-007 | Metal Mesh Filter ¹¹ | 86% |

⁹ Existing equipment modification (2021): increased aluminum process rate from 3500 lb/hr to 7000 lb/hr.

¹⁰ A stack test was performed in September 2018. Data included meter temperature, stack temperature and differential pressure.

¹¹ A stack test was performed in September 2018. Data included aluminum powder throughput, fan speeds and differential pressure of the atomization and metal mesh filter.

U3 Specific Conditions

S1. Standards

[Regulation 2.03, section 6.1]

a. Opacity

- i. For Emission Point E-8a, E-8b, and E-8c, the owner or operator shall not cause or permit the discharge of emissions equal to or excess of 20% opacity. [Regulation 7.08, section 3.1.1]

b. PM/PM10/PM_{2.5}

- i. For Emission Points E-8a and E-9 combined, the owner or operator shall not allow PM emissions to exceed 25 tons per 12 consecutive month period.¹² [Regulation 2.05]
- ii. For Emission Points [U2 (E-3, E-4, E-5b, E-6, E-7b), U3 (E-8a-c), U4 (E-12a, E-15), U7 (E-343, E344, E345, E346, E347), and U8 (E-158, E-160, E-164)] combined, the owner or operator shall not allow PM emissions to exceed 25 tons per 12 consecutive month period. [Regulation 2.05]
- iii. For Emission Points [U2 (E-3, E-4, E-5b, E-6, E-7b), U3 (E-8a-c), U4 (E-12a, E-15), U7 (E-343, E344, E345, E346, E347), and U8 (E-158, E-160, E-164)] combined, the owner or operator shall not allow PM₁₀ emissions to exceed 15 tons per 12 consecutive month period. [Regulation 2.05]
- iv. For Emission Points [U2 (E-3, E-4, E-5b, E-6, E-7b), U3 (E-8a-c), U4 (E-12a, E-15), U7 (E-343, E344, E345, E346, E347), and U8 (E-158, E-160, E-164)] combined, the owner or operator shall not allow PM_{2.5} emissions to exceed 10 tons per 12 consecutive month period. [Regulation 2.05]
- v. For Emission Point E-8a, the owner or operator shall not allow PM emissions to exceed 7.81 lb/hr based on actual operating hours in a calendar day. [Regulation 7.08, section 3.1.2]
- vi. For Emission Points E-8b and E-8c, the owner or operator shall not allow PM emissions to exceed 7.81 lb/hr per piece of equipment based on actual

¹² The addition of Emission Point E-8a, in 1995 was a modification to Emission Point E-9. In so doing, E-9 no longer was subject to the existing source Regulation 6.09 and became subject to the new source Regulation 7.08. The potential emissions of the project to install Emission Point E-8a and modification of Emission Point E-9 was 132.39 tons per year which would be a major modification for PSD/Non-Attainment NSR, therefore the company has a PSD/Non-Attainment avoidance limit of less than 25 tons per year

operating hours in a calendar day.¹³
 [Regulation 7.08, section 3.1.2]

- vii. For Emission Point E-8a, the owner or operator shall at all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. [Regulation 1.05, section 5]

c. TAC

- i. See Plantwide emission unit.
- ii. The owner or operator shall not allow aluminum emissions to exceed the emission standards listed in the following table. [Regulation 5.21, section 4.2 and 4.3]

Table 4 - Aluminum Emission Standards¹⁴

| Stack ID | Emission Point | Description | (lb/8-hr) | Basis of Limit |
|----------|----------------|-----------------------|-----------|-------------------------------|
| S-6 | E-8a | Buhler A Storage Tank | 1.92 | Modeling using controlled PTE |

S2. Monitoring and Record Keeping
 [Regulation 2.03, section 6.1]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. Opacity

- i. For Emission Point E-8a, to demonstrate compliance with the opacity standard:
 - (1) The owner or operator shall, monthly, conduct a one-minute visible emissions survey during normal operation. No more than four emission points shall be observed simultaneously. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.

¹³ Using AP-42 emission factors (Chapters 11.12 and 11.24 for ‘Concrete Batching; Pneumatic Cement Unloading to Elevated Bin’ and ‘Metallic Mineral Processing; Material Handling and Transfer – low moisture ore’), E-8b, and E-8c should meet the lb/hr emission standards uncontrolled.

¹⁴ Emission Point E-8a, the (lb/avg) was modeled in the construction application (12/11/2020) based on potential controlled TAC emissions (HQIND = 0.46 and HQNON IND = 0.092), Emission Points E-8b and E-8c are Insignificant Activities, therefore by definition are *de minimis* for STAR.

- (2) At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation.
- (3) The owner or operator shall maintain records, monthly, of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include the date of the survey, the name of the person conducting the survey, whether or not visible emissions were observed, and what if any corrective action was performed. If an emission point is not being operated during a given month, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

- ii. For Emission Points E-8b and E-8c: There are no opacity monitoring or record keeping requirements.

b. PM/PM₁₀/PM_{2.5}

- i. For Emission Points [U2 (E-3, E-4, E-5b, E-6, E-7b), U3 (E-8a-c), U4 (E-12a, E-15), U7 (E-343, E344, E345, E346, E347), and U8 (E-158, E-160, E-164)], the owner or operator shall, daily, keep records of all production rates and hours of operation.
- ii. For Emission Points [U2 (E-3, E-4, E-5b, E-6, E-7b), U3 (E-8a-c), U4 (E-12a, E-15), U7 (E-343, E344, E345, E346, E347), and U8 (E-158, E-160, E-164)], the owner or operator shall monthly calculate and record the previous 12 consecutive month PM, PM₁₀, and PM_{2.5} emissions, based on the hours of actual operation of the processes during each day and the design collection efficiency of any filtration devices used, in order to demonstrate the status of compliance with the tons per 12 consecutive month period limits.
- iii. For mission Points E-8a and E-9, the owner or operator shall monthly calculate and record the previous 12 consecutive month PM emissions based on the hours of actual operation of the processes during each day and the design collection efficiency of any filtration devices used, in order to demonstrate the status of compliance with the tons per 12 consecutive month period limits.
- iv. The owner or operator shall use the emission factors in Attachment A unless alternative calculation methods or factors are approved by the District to demonstrate compliance.
- v. For Control Devices C-E-8 and C-F-007: The owner or operator shall monthly perform a visual inspection of the structural and mechanical

integrity of the dust collectors for signs of damage, air leakage, corrosion, or other equipment defects, and repair and/or replace defective components as needed. The owner or operator shall maintain monthly records of the results.

- vi. For Control Device C-F-007: The owner or operator shall monitor and record the pressure drop across the Metal Mesh Filters at least once per each operating day.¹⁵ [40 CFR 64.3(b)(4)(iii)]

Table 5 – Metal Mesh Filter Pressure Drop Range

| Control ID | Description | Performance Indicator | Operating Range |
|------------|-------------------|-----------------------|-----------------|
| C-F-007 | Metal Mesh Filter | Pressure drop | 0.06 – 2 psi |

- vii. For Emission Point E-8a
- (1) The owner or operator shall maintain daily records of the type and amount of product transferred.
 - (2) The owner or operator shall maintain daily records of the hours of operation of the equipment.
 - (3) The owner or operator shall maintain daily records of any periods of time where the process was operating and the control device was not operating or a declaration that the control device operated at all times that day when the process was operating.
- viii. For Emission Point E-8a: If there is any time that the control device is bypassed or not in operation when the process is operating, then the owner or operator shall keep a record of the following for each bypass event:
- (1) Date;
 - (2) Start time and stop time;
 - (3) Identification of the control device and process equipment;
 - (4) Calculate PM emissions during the bypass in lb/hr using the most recent emission factor;
 - (5) Summary of the cause or reason for each bypass event;

¹⁵ The 40 CFR 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources Plan was received January 15, 2013. The revised CAM Plan was received May 16, 2014. The addition of Emission Point E-8a, in 1995 was a modification to Emission Point E-9. In so doing, E-9 no longer was subject to the existing source Regulation 6.09 and became subject to the new source Regulation 7.08. The potential emissions of the project to install Emission Point E-8a and modification of Emission Point E-9 was 132.39 tons per year which would be a major modification for PSD/Non-Attainment NSR, therefore the company has a PSD/Non-Attainment avoidance limit of less than 25 tons per year.

- (6) Corrective action taken to minimize the extent or duration of the bypass event; and
 - (7) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.
 - (8) If this event is due to an upset condition, you must report as specified in District regulation 1.07, section 4.
- ix. For Emission Points E-8b and E-8c: There are no PM compliance monitoring or record keeping requirements for this equipment related to the lb/hr emission limit.

c. TAC

- i. See Plantwide monitoring and record keeping section for additional requirements.
- ii. For Emission Point E-8a:
 - (1) The owner or operator shall monthly calculate and record TAC emissions for this point in order to demonstrate compliance with the TAC emission standards.

S3. Reporting

[Regulation 2.03, section 6.1]

The owner or operator shall submit semi-annual compliance reports that include the information in this section. All reports shall include the company name, plant ID number, and the beginning and ending date of the reporting period. The compliance reports shall clearly identify any deviation from a permit requirement or a declaration that there were no such deviations. The compliance reports shall be postmarked within 60 days following the end of each reporting period. All compliance reports shall include the following certification statement per Regulation 2.16, section 3.5.11.

- “Based on information and belief formed after reasonable inquiry, I certify that the statements and information in this document are true, accurate, and complete”.
- Signature and title of the responsible official of the company.

The compliance reports are due on or before the following dates of each calendar year:

| <u>Reporting Period</u> | <u>Report Due Date</u> |
|--|-------------------------|
| January 1 st through June 30 th | August 29 th |
| July 1 st through December 31 st | March 1 st |

a. Opacity

- i. For Emission Point E-8a:
 - (1) Any deviation from the requirement to perform daily and monthly visible emission (VE) surveys;

- (2) Any deviation from the requirement to record the results of each VE survey;
 - (3) The number, date, and time of each VE survey where visible emissions were observed;
 - (4) Identification of all periods of exceedance of the opacity standard; and
 - (5) Description of any corrective action taken for each exceedance.
- ii. For Emission Points E-8b, and E-8c, there are no opacity compliance reporting requirements.
- b. PM/PM₁₀/PM_{2.5}**
- i. For Emission Point E-8a: The owner or operator shall report the following information regarding bypasses in the semi-annual compliance reports.
 - (1) Number of times the vent stream bypasses the control device and is vented to the atmosphere;
 - (2) Duration of each bypass to the atmosphere;
 - (3) Calculated pound per hour PM emissions for each bypass.
 - ii. For Emission Points [U2 (E-3, E-4, E-5b, E-6, E-7b), U3 (E-8a-c), U4 (E-12a, E-15), U7 (E-343, E344, E345, E346, E347), and U8 (E-158, E-160, E-164)]:
 - (1) Identification of all periods of exceedances of the tons per 12 consecutive month period limits including the quantity of excess emissions; and
 - (2) Description of any corrective action taken for each exceedance.
 - iii. For Emission Points E-8b and E-8c: There are no PM compliance reporting requirements for this equipment related to the lb/hr emission limit.
 - iv. For Control Device C-F-007:
 - (1) Any deviation from the requirement to record the results of visual inspections of the control devices;
 - (2) Any deviation from the requirement to record the results of the pressure drop readings;
 - (3) Identification of all periods when the pressure drop was outside the operating range; and
 - (4) Description of any corrective action taken for each exceedance.

c. TAC

- i. See Plantwide reporting section.
- ii. For Emission Point E-8a: The owner or operator shall identify all periods of exceeding a TAC emission standard during a reporting period. The report shall include the following:
 - (1) Emission Unit ID number and emission point ID number;
 - (2) Identification of all periods during which a deviation occurred;
 - (3) A description, including the magnitude, of the deviation;
 - (4) If known, the cause of the deviation; and
 - (5) A description of all corrective actions taken to abate the deviation.

Emission Unit U4: Hot Air Bin Fill**U4 Applicable Regulations**

| FEDERALLY ENFORCEABLE REGULATIONS | | |
|--|--|----------------------------|
| Regulation | Title | Applicable Sections |
| 2.05 | Prevention of Significant Deterioration of Air Quality | 1 |
| 7.08 | Standards of Performance for New Process Operations | 1, 2, 3.1.1, 3.3.1 |

| DISTRICT ONLY ENFORCEABLE REGULATIONS | | |
|---|---|----------------------------|
| Regulation | Title | Applicable Sections |
| 5.00 | Definitions | 1, 2 |
| 5.01 | General Provisions | 1 through 2 |
| 5.20 | Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant | 1 through 6 |
| 5.21 | Environmental Acceptability for Toxic Air Contaminants | 1 through 5 |
| 5.22 | Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant | 1 through 5 |
| 5.23 | Categories of Toxic Air Contaminants | 1 through 6 |
| STAR regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23 | | |

U4 Equipment

| Emission Point | Description | Install Date | Applicable Regulations | Control ID | Release ID |
|-----------------------|--|---------------------|-------------------------------|-------------------|-------------------|
| E-12a | Large Powder Storage Tank 2, make Intertech, model: Custom, capacity 7,000 lb/hr ¹⁶ | 2016 | 2.05, STAR, 7.08 | C-E-12 C-F-009 | S-11 |
| E-15 | Tote/Drum Fill Station #2, make Tote, model A-74, capacity 7,000 lb/hr ¹⁶ (Insignificant Activity – <i>de minimis</i> for STAR) | 1989 | 2.05, STAR, 7.08 | C-E-12 C-F-009 | S-11 |

¹⁶ Existing equipment modification (2021): increased aluminum process rate from 3000 lb/hr to 7000 lb/hr.

U4 Control Devices

| Control ID | Description | Control Efficiency |
|-------------------|--|---------------------------|
| C-E-12 | Bin Fill 2 Cyclone, Air vent cyclone to control emissions from large powder storage tank #2, make Kirk & Blum, model: Custom, installed 1989 ¹⁷ | 42.98% |
| C-F-009 | Bin Fill 2 Metal Mesh Filter, make BMI Industrial Systems, Model: Custom, capacity 1 cfm, installed 2009 ¹⁷ | 99.87% |

¹⁷ A stack test was performed in January 2019 for E-128, and uncontrolled and controlled PM emission factors will be used as representative for C-E-12 and C-F-009.

U4 Specific Conditions

S1. Standards

[Regulation 2.03, section 6.1]

a. Opacity

- i. For Emission Points E-12a and E-15, the owner or operator shall not cause or permit the discharge of emissions equal to or in excess of 20% opacity. [Regulation 7.08, section 3.1.1]

b. PM/PM₁₀/PM_{2.5}

- i. For Emission Points [U2 (E-3, E-4, E-5b, E-6, E-7b), U3 (E-8a-c), U4 (E-12a, E-15), U7 (E-343, E344, E345, E346, E347), and U8 (E-158, E-160, E-164)] combined, the owner or operator shall not allow PM emissions to exceed 25 tons per 12 consecutive month period. [Regulation 2.05]
- ii. For Emission Points [U2 (E-3, E-4, E-5b, E-6, E-7b), U3 (E-8a-c), U4 (E-12a, E-15), U7 (E-343, E344, E345, E346, E347), and U8 (E-158, E-160, E-164)] combined, the owner or operator shall not allow PM₁₀ emissions to exceed 15 tons per 12 consecutive month period. [Regulation 2.05]
- iii. For Emission Points [U2 (E-3, E-4, E-5b, E-6, E-7b), U3 (E-8a-c), U4 (E-12a, E-15), U7 (E-343, E344, E345, E346, E347), and U8 (E-158, E-160, E-164)] combined, the owner or operator shall not allow PM_{2.5} emissions to exceed 10 tons per 12 consecutive month period. [Regulation 2.05]
- iv. For Emission Point E-12a, the owner or operator shall at all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. [Regulation 1.05, section 5]
- v. For Emission points E-12a and E-15, the owner or operator shall not allow PM emissions to exceed 7.81 lb/hr per piece of equipment based on actual operating hours in a calendar day¹⁸. [Regulation 7.08, section 3.1.2]

c. TAC

- i. See Plantwide emission unit.

¹⁸ Using an AP-42 emission factor (Chapter 11.19, Crushed Stone Processing and Pulverized Mineral Processing) Emission Points E-15 should meet the lb/hr emission standards uncontrolled.

- ii. The owner or operator shall not allow aluminum emissions to exceed the emission standards listed in the following table.
[Regulation 5.21, section 4.2 and 4.3]

Table 6- Aluminum Emission Standards¹⁹

| Stack ID | Emission Point | Description | lb/hr | (lb/8-hr) | Basis of Limit |
|----------|----------------|-----------------------------|-------|-----------|-----------------------|
| S-11 | E-12a | Large Powder Storage Tank 2 | 1.0 | 1.0 | De minimis controlled |

S2. Monitoring and Record Keeping

[Regulation 2.03, section 6.1]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. Opacity

- i. For Emission Points E-12a and E-15 to demonstrate compliance with the opacity standard:
- (1) The owner or operator shall, monthly, conduct a one-minute visible emissions survey during normal operation. No more than four emission points shall be observed simultaneously. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.
 - (2) At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation.
 - (3) The owner or operator shall maintain records, monthly, of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include the date of the survey, the name of the person conducting the survey, whether or not visible emissions were observed, and what if any corrective action was performed. If an emission point is not being operated during a given month, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

¹⁹ Emission Point E-12a has potential controlled TAC emissions, 0.02 lb/hr and 0.08 lb/8-hr based on the construction application and are De minimis controlled. Emission Points E-15 is an Insignificant Activity and therefore by definition is *de minimis* for STAR.

b. PM/PM₁₀/PM_{2.5}

- i. For Emission Points [U2 (E-3, E-4, E-5b, E-6, E-7b), U3 (E-8a-c), U4 (E-12a, E-15), U7 (E-343, E344, E345, E346, E347), and U8 (E-158, E-160, E-164)], the owner or operator shall, daily, keep records of all production rates and hours of operation.
- ii. For Emission Points [U2 (E-3, E-4, E-5b, E-6, E-7b), U3 (E-8a-c), U4 (E-12a, E-15), U7 (E-343, E344, E345, E346, E347), and U8 (E-158, E-160, E-164)], the owner or operator shall monthly calculate and record the previous 12 consecutive month PM, PM₁₀, and PM_{2.5} emissions, based on the hours of actual operation of the processes during each day and the design collection efficiency of any filtration devices used, in order to demonstrate the status of compliance with the tons per 12 consecutive month period limits.
- iii. The owner or operator shall use the emission factors in Attachment A unless alternative calculation methods or factors are approved by the District to demonstrate compliance.
- iv. For Control Devices C-E-12 and C-F-009: The owner or operator shall, monthly, perform a visual inspection of the structural and mechanical integrity of the dust collectors for signs of damage, air leakage, corrosion, or other equipment defects, and repair and/or replace defective components as needed. The owner or operator shall maintain monthly records of the results.
- v. For Control Device C-F-009: The owner or operator shall monitor and record the pressure drop across the Metal Mesh Filters at least once per each operating day.

Table 7 – Metal Mesh Filter Pressure Drop Range

| Control ID | Description | Performance Indicator | Operating Range |
|------------|-------------------|-----------------------|-----------------|
| C-F-009 | Metal Mesh Filter | Pressure drop | 0.06 – 2 psi |

- vi. For emission Point E-12a
 - (1) The owner or operator shall maintain daily records of the type and amount of product transferred.
 - (2) The owner or operator shall maintain daily records of the hours of operation of the equipment.
 - (3) The owner or operator shall maintain daily records of any periods of time where the process was operating and the control device was not operating or a declaration that the control device operated at all times that day when the process was operating.

- vii. For emission point E-12a: If there is any time that the control device is bypassed or not in operation when the process is operating, then the owner or operator shall keep a record of the following for each bypass event:
- (1) Date;
 - (2) Start time and stop time;
 - (3) Identification of the control device and process equipment;
 - (4) Calculate PM emissions during the bypass in lb/hr using the most recent emission factor;
 - (5) Summary of the cause or reason for each bypass event;
 - (6) Corrective action taken to minimize the extent or duration of the bypass event; and
 - (7) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.
 - (8) If this event is due to an upset condition, you must report as specified in District regulation 1.07, section 4.

c. TAC

- i. See Plantwide monitoring and record keeping section for additional requirements.
- ii. For Emission Point E-12a:
 - (1) The owner or operator shall monthly calculate and record TAC emissions for this point in order to demonstrate compliance with the TAC emission standards.

S3. Reporting

[Regulation 2.03, section 6.1]

The owner or operator shall submit semi-annual compliance reports that include the information in this section. All reports shall include the company name, plant ID number, and the beginning and ending date of the reporting period. The compliance reports shall clearly identify any deviation from a permit requirement or a declaration that there were no such deviations. The compliance reports shall be postmarked within 60 days following the end of each reporting period. All compliance reports shall include the following certification statement per Regulation 2.16, section 3.5.11:

- “Based on information and belief formed after reasonable inquiry, I certify that the statements and information in this document are true, accurate, and complete”.
- Signature and title of the responsible official of the company.

The compliance reports are due on or before the following dates of each calendar year:

| <u>Reporting Period</u> | <u>Report Due Date</u> |
|--|-------------------------|
| January 1 st through June 30 th | August 29 th |
| July 1 st through December 31 st | March 1 st |

a. Opacity

- i. For Emission Points E-12a and E-15;
 - (1) Any deviation from the requirement to perform monthly visible emission (VE) surveys;
 - (2) Any deviation from the requirements to record the results of each VE survey;
 - (3) The number, date, and time of each VE survey where visible emissions were observed;
 - (4) Identification of all periods of exceedance of the opacity standard; and
 - (5) Description of any corrective action taken for each exceedance.

b. PM/PM₁₀/PM_{2.5}

- i. For Emission Point E-12a: The owner or operator shall report the following information regarding bypasses in the semi-annual compliance reports.
 - (1) Number of times the vent stream bypasses the control device and is vented to the atmosphere;
 - (2) Duration of each bypass to the atmosphere;
 - (3) Calculated pound per hour PM emissions for each bypass.
- ii. For Emission Points [U2 (E-3, E-4, E-5b, E-6, E-7b), U3 (E-8a-c), U4 (E-12a, E-15), U7 (E-343, E344, E345, E346, E347), and U8 (E-158, E-160, E-164)]:
 - (1) Identification of all periods of exceedances of the tons per 12 consecutive month period limits including the quantity of excess emissions; and
 - (2) Description of any corrective action taken for each exceedance.
- iii. For Control Device C-E-12;
 - (1) Any deviation from the requirement to record the results of visual inspections of the control devices;
 - (2) Description of any corrective action taken for each exceedance.
- iv. For Control Device C-F-0009;

- (1) Any deviation from the requirement to record the results of visual inspections of the control devices;
- (2) Any deviation from the requirement to record the results of the pressure drop readings;
- (3) Identification of all periods when the pressure drop was outside the operating range; and
- (4) Description of any corrective action taken for each exceedance.

c. TAC

- i. See Plantwide reporting section.
- ii. For emission point E-12a: The owner or operator shall identify all periods of exceeding a TAC emission standard during a reporting period. The report shall include the following:
 - (1) Emission Unit ID number and emission point ID number;
 - (2) Identification of all periods during which a deviation occurred;
 - (3) A description, including the magnitude, of the deviation;
 - (4) If known, the cause of the deviation; and
 - (5) A description of all corrective actions taken to abate the deviation.

Emission Unit U7: Blending/Repack**U7 Applicable Regulations**

| FEDERALLY ENFORCEABLE REGULATIONS | | |
|--|--|----------------------------|
| Regulation | Title | Applicable Sections |
| 2.05 | Prevention of Significant Deterioration of Air Quality | 1 |
| 7.08 | Standards of Performance for New Process Operations | 1, 2, 3.1, 3.2 and 3.3 |

| DISTRICT ONLY ENFORCEABLE REGULATIONS | | |
|---|---|----------------------------|
| Regulation | Title | Applicable Sections |
| 5.00 | Definitions | 1, 2 |
| 5.01 | General Provisions | 1 through 2 |
| 5.20 | Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant | 1 through 6 |
| 5.21 | Environmental Acceptability for Toxic Air Contaminants | 1 through 5 |
| 5.22 | Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant | 1 through 5 |
| 5.23 | Categories of Toxic Air Contaminants | 1 through 6 |
| STAR regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23 | | |

U7 Equipment

| Emission Point | Description | Install Date | Applicable Regulations | Control ID | Release ID |
|-----------------------|---|---------------------|-------------------------------|-------------------|-------------------|
| E-343 | Supersack unloader and vibrator, Dynamic Air, HDP 3000, capacity 7000 lb/hr (Insignificant Activity – <i>de minimis</i> for STAR) | 2021 | 2.05, STAR, 7.08 | NA | S-90 |

| Emission Point | Description | Install Date | Applicable Regulations | Control ID | Release ID |
|-----------------------|--|---------------------|-------------------------------|-------------------|-------------------|
| E-344 | Drum unloader and vibrator, Dynamic Air, HDP 3000, capacity 7000 lb/hr (Insignificant Activity – <i>de minimis</i> for STAR) | 2021 | 2.05, STAR, 7.08 | NA | NA |
| E-345 | Air Blender, Dynamic Air, Blendcon Gas Blender, capacity 2750 lb/hr (Insignificant Activity – <i>de minimis</i> for STAR) | 2021 | 2.05, STAR, 7.08 | C-12 | NA |
| E-346 | Feed Hopper, Dynamic Air, custom, capacity 6300 lb/hr (Insignificant Activity – <i>de minimis</i> for STAR) | 2021 | 2.05, STAR, 7.08 | C-12 | NA |
| E-347 | Product containers, various, capacity 6300 lb/hr (Insignificant Activity – <i>de minimis</i> for STAR) | 2021 | 2.05, STAR, 7.08 | C-12 | NA |

U7 Control Devices

| Control ID | Description | Control Efficiency |
|-------------------|--|---------------------------|
| C-12 | Baghouse, Dynamic Air, model 1200, series 692 Modu-Kleen | 98% |

U7 Specific Conditions

S1. Standards

[Regulation 2.03, section 6.1]

a. Opacity

- i. For Emission Points E-343, E344, E345, E346, and E347, the owner or operator shall not cause or permit the discharge of emissions equal to or in excess of 20% opacity. [Regulation 7.08, section 3.1.1]

b. PM/PM₁₀/PM_{2.5}

- i. For Emission Points [U2 (E-3, E-4, E-5b, E-6, E-7b), U3 (E-8a-c), U4 (E-12a, E-15), U7 (E-343, E344, E345, E346, E347), and U8 (E-158, E-160, E-164)] combined, the owner or operator shall not allow PM emissions to exceed 25 tons per 12 consecutive month period. [Regulation 2.05]
- ii. For Emission Points [U2 (E-3, E-4, E-5b, E-6, E-7b), U3 (E-8a-c), U4 (E-12a, E-15), U7 (E-343, E344, E345, E346, E347), and U8 (E-158, E-160, E-164)] combined, the owner or operator shall not allow PM₁₀ emissions to exceed 15 tons per 12 consecutive month period. [Regulation 2.05]
- iii. For Emission Points [U2 (E-3, E-4, E-5b, E-6, E-7b), U3 (E-8a-c), U4 (E-12a, E-15), U7 (E-343, E344, E345, E346, E347), and U8 (E-158, E-160, E-164)] combined, the owner or operator shall not allow PM_{2.5} emissions to exceed 10 tons per 12 consecutive month period. [Regulation 2.05]
- iv. For Emission Point E-343 and E-344, the owner or operator shall not allow PM emissions to exceed 7.81 lb/hr based on actual operating hours in a calendar day. [Regulation 7.08, section 3.1.2]²⁰
- v. For Emission Point E-345, the owner or operator shall not allow PM emissions to exceed 4.37 lb/hr based on actual operating hours in a calendar day. [Regulation 7.08, section 3.1.2]²⁰
- vi. For Emission Points E-346 and E-347, the owner or operator shall not allow PM emissions to exceed 7.31 lb/hr for each emission point based on actual operating hours in a calendar day. [Regulation 7.08, section 3.1.2]²⁰

²⁰ Using an AP-42 emission factor (Chapter 11.24 for ‘Metallic Mineral Processing; Material Handling and Transfer – low moisture ore’), Emission Points E-343, E344, E345, E346, and E-347 should meet the lb/hr emission standards uncontrolled.

c. TAC

- i. See Plantwide emission unit.²¹

S2. Monitoring and Record Keeping

[Regulation 2.03, section 6.1]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. Opacity

- i. For Emission Points E-343, E344, E345, E346, and E347, there are no monitoring or record keeping requirements for opacity compliance for this equipment.

b. PM/PM₁₀/PM_{2.5}

- i. For Emission Points [U2 (E-3, E-4, E-5b, E-6, E-7b), U3 (E-8a-c), U4 (E-12a, E-15), U7 (E-343, E344, E345, E346, E347), and U8 (E-158, E-160, E-164)], the owner or operator shall, daily, keep records of all production rates and hours of operation.
- ii. For Emission Points [U2 (E-3, E-4, E-5b, E-6, E-7b), U3 (E-8a-c), U4 (E-12a, E-15), U7 (E-343, E344, E345, E346, E347), and U8 (E-158, E-160, E-164)], the owner or operator shall monthly calculate and record the previous 12 consecutive month PM, PM₁₀, and PM_{2.5} emissions, based on the hours of actual operation of the processes during each day and the design collection efficiency of any filtration devices used, in order to demonstrate the status of compliance with the tons per 12 consecutive month period limits.
- iii. The owner or operator shall use the emission factors in Attachment A unless alternative calculation methods or factors are approved by the District to demonstrate compliance.
- ~~iv.~~ For Emission Points E-343, E-344, E-345, E-346, and E-347, there are no PM monitoring or record keeping requirements related to the lb/hr emission limit.

c. TAC

- i. See Plantwide monitoring and records keeping section for additional requirements.

²¹ Emission Points E-343, E-344, E-345, E-346 and E-347 are Insignificant Activities and therefore by definition are *de minimis* for STAR.

S3. Reporting
[Regulation 2.03, section 6.1]

The owner or operator shall submit semi-annual compliance reports that include the information in this section. All reports shall include the company name, plant ID number, and the beginning and ending date of the reporting period. The compliance reports shall clearly identify any deviation from a permit requirement or a declaration that there were no such deviations. The compliance reports shall be postmarked within 60 days following the end of each reporting period. All compliance reports shall include the following certification statement per Regulation 2.16, section 3.5.11:

- “Based on information and belief formed after reasonable inquiry, I certify that the statements and information in this document are true, accurate, and complete”.
- Signature and title of the responsible official of the company.

The compliance reports are due on or before the following dates of each calendar year:

| <u>Reporting Period</u> | <u>Report Due Date</u> |
|--|-------------------------|
| January 1 st through June 30 th | August 29 th |
| July 1 st through December 31 st | March 1 st |

a. Opacity

- i. For Emission Points E-343, E344, E345, E346, and E347, there are no compliance reporting requirements for this equipment.

b. PM/PM₁₀/PM_{2.5}

- i. For Emission Points [U2 (E-3, E-4, E-5b, E-6, E-7b), U3 (E-8a-c), U4 (E-12a, E-15), U7 (E-343, E344, E345, E346, E347), and U8 (E-158, E-160, E-164)]:
 - (1) Identification of all periods of exceedances of the emission standard including the quantity of excess emissions; and
 - (2) Description of any corrective action taken for each exceedance.

c. TAC

- i. See Plantwide reporting section.

Emission Unit U8: Rescreens**U8 Applicable Regulations**

| FEDERALLY ENFORCEABLE REGULATIONS | | |
|--|--|----------------------------|
| Regulation | Title | Applicable Sections |
| 2.05 | Prevention of Significant Deterioration of Air Quality | 1 |
| 7.08 | Standards of Performance for New Process Operations | 1, 2, 3.1, 3.2 and 3.3 |

| DISTRICT ONLY ENFORCEABLE REGULATIONS | | |
|---|---|----------------------------|
| Regulation | Title | Applicable Sections |
| 5.00 | Definitions | 1, 2 |
| 5.01 | General Provisions | 1 through 2 |
| 5.20 | Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant | 1 through 6 |
| 5.21 | Environmental Acceptability for Toxic Air Contaminants | 1 through 5 |
| 5.22 | Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant | 1 through 5 |
| 5.23 | Categories of Toxic Air Contaminants | 1 through 6 |
| STAR regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23 | | |

U8 Equipment

| Emission Point | Description | Install Date | Applicable Regulations | Control ID | Release ID |
|-----------------------|---|---------------------|-------------------------------|-------------------|-------------------|
| E-158 | Repack Drum/Tote Unloading, make Fischer AG, model: Custom, capacity 700 Liters [5000 lb/hr] ²² | 2004 | 2.05, STAR, 7.08, 40 CFR 64 | C-E-161 | S-66 |
| E-160 | Repack Staging Vessel, make BMI Industrial Systems, model: Custom, capacity 500 Liters [5000 lb/hr] ²² | 2004 | 2.05, STAR, 7.08, 40 CFR 64 | | |

²² Existing equipment modification (2021): increased aluminum process rate to 5000 lb/hr.

| Emission Point | Description | Install Date | Applicable Regulations | Control ID | Release ID |
|-----------------------|---|---------------------|-------------------------------|-------------------|-------------------|
| E-164 | Repack Drum Loading, make: Varies, model: 55-gallon drum, capacity 5000 lb/hr ²² | 2004 | 2.05, STAR, 7.08, 40 CFR 64 | C-E-165 | S-67 |

U8 Control Devices

| Control ID | Description | Control Efficiency |
|-------------------|--|---------------------------|
| C-E-161 | Repack Metal Mesh Filter, make BMI Industrial Systems, model: Custom, capacity 1 cfm, installed 2004 | 99.99% |
| C-E-165 | Repack Metal Mesh Filter, make BMI Industrial Systems, model: Custom, capacity 1 cfm, installed 2004 | 99.99% |

U8 Specific Conditions

S1. Standards

[Regulation 2.03, section 6.1]

a. Opacity

- i. For Emission Points E-158, E-160, and E-164, the owner or operator shall not cause or permit the discharge of emissions equal to or in excess of 20% opacity. [Regulation 7.08, section 3.1.1]

b. PM/PM₁₀/PM_{2.5}

- i. For Emission Points [U2 (E-3, E-4, E-5b, E-6, E-7b), U3 (E-8a-c), U4 (E-12a, E-15), U7 (E-343, E344, E345, E346, E347), and U8 (E-158, E-160, E-164)] combined, the owner or operator shall not allow PM emissions to exceed 25 tons per 12 consecutive month period. [Regulation 2.05]
- ii. For Emission Points [U2 (E-3, E-4, E-5b, E-6, E-7b), U3 (E-8a-c), U4 (E-12a, E-15), U7 (E-343, E344, E345, E346, E347), and U8 (E-158, E-160, E-164)] combined, the owner or operator shall not allow PM₁₀ emissions to exceed 15 tons per 12 consecutive month period. [Regulation 2.05]
- iii. For Emission Points [U2 (E-3, E-4, E-5b, E-6, E-7b), U3 (E-8a-c), U4 (E-12a, E-15), U7 (E-343, E344, E345, E346, E347), and U8 (E-158, E-160, E-164)] combined, the owner or operator shall not allow PM_{2.5} emissions to exceed 10 tons per 12 consecutive month period. [Regulation 2.05]
- iv. For Emission Points E-158, E-160, and E-164, the owner or operator shall not allow PM emissions to exceed 6.34 lb/hr per piece of equipment based on actual operating hours in a calendar day.²³²⁴
[Regulation 7.08, section 3.1.2]
- v. For Emission Point E-158, E-160, and E-164, the owner or operator shall at all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. [Regulation 1.05, section 5]

²³ Using hourly potential emissions obtained from the September 2016 Stack Test of E-158 & E-160, Emission Points E-158, E-160, and E-164 should meet the lb/hr emission standards controlled

²⁴ The 40 CFR 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources Plan was received for U8 (E-158, E-160, and E-164), was received March 5, 2021.

c. TAC

- i. See Plantwide emission unit.
- ii. The owner or operator shall not allow aluminum emissions to exceed the emission standards listed in the following table.
[Regulation 5.21, section 4.2 and 4.3]

Table 8- Aluminum Emission Standards²⁵

| Stack ID | Emission Point | Description | (lb/hr) | (lb/8-hr) | Basis of Limit |
|----------|----------------|-----------------------------|---------|-----------|-----------------------|
| S-66 | E-158 | Repack Drum/Tote Unloading, | 1.00 | 1.00 | De Minimis controlled |
| S-66 | E-160 | Repack 200 Staging Vessel, | 1.00 | 1.00 | De Minimis controlled |
| S-67 | E-164 | Repack Drum Loading, | 1.00 | 1.00 | De Minimis controlled |

S2. Monitoring and Record Keeping
[Regulation 2.03, section 6.1]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. Opacity

- i. For Emission Points E-158, E-160, and E-164 to demonstrate compliance with the opacity standard:
 - (1) The owner or operator shall, monthly, conduct a one-minute visible emissions survey during normal operation. No more than four emission points shall be observed simultaneously. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure. [40 CFR 64.3(b)(4)(i)]
 - (2) At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation. [40 CFR 64.3(b)(4)(i)]
 - (3) The owner or operator shall maintain records, monthly, of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include the date of the survey, the

²⁵ Emission Point E-158, E-160, and E-164 each have potential controlled TAC emissions, 0.0032 lb/hr and 0.0255 lb/8-hr based on the construction application and are De minimis controlled.

name of the person conducting the survey, whether or not visible emissions were observed, and what if any corrective action was performed. If an emission point is not being operated during a given month, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

[40 CFR 64.3(b)(4)(i)]

b. PM/PM₁₀/PM_{2.5}

- i. For Emission Points [U2 (E-3, E-4, E-5b, E-6, E-7b), U3 (E-8a-c), U4 (E-12a, E-15), U7 (E-343, E344, E345, E346, E347), and U8 (E-158, E-160, E-164)], the owner or operator shall, daily, keep records of all production rates and hours of operation.
- ii. For Emission Points [U2 (E-3, E-4, E-5b, E-6, E-7b), U3 (E-8a-c), U4 (E-12a, E-15), U7 (E-343, E344, E345, E346, E347), and U8 (E-158, E-160, E-164)], the owner or operator shall monthly calculate and record the previous 12 consecutive month PM, PM₁₀, and PM_{2.5} emissions, based on the hours of actual operation of the processes during each day and the design collection efficiency of any filtration devices used, in order to demonstrate the status of compliance with the tons per 12 consecutive month period limits.
- iii. The owner or operator shall use the emission factors in Attachment A unless alternative calculation methods or factors are approved by the District to demonstrate compliance.
- iv. For Control Devices C-E-161 and C-E-165: The owner or operator shall, monthly, perform a visual inspection of the structural and mechanical integrity of the dust collectors for signs of damage, air leakage, corrosion, or other equipment defects, and repair and/or replace defective components as needed. The owner or operator shall maintain monthly records of the results. [40 CFR 64.3(b)(4)(iii)]
- v. For Control Devices C-E-161 and C-E-165: The owner or operator shall monitor and record the pressure drop across the Metal Mesh Filters at least once per each operating day.²⁶ [40 CFR 64.3(b)(4)(iii)]

²⁶ The 40 CFR 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources Plan was received for U8 (E-158, E-160, and E-164), was received March 5, 2021.

Table 9– Metal Mesh Filter Pressure Drop Range

| Control ID | Description | Performance Indicator | Operating Range |
|------------|--|-----------------------|--|
| C-E-161 | Repack Metal Mesh Filter, make BMI Industrial Systems, model: Custom, capacity 1 cfm, installed 2004 | Pressure drop | The allowable operating range to be established based on 90 days of operation. |
| C-E-165 | Repack Metal Mesh Filter, make BMI Industrial Systems, model: Custom, capacity 1 cfm, installed 2004 | Pressure drop | The allowable operating range to be established based on 90 days of operation. |

- vi. For Control Devices C-E-161 and C-E-165: The owner or operator shall determine the appropriate pressure drop range across the baghouse that will be used as the indicators of normal operation of the control devices.
- (1) The owner or operator shall, monitor and record pressure drop across the baghouse at least once each per operating day. The owner or operator shall establish an appropriate pressure drop range for the normal operation of the baghouse after ninety (90) consecutive days of observation.
- vii. For emission points E-158, E-160, and E-164:
- (1) The owner or operator shall maintain daily records of the type and amount of product transferred.
 - (2) The owner or operator shall maintain daily records of the hours of operation of the equipment.
 - (3) The owner or operator shall maintain daily records of any periods of time where the process was operating and the control device was not operating or a declaration that the control device operated at all times that day when the process was operating.
- viii. For emission points E-158, E-160, and E-164: If there is any time that the control device is bypassed or not in operation when the process is operating, then the owner or operator shall keep a record of the following for each bypass event:
- (1) Date;
 - (2) Start time and stop time;
 - (3) Identification of the control device and process equipment;

- (4) Calculate PM emissions during the bypass in lb/hr using the most recent emission factor;
- (5) Summary of the cause or reason for each bypass event;
- (6) Corrective action taken to minimize the extent or duration of the bypass event; and
- (7) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.
- (8) If this event is due to an upset condition, you must report as specified in District regulation 1.07, section 4.

c. TAC

- i. See Plantwide monitoring and record keeping section for additional requirements.
- ii. For Emission Points E-158, E-160, and E-164:
 - (1) The owner or operator shall monthly calculate and record TAC emissions for this point in order to demonstrate compliance with the TAC emission standards.

S3. Reporting

[Regulation 2.03, section 6.1]

The owner or operator shall submit semi-annual compliance reports that include the information in this section. All reports shall include the company name, plant ID number, and the beginning and ending date of the reporting period. The compliance reports shall clearly identify any deviation from a permit requirement or a declaration that there were no such deviations. The compliance reports shall be postmarked within 60 days following the end of each reporting period. All compliance reports shall include the following certification statement per Regulation 2.16, section 3.5.11:

- “Based on information and belief formed after reasonable inquiry, I certify that the statements and information in this document are true, accurate, and complete”.
- Signature and title of the responsible official of the company.

The compliance reports are due on or before the following dates of each calendar year:

| <u>Reporting Period</u> | <u>Report Due Date</u> |
|--|-------------------------|
| January 1 st through June 30 th | August 29 th |
| July 1 st through December 31 st | March 1 st |

a. Opacity

- i. For Emission Points E-158, E-160, and E-164:

- (1) Any deviation from the requirement to perform daily and monthly visible emission (VE) surveys;
- (2) Any deviation from the requirement to record the results of each VE survey;
- (3) The number, date, and time of each VE survey where visible emissions were observed;
- (4) Identification of all periods of exceedance of the opacity standard; and
- (5) Description of any corrective action taken for each exceedance.

b. PM/PM₁₀/PM_{2.5}

- i. For Emission Points E-158, E-160, and E-164: The owner or operator shall report the following information regarding bypasses in the semi-annual compliance reports.
 - (1) Number of times the vent stream bypasses the control device and is vented to the atmosphere;
 - (2) Duration of each bypass to the atmosphere;
 - (3) Calculated pound per hour PM emissions for each bypass.
- ii. For Emission Points [U2 (E-3, E-4, E-5b, E-6, E-7b), U3 (E-8a-c), U4 (E-12a, E-15), U7 (E-343, E344, E345, E346, E347), and U8 (E-158, E-160, E-164)]:
 - (1) Identification of all periods of exceedances of the emission standard including the quantity of excess emissions; and
 - (2) Description of any corrective action taken for each exceedance.
- iii. For Control Devices C-E-161 and C-E-165;
 - (1) Any deviation from the requirement to record the results of visual inspections of the control devices;
 - (2) Any deviation from the requirement to record the results of the pressure drop readings;
 - (3) Identification of all periods when the pressure drop was outside the operating range; and
 - (4) Description of any corrective action taken for each exceedance.
- iv. For Control Devices C-E-161 and C-E-165:
 - (1) The owner or operator shall submit to the District the established appropriate ranges of the pressure drop for the baghouse. The report shall be submitted within 30 days following the end of the 90 day monitoring period.

c. TAC

- i. See Plantwide reporting section.
- ii. For Emission E-158, E-160, and E-164: The owner or operator shall identify all periods of exceeding a TAC emission standard during a reporting period. The report shall include the following:
 - (1) Emission Unit ID number and emission point ID number;
 - (2) Identification of all periods during which a deviation occurred;
 - (3) A description, including the magnitude, of the deviation;
 - (4) If known, the cause of the deviation; and
 - (5) A description of all corrective actions taken to abate the deviation.

Insignificant Activities

| Equipment | Qty. | PTE (ton/yr) | Regulation Basis |
|---|-------------|--------------------------|-------------------------------|
| M-7 Screen Room (E-4, see U2) | 1 | 0.66 (PM ₁₀) | Regulation 1.02, section 1.38 |
| M-8 Screen Room (E-6, see U2) | 1 | 0.66 (PM ₁₀) | Regulation 1.02, section 1.38 |
| Multicyclone Drum Loading (E-5a, see U2) | 1 | 0.03 (PM ₁₀) | Regulation 1.02, section 1.38 |
| Filter Container Loading (E-5b, see U2) | 1 | 0.01 (PM ₁₀) | Regulation 1.02, section 1.38 |
| Multicyclone Drum Loading (E-7a, see U2) | 1 | 0.03 (PM ₁₀) | Regulation 1.02, section 1.38 |
| Filter Container Loading (E-7b, see U2) | 1 | 0.01 (PM ₁₀) | Regulation 1.02, section 1.38 |
| Buhler A Weigh Tank (E-8b, see U3) | 1 | 1.84 (PM ₁₀) | Regulation 1.02, section 1.38 |
| Buhler A Conveyor Pod (E-8c, see U3) | 1 | 1.84 (PM ₁₀) | Regulation 1.02, section 1.38 |
| Tote/Drum Filling Station #2 (E-15, see U4) | 1 | 1.84 (PM ₁₀) | Regulation 1.02, section 1.38 |
| Supersack Unloader and Vibrator (E-343, see U7) | 1 | 1.84 (PM ₁₀) | Regulation 1.02, section 1.38 |
| Drum Unloader and Vibrator (E-344, see U7) | 1 | 1.84 (PM ₁₀) | Regulation 1.02, section 1.38 |
| Air Blender (E-345, see U7) | 1 | 4.40 (PM ₁₀) | Regulation 1.02, section 1.38 |
| Feed Hopper (E-346, see U7) | 1 | 1.66 (PM ₁₀) | Regulation 1.02, section 1.38 |
| Product Container (E-347, see U7) | 1 | 1.66 (PM ₁₀) | Regulation 1.02, section 1.38 |

1. Insignificant activities identified in District Regulation 1.02, Appendix A, may be subject to size or production rate disclosure requirements pursuant to Regulation 2.16, section 3.5.4.1.4.
2. Insignificant activities identified in District Regulation 1.02, Appendix A shall comply with generally applicable requirements as required by Regulation 2.16, section 4.1.9.4.
3. The Insignificant Activities Table is correct as of the date the permit was proposed for review by U.S. EPA, Region 4.
4. Emissions from Insignificant Activities shall be reported in conjunction with the reporting of annual emissions of the facility as required by the District.

5. The owner or operator shall submit an updated list of insignificant activities that occurred during the preceding year pursuant to Regulation 2.16, section 4.3.5.3.6.
6. The owner or operator may elect to monitor actual throughputs for each of the insignificant activities and calculate actual annual emissions or use Potential to Emit (PTE) to be reported on the annual emission inventory.
7. The District has determined pursuant to Regulation 2.16, section 4.1.9.4 that no monitoring, record keeping, or reporting requirements apply to the insignificant activities listed, except for the equipment that has an applicable regulation and permitted under an insignificant activity (IA) unit.

Attachment A – Calculation Methodology

Emissions are calculated by multiplying the throughput (ton, MMCF, gallons, etc.) or hours of operation of the equipment by the appropriate emission factor and 1 minus any control device's efficiency.

Unit U2: Hot Air Furnace

| Equipment | Emission Point | PM Emission Factor | Determination Method |
|-------------------------------|----------------|--|---|
| Atomization Furnace | E-3(S-4) | 82.84 lb/ton (uncontrolled). 0.011 lb/ton (multicyclone & mesh filter controlled) | April 2012 Stack Test on Control Points E-5 and E-7 |
| | E-3(S-5) | 84.84 lb/ton (uncontrolled) 0.0096 lb/ton (multicyclone & mesh filter controlled) | |
| M-7 Screen Room | E-4 | 0.12 lb/ton each (uncontrolled) | AP-42 Chapter 11.24; Metallic Mineral Processing; Material Handling and Transfer - low moisture ore |
| M-8 Screen Room | E-6 | | |
| Multicyclone Drum Loading | E-5a | | |
| Filter Container Drum Loading | E-5b | | |
| Multicyclone Drum Loading | E-7a | | |
| Filter Container Drum Loading | E-7b | | |

Unit U3: Hot Air Direct Convey and Air Slide System

| Equipment | Emission Point | PM Emission Factor | Determination Method |
|-----------------------|----------------|--|---|
| Buhler A Storage Tank | E-8a | 1.97 lb/ton (uncontrolled) 0.49 lb/ton (cyclone controlled) 0.070 lb/ton (cyclone & mesh filter) | September 2018 Stack Test on Emission Point E-8a |
| Buhler A Weigh Tank | E-8b | 0.12 lb/ton (uncontrolled) 0.030 lb/ton (cyclone controlled) | AP-42 Chapter 11.24; Metallic Mineral Processing; Material Handling and Transfer - low moisture ore |
| Buhler A Conveyor Pod | E-8c | 0.004lb/ton (cyclone & mesh filter) | |
| Rail Car Loading | E-9 | 1.97 lb/ton (uncontrolled) 0.49 lb/ton (cyclone controlled) 0.070 lb/ton (cyclone & mesh filter) | September 2018 Stack Test for E-8a |

Unit U4: Hot Air Bin Fill

| Equipment | Emission Point | PM Emission Factor | Determination Method |
|-----------------|----------------|--|---|
| Storage Tanks | E-12a | 6.32 lb/ton (uncontrolled) 3.92 lb/ton (cyclone controlled) 0.005 lb/ton (cyclone & mesh filter) | January 2019 Stack Test for E-128 (U-6) |
| Filling Station | E-15 | 0.12 lb/ton (uncontrolled) 0.074 lb/ton (cyclone controlled) 0.0001 lb/ton (cyclone & mesh filter) | AP-42 Chapter 11.24; Metallic Mineral Processing; Material Handling and Transfer - low moisture ore |

Unit U7: Blending/Repack

| Equipment | Emission Point | PM Emission Factor | Determination Method |
|---------------------------------|----------------|---|---|
| Supersack Unloader and Vibrator | E-343 | 0.12 lb/ton (uncontrolled) | AP-42 Chapter 11.24; Metallic Mineral Processing; Material Handling and Transfer - low moisture ore |
| Drum Unloader and Vibrator | E-344 | | |
| Air Blender | E-345 | 0.73 lb/ton (uncontrolled) 0.015 lb/ton (controlled) | AP-42 Chapter 11.12, Pneumatic Cement Unloading to elevated bin |
| Feed Hopper | E-346 | 0.12 lb/ton (uncontrolled) | AP-42 Chapter 11.24; Metallic Mineral Processing; Material Handling and Transfer - low moisture ore |
| Product Container | E-347 | 0.0024 lb/ton (controlled) | |

Unit U8: Rescreen Operation

| Equipment | Emission Point | PM Emission Factor/Rate | Determination Method |
|----------------------------|----------------|--|--|
| Repack Drum/Tote Unloading | E-158 | 12.75 lb/ton (uncontrolled) 0.00020 lb/ton (mesh filter controlled) | September 2016 Stack Test of Repack Drum/Tote Unloading (E-158) |
| Repack Staging Vessel | E-160 | | |
| Repack Drum Loading | E-164 | | |

Attachment B – Determination of Benchmark Ambient Concentration (BAC)

Category _____ Number _____

Compound name _____ CAS No. _____

Molecular weight _____

BAC_C = _____ µg/m³, annual
de minimis _____ lb/hr; _____ lb/_____; _____ lb/year

BAC_{NC} = _____ µg/m³, _____ (avg period)

I. Carcinogen Risk - BAC_C (annual averaging period)

Carcinogen YES NO

1. IRIS 10⁻⁶ risk = _____ µg/m³ URE = _____ (µg/m³)⁻¹ Date _____
2. Cal 10⁻⁶ risk = _____ µg/m³ IUR = _____ (µg/m³)⁻¹ Date _____
3. Mich 10⁻⁶ risk = _____ µg/m³ Date _____
4. NTP Part A YES NO Part B YES NO
5. IARC Group 1 YES NO Group 2A YES NO Group 2B YES NO
6. ATSDR
7. Sec. 3.3.4 Method # _____ 10⁻⁶ risk = _____ µg/m³ Date _____
8. Default 0.0004 µg/m³

II. Chronic Noncancer Risk - BAC_{NC} (averaging period as specified)

1. IRIS RfC = _____ µg/m³, annual Date _____
2. Cal REL = _____ µg/m³, annual Date _____
3. IRIS [1] RfD = _____ µg/kg/day × (70/20) = _____ µg/m³, annual Date _____
4. Mich ITSL = _____ µg/m³, _____ averaging period Date _____
5. TLV NIOSH = _____ µg/m³ × 0.01 = _____ µg/m³, 8-hour Date _____
6. RTECS [1] _____ = _____ µg/m³, annual Date _____
 (describe calculation from Reg 5.20, sections 4.6 - 4.10)
7. Default 0.004 µg/m³

[1] To use data based upon an oral route of exposure, the District must make an affirmative determination that data are not available to indicate that oral-route to inhalation-route extrapolation is inappropriate.

III. De minimis calculations

1. Carcinogen BAC_C _____ µg/m³ × 0.54 = _____ lb/hour
 BAC_C _____ µg/m³ × 480 = _____ lb/year
2. Chronic Noncancer Risk _____ (averaging period)
 BAC_{NC} _____ µg/m³ × F factor = _____ lb/(avg period)

| BAC averaging period | F factor for avg period | | | |
|----------------------|-------------------------|---------|--------|--------|
| | Annual | 24 hour | 8 hour | 1 hour |
| Annual | 480 | | | 0.54 |
| 24 hours | | 0.12 | | 0.05 |
| 8 hours | | | 0.02 | 0.02 |
| 1 hour | | | | 0.001 |

[Regulation 5.22, table 1]

Prepared by _____ Date _____

Fee Comment

The permit fees are based on the construction permit fee for a Title V source (\$2,728.69), EA demo with modeling (\$1,637.21) and STAR De Minis Determination Fee per application (\$545.80). The total permit fees are \$4911.70