

February 8, 2012

Mr. Michael Burgess
Vice President - Manufacturing
PyraMax Ceramics, LLC
161 Britt Waters Road, NW
Milledgeville, GA 31061

Re: Construction Permit No. 0160-0023-CA

Dear Mr. Burgess,

Enclosed is Construction Permit No. 0160-0023. This construction permit is being issued in accordance with the plans, specifications and other information submitted in the construction permit application, as amended.

In addition to this permit to construct, a permit to operate is required in accordance with *South Carolina Regulation 61-62, Air Pollution Control Regulations and Standards*. The regulations require a written request for a new or revised operating permit to cover any new or altered source, postmarked no later than fifteen (15) days after the actual date of initial startup of each new or altered source unless a more stringent time frame is required.

Please note the emissions limitations and operational requirements contained within this permit. It is important for you and/or an authorized representative responsible for the overall operation of this facility to read this issued permit carefully and to understand all requirements. If any errors or omissions are discovered, please notify George Robinson of my staff, via e-mail at robings@dhc.sc.gov, or call (803) 898-4135 immediately.

Pursuant to the South Carolina Administrative Procedures Act, any Department decision involving the issuance, denial, suspension, or revocation of a permit or certification may be appealed by the applicant, permittee, licensee, or affected person. Please see the enclosed "Notice of Appeal Procedure" for guidelines on filing an appeal.

Sincerely,



Elizabeth J. Basil
Director, Engineering Services Division
Bureau of Air Quality

EJB:gsr:kal
Enclosure

cc: Jennifer Hughes, Region 5, Aiken EQC Office
Permit File: 0160-0023
ec: Consultant: Tom Muscenti, Trinity Consultants, E mail: tmuscenti@trinityconsultants.com
Michael Shroup, Source Evaluation Section



**Office of Environmental Quality Control
Bureau of Air Quality
PSD and NESHAP (40 CFR 63)
Construction Permit**

**PyraMax Ceramics, LLC
2636 Augusta Highway
Allendale, SC 29810**

Pursuant to the provisions of the *Pollution Control Act*, Sections 48-1-50(5) and 48-1-110(a), the 1976 *Code of Laws of South Carolina*, as amended, and *South Carolina Regulation 61-62, Air Pollution Control Regulations and Standards*, the Bureau of Air Quality authorizes the construction of this facility and the equipment specified herein in accordance with the plans, specifications, and other information submitted in the construction permit application received on September 16, 2011 as amended.

The construction and subsequent operation of this facility is subject to and conditioned upon the terms, limitations, standards, and schedules contained herein or as specified by this permit and its accompanying attachments.

**Permit Number: 0160-0023-CA
Issue Date: February 8, 2012**

**Director, Engineering Services Division
Bureau of Air Quality**

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PART 1 - APPLICABILITY (S.C. Regulation 61-62.1, Section II)

| Condition Number | Condition |
|------------------|--|
| 1.1 | Except as allowed under S.C. Regulation 61-62.1, Section II(A)(1) paragraphs (c) and (d), any person who plans to construct, alter or add to a source of air contaminants, including installation of any device for the control of air contaminant discharges, shall first obtain a construction permit from the Department prior to commencement of construction. |
| 1.2 | The owner/operator shall obtain Bureau authorization, as required under S.C. Regulation 61-62.1, Section II(A), prior to making modifications not covered under this construction permit. |
| 1.3 | No construction permits shall be required for the sources listed as exempt from the requirement to obtain a construction permit in S.C. Regulations 61-62.1, Section II(B); however, modifications at these facilities may trigger the requirement to obtain a construction permit. |
| 1.4 | All official correspondence, plans, permit applications, and written statements are an integral part of the permit. Any false information or misrepresentation in the application for a construction permit may be grounds for permit revocation. |

PART 2 - GENERAL REQUIREMENTS

This part describes conditions and provisions applicable to all sources. Specific source category conditions and requirements are contained in Part 5 of this permit.

PART 2.A - PERMIT EXPIRATION AND EXTENSION (S.C. Regulation 61-62.1, Section II(A)(4))

| Condition Number | Condition |
|------------------|--|
| 2.A.1 | Approval to construct shall become invalid if construction; a. is not commenced within 18 months after receipt of such approval, b. if discontinued for a period of 18 months or more, or c. if construction is not completed within a reasonable time as considered by the Department. |
| 2.A.2 | The Department may extend the construction permit for an additional 18-month period upon a satisfactory showing that an extension is justified. This request must be made prior to the permit expiration. |
| 2.A.3 | This provision does not apply to the time period between construction of the approved phases of a phased construction project; each phase must commence construction within 18 months of the projected and approved commencement date. |

PART 2.B - PERMIT TO OPERATE (S.C. Regulation 61-62.1 Section II (A) & (F))

| Condition Number | Condition |
|------------------|--|
| 2.B.1 | Any source that is required to obtain an air quality construction permit issued by the Department must obtain an operating permit when the new or altered source is placed into operation and shall comply with the requirements of S.C. Regulation 61-62.1 Section II(F). |
| 2.B.2 | If construction is certified as provided in S.C. Regulation 61-62.1 Section II(F)(2), the permittee may operate the source in compliance with the terms and conditions of the construction permit until the operating permit is issued by the Department. |
| 2.B.3 | The owner/operator or professional engineer in charge of the project shall certify that, to the best of his/her knowledge and belief and as a result of periodic observation during construction, the construction under application has been completed in accordance with the specifications agreed upon in the construction permit issued by the Department. |
| 2.B.4 | If construction is not built as specified in the permit application and associated construction permit(s), the owner/operator must submit to the Department a complete description of modifications that are at variance with the documentation of the construction permitting determination prior to commencing operation. |

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PART 2.B - PERMIT TO OPERATE (S.C. Regulation 61-62.1 Section II (A) & (F))

| Condition Number | Condition |
|-------------------------|---|
| 2.B.5 | Construction variances that would trigger additional requirements that have not been addressed prior to start of operation shall be considered construction without a permit. |
| 2.B.6 | The owner/operator shall submit written notification to the Director of Engineering Services and the Regional Air Section Manager of the date construction is commenced, postmarked no later than 30 days after such date. |
| 2.B.7 | The owner/operator shall submit written notification to the Director of Engineering Services and the Regional Air Section Manager of the actual date of initial startup of each new or altered source, postmarked within 15 days after such date. |

PART 2.C - FEE ASSESSMENT AND PAYMENT (S.C. Regulation 61-30)

| Condition Number | Condition |
|-------------------------|--|
| 2.C.1 | The permittee shall pay permit fees to the Department in accordance with the requirements of S.C. Regulation 61-30, Environmental Protection Fees. |

PART 2.D - DUTY TO COMPLY (S.C. Regulation 61-62.1, Section II)

| Condition Number | Condition |
|-------------------------|--|
| 2.D.1 | S.C. Regulation 61-62.1, Section II will not supersede any State or Federal requirements nor special permit conditions, unless this regulation would impose a more restrictive emission limit. The owner or operator shall comply with all terms, conditions, and limitations of any Department-issued permit for sources or activities at its facility. A source's permit status may change upon promulgation of new regulatory requirements. |

PART 2.E - INSPECTION AND ENTRY (S.C. Regulation 61-62.1, Section II(O))

| Condition Number | Condition |
|-------------------------|---|
| 2.E.1 | Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Department or an authorized representative to perform the following: <ol style="list-style-type: none">1. Enter the facility where emissions-related activity is conducted, or where records must be kept under the conditions of the permit.2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit.3. Inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.4. As authorized by the Federal Clean Air Act and/or the S.C. Pollution Control Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements. |

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PART 3 - FACILITY WIDE GENERAL REQUIREMENTS

This part describes conditions and provisions applicable facility wide. Specific source category conditions and requirements are contained in Part 5 of this permit.

| Condition Number | Condition |
|-------------------------|--|
| 3.1 | <p>In accordance with SC Regulation 61-62.1, Section II(J), for sources not required to have continuous emissions monitors, any malfunction of air pollution control equipment or system, process upset or other equipment failure which results in discharges of air contaminants lasting for one hour or more and which are greater than those discharges described for normal operation in the permit application shall be reported to the Department's local Environmental Quality Control (EQC) Regional office within twenty-four (24) hours after the beginning of the occurrence. The contact information for the local EQC Regional office can be found at http://www.scdhec.gov/environment/envserv/regions.htm.</p> <p>The owner or operator shall also submit a written report within thirty (30) days of the occurrence. This report shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality (BAQ) and shall include as a minimum, the following:</p> <ol style="list-style-type: none"> 1. The identity of the stack and/or emission point where the excess emissions occurred; 2. The magnitude of excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the excess emissions; 3. The time and duration of excess emissions; 4. The identity of the equipment causing the excess emissions; 5. The nature and cause of such excess emissions; 6. The steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunction; 7. The steps taken to limit the excess emissions; and, 8. Documentation that the air pollution control equipment, process equipment, or processes were at all times maintained and operated, to the maximum extent practicable, in a manner consistent with good practice for minimizing emissions. |
| 3.2 | <p>Air dispersion modeling (or other method) has demonstrated that this facility's operation will not interfere with the attainment and maintenance of any state or federal ambient air standard. Any changes in the parameters used in the air dispersion modeling may require a review by the facility to determine continuing compliance with these standards. These potential changes include any decrease in stack height, decrease in stack velocity, increase in stack diameter, decrease in stack exit temperature, increase in building height or building additions, increase in emission rates, decrease in distance between stack and property line, changes in vertical stack orientation, and installation of a rain cap that impedes vertical flow. Parameters that are not required in the determination will not invalidate the demonstration if they are modified. The emission rates used in the determination are listed in Attachment A of this permit. Higher emission rates may be administratively incorporated into Attachment A of this permit provided a demonstration using these higher emission rates shows the attainment and maintenance of any state or federal ambient air quality standard or with any other applicable requirement. Variations from the input parameters in the demonstration shall not constitute a violation unless the maximum allowable ambient concentrations identified in the standard are exceeded. This is a State Only enforceable requirement.</p> |
| 3.3 | <p>The owner/operator shall maintain this facility at or below the emission rates as listed in Attachment A, not to exceed the pollutant limitations of this construction permit. Should the facility wish to increase the emission rates listed in Attachment A, not to exceed the pollutant limitations in the body of this permit, it may do so by the administrative process specified in condition 3.2.</p> |

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PART 3 - FACILITY WIDE GENERAL REQUIREMENTS

This part describes conditions and provisions applicable facility wide. Specific source category conditions and requirements are contained in Part 5 of this permit.

| Condition Number | Condition |
|------------------|---|
| 3.4 | <p>In accordance with S.C. Regulation 61-62.1, Section II(F)(3), for sources not yet covered by an effective Title V operating permit, the owner/operator shall submit a written request to the Director of the Engineering Services Division for a new Title V operating permit to cover any new, or altered source, postmarked no later than fifteen (15) days after the actual date of initial startup of each new or altered source.</p> <p>In accordance with S.C. Regulation 61-62.70.5(a), the owner or operator shall submit a timely and complete Part 70 permit application within 12 months of start up defined as the setting in operation of a source for any purpose</p> |
| 3.5 | <p>All newly permitted and constructed Title V sources and/or Non-attainment Area (NAA) Sources shall complete and submit an emissions inventory consistent with the schedule approved pursuant to S.C. Regulation 61-62.1, Section III. These Emissions Inventory Reports shall be submitted to the Manager of the Emissions Inventory Section of the Bureau of Air Quality (BAQ).</p> <p style="text-align: center;">SCDHEC - BAQ Emissions Inventory Section 2600 Bull Street Columbia, SC 29201</p> <p>This requirement notwithstanding, an emissions inventory may be required at any time in order to determine the compliance status of any facility.</p> |
| 3.6 | <p>All source tests required by this permit shall be conducted while operating under maximum operating capacity or other conditions that would result in the maximum expected emissions. Source tests conducted under any other conditions may result in operating limitations</p> |

PART 4 - PROJECT DESCRIPTION

Permission is hereby granted to construct a greenfield ceramic proppant manufacturing facility near Allendale, Allendale County, South Carolina. The Proppant Plant will produce proppant beads for use in the oil and natural gas industry. The facility will consist of four (4) identical processing lines. Each processing line will consist of the following areas:

- raw material handling;
- feedstock preparation;
- pelletization;
- green pellet screening;
- calcinations/sintering; and
- finishing
- Two 5 million Btu/hr boilers
- Emergency Engines and fire pumps

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PART 5 - CONSTRUCTION PERMIT REQUIREMENTS

PART 5.A - GENERIC CONDITIONS

| Condition Number | Equipment/Control Device ID | Condition |
|-------------------------|------------------------------------|---|
| 5.A.1 | All Sources | In accordance with S.C. Regulation 61-62.1, Section II(J), a copy of the Department issued construction and/or operating permit must be kept readily available at the facility at all times. A permittee shall maintain such operational records; make reports; install, use, and maintain monitoring equipment or methods; sample and analyze emissions or discharges in accordance with prescribed methods, at locations, intervals, and procedures as the Department shall prescribe; and provide such other information as the Department reasonably may require. All records required to demonstrate compliance with the limits established under this permit shall be maintained on site for a period of at least five (5) years and shall be made available to a Department representative upon request. |
| 5.A.2 | All Sources | The owner/operator shall maintain on file all measurements including continuous monitoring system or monitoring device performance measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required in a permanent form suitable for inspection by Department personnel. |
| 5.A.3 | All Sources | All gauges shall be readily accessible and easily read by operating personnel and Department personnel (i.e. on ground level or easily accessible roof level). Monitoring parameter readings (i.e., pressure drop readings, etc.) and inspection checks shall be maintained in logs (written or electronic), along with any corrective action taken when deviations occur. Each incidence of operation outside the operational ranges, including date and time, cause, and corrective action taken, shall be recorded and kept on site. Exceedance of operational range shall not be considered a violation of an emission limit of this permit, unless the exceedance is also accompanied by other information demonstrating that a violation of an emission limit has taken place. Reports of these incidences shall be submitted semiannually. If no incidences occurred during the reporting period then a letter shall indicate such. Any alternative method for monitoring control device performance must be preapproved by the Bureau and shall be incorporated into the permit as set forth in S.C. Regulation 61-62.70.7 |
| 5.A.4 | All Sources | Visual Inspection means a qualitative observation of opacity during daylight hours where the inspector records results in a log, noting color, duration, density (heavy or light), cause and corrective action taken for any abnormal emissions. The observer does not need to be certified to conduct valid visual inspections. However, at a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, and observer position relative to lighting, wind, and the presence of uncombined water. |

PART 5.B - LIMITATIONS, MONITORING AND REPORTING

PART 5.B.1 - EQUIPMENT FOR CONSTRUCTION PERMIT 0160-0023-CA

| Equipment ID | Equipment Description | Control Device ID | Emission Point ID |
|--|--------------------------------------|--------------------------|--------------------------|
| Unit ID 01 Services all Process Lines | | | |
| Raw Material Handling and Storage | | | |
| 00-23-1000 | Raw Material Storage, Bays 1 thru 12 | N/A | N/A |
| Add1 | Additive Silo - Line 1 & 2 | Add1 | Add1 |
| Add2 | Additive Silo - Line 3 & 4 | Add2 | Add2 |

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PART 5.B - LIMITATIONS, MONITORING AND REPORTING

PART 5.B.1 - EQUIPMENT FOR CONSTRUCTION PERMIT 0160-0023-CA

| Equipment ID | Equipment Description | Control Device ID | Emission Point ID |
|--|--|--------------------------|--------------------------|
| SBSilo1 | Sodium bicarbonate Silo for Line #1 | SBSilo1 | SBSilo1 |
| SBSilo2 | Sodium bicarbonate Silo for Line #2 | SBSilo2 | SBSilo2 |
| SBSilo3 | Sodium bicarbonate Silo for Line #3 | SBSilo3 | SBSilo3 |
| SBSilo4 | Sodium bicarbonate Silo for Line #4 | SBSilo4 | SBSilo4 |
| Unit ID 02 Process Line 1 | | | |
| Feedstock Preparation - Line 1 | | | |
| 10-15-1003 | Feeder | | |
| 10-07-1002 | Conveyor to Mix Tanks | | |
| 11-01-1050 | Mix Tank for clay, ammonia, dispersant, and water. | | |
| 11-12-1601 | Pneumatic System Dust Collector | | |
| 11-03-1606 | Recycled Dust Surge Bin | CD-11-12-1605 | 11-12-1605 |
| 11-07-1604 | Weigh Belt | CD-13-12-1215 | 13-12-1215 |
| 11-29-1609 | Recycle Mix Tank for clay, water, and additives. | | |
| Pelletization - Line 1 | | | |
| 12-03-1162 | Seed Feed Bin to Pelletizer #1 | CD-12-12-1163 | 12-12-1163 |
| 12-07-1154 | Conveyor to Feed Seed Bin | CD-12-12-1163 | 12-12-1163 |
| 12-27-1100 | Pelletizer #1, with three (3) each 25 million BTU/hr natural gas direct fired low NOx burners (propane back up fuel) | CD-12-12-1141 | 12-12-1141 |
| 12-13-1105 | Screen Feed Elevator | CD-13-12-1215 | 13-12-1215 |
| Green Pellet Screening - Line 1 | | | |
| 13-03-1230 | Feed Hopper | CD-13-12-1215 | 13-12-1215 |
| 13-24-1232 | Green Pellet Screen | CD-13-12-1215 | 13-12-1215 |
| 13-24-1233 | Green Pellet Screen | CD-13-12-1215 | 13-12-1215 |
| 13-24-1234 | Green Pellet Screen | CD-13-12-1215 | 13-12-1215 |
| 13-24-1235 | Green Pellet Screen | CD-13-12-1215 | 13-12-1215 |
| 13-07-1239 | Conveyors | CD-13-12-1215 | 13-12-1215 |
| 13-07-1240 | Conveyors | CD-13-12-1215 | 13-12-1215 |
| 13-07-1241 | Conveyors | CD-13-12-1215 | 13-12-1215 |
| 13-07-1231 | Conveyor, Oversized Green Pellets | CD-13-12-1215 | 13-12-1215 |
| 13-07-1193 | Conveyor, Undersized Green Pellets | CD-13-12-1215 | 13-12-1215 |
| 13-13-1194 | Seed Bin Elevator | CD-13-12-1215 | 13-12-1215 |
| 13-13-1208 | Kiln Feed Elevator | CD-13-12-1215 | 13-12-1215 |
| Calcining / Sintering - Line 1 | | | |

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PART 5.B - LIMITATIONS, MONITORING AND REPORTING

PART 5.B.1 - EQUIPMENT FOR CONSTRUCTION PERMIT 0160-0023-CA

| Equipment ID | Equipment Description | Control Device ID | Emission Point ID |
|---------------------------------------|--|--------------------------------|--------------------------|
| 14-03-1400 | Kiln Feed Bin | CD-14-12-1401 | 14-12-1401 |
| 14-03-1485 | Kiln Recycle Feed Bin | CD-14-12-1486 | 14-12-1486 |
| 14-07-1403 | Weigh Belt for Rotary Kiln | CD-13-12-1215 | 13-12-1215 |
| 14-13-1484 | Kiln Recycle Elevator to Kiln Recycle Feed Bin | CD-13-12-1215 | 13-12-1215 |
| 14-21-1410 | Rotary Kiln #1 with one (1) 56.8 million BTU/hr Natural gas, Direct fired, low NOx burner (Propane back-up). | CD-14-09-1421 CD-14-12-1412 | 14-12-1412 |
| 14-21-1430 | Rotary Kiln Cooler | CD-14-09-1421 CD-14-12-1412 | 14-12-1412 |
| 14-21-1431 | Cooler Elevator | CD-15-12-1488 | 15-12-1488 |
| Finishing - Line 1 | | | |
| 15-24-1439 | Coarse Product Screens | CD-15-12-1488 | 15-12-1488 |
| 15-24-1440 | Coarse Product Screens | CD-15-12-1488 | 15-12-1488 |
| 15-03-1441 | QC Bin #1 | CD-15-12-1488 | 15-12-1488 |
| 15-03-1445 | QC Bin #2 | CD-15-12-1488 | 15-12-1488 |
| 15-24-1459 | Secondary Product Screens | CD-15-12-1488 | 15-12-1488 |
| 15-24-1460 | Secondary Product Screens | CD-15-12-1488 | 15-12-1488 |
| 15-03-1461 | QC Bin #3 | CD-15-12-1488 | 15-12-1488 |
| 15-03-1465 | QC Bin #4 | CD-15-12-1488 | 15-12-1488 |
| 15-07-1448 | Coarse Reversing Weigh Belt | CD-15-12-1488 | 15-12-1488 |
| 15-07-1468 | Fine Reversing Weigh Belt from QC Bins # 1 – 4 | CD-15-12-1488 | 15-12-1488 |
| 15-21-1491 | Recycle Elevator | CD-15-12-1488 | 15-12-1488 |
| 15-03-1480 | Recycle Weigh Bin | CD-15-12-1488 | 15-12-1488 |
| 16-03-1520 | Product Silo # 1 | CD-16-12-1521 | 16-12-1521 |
| 16-03-1530 | Product Silo # 2 | CD-16-12-1531 | 16-12-1531 |
| 16-03-1540 | Product Silo # 3 | CD-16-12-1541 | 16-12-1541 |
| 16-03-1550 | Product Silo # 4 | CD-16-12-1551 | 16-12-1551 |
| 16-03-1560 | Product Silo # 5 | CD-16-12-1561 | 16-12-1561 |
| 16-07-1570 | Belt Conveyor | CD-16-12-1580 | 16-12-1580 |
| 16-07-1571 | Loading Elevator | CD-16-12-1580 | 16-12-1580 |
| 16-03-1572 | Weigh Bin | CD-16-12-1580 | 16-12-1580 |
| 16-18-1576 | Loading Spout | CD-16-12-1580 | 16-12-1580 |
| Unit ID 03 Process Line 2 | | | |
| Feedstock Preparation - Line 2 | | | |
| 20-15-1003 | Feeder | | |
| 20-07-1002 | Conveyor to Mix Tanks | | |
| 21-01-1050 | Mix Tank for clay, ammonia, dispersant, and water. | | |

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PART 5.B - LIMITATIONS, MONITORING AND REPORTING

PART 5.B.1 - EQUIPMENT FOR CONSTRUCTION PERMIT 0160-0023-CA

| Equipment ID | Equipment Description | Control Device ID | Emission Point ID |
|--|--|--------------------------------|--------------------------|
| 21-03-1606 | Recycled Dust Surge Bin | CD-21-12-1605 | 21-12-1605 |
| 21-07-1604 | Weigh Belt | CD-23-12-1215 | 23-12-1215 |
| 21-29-1609 | Recycle Mix Tank for clay, water, and additives. | | |
| Pelletization - Line 2 | | | |
| 22-03-1162 | Seed Feed Bin to Pelletizer #2 | CD-22-12-1163 | 22-12-1163 |
| 22-07-1154 | Conveyor to Feed Seed Bin | CD-22-12-1163 | 22-12-1163 |
| 22-27-1100 | Pelletizer #2, with three (3) each 25 million BTU/hr natural gas direct fired low NOx burners (propane back up fuel) | CD-22-12-1141 | 22-12-1141 |
| 22-13-1105 | Screen Feed Elevator | CD-23-12-1215 | 23-12-1215 |
| Green Pellet Screening - Line 2 | | | |
| 23-03-1230 | Feed Hopper | CD-23-12-1215 | 23-12-1215 |
| 23-24-1232 | Green Pellet Screen | CD-23-12-1215 | 23-12-1215 |
| 23-24-1233 | Green Pellet Screen | CD-23-12-1215 | 23-12-1215 |
| 23-24-1234 | Green Pellet Screen | CD-23-12-1215 | 23-12-1215 |
| 23-24-1235 | Green Pellet Screen | CD-23-12-1215 | 23-12-1215 |
| 23-07-1239 | Conveyors | CD-23-12-1215 | 23-12-1215 |
| 23-07-1240 | Conveyors | CD-23-12-1215 | 23-12-1215 |
| 23-07-1241 | Conveyors | CD-23-12-1215 | 23-12-1215 |
| 23-07-1231 | Conveyor, Oversized Green Pellets | CD-23-12-1215 | 23-12-1215 |
| 23-07-1193 | Conveyor, Undersized Green Pellets | CD-23-12-1215 | 23-12-1215 |
| 23-13-1194 | Seed Bin Elevator | CD-23-12-1215 | 23-12-1215 |
| 23-13-1208 | Kiln Feed Elevator | CD-23-12-1215 | 23-12-1215 |
| Calcining / Sintering - Line 2 | | | |
| 24-03-1400 | Kiln Feed Bin | CD-24-12-1401 | 24-12-1401 |
| 24-03-1485 | Kiln Recycle Feed Bin | CD-24-12-1486 | 24-12-1486 |
| 24-07-1403 | Weigh Belt for Rotary Kiln | CD-23-12-1215 | 23-12-1215 |
| 24-13-1484 | Kiln Recycle Elevator to Kiln Recycle Feed Bin | CD-23-12-1215 | 23-12-1215 |
| 24-21-1410 | Rotary Kiln with one (1) 56.8 million BTU/hr Natural gas, Direct fired, low NOx burner (Propane back-up). | CD-24-09-1421 CD-24-12-1412 | 24-12-1412 |
| 24-21-1430 | Rotary Kiln Cooler | CD-24-09-1421 CD-24-12-1412 | 24-12-1412 |
| 24-21-1431 | Cooler Elevator | CD-25-12-1488 | 25-12-1488 |
| Finishing - Line 2 | | | |
| 25-24-1439 | Coarse Product Screens | CD-25-12-1488 | 25-12-1488 |

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PART 5.B - LIMITATIONS, MONITORING AND REPORTING

PART 5.B.1 - EQUIPMENT FOR CONSTRUCTION PERMIT 0160-0023-CA

| Equipment ID | Equipment Description | Control Device ID | Emission Point ID |
|---------------------------------------|--|--------------------------|--------------------------|
| 25-24-1440 | Coarse Product Screens | CD-25-12-1488 | 25-12-1488 |
| 25-03-1441 | QC Bin #1 | CD-25-12-1488 | 25-12-1488 |
| 25-03-1445 | QC Bin #2 | CD-25-12-1488 | 25-12-1488 |
| 25-24-1459 | Secondary Product Screens | CD-25-12-1488 | 25-12-1488 |
| 25-24-1460 | Secondary Product Screens | CD-25-12-1488 | 25-12-1488 |
| 25-03-1461 | QC Bin #3 | CD-25-12-1488 | 25-12-1488 |
| 25-03-1465 | QC Bin #4 | CD-25-12-1488 | 25-12-1488 |
| 25-07-1448 | Coarse Reversing Weigh Belt | CD-25-12-1488 | 25-12-1488 |
| 25-07-1468 | Fine Reversing Weigh Belt from QC Bins # 1 – 4 | CD-25-12-1488 | 25-12-1488 |
| 25-21-1491 | Recycle Elevator | CD-25-12-1488 | 25-12-1488 |
| 25-03-1480 | Recycle Weigh Bin | CD-25-12-1488 | 25-12-1488 |
| 26-03-1520 | Product Silo # 1 | CD-26-12-1521 | 26-12-1521 |
| 26-03-1530 | Product Silo # 2 | CD-26-12-1531 | 26-12-1531 |
| 26-03-1540 | Product Silo # 3 | CD-26-12-1541 | 26-12-1541 |
| 26-03-1550 | Product Silo # 4 | CD-26-12-1551 | 26-12-1551 |
| 26-03-1560 | Product Silo # 5 | CD-26-12-1561 | 26-12-1561 |
| 26-07-1570 | Belt Conveyor | CD-26-12-1580 | 26-12-1580 |
| 26-07-1571 | Loading Elevator | CD-26-12-1580 | 26-12-1580 |
| 26-03-1572 | Weigh Bin | CD-26-12-1580 | 26-12-1580 |
| 26-18-1576 | Loading Spout | CD-26-12-1580 | 26-12-1580 |
| Unit ID 04 Process Line 3 | | | |
| Feedstock Preparation - Line 3 | | | |
| 30-15-1003 | Feeder | | |
| 30-07-1002 | Conveyor to Mix Tanks | | |
| 31-01-1050 | Mix Tank for clay, ammonia, dispersant, and water. | | |
| 31-03-1606 | Recycled Dust Surge Bin | CD-31-12-1605 | 31-12-1605 |
| 31-07-1604 | Weigh Belt | CD-33-12-1215 | 33-12-1215 |
| 31-29-1609 | Recycle Mix Tank for clay, water, and additives. | | |
| Pelletization - Line 3 | | | |
| 32-03-1162 | Seed Feed Bin to Pelletizer #3 | CD-32-12-1163 | 32-12-1163 |
| 32-07-1154 | Conveyor to Feed Seed Bin | CD-32-12-1163 | 32-12-1163 |
| 32-27-1100 | Pelletizer #3, with three (3) each 25 million BTU/hr natural gas direct fired low NOx burners (propane back up fuel) | CD-32-12-1141 | 32-12-1141 |
| 32-13-1105 | Screen Feed Elevator | CD-33-12-1215 | 33-12-1215 |

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PART 5.B - LIMITATIONS, MONITORING AND REPORTING

PART 5.B.1 - EQUIPMENT FOR CONSTRUCTION PERMIT 0160-0023-CA

| Equipment ID | Equipment Description | Control Device ID | Emission Point ID |
|--|--|--------------------------------|-------------------|
| Green Pellet Screening - Line 3 | | | |
| 33-03-1230 | Feed Hopper | CD-33-12-1215 | 33-12-1215 |
| 33-24-1232 | Green Pellet Screen | CD-33-12-1215 | 33-12-1215 |
| 33-24-1233 | Green Pellet Screen | CD-33-12-1215 | 33-12-1215 |
| 33-24-1234 | Green Pellet Screen | CD-33-12-1215 | 33-12-1215 |
| 33-24-1235 | Green Pellet Screen | CD-33-12-1215 | 33-12-1215 |
| 33-07-1239 | Conveyors | CD-33-12-1215 | 33-12-1215 |
| 33-07-1240 | Conveyors | CD-33-12-1215 | 33-12-1215 |
| 33-07-1241 | Conveyors | CD-33-12-1215 | 33-12-1215 |
| 33-07-1231 | Conveyor, Oversized Green Pellets | CD-33-12-1215 | 33-12-1215 |
| 33-07-1193 | Conveyor, Undersized Green Pellets | CD-33-12-1215 | 33-12-1215 |
| 33-13-1194 | Seed Bin Elevator | CD-33-12-1215 | 33-12-1215 |
| 33-13-1208 | Kiln Feed Elevator | CD-33-12-1215 | 33-12-1215 |
| Calcining / Sintering - Line 3 | | | |
| 34-03-1400 | Kiln Feed Bin | CD-34-12-1401 | 34-12-1401 |
| 34-03-1485 | Kiln Recycle Feed Bin | CD-34-12-1486 | 34-12-1486 |
| 34-07-1403 | Weigh Belt for Rotary Kiln | CD-33-12-1215 | 33-12-1215 |
| 34-13-1484 | Kiln Recycle Elevator to Kiln Recycle Feed Bin | CD-33-12-1215 | 33-12-1215 |
| 34-21-1410 | Rotary Kiln #3 with one (1) 56.8 million BTU/hr Natural gas, Direct fired, low NOx burner (Propane back-up). | CD-34-09-1421 CD-34-12-1412 | 34-12-1412 |
| 34-21-1430 | Rotary Kiln Cooler | CD-34-09-1421 CD-34-12-1412 | 34-12-1412 |
| 34-21-1431 | Cooler Elevator | CD-35-12-1488 | 35-12-1488 |
| Finishing - Line 3 | | | |
| 35-24-1439 | Coarse Product Screens | CD-35-12-1488 | 35-12-1488 |
| 35-24-1440 | Coarse Product Screens | CD-35-12-1488 | 35-12-1488 |
| 35-03-1441 | QC Bin #1 | CD-35-12-1488 | 35-12-1488 |
| 35-03-1445 | QC Bin #2 | CD-35-12-1488 | 35-12-1488 |
| 35-24-1459 | Secondary Product Screens | CD-35-12-1488 | 35-12-1488 |
| 35-24-1460 | Secondary Product Screens | CD-35-12-1488 | 35-12-1488 |
| 35-03-1461 | QC Bin #3 | CD-35-12-1488 | 35-12-1488 |
| 35-03-1465 | QC Bin #4 | CD-35-12-1488 | 35-12-1488 |
| 35-07-1448 | Coarse Reversing Weigh Belt | CD-35-12-1488 | 35-12-1488 |
| 35-07-1468 | Fine Reversing Weigh Belt from QC Bins # 1 – 4 | CD-35-12-1488 | 35-12-1488 |
| 35-21-1491 | Recycle Elevator | CD-35-12-1488 | 35-12-1488 |
| 35-03-1480 | Recycle Weigh Bin | CD-35-12-1488 | 35-12-1488 |

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PART 5.B - LIMITATIONS, MONITORING AND REPORTING

PART 5.B.1 - EQUIPMENT FOR CONSTRUCTION PERMIT 0160-0023-CA

| Equipment ID | Equipment Description | Control Device ID | Emission Point ID |
|--|--|--------------------------|--------------------------|
| 36-03-1520 | Product Silo # 1 | CD-36-12-1521 | 36-12-1521 |
| 36-03-1530 | Product Silo # 2 | CD-36-12-1531 | 36-12-1531 |
| 36-03-1540 | Product Silo # 3 | CD-36-12-1541 | 36-12-1541 |
| 36-03-1550 | Product Silo # 4 | CD-36-12-1551 | 36-12-1551 |
| 36-03-1560 | Product Silo # 5 | CD-36-12-1561 | 36-12-1561 |
| 36-07-1570 | Belt Conveyor | CD-36-12-1580 | 36-12-1580 |
| 36-07-1571 | Loading Elevator | CD-36-12-1580 | 36-12-1580 |
| 36-03-1572 | Weigh Bin | CD-36-12-1580 | 36-12-1580 |
| 36-18-1576 | Loading Spout | CD-36-12-1580 | 36-12-1580 |
| Unit ID 05 Process Line 4 | | | |
| Feedstock Preparation – Line 4 | | | |
| 40-15-1003 | Feeder | | |
| 40-07-1002 | Conveyor to Mix Tanks | | |
| 41-01-1050 | Mix Tank for clay, ammonia, dispersant, and water. | | |
| 41-03-1606 | Recycled Dust Surge Bin | CD-41-12-1605 | 41-12-1605 |
| 41-07-1604 | Weigh Belt | CD-43-12-1215 | 43-12-1215 |
| 41-29-1609 | Recycle Mix Tank for clay, water, and additives. | | |
| Pelletization - Line 4 | | | |
| 42-03-1162 | Seed Feed Bin to Pelletizer #4 | CD-42-12-1163 | 42-12-1163 |
| 42-07-1154 | Conveyor to Feed Seed Bin | CD-42-12-1163 | 42-12-1163 |
| 42-27-1100 | Pelletizer #4, with three (3) each 25 million BTU/hr natural gas direct fired low NOx burners (propane back up fuel) | CD-42-12-1141 | 42-12-1141 |
| 42-13-1105 | Screen Feed Elevator | CD-43-12-1215 | 43-12-1215 |
| Green Pellet Screening - Line 4 | | | |
| 43-03-1230 | Feed Hopper | CD-43-12-1215 | 43-12-1215 |
| 43-24-1232 | Green Pellet Screen | CD-43-12-1215 | 43-12-1215 |
| 43-24-1233 | Green Pellet Screen | CD-43-12-1215 | 43-12-1215 |
| 43-24-1234 | Green Pellet Screen | CD-43-12-1215 | 43-12-1215 |
| 43-24-1235 | Green Pellet Screen | CD-43-12-1215 | 43-12-1215 |
| 43-07-1239 | Conveyors | CD-43-12-1215 | 43-12-1215 |
| 43-07-1240 | Conveyors | CD-43-12-1215 | 43-12-1215 |
| 43-07-1241 | Conveyors | CD-43-12-1215 | 43-12-1215 |
| 43-07-1231 | Conveyor, Oversized Green Pellets | CD-43-12-1215 | 43-12-1215 |
| 43-07-1193 | Conveyor, Undersized Green Pellets | CD-43-12-1215 | 43-12-1215 |

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PART 5.B - LIMITATIONS, MONITORING AND REPORTING

PART 5.B.1 - EQUIPMENT FOR CONSTRUCTION PERMIT 0160-0023-CA

| Equipment ID | Equipment Description | Control Device ID | Emission Point ID |
|---------------------------------------|--|--------------------------------|--------------------------|
| 43-13-1194 | Seed Bin Elevator | CD-43-12-1215 | 43-12-1215 |
| 43-13-1208 | Kiln Feed Elevator | CD-43-12-1215 | 43-12-1215 |
| Calcining / Sintering – Line 4 | | | |
| 44-03-1400 | Kiln Feed Bin | CD-44-12-1401 | 44-12-1401 |
| 44-03-1485 | Kiln Recycle Feed Bin | CD-44-12-1486 | 44-12-1486 |
| 44-07-1403 | Weigh Belt for Rotary Kiln | CD-43-12-1215 | 43-12-1215 |
| 44-13-1484 | Kiln Recycle Elevator to Kiln Recycle Feed Bin | CD-43-12-1215 | 43-12-1215 |
| 44-21-1410 | Rotary Kiln #4 with one (1) 56.8 million BTU/hr Natural gas, Direct fired, low NOx burner (Propane back-up). | CD-44-09-1421 CD-44-12-1412 | 44-12-1412 |
| 44-21-1430 | Rotary Kiln Cooler | CD-44-09-1421 CD-44-12-1412 | 44-12-1412 |
| 44-21-1431 | Cooler Elevator | CD-45-12-1488 | 45-12-1488 |
| Finishing – Line 4 | | | |
| 45-24-1439 | Coarse Product Screens | CD-45-12-1488 | 45-12-1488 |
| 45-24-1440 | Coarse Product Screens | CD-45-12-1488 | 45-12-1488 |
| 45-03-1441 | QC Bin #1 | CD-45-12-1488 | 45-12-1488 |
| 45-03-1445 | QC Bin #2 | CD-45-12-1488 | 45-12-1488 |
| 45-24-1459 | Secondary Product Screens | CD-45-12-1488 | 45-12-1488 |
| 45-24-1460 | Secondary Product Screens | CD-45-12-1488 | 45-12-1488 |
| 45-03-1461 | QC Bin #3 | CD-45-12-1488 | 45-12-1488 |
| 45-03-1465 | QC Bin #4 | CD-45-12-1488 | 45-12-1488 |
| 45-07-1448 | Coarse Reversing Weigh Belt | CD-45-12-1488 | 45-12-1488 |
| 45-07-1468 | Fine Reversing Weigh Belt from QC Bins # 1 – 4 | CD-45-12-1488 | 45-12-1488 |
| 45-21-1491 | Recycle Elevator | CD-45-12-1488 | 45-12-1488 |
| 45-03-1480 | Recycle Weigh Bin | CD-45-12-1488 | 45-12-1488 |
| 46-03-1520 | Product Silo # 1 | CD-46-12-1521 | 46-12-1521 |
| 46-03-1530 | Product Silo # 2 | CD-46-12-1531 | 46-12-1531 |
| 46-03-1540 | Product Silo # 3 | CD-46-12-1541 | 46-12-1541 |
| 46-03-1550 | Product Silo # 4 | CD-46-12-1551 | 46-12-1551 |
| 46-03-1560 | Product Silo # 5 | CD-46-12-1561 | 46-12-1561 |
| 46-07-1570 | Belt Conveyor | CD-46-12-1580 | 46-12-1580 |
| 46-07-1571 | Loading Elevator | CD-46-12-1580 | 46-12-1580 |
| 46-03-1572 | Weigh Bin | CD-46-12-1580 | 46-12-1580 |
| 46-18-1576 | Loading Spout | CD-46-12-1580 | 46-12-1580 |

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PART 5.B - LIMITATIONS, MONITORING AND REPORTING

PART 5.B.1 - EQUIPMENT FOR CONSTRUCTION PERMIT 0160-0023-CA

| Equipment ID | Equipment Description | Control Device ID | Emission Point ID |
|-------------------------------------|---|-------------------|-------------------|
| Unit ID 06 Support Equipment | | | |
| BinderMix | Binder Mix Tank #1 | N/A | N/A |
| BinderMix | Binder Mix Tank #2 | N/A | N/A |
| BinderMix | Binder Mix Tank #3 | N/A | N/A |
| BinderMix | Binder Mix Tank #4 | N/A | N/A |
| B1 | One (1), 5 million BTU/hr Natural Gas fired Fire Tube Boiler # 1, Hot Water Heater, with Propane as back-up fuel. | N/A | B1 |
| B2 | One (1), 5 million BTU/hr Natural Gas fired Fire Tube Boiler # 2, Hot Water Heater, with Propane as back-up fuel. | N/A | B2 |
| Engine 1 | 29 hp, Diesel Powered, Emergency Engine | N/A | Engine 1 |
| Engine 2 | 29 hp, Diesel Powered, Emergency Engine | N/A | Engine 2 |
| Engine 3 | 29 hp, Diesel Powered, Emergency Engine | N/A | Engine 3 |
| Engine 4 | 29 hp, Diesel Powered, Emergency Engine | N/A | Engine 4 |
| Engine 5 | 29 hp, Diesel Powered, Emergency Engine | N/A | Engine 5 |
| Engine 6 | 29 hp, Diesel Powered, Emergency Engine | N/A | Engine 6 |
| Engine 7 | 29 hp, Diesel Powered, Emergency Engine | N/A | Engine 7 |
| Engine 8 | 29 hp, Diesel Powered, Emergency Engine | N/A | Engine 8 |
| EG1 | 500 kW, 757 hp, Diesel Powered, Emergency Generator # 1 | N/A | EG1 |
| EG2 | 500 kW, 757 hp, Diesel Powered, Emergency Generator # 2 | N/A | EG2 |
| EG3 | 500 kW, 757 hp, Diesel Powered, Emergency Generator # 3 | N/A | EG3 |
| EG4 | 500 kW, 757 hp, Diesel Powered, Emergency Generator # 4 | N/A | EG4 |
| EG5 | 500 kW, 757 hp, Diesel Powered, Emergency Generator # 5 | N/A | EG5 |
| EG6 | 500 kW, 757 hp, Diesel Powered, Emergency Generator # 6 | N/A | EG6 |
| EG7 | 500 kW, 757 hp, Diesel Powered, Emergency Generator # 7 | N/A | EG7 |
| EG8 | 500 kW, 757 hp, Diesel Powered, Emergency Generator # 8 | N/A | EG8 |
| Fire Pump | 500hp, Diesel Powered, Emergency Fire Pump | N/A | Fire Pump |

PART 5.B.2 - CONTROL DEVICES FOR CONSTRUCTION PERMIT 0160-0023-CA

| Control Device ID | Control Device Description | Pollutant(s) Controlled |
|-----------------------|----------------------------|--|
| Process Line 1 | | |
| CD-11-12-1605 | Bin Vent | PM/PM ₁₀ /PM _{2.5} |
| CD-12-12-1163 | Bin Vent | PM/PM ₁₀ /PM _{2.5} |
| CD-12-12-1141 | Dust Collector | PM/PM ₁₀ /PM _{2.5} |
| CD-13-12-1215 | Dust Collector | PM/PM ₁₀ /PM _{2.5} |
| CD-14-12-1401 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |
| CD-14-09-1421 | Cyclone | PM/PM ₁₀ /PM _{2.5} |

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PART 5.B.2 - CONTROL DEVICES FOR CONSTRUCTION PERMIT 0160-0023-CA

| Control Device ID | Control Device Description | Pollutant(s) Controlled |
|--------------------------|-----------------------------------|---|
| CD-14-12-1412 | Catalytic Baghouse System | PM/PM ₁₀ /PM _{2.5} NO _x , SO ₂ , HAP/TAP |
| CD-14-12-1486 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |
| CD-15-12-1488 | Dust Collector | PM/PM ₁₀ /PM _{2.5} |
| CD-16-12-1521 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |
| CD-16-12-1531 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |
| CD-16-12-1541 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |
| CD-16-12-1551 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |
| CD-16-12-1561 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |
| CD-16-12-1580 | Dust Collector | PM/PM ₁₀ /PM _{2.5} |
| Process Line 2 | | |
| CD-21-12-1605 | Bin Vent | PM/PM ₁₀ /PM _{2.5} |
| CD-22-12-1163 | Bin Vent | PM/PM ₁₀ /PM _{2.5} |
| CD-22-12-1141 | Dust Collector | PM/PM ₁₀ /PM _{2.5} |
| CD-23-12-1215 | Dust Collector | PM/PM ₁₀ /PM _{2.5} |
| CD-24-12-1401 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |
| CD-24-09-1421 | Cyclone | PM/PM ₁₀ /PM _{2.5} |
| CD-24-12-1412 | Catalytic Baghouse System | PM/PM ₁₀ /PM _{2.5} NO _x , SO ₂ , HAP/TAP |
| CD-24-12-1486 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |
| CD-25-12-1488 | Dust Collector | PM/PM ₁₀ /PM _{2.5} |
| CD-26-12-1521 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |
| CD-26-12-1531 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |
| CD-26-12-1541 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |
| CD-26-12-1551 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |
| CD-26-12-1561 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |
| CD-26-12-1580 | Dust Collector | PM/PM ₁₀ /PM _{2.5} |
| Process Line 3 | | |
| CD-31-12-1605 | Bin Vent | PM/PM ₁₀ /PM _{2.5} |
| CD-32-12-1163 | Bin Vent | PM/PM ₁₀ /PM _{2.5} |
| CD-32-12-1141 | Dust Collector | PM/PM ₁₀ /PM _{2.5} |
| CD-33-12-1215 | Dust Collector | PM/PM ₁₀ /PM _{2.5} |
| CD-34-12-1401 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |
| CD-34-09-1421 | Cyclone | PM/PM ₁₀ /PM _{2.5} |
| CD-34-12-1412 | Catalytic Baghouse System | PM/PM ₁₀ /PM _{2.5} NO _x , SO ₂ , HAP/TAP |
| CD-34-12-1486 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |
| CD-35-12-1488 | Dust Collector | PM/PM ₁₀ /PM _{2.5} |
| CD-36-12-1521 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |
| CD-36-12-1531 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |
| CD-36-12-1541 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |
| CD-36-12-1551 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |
| CD-36-12-1561 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |
| CD-36-12-1580 | Dust Collector | PM/PM ₁₀ /PM _{2.5} |

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PART 5.B.2 - CONTROL DEVICES FOR CONSTRUCTION PERMIT 0160-0023-CA

| Control Device ID | Control Device Description | Pollutant(s) Controlled |
|-----------------------|----------------------------|---|
| Process Line 4 | | |
| CD-41-12-1605 | Bin Vent | PM/PM ₁₀ /PM _{2.5} |
| CD-42-12-1163 | Bin Vent | PM/PM ₁₀ /PM _{2.5} |
| CD-42-12-1141 | Dust Collector | PM/PM ₁₀ /PM _{2.5} |
| CD-43-12-1215 | Dust Collector | PM/PM ₁₀ /PM _{2.5} |
| CD-44-12-1401 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |
| CD-44-09-1421 | Cyclone | PM/PM ₁₀ /PM _{2.5} |
| CD-44-12-1412 | Catalytic Baghouse System | PM/PM ₁₀ /PM _{2.5} NO _x , SO ₂ , HAP/TAP |
| CD-44-12-1486 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |
| CD-45-12-1488 | Dust Collector | PM/PM ₁₀ /PM _{2.5} |
| CD-46-12-1521 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |
| CD-46-12-1531 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |
| CD-46-12-1541 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |
| CD-46-12-1551 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |
| CD-46-12-1561 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |
| CD-46-12-1580 | Dust Collector | PM/PM ₁₀ /PM _{2.5} |
| CD-Add1 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |
| CD-Add2 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |
| CD-SBSilo1 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |
| CD-SBSilo2 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |
| CD-SBSilo3 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |
| CD-SBSilo4 | Bin Vent Filter | PM/PM ₁₀ /PM _{2.5} |

PART 5.B.3 - CONDITIONS FOR CONSTRUCTION PERMIT 0160-0023-CA

| Condition Number | Equipment/Control Device ID | Regulated Pollutant/Standard | Conditions |
|------------------|---|------------------------------|---|
| 5.B.1 | Unit ID 01 thru 05, Engine 1 – 8, EG 1 – 8, Fire Pump | Opacity/Standard 4 | <p>Limits/Standards: In accordance with S.C. Regulation 61-62.5, Standard No. 4 - Emissions from Process Industries, Section IX - Visible Emissions (Where Not Specified Elsewhere), where construction or modification began after December 31, 1985, emissions (including fugitive emissions) shall not exhibit an opacity greater than 20%.</p> <p>Equipment ID 00-23-1000, Raw Material Storage, Bays 1 thru 12 – Standard 4, Section X A. All non-enclosed operations shall be conducted in such a manner that a minimum of particulate matter becomes airborne. In no case shall established ambient air quality standards be exceeded at or beyond the property line.</p> <p>State Only: No</p> <p>Testing: None Required</p> <p>Monitoring/Record Keeping/Reporting/Other: The control devices shall be in place and operational whenever processes controlled by the</p> |

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PART 5.B.3 - CONDITIONS FOR CONSTRUCTION PERMIT 0160-0023-CA

| Condition Number | Equipment/Control Device ID | Regulated Pollutant/Standard | Conditions |
|------------------|-----------------------------|------------------------------|---|
| | | | <p>control devices are running, except during periods of baghouse malfunction or mechanical failure.</p> <p>The permittee shall perform a visual inspection on a weekly basis during source operation. Visual Inspection means a qualitative observation of opacity during daylight hours where the inspector records results in a log, noting color, duration, density (heavy or light), cause and corrective action taken for any abnormal emissions. The observer does not need to be certified to conduct valid visual inspections. However, at a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, and observer position relative to lighting, wind, and the presence of uncombined water. Logs shall be kept to record all visual inspections, including cause and corrective action taken for any abnormal emissions and visual inspections from date of recording. Entries should be made to the log to indicate the dates when the source is not in operation. The owner/operator shall submit semiannual reports of the visual inspections.</p> <p>The kilns and pelletizers are permitted to burn only natural gas and propane as fuel. The use of any other substances as fuel is prohibited without prior written approval from the Bureau of Air Quality.</p> |
| 5.B.2 | Boilers B1 and B2 | Opacity/Standard 1 | <p>Limits/Standards: In accordance with S.C. Regulation 61-62.5, Standard No. 1, Emissions from Fuel Burning Operations the boiler(s) shall not discharge into the ambient air smoke which exceeds an opacity of 20%.</p> <p>The opacity standards set forth above apply at all times. The owner/operator shall, to the extent practicable, maintain and operate any source including associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions.</p> <p>State Only: No</p> <p>Testing: None Required</p> <p>Monitoring/Record Keeping/Reporting/Other: The facility is permitted to combust natural gas and propane as a backup only.</p> |
| 5.B.3 | Each Unit ID 01 thru 05 | PM / Standard 4 | <p>Limits/Standards: In accordance with S.C. Regulation 61-62.5, Standard No. 4 - Emissions from Process Industries, Section VIII - Other Manufacturing, particulate matter emissions shall be limited to the rate specified by use of the following equations: for process weight rates less than or equal to 30 tons per hour ($E = 4.10P^{0.67}$) and for process weight rates greater than 30 tons per hour ($E = 55.0P^{0.11} - 40$) where E = the allowable emission rate in pounds per hour and P = process weight rate in tons per hour. As such, each process's allowable particulate matter emission limit is limited to the amount shown in the table below at its nominal production rating:</p> |

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| | | | <table border="1" data-bbox="657 436 1450 569"> <thead> <tr> <th data-bbox="657 436 966 499">Unit ID</th> <th data-bbox="966 436 1174 499">Emission Limit (lbs/hr)</th> <th data-bbox="1174 436 1450 499">Process Weight Rate (tons/hr)</th> </tr> </thead> <tbody> <tr> <td data-bbox="657 499 966 533">01 - SB & Additive Silos</td> <td data-bbox="966 499 1174 533">6.74</td> <td data-bbox="1174 499 1450 533">2.1</td> </tr> <tr> <td data-bbox="657 533 966 569">02 thru 05</td> <td data-bbox="966 533 1174 569">33.80 (each)</td> <td data-bbox="1174 533 1450 569">23.3 (each)</td> </tr> </tbody> </table> <p data-bbox="586 604 764 632">State Only: No</p> <p data-bbox="586 667 1143 695">Testing: None Required for Standard 4 compliance</p> <p data-bbox="586 730 1117 758">Monitoring/Record Keeping/Reporting/Other:</p> <p data-bbox="586 762 1520 911">Unit ID 01 (SB & Additive Silos) – 05 The owner/operator shall continue to operate and maintain pressure drop gauge(s) on each module of the baghouse(s). Pressure drop readings shall be recorded daily during source operation. The baghouse(s) shall be in place and operational whenever processes controlled by the baghouse(s) are running, except during periods of baghouse malfunction or mechanical failure.</p> <p data-bbox="586 947 1520 1005">The following operation and maintenance checks will be made on at least a weekly basis for all baghouses:</p> <ul style="list-style-type: none"> <li data-bbox="586 1041 1419 1068">a) The baghouse cleaning systems will be checked for proper operation. <li data-bbox="586 1073 1484 1100">b) Check dust collection hoppers and conveying systems for proper operation. <p data-bbox="586 1136 1520 1194">The results from the operation and maintenance checks shall be maintained in logs (written or electronic), along with any corrective action taken.</p> <p data-bbox="586 1230 1520 1444">Operational ranges for the monitored parameters shall be established as recommended by the control device manufacturer to provide a reasonable assurance of compliance. Future operational ranges for the monitored parameters shall be derived from stack test data, vendor certification, and/or operational history and visual inspections, which demonstrate the proper operation of the equipment in compliance. These ranges, with supporting documentation and quality assurance procedures, shall be submitted to the Bureau for approval within 180 days of start up.</p> <p data-bbox="586 1480 1520 1507">The operating ranges may be updated using this procedure, following Bureau approval.</p> <p data-bbox="586 1543 1520 1631">The kilns and pelletizers are permitted to burn only natural gas and propane as fuel. The use of any other substances as fuel is prohibited without prior written approval from the Bureau of Air Quality.</p> | Unit ID | Emission Limit (lbs/hr) | Process Weight Rate (tons/hr) | 01 - SB & Additive Silos | 6.74 | 2.1 | 02 thru 05 | 33.80 (each) | 23.3 (each) |
| Unit ID | Emission Limit (lbs/hr) | Process Weight Rate (tons/hr) | | | | | | | | | | |
| 01 - SB & Additive Silos | 6.74 | 2.1 | | | | | | | | | | |
| 02 thru 05 | 33.80 (each) | 23.3 (each) | | | | | | | | | | |
| 5.B.4 | Each Pelletizer: 12-27-1100/ 12-12-1141, 22-27-1100/ 22-12-1141, 32-27-1100/ 32-12-1141, | PM/PM ₁₀ / PM _{2.5} / PSD BACT | <p data-bbox="586 1667 1520 1726">Limits/Standards: The facility is a major source as defined in SC Regulation 61-62.5, Standard No. 7, Prevention of Significant Deterioration (PSD).</p> <p data-bbox="586 1782 1263 1810">For each pelletizer the BACT control technology is a baghouse.</p> <p data-bbox="586 1845 1247 1904">The BACT emission limit for each pelletizer is established as: PM = 0.01 gr/dscf</p> | | | | | | | | | |

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| | 42-27-1100/ 42-12-1141, | | <p>PM₁₀ = 0.01 gr/dscf PM_{2.5} = 0.006 gr/dscf (filterable and condensable)</p> <p>The owner/operator shall install, operate, and maintain pressure drop gauge(s) on each module of the baghouse(s). Pressure drop readings shall be recorded daily during source operation. The baghouse(s) shall be in place and operational whenever processes controlled by the baghouse(s) are running, except during periods of baghouse malfunction or mechanical failure.</p> <p>State Only: No</p> <p>Testing: In accordance with SC Regulation 61-62.5, Standard No. 7, an initial source test of the baghouse for PM, PM₁₀, and PM_{2.5} emissions shall be conducted within 180 days after startup of each process line and every two (2) years thereafter at maximum operating capacity. Particulate matter tests shall include filterable and condensable particulate matter. Less frequent source testing for PM, PM₁₀, and PM_{2.5} may be approved, if at least two (2) consecutive stack tests show that the emissions are at or below 75% of the emission limitation, and if there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions. If less frequent testing is approved the next source test must be completed no more than 48 months after the previous source test. Results of greater than 75% of the emissions limitation will result in reinstating the two year test cycle. Source testing for PM_{2.5} condensable PM is required in the initial testing only, and will be waived in the future if the initial test indicates there are no detectable level of condensable PM.</p> <p>All test plans, notifications and final reports shall be submitted to the Bureau of Air Quality's Source Evaluation Section according to S.C. Regulation 61-62.1 Section IV. A protocol shall be submitted to the Source Test Evaluation Section of this Bureau for approval indicating the proposed initial source test date and test procedure at least 45 days prior to the proposed test date. The Bureau must be notified at least two weeks prior to a source test so that a Bureau Representative may be present, and the final test report must be submitted no later than 30 days after completion of on-site testing.</p> <p>Monitoring/Record Keeping/Reporting/Other: Pressure drop readings for each baghouse shall be recorded daily during source operation.</p> <p>Operational ranges for the monitored parameters shall be established initially as recommended by the control device manufacturer to provide a reasonable assurance of compliance. Future operational ranges for the monitored parameters shall be derived from stack test data, vendor certification, and/or operational history and visual inspections, which demonstrate the proper operation of the equipment in compliance. These ranges, with supporting documentation and quality assurance procedures, shall be submitted to the Bureau for approval within 180 days of start up.</p> <p>The operating ranges may be updated using this procedure, following Bureau approval</p> <p>The following operation and maintenance checks will be made on at least a weekly basis for all baghouses:</p> |

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| | | | <p>a) The baghouse cleaning systems will be checked for proper operation. b) Check dust collection hoppers and conveying systems for proper operation.</p> <p>The results from the operation and maintenance checks shall be maintained in logs (written or electronic), along with any corrective action taken.</p> |
| 5.B.5 | <p>Each Calcining Kiln: 14-21-1410/ 14-09-1421& 14-12-1412, 24-21-1410/ 24-09-1421& 24-12-1412, 34-21-1410/ 34-09-1421& 34-12-1412, 44-21-1410/ 44-09-1421& 44-12-1412</p> | <p>PM/PM₁₀/ PM_{2.5} /PSD BACT</p> | <p>Limits/Standards: The facility is a major source as defined in SC Regulation 61-62.5, Standard No. 7, Prevention of Significant Deterioration (PSD). The potential PM emissions from this project are greater than the significant emission rate as defined in SC Regulation 61-62.5, Standard No. 7(32)(i)(b) and 49(i).</p> <p>For each kiln the BACT control technology is a catalytic baghouse.</p> <p>The BACT emission limit for each calcining kiln is established as: PM = 0.01 gr/dscf (filterable) and 9.01 lb/hr (filterable and condensable) PM₁₀ = 0.01 gr/dscf (filterable) and 9.01 lb/hr (filterable and condensable) PM_{2.5} = 0.006 gr/dscf(filterable) and 7.25 lb/hr (filterable and condensable)</p> <p>The owner/operator shall install, operate, and maintain pressure drop gauge(s) on each module of the baghouse(s). Pressure drop readings shall be recorded daily during source operation. The baghouse(s) shall be in place and operational whenever processes controlled by the baghouse(s) are running, except during periods of baghouse malfunction or mechanical failure.</p> <p>State Only: No</p> <p>Testing: In accordance with SC Regulation 61-62.5, Standard No. 7, an initial source test of the catalytic baghouse for PM, PM₁₀, and PM_{2.5} emissions shall be conducted within 180 days after startup of each process line and every two (2) years thereafter at maximum operating capacity. Particulate matter tests shall include filterable and condensable particulate matter. Less frequent source testing for PM, PM₁₀, and PM_{2.5} may be approved if at least two (2) consecutive stack tests shows that the emissions are at or below 75% of the emission limitation, and if there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions. If less frequent testing is approved the next source test must be completed no more than 48 months after the previous source test. Results of greater than 75% of the emissions limitation will result in reinstating the two year test cycle.</p> <p>All test plans, notifications and final reports shall be submitted to the Bureau of Air Quality's Source Evaluation Section according to S.C. Regulation 61-62.1 Section IV. A protocol shall be submitted to the Source Test Evaluation Section of this Bureau for approval indicating the proposed initial source test date and test procedure at least 45 days prior to the proposed test date. The Bureau must be notified at least two weeks prior to a source test so that a Bureau Representative may be present, and the final test report must</p> |

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| | | | <p>be submitted no later than 30 days after completion of on-site testing.</p> <p>Monitoring/Record Keeping/Reporting/Other: Pressure drop readings for each baghouse shall be recorded daily during source operation.</p> <p>Operational ranges for the monitored parameters shall be established initially as recommended by the control device manufacturer to provide a reasonable assurance of compliance. Future operational ranges for the monitored parameters shall be derived from stack test data, vendor certification, and/or operational history and visual inspections, which demonstrate the proper operation of the equipment in compliance. These ranges, with supporting documentation and quality assurance procedures, shall be submitted to the Bureau for approval within 180 days of start up.</p> <p>The operating ranges may be updated using this procedure, following Bureau approval</p> <p>The following operation and maintenance checks will be made on at least a weekly basis for all baghouses:</p> <p>a) The baghouse cleaning systems will be checked for proper operation. b) Check dust collection hoppers and conveying systems for proper operation.</p> <p>The results from the operation and maintenance checks shall be maintained in logs (written or electronic), along with any corrective action taken.</p> |
| 5.B.6 | <p>Material Handling, All Sources except: 12-27-1100/ 12-12-1141, 22-27-1100/ 22-12-1141, 32-27-1100/ 32-12-1141, 42-27-1100/ 42-12-1141, 14-21-1410/ 14-12-1412, 24-21-1410/ 24-12-1412, 34-21-1410/ 34-12-1412, 44-21-1410/ 44-12-1412</p> | <p>PM/PM₁₀/ PM_{2.5} /PSD BACT</p> | <p>Limits/Standards: The facility is a major source as defined in SC Regulation 61-62.5, Standard No. 7, Prevention of Significant Deterioration (PSD).</p> <p>For each material handling point source the BACT control technology is a baghouse.</p> <p>The BACT emission limit for each material handling source is established as: $PM/PM_{10}/PM_{2.5} = 0.005 \text{ gr/dscf}$</p> <p>State Only: No</p> <p>Testing: In accordance with SC Regulation 61-62.5, Standard No. 7, an initial source test for PM, PM₁₀, and PM_{2.5} emissions shall be conducted within 180 days after startup of each process line for the following control devices: CD-13-12-1215, CD-15-12-1488, CD-16-12-1580 CD-23-12-1215, CD-25-12-1488, CD-26-12-1580 CD-33-12-1215, CD-35-12-1488, CD-36-12-1580 CD-43-12-1215, CD-45-12-1488, CD-46-12-1580</p> <p>All test plans, notifications and final reports shall be submitted to the Bureau of Air Quality's Source Evaluation Section according to S.C. Regulation 61-62.1 Section IV. A protocol shall be submitted to the Source Test Evaluation Section of this Bureau for approval indicating the proposed initial source test date and test procedure at least 45 days prior to the proposed test date. The Bureau must be notified at least two weeks prior to a source test so that a Bureau Representative may be present, and the final test report must be submitted no later than 30 days after completion of on-site testing.</p> |

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| | | | <p>Monitoring/Record Keeping/Reporting/Other: Pressure drop readings for each baghouse shall be recorded daily during source operation.</p> <p>Operational ranges for the monitored parameters shall be established initially as recommended by the control device manufacturer to provide a reasonable assurance of compliance. Future operational ranges for the monitored parameters shall be derived from stack test data, vendor certification, and/or operational history and visual inspections, which demonstrate the proper operation of the equipment in compliance. These ranges, with supporting documentation and quality assurance procedures, shall be submitted to the Bureau for approval within 180 days of start up.</p> <p>The operating ranges may be updated using this procedure, following Bureau approval.</p> <p>The following operation and maintenance checks will be made on at least a weekly basis for all baghouses:</p> <ul style="list-style-type: none"> a) The baghouse cleaning systems will be checked for proper operation. b) Check dust collection hoppers and conveying systems for proper operation. <p>The results from the operation and maintenance checks shall be maintained in logs (written or electronic), along with any corrective action taken.</p> |
| 5.B.7 | Boilers B1 and B2 | PM/Standard 1 | <p>Limits/Standards: In accordance with S.C. Regulation 61-62.5, Standard No. 1 – Emissions from Fuel Burning Operations, Section II- Particulate Matter Emissions the allowable discharge of PM is 0.6 lbs/million Btu heat input.</p> <p>State Only: No</p> <p>Testing: None Required</p> <p>Monitoring/Record Keeping/Reporting/Other: The facility is permitted to combust natural gas and propane as a backup only.</p> |
| 5.B.8 | Boilers B1 and B2 | PM/PM ₁₀ /PM _{2.5} PSD-BACT | <p>Limits/Standards: The facility is a major source as defined in SC Regulation 61-62.5, Standard No. 7, Prevention of Significant Deterioration (PSD).</p> <p>The Best Available Control Technology (BACT for the boilers is the combustion of natural gas and propane and fuels and good combustion technique.</p> <p>These good combustion practices will be developed and maintained in an Operations and Maintenance Manual (O & M Manual) which specifies proper operation and repair of the boilers.</p> <p>As a minimum this O & M Manual shall include:</p> <ul style="list-style-type: none"> (1) The vendor requirements for maintenance and operation and manufacturer updates as applicable to the purchased equipment (i.e. vendor manual with updates). Any deviation from the vendor requirements shall be supported in |

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| | | | <p>detail to not be effective.</p> <p>(2) Facility’s response to source test results, visual observations, or change in any process variables such as change in fuel supply.</p> <p>(3) Methods for minimizing emissions during start-up, shut-down and malfunctions, while continuing to meet BACT limits.</p> <p>The original O & M Plan should be submitted within 180 days of startup.</p> <p>Deficiencies or omissions in the O & M Manual will be corrected within six (6) months of notification from this Bureau. This O & M Manual will be updated as required to reflect changes in operations, equipment, and emissions.</p> <p>The facility must have as a minimum the following as good combustion practices:</p> <ol style="list-style-type: none"> 1) Good air/fuel mixing in the combustion zone; 2) Sufficient residence time to complete combustion; 3) Proper fuel gas supply system design and operation in order to minimize the effect of contaminants and fluctuations in pressure and flow on the fuel gas quality delivered to combustion units; 4) Operator and maintenance practices including good burner maintenance and operation; 5) High temperatures and low oxygen levels in the primary combustion zone; and 6) Overall excess oxygen levels high enough to complete combustion while maximizing thermal efficiency. <p>State Only: No</p> <p>Testing: None Required</p> <p>Monitoring/Record Keeping/Reporting/Other: The permittee must record the type and quantity of fuel consumed on a monthly basis. Records of fuel consumption shall be maintained on site for a period of at least five (5) years from the date generated and shall be made available to a Department representative upon request.</p> |
| 5.B.9 | Engine 1 – 8, EG1 -8 Fire Pump | PM/PM ₁₀ / PM _{2.5} PSD- BACT | <p>Limits/Standards: The facility is a major source as defined in SC Regulation 61-62.5, Standard No. 7, Prevention of Significant Deterioration (PSD).</p> <p>The Best Available Control Technology (BACT for the emergency engines and fire pump has been determined to be compliance with NSPS, subpart IIII, 40 CFR60.4202 and 40 CFR60.4205. This control technology will include combustion of ultra low sulfur diesel (<15 ppm sulfur) for a maximum of 100 hours per year for maintenance and testing.</p> <p>The BACT Emission limits for PM are:</p> <p>Fire Pump = 0.20 g/kW-hr Engine 1 – 8 = 0.30 g/kW-hr (each engine) EG1 – 8 = 0.20 g/kW-hr (each engine)</p> |

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| | | | <p>State Only: No</p> <p>Testing: None Required</p> <p>Monitoring/Record Keeping/Reporting/Other: Diesel fuel sulfur content shall be less than or equal to 0.0015 percent by weight. Acceptable fuel oil certification can be ensured by following Department guidance entitled “Guidance for Fuel Oil Certifications” issued on August 12, 2004 and any subsequent revisions. Diesel fuel supplier certification shall be obtained for each batch of diesel fuel received and stored on site. Reports of the recorded sulfur content shall be maintained on site for a period of five years and submitted semiannually.</p> <p>PyraMax will purchase engines certified by the manufacturer to meet the requirements of NSPS subpart IIII. Facility shall maintain records required to show compliance with NSPS Subpart IIII.</p> |
| 5.B.10 | Each Pelletizer: 12-27-1100/ 12-12-1141, 22-27-1100/ 22-12-1141, 32-27-1100/ 32-12-1141, 42-27-1100/ 42-12-1141 | NO _x /PSD-BACT | <p>Limits/Standards: The facility is a major source as defined in SC Regulation 61-62.5, Standard No. 7, Prevention of Significant Deterioration (PSD).</p> <p>The Best Available Control Technology (BACT) for the Pelletization Process – four (4) Pelletizers (process + fuel combustion) for NO_x is determined to be Good Design and Operating Practices including the use of low NO_x burners.</p> <p>The BACT NO_x emission limit for each pelletizer is established as 2.25 lb/hr, one hour average.</p> <p>These Good Practices will be developed and maintained in an Operations and Maintenance Manual (O & M Manual) which specifies proper operation and repair of the pelletizers.</p> <p>As a minimum this O & M Manual shall include:</p> <ol style="list-style-type: none"> (1) The vendor requirements for maintenance and operation and manufacturer updates as applicable to the purchased equipment (i.e. vendor manual with updates). Any deviation from the vendor requirements shall be supported in detail to not be effective. (2) Facility’s response to source test results, visual observations, or change in any process variables such as throughput, raw materials etc. (3) Methods for minimizing emissions during startup, shut-down and malfunctions, while continuing to meet BACT limits. <p>The original O & M Plan should be submitted within 180 days of startup.</p> <p>Deficiencies or omissions in the O & M Manual will be corrected within six (6) months of notification from this Bureau. This O & M Manual will be updated as required to reflect changes in operations, equipment, and emissions.</p> |

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| | | | <p>The facility must have as a minimum the following as good design and combustion practices:</p> <ol style="list-style-type: none"> 1) Good air/fuel mixing in the combustion zone; 2) Sufficient residence time to complete combustion; 3) Proper fuel gas supply system design and operation in order to minimize the effect of contaminants and fluctuations in pressure and flow on the fuel gas quality delivered to combustion units; 4) Operator and maintenance practices including good burner maintenance and operation; 5) High temperatures and low oxygen levels in the primary combustion zone; and 6) Overall excess oxygen levels high enough to complete combustion while maximizing thermal efficiency. <p>State Only: No</p> <p>Testing: In accordance with SC Regulation 61-62.5, Standard No. 7, an initial source test of the pelletizer for NO_x emissions shall be conducted within 180 days after startup of each process line and every two (2) years thereafter at maximum operating capacity. Less frequent source testing for NO_x may be approved if at least two (2) consecutive stack tests shows that the emissions are at or below 75% of the emission limitation, and if there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions. If less frequent testing is approved the next source test must be completed no more than 48 months after the previous source test. Results of greater than 75% of the emissions limitation will result in reinstating the two year test cycle.</p> <p>All test plans, notifications and final reports shall be submitted to the Bureau of Air Quality's Source Evaluation Section according to S.C. Regulation 61-62.1 Section IV. A protocol shall be submitted to the Source Test Evaluation Section of this Bureau for approval indicating the proposed initial source test date and test procedure at least 45 days prior to the proposed test date. The Bureau must be notified at least two weeks prior to a source test so that a Bureau Representative may be present, and the final test report must be submitted no later than 30 days after completion of on-site testing.</p> <p>Monitoring/Record Keeping/Reporting/Other: Each Pelletizer is permitted to burn only natural gas and propane as fuel. The use of any other substances as fuel is prohibited without prior written approval from the Bureau of Air Quality.</p> |
| 5.B.11 | Each Calcining Kiln: 14-21-1410/ 14-09-1421& 14-12-1412, 24-21-1410/ 24-09-1421& 24-12-1412, 34-21-1410/ 34-09-1421& 34-12-1412, | NO _x /PSD-BACT | <p>Limits/Standards:</p> <p>The facility is a major source as defined in SC Regulation 61-62.5, Standard No. 7, Prevention of Significant Deterioration (PSD).</p> <p>The Best Available Control Technology (BACT) for the Rotary Calcining Kilns – four (4) rotary kilns (process + fuel combustion) for NO_x is determined to be the use of a catalytic baghouse. Low NO_x burners will also be used within the kiln system for minimization of combustion related NO_x emissions.</p> <p>The BACT NO_x emission limit for each calcining kiln is established as 36.30 lb/hr, one hour average.</p> |

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| | 44-21-1410/ 44-09-1421& 44-12-1412 | | <p>State Only: No</p> <p>Testing: In accordance with SC Regulation 61-62.5, Standard No. 7, an initial source test of the Calcining kiln for NO_x emissions shall be conducted within 180 days after startup of each process line and every two (2) years thereafter at maximum operating capacity. Less frequent source testing for NO_x may be approved if at least two (2) consecutive stack tests shows that the emissions are at or below 75% of the emission limitation, and if there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions. If less frequent testing is approved the next source test must be completed no more than 48 months after the previous source test. Results of greater than 75% of the emissions limitation will result in reinstating the two year test cycle.</p> <p>All test plans, notifications and final reports shall be submitted to the Bureau of Air Quality's Source Evaluation Section according to S.C. Regulation 61-62.1 Section IV. A protocol shall be submitted to the Source Test Evaluation Section of this Bureau for approval indicating the proposed initial source test date and test procedure at least 45 days prior to the proposed test date. The Bureau must be notified at least two weeks prior to a source test so that a Bureau Representative may be present, and the final test report must be submitted no later than 30 days after completion of on-site testing.</p> <p>Monitoring/Record Keeping/Reporting/Other: Each kiln is permitted to burn only natural gas and propane as fuel. The use of any other substances as fuel is prohibited without prior written approval from the Bureau of Air Quality.</p> <p>(1) The owner/operator shall record and maintain records of the amounts and types of each fuel combusted by the calcining kilns. The amount and type of fuel combusted shall be recorded monthly. The records of fuel consumption shall be maintained on-site and be available for review by Department personnel.</p> <p>(2) The owner/operator shall establish parametric monitoring of the ammonia injection rates for each catalytic baghouse. The owner/operator shall continuously monitor the injection rate and maintain an injection rate within the established operational range.</p> <p>The ammonia injection rate, operational range shall be established during the initial source test of the Calcining kiln for NO_x.</p> <p>Operational ranges for the monitored parameters shall be established initially as recommended by the control device manufacturer to provide a reasonable assurance of compliance. Future operational ranges for the monitored parameters shall be derived from stack test data, vendor certification, and/or operational history and visual inspections, which demonstrate the proper operation of the equipment in compliance. These ranges, with supporting documentation and quality assurance procedures, shall be submitted to the Bureau for approval within 180 days of start up.</p> <p>The operating ranges may be updated using this procedure, following Bureau approval</p> |

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|------------------|-----------------------------|-----------------------------------|--|
| 5.B.12 | Boilers B1 and B2 | NO _x / PSD- BACT | <p>Limits/Standards: The facility is a major source as defined in SC Regulation 61-62.5, Standard No. 7, Prevention of Significant Deterioration (PSD). The Best Available Control Technology (BACT for the boilers has been determined to be good design/combustion techniques with low NO_x burners and the combustion of natural gas and propane and fuels. These good combustion practices will be developed and maintained in an Operations and Maintenance Manual (O & M Manual) which specifies proper operation and repair of the boilers. As a minimum this O & M Manual shall include: (1) The vendor requirements for maintenance and operation and manufacturer updates as applicable to the purchased equipment (i.e. vendor manual with updates). Any deviation from the vendor requirements shall be supported in detail to not be effective. (2) Facility's response to source test results, visual observations, or change in any process variables such as change in fuel supply. (3) Methods for minimizing emissions during start-up, shut-down and malfunctions, while continuing to meet BACT limits. The original O & M Plan should be submitted within 180 days of startup. Deficiencies or omissions in the O & M Manual will be corrected within six (6) months of notification from this Bureau. This O & M Manual will be updated as required to reflect changes in operations, equipment, and emissions. The facility must have as a minimum the following as good combustion practices: 1) Good air/fuel mixing in the combustion zone; 2) Sufficient residence time to complete combustion; 3) Proper fuel gas supply system design and operation in order to minimize the effect of contaminants and fluctuations in pressure and flow on the fuel gas quality delivered to combustion units; 4) Operator and maintenance practices including good burner maintenance and operation; 5) High temperatures and low oxygen levels in the primary combustion zone; and 6) Overall excess oxygen levels high enough to complete combustion while maximizing thermal efficiency.</p> <p>State Only: No</p> <p>Testing: None Required</p> <p>Monitoring/Record Keeping/Reporting/Other: The permittee must record the type and quantity of fuel consumed on a monthly basis. Records of fuel consumption shall be maintained on site for a period of at least five (5) years from the date generated and shall be made available to a Department representative upon request.</p> |

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|------------------|--------------------------------------|---------------------------------|--|
| | | | |
| 5.B.13 | Engine 1 – 8, EG1 -8 Fire Pump | NO _x PSD- BACT | <p>Limits/Standards: The facility is a major source as defined in SC Regulation 61-62.5, Standard No. 7, Prevention of Significant Deterioration (PSD). The Best Available Control Technology (BACT for the emergency engines and fire pump has been determined to be compliance with NSPS, subpart IIII, 40 CFR60.4202 and 40 CFR60.4205.</p> <p>The BACT Emission limits for NO_x + NMHC are: Fire Pump = 4.0 g/kW-hr Engine 1 – 8 = 7.5 g/kW-hr (each engine) EG1 – 8 = 4.0 g/kW-hr (each engine)</p> <p>Operation of the engines are limited to 100 hours per year for maintenance and testing,</p> <p>State Only: No</p> <p>Testing: None Required</p> <p>Monitoring/Record Keeping/Reporting/Other: Pyramax will purchase engines certified by the manufacturer to meet the requirements of NSPS subpart IIII. Facility shall maintain records required to show compliance with NSPS Subpart IIII.</p> |

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| Condition Number | Equipment/Control Device ID | Regulated Pollutant/Standard | Conditions |
|------------------|---|------------------------------|--|
| 5.B.14 | Each Pelletizer: 12-27-1100/ 12-12-1141, 22-27-1100/ 22-12-1141, 32-27-1100/ 32-12-1141, 42-27-1100/ 42-12-1141 | SO ₂ /PSD-BACT | <p>Limits/Standards: The facility is a major source as defined in SC Regulation 61-62.5, Standard No. 7, Prevention of Significant Deterioration (PSD).</p> <p>The Best Available Control Technology (BACT) for the Pelletization Process – four (4) Pelletizers (process + fuel combustion) for SO₂ is determined to be the use of natural gas or propane as fuel.</p> <p>State Only: No</p> <p>Testing: None Required</p> <p>Monitoring/Record Keeping/Reporting/Other: Each Pelletizer is permitted to burn only natural gas and propane as fuel. The use of any other substances as fuel is prohibited without prior written approval from the Bureau of Air Quality.</p> <p>The owner/operator shall record and maintain records of the amounts and types of each fuel combusted by the pelletizers. The amount and type of fuel combusted shall be recorded monthly. The records of fuel consumption shall be maintained on-site and be available for review by Department personnel.</p> |
| 5.B.15 | Each Calcining Kiln: 14-21-1410/ 14-09-1421& 14-12-1412, 24-21-1410/ 24-09-1421& 24-12-1412, 34-21-1410/ 34-09-1421& 34-12-1412, 44-21-1410/ 44-09-1421& 44-12-1412 | SO ₂ /PSD-BACT | <p>Limits/Standards: The facility is a major source as defined in SC Regulation 61-62.5, Standard No. 7, Prevention of Significant Deterioration (PSD)</p> <p>The Best Available Control Technology (BACT) for the Rotary Calcining Kilns – four (4) rotary kilns (process + fuel combustion) for SO₂ is determined to be the use of a catalytic baghouse. In addition, BACT will require fuel be restricted to natural gas or propane.</p> <p>The BACT SO₂ emission limit for each calcining kiln is established as 11.64 lb/hr of SO₂ emissions (one-hour average).</p> <p>State Only: No</p> <p>Testing: In accordance with SC Regulation 61-62.5, Standard No. 7, an initial source test of the Calcining kiln for SO₂ emissions shall be conducted within 180 days after startup of each process line and every two (2) years thereafter at maximum operating capacity. Less frequent source testing for SO₂ may be approved if at least two (2) consecutive stack tests shows that the emissions are at or below 75% of the emission limitation, and if there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions. If less frequent testing is approved the next source test must be completed no more than 48 months after the previous source test. Results of greater than 75% of the emissions limitation will result in reinstating the two year test cycle.</p> <p>All test plans, notifications and final reports shall be submitted to the Bureau of Air Quality’s Source Evaluation Section according to S.C. Regulation 61-62.1 Section IV. A protocol shall be submitted to the Source Test Evaluation Section of this Bureau for</p> |

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| Condition Number | Equipment/Control Device ID | Regulated Pollutant/Standard | Conditions |
|------------------|-----------------------------|------------------------------|--|
| | | | <p>approval indicating the proposed initial source test date and test procedure at least 45 days prior to the proposed test date. The Bureau must be notified at least two weeks prior to a source test so that a Bureau Representative may be present, and the final test report must be submitted no later than 30 days after completion of on-site testing.</p> <p>Monitoring/Record Keeping/Reporting/Other: When tests results are submitted, compliance will be demonstrated by meeting all three limits established above.</p> <p>Each kiln is permitted to burn only natural gas and propane as fuel. The use of any other substances as fuel is prohibited without prior written approval from the Bureau of Air Quality.</p> <p>(1) The owner/operator shall record and maintain records of the amounts and types of each fuel combusted by the calcining kilns. The amount and type of fuel combusted shall be recorded monthly. The records of fuel consumption shall be maintained on-site and be available for review by Department personnel.</p> <p>(2) The owner/operator shall sample and maintain records for sulfur content (% by weight) on a weekly basis for the clay received at the facility. Semiannual reports shall be submitted.</p> <p>(3) The owner/operator shall establish parametric monitoring of the sorbent injection rates for each catalytic baghouse. The owner/operator shall continuously monitor the injection rate and maintain an injection rate within the established operational range.</p> <p>The sorbent injection rate, operational range shall be established during the initial source test of the Calcining kiln for SO₂.</p> <p>Operational ranges for the monitored parameters shall be established initially as recommended by the control device manufacturer to provide a reasonable assurance of compliance. Future operational ranges for the monitored parameters shall be derived from stack test data, vendor certification, and/or operational history and visual inspections, which demonstrate the proper operation of the equipment in compliance. These ranges, with supporting documentation and quality assurance procedures, shall be submitted to the Bureau for approval within 180 days of start up.</p> <p>The operating ranges may be updated using this procedure, following Bureau approval</p> <p>(4) The owner/operator shall demonstrate compliance with the sulfur limit on a 1-hour rolling average for SO₂ emissions. Semiannual reports shall be submitted.</p> |
| 5.B.16 | Boilers B1 and B2 | SO ₂ /Standard 1 | <p>Limits/Standards: In accordance with S.C. Regulation 61-62.5, Standard No. 1 – Emissions from Fuel Burning Operations, Section III- Sulfur Dioxide Emissions, the allowable discharge of SO₂ is 3.5 lbs/million Btu heat input.</p> <p>State Only: No</p> |

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|---|--|-------------------------------------|---|
| Condition Number | Equipment/Control Device ID | Regulated Pollutant/Standard | Conditions |
| | | | <p>Testing: None Required</p> <p>Monitoring/Record Keeping/Reporting/Other: The facility is permitted to combust natural gas and propane as a backup only.</p> |
| 5.B.17 | Boilers B1 and B2 | SO ₂ PSD- BACT | <p>Limits/Standards: The facility is a major source as defined in SC Regulation 61-62.5, Standard No. 7, Prevention of Significant Deterioration (PSD). The Best Available Control Technology (BACT for the boilers is the combustion of natural gas and propane and fuels.</p> <p>State Only: No</p> <p>Testing: None Required</p> <p>Monitoring/Record Keeping/Reporting/Other: The permittee must record the type and quantity of fuel consumed on a monthly basis. Records of fuel consumption shall be maintained on site for a period of at least five (5) years from the date generated and shall be made available to a Department representative upon request.</p> |
| 5.B.18 | Engine 1 – 8, EG1 -8 Fire Pump | SO ₂ PSD- BACT | <p>Limits/Standards: The facility is a major source as defined in SC Regulation 61-62.5, Standard No. 7, Prevention of Significant Deterioration (PSD). The Best Available Control Technology (BACT for the emergency engines and fire pump is the combustion ultra low sulfur diesel (<15 ppm sulfur) for a maximum of 100 hours per year for maintenance and testing.</p> <p>State Only: No</p> <p>Testing: None Required</p> <p>Monitoring/Record Keeping/Reporting/Other: Diesel fuel sulfur content shall be less than or equal to 0.0015 percent by weight. Acceptable fuel oil certification can be ensured by following Department guidance entitled “Guidance for Fuel Oil Certifications” issued on August 12, 2004 and any subsequent revisions. Diesel fuel supplier certification shall be obtained for each batch of diesel fuel received and stored on site. Reports of the recorded sulfur content shall be maintained on site for a period of five years and submitted semiannually.</p> |
| 5.B.19 | Each Pelletizer: 12-27-1100/ 12-12-1141, 22-27-1100/ 22-12-1141, 32-27-1100/ 32-12-1141, | CO/PSD- BACT | <p>Limits/Standards: The facility is a major source as defined in SC Regulation 61-62.5, Standard No. 7, Prevention of Significant Deterioration (PSD). The potential CO emissions from this project are greater than the significant emission rate as defined in SC Regulation 61-62.5, Standard No. 7(32)(i)(b) and 49(i).</p> <p>The Best Available Control Technology (BACT) for the Pelletization Process – four (4)</p> |

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|------------------|-----------------------------|------------------------------|--|
| | 42-27-1100/ 42-12-1141 | | <p>pelletizers (fuel combustion) for CO is determined to be Good Design Combustion Practices.</p> <p>The BACT CO emission limit for each pelletizer is 13.73 lb/hr (1 hour average).</p> <p>These good combustion practices will be developed and maintained in an Operations and Maintenance Manual (O & M Manual) which specifies proper operation and repair of the pelletizers.</p> <p>As a minimum this O & M Manual shall include:</p> <ol style="list-style-type: none"> 1) The vendor requirements for maintenance and operation and manufacturer updates as applicable to the purchased equipment (i.e. vendor manual with updates). Any deviation from the vendor requirements shall be supported in detail to not be effective. 2) Facility's response to source test results, visual observations, or change in any process variables such as throughput, raw materials etc. 3) Methods for minimizing emissions during start-up, shut-down and malfunctions, while continuing to meet BACT limits. <p>The original O & M Plan should be submitted within 180 days of startup.</p> <p>Deficiencies or omissions in the O & M Manual will be corrected within six (6) months of notification from this Bureau. This O & M Manual will be updated as required to reflect changes in operations, equipment, and emissions.</p> <p>The facility must have as a minimum the following as good design and combustion practices:</p> <ol style="list-style-type: none"> 1) Good air/fuel mixing in the combustion zone; 2) Sufficient residence time to complete combustion; 3) Proper fuel gas supply system design and operation in order to minimize the effect of contaminants and fluctuations in pressure and flow on the fuel gas quality delivered to combustion units; 4) Operator and maintenance practices including good burner maintenance and operation; 5) High temperatures and low oxygen levels in the primary combustion zone; and 6) Overall excess oxygen levels high enough to complete combustion while maximizing thermal efficiency. <p>State Only: No</p> <p>Testing: In accordance with SC Regulation 61-62.5, Standard No. 7, an initial source test for CO emissions shall be conducted within 180 days after startup and every two (2) years thereafter. Less frequent source testing for CO may be approved if at least two (2) consecutive stack tests shows that the emissions are at or below 75% of the emission limitation, and if there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions. If less frequent testing is approved the next source test must be completed no more than 48 months after the</p> |

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|------------------|--|------------------------------|--|
| | | | <p>previous source test. Results of greater than 75% of the emissions limitation will result in reinstating the two year test cycle.</p> <p>All test plans, notifications and final reports shall be submitted to the Bureau of Air Quality's Source Evaluation Section according to S.C. Regulation 61-62.1 Section IV. A protocol shall be submitted to the Source Test Evaluation Section of this Bureau for approval indicating the proposed initial source test date and test procedure at least 45 days prior to the proposed test date. The Bureau must be notified at least two weeks prior to a source test so that a Bureau Representative may be present, and the final test report must be submitted no later than 30 days after completion of on-site testing.</p> <p>For future operations, a change out/replacement of BACT equipment or a significant modification of BACT equipment requires a source test with the above requirements.</p> <p>Monitoring/Record Keeping/Reporting/Other: Each Pelletizer is permitted to burn only natural gas and propane as fuel. The use of any other substances as fuel is prohibited without prior written approval from the Bureau of Air Quality.</p> <p>The owner/operator shall record and maintain records of the amounts and types of each fuel combusted by the calcining kilns. The amount and type of fuel combusted shall be recorded monthly. The records of fuel consumption shall be maintained on-site and be available for review by Department personnel.</p> |
| 5.B.20 | <p>Each Calcining Kiln: 14-21-1410/ 14-09-1421& 14-12-1412, 24-21-1410/ 24-09-1421& 24-12-1412, 34-21-1410/ 34-09-1421& 34-12-1412, 44-21-1410/ 44-09-1421& 44-12-1412</p> | CO/PSD-BACT | <p>Limits/Standards: The facility is a major source as defined in SC Regulation 61-62.5, Standard No. 7, Prevention of Significant Deterioration (PSD). The potential CO emissions from this project are greater than the significant emission rate as defined in SC Regulation 61-62.5, Standard No. 7(32)(i)(b) and 49(i).</p> <p>The Best Available Control Technology (BACT) for the Calcining/Sintering Process – four (4) kilns (fuel combustion) for CO is determined to be Good Design and Combustion Practices.</p> <p>The BACT CO emission limit for each calcining kiln is established as 33.55 lb/hr CO emissions (1 hour average).</p> <p>These good combustion practices will be developed and maintained in an Operations and Maintenance Manual (O & M Manual) which specifies proper operation and repair of the kilns.</p> <p>As a minimum this O & M Manual shall include:</p> <ol style="list-style-type: none"> 1) The vendor requirements for maintenance and operation and manufacturer updates as applicable to the purchased equipment (i.e. vendor manual with updates). Any deviation from the vendor requirements shall be supported in detail to not be effective. 2) Facility's response to source test results, visual observations, or change in any process variables such as throughput, raw materials etc. 3) Methods for minimizing emissions during start-up, shut-down and |

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| Condition Number | Equipment/Control Device ID | Regulated Pollutant/Standard | Conditions |
|------------------|-----------------------------|------------------------------|---|
| | | | <p>malfunctions, while continuing to meet BACT limits.</p> <p>The original O & M Plan should be submitted within 180 days of startup.</p> <p>Deficiencies or omissions in the O & M Manual will be corrected within six (6) months of notification from this Bureau. This O & M Manual will be updated as required to reflect changes in operations, equipment, and emissions.</p> <p>The facility must have as a minimum the following as good combustion practices:</p> <ol style="list-style-type: none"> 1) Good air/fuel mixing in the combustion zone; 2) Sufficient residence time to complete combustion; 3) Proper fuel gas supply system design and operation in order to minimize the effect of contaminants and fluctuations in pressure and flow on the fuel gas quality delivered to combustion units; 4) Operator and maintenance practices including good burner maintenance and operation; 5) High temperatures and low oxygen levels in the primary combustion zone; and 6) Overall excess oxygen levels high enough to complete combustion while maximizing thermal efficiency. <p>State Only: No</p> <p>Testing: In accordance with SC Regulation 61-62.5, Standard No. 7, an initial source test of the Calcining kiln for CO emissions shall be conducted within 180 days after startup of each process line and every two (2) years thereafter at maximum operating capacity. Less frequent source testing for CO may be approved if at least two (2) consecutive stack tests shows that the emissions are at or below 75% of the emission limitation, and if there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions. If less frequent testing is approved the next source test must be completed no more than 48 months after the previous source test. Results of greater than 75% of the emissions limitation will result in reinstating the two year test cycle.</p> <p>All test plans, notifications and final reports shall be submitted to the Bureau of Air Quality's Source Evaluation Section according to S.C. Regulation 61-62.1 Section IV. A protocol shall be submitted to the Source Test Evaluation Section of this Bureau for approval indicating the proposed initial source test date and test procedure at least 45 days prior to the proposed test date. The Bureau must be notified at least two weeks prior to a source test so that a Bureau Representative may be present, and the final test report must be submitted no later than 30 days after completion of on-site testing.</p> <p>For future operations, a change out/replacement of BACT equipment or a significant modification of BACT equipment requires a source test with the above requirements.</p> <p>Monitoring/Record Keeping/Reporting/Other: Each Kiln is permitted to burn only natural gas and propane as fuel. The use of any other substances as fuel is prohibited without prior written approval from the Bureau of Air Quality.</p> <p>(1) The owner/operator shall record and maintain records of the amounts and types of</p> |

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|------------------|-----------------------------|------------------------------|--|
| | | | <p>each fuel combusted by the calcining kilns. The amount and type of fuel combusted shall be recorded monthly. The records of fuel consumption shall be maintained on-site and be available for review by Department personnel.</p> <p>(2) The owner/operator shall sample and maintain records for carbon content (% by weight) on a weekly basis for the clay received at the facility. Semiannual reports shall be submitted.</p> |
| 5.B.21 | Boilers B1 and B2 | CO/PSD-BACT | <p>Limits/Standards: The facility is a major source as defined in SC Regulation 61-62.5, Standard No. 7, Prevention of Significant Deterioration (PSD). The Best Available Control Technology (BACT for the boilers has been determined to be the combustion of natural gas and propane and fuels and good combustion technique. These good combustion practices will be developed and maintained in an Operations and Maintenance Manual (O & M Manual) which specifies proper operation and repair of the boilers. As a minimum this O & M Manual shall include: 1) The vendor requirements for maintenance and operation and manufacturer updates as applicable to the purchased equipment (i.e. vendor manual with updates). Any deviation from the vendor requirements shall be supported in detail to not be effective. 2) Facility's response to source test results, visual observations, or change in any process variables such as change in fuel supply. 3) Methods for minimizing emissions during start-up, shut-down and malfunctions, while continuing to meet BACT limits.</p> <p>The original O & M Plan should be submitted within 180 days of startup.</p> <p>Deficiencies or omissions in the O & M Manual will be corrected within six (6) months of notification from this Bureau. This O & M Manual will be updated as required to reflect changes in operations, equipment, and emissions.</p> <p>The facility must have as a minimum the following as good combustion practices: 1) Good air/fuel mixing in the combustion zone; 2) Sufficient residence time to complete combustion; 3) Proper fuel gas supply system design and operation in order to minimize the effect of contaminants and fluctuations in pressure and flow on the fuel gas quality delivered to combustion units; 4) Operator and maintenance practices including good burner maintenance and operation; 5) High temperatures and low oxygen levels in the primary combustion zone; and 6) Overall excess oxygen levels high enough to complete combustion while maximizing thermal efficiency.</p> <p>State Only: No</p> |

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|---|---|-------------------------------------|---|
| Condition Number | Equipment/Control Device ID | Regulated Pollutant/Standard | Conditions |
| | | | <p>Testing: None Required</p> <p>Monitoring/Record Keeping/Reporting/Other: The permittee must record the type and quantity of fuel consumed on a monthly basis. Records of fuel consumption shall be maintained on site for a period of at least five (5) years from the date generated and shall be made available to a Department representative upon request.</p> |
| 5.B.22 | Engine 1 – 8, EG1 -8 Fire Pump | CO/PSD- BACT | <p>Limits/Standards: The facility is a major source as defined in SC Regulation 61-62.5, Standard No. 7, Prevention of Significant Deterioration (PSD). The Best Available Control Technology (BACT for the emergency engines and fire pump has been determined to be compliance with NSPS, subpart IIII, 40 CFR60.4202 and 40 CFR60.4205. Hours of operation are limited to 100 hours for maintenance and testing purposes. The BACT Emission limits are: Fire Pump CO = 3.5 g/kW-hr Engine 1 – 8 CO = 5.5 g/kW-hr (each engine) EG1 – 8 CO = 3.5 g/kW-hr (each engine)</p> <p>State Only: No</p> <p>Testing: None Required</p> <p>Monitoring/Record Keeping/Reporting/Other: Pyramax will purchase engines certified by the manufacturer to meet the requirements of NSPS subpart IIII. Facility shall maintain records required to show compliance with NSPS Subpart IIII.</p> |
| 5.B.23 | Each Pelletizer: 12-27-1100/ 12-12-1141, 22-27-1100/ 22-12-1141, 32-27-1100/ 32-12-1141, 42-27-1100/ 42-12-1141 | VOC/PSD -BACT | <p>Limits/Standards: The facility is a major source as defined in SC Regulation 61-62.5, Standard No. 7, Prevention of Significant Deterioration (PSD). The potential VOC emissions from this project are greater than the significant emission rate as defined in SC Regulation 61-62.5, Standard No. 7(32)(i)(b) and 49(i). The Best Available Control Technology (BACT) for the Pelletization Process – four (4) Pelletizers (process + fuel combustion) for VOC is determined to be Good Design and Combustion Practices The BACT VOC emission limit for each pelletizer is established as 11.78 lb/hr VOC emissions. These Good combustion practices will be developed and maintained in an Operations and Maintenance Manual (O & M Manual) which specifies proper operation and repair of the pelletizers.</p> |

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| | | | <p>As a minimum this O & M Manual shall include:</p> <ol style="list-style-type: none"> (1) The vendor requirements for maintenance and operation and manufacturer updates as applicable to the purchased equipment (i.e. vendor manual with updates). Any deviation from the vendor requirements shall be supported in detail to not be effective. (2) Facility's response to source test results, visual observations, or change in any process variables such as throughput, raw materials etc. (3) Methods for minimizing emissions during start-up, shut-down and malfunctions., while meeting BACT emission limits. <p>The original O & M Plan should be submitted within 180 days of startup.</p> <p>Deficiencies or omissions in the O & M Manual will be corrected within six (6) months of notification from this Bureau. This O & M Manual will be updated as required to reflect changes in operations, equipment, and emissions. Operation and emissions limitations consistent with the O & M Manual represent Good Combustion Practices for the purposes of this provision.</p> <p>PyraMax must have the following as good combustion practices:</p> <ol style="list-style-type: none"> 1) Good air/fuel mixing in the combustion zone; 2) Sufficient residence time to complete combustion; 3) Proper fuel gas supply system design and operation in order to minimize the effect of contaminants and fluctuations in pressure and flow on the fuel gas quality delivered to combustion units; 4) Operator and maintenance practices including good burner maintenance and operation; 5) High temperatures and low oxygen levels in the primary combustion zone; and 6) Overall excess oxygen levels high enough to complete combustion while maximizing thermal efficiency. <p>State Only: No</p> <p>Testing: A source test for VOC shall be conducted while the Pelletizer is operating under maximum operating capacity within 180 days from the start-up of operation, for each process line, using good combustion practices. Source tests conducted under any other conditions may result in testing limitations. All test plans, notifications and final reports shall be submitted to the Bureau of Air Quality's Source Evaluation Section according to S.C. Regulation 61-62.1 Section IV. A protocol shall be submitted to the Source Test Evaluation Section of this Bureau for approval indicating the proposed initial source test date and test procedure at least 45 days prior to the proposed test date. The Bureau must be notified at least two weeks prior to a source test so that a Bureau Representative may be present, and the final test report must be submitted no later than 30 days after completion of on-site testing.</p> <p>Monitoring/Record Keeping/Reporting/Other: Each Pelletizer is permitted to burn only natural gas and propane as fuel. The use of any other substances as fuel is prohibited without prior written approval from the Bureau of Air Quality.</p> |

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|------------------|--|-------------------------------------|---|
| | | | <p>The owner/operator shall maintain records of all volatile organic compounds (VOC). These records shall include the total amount of each material used, the VOC content in percent by weight of each material and any other records necessary to determine VOC emissions. VOC emissions from each Pelletizer shall be calculated on a monthly basis, and a twelve-month rolling sum shall be calculated for total VOC emissions. The twelve-month rolling sum shall be less than 51.59 tpy for VOC. Reports of the calculated values and the twelve-month rolling sum shall be submitted semiannually.</p> <p>An algorithm, including example calculations and emission factors, explaining the method used to determine emission rates shall be included in the initial report. Subsequent submittals of the algorithm and example calculations are unnecessary, unless the method of calculation is found to be unacceptable by the Bureau or if the facility changes the method of calculating emissions and/or changes emission factors.</p> |
| 5.B.24 | <p>Each Calcining Kiln: 14-21-1410/ 14-09-1421& 14-12-1412, 24-21-1410/ 24-09-1421& 24-12-1412, 34-21-1410/ 34-09-1421& 34-12-1412, 44-21-1410/ 44-09-1421& 44-12-1412</p> | <p>VOC/PSD -BACT</p> | <p>Limits/Standards: The facility is a major source as defined in SC Regulation 61-62.5, Standard No. 7, Prevention of Significant Deterioration (PSD). The potential VOC emissions from this project are greater than the significant emission rate as defined in SC Regulation 61-62.5, Standard No. 7(32)(i)(b) and 49(i).</p> <p>The Best Available Control Technology (BACT) for the Calcining Kilns Process – four (4) kilns (fuel combustion) for VOC is determined to be Good Design and Combustion Practices</p> <p>The BACT VOC emission limit for each calcining kiln is established as 0.62 lb/hr (1 hr average) VOC emissions.</p> <p>These Good Combustion Practices will be developed and maintained in an Operations and Maintenance Manual (O & M Manual) which specifies proper operation and repair of the kilns.</p> <p>As a minimum this O & M Manual shall include:</p> <ol style="list-style-type: none"> 1) The vendor requirements for maintenance and operation and manufacturer updates as applicable to the purchased equipment (i.e. vendor manual with updates). Any deviation from the vendor requirements shall be supported in detail to not be effective. 2) Facility’s response to source test results, visual observations, or change in any process variables such as throughput, raw materials etc. 3) Methods for minimizing emissions during start-up, shut-down and malfunctions, while meeting BACT emission limits. <p>The original O & M Plan should be submitted within 180 days of startup.</p> <p>Deficiencies or omissions in the O & M Manual will be corrected within six (6) months of notification from this Bureau. This O & M Manual will be updated as required to reflect changes in operations, equipment, and emissions. Operation and emissions limitations consistent with the O & M Manual represent Good Combustion Practices for the purposes</p> |

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| Condition Number | Equipment/Control Device ID | Regulated Pollutant/Standard | Conditions |
|------------------|-----------------------------|------------------------------|--|
| | | | <p>of this provision.</p> <p>PyraMax must have the following as good combustion practices:</p> <ol style="list-style-type: none"> 1) Good air/fuel mixing in the combustion zone; 2) Sufficient residence time to complete combustion; 3) Proper fuel gas supply system design and operation in order to minimize the effect of contaminants and fluctuations in pressure and flow on the fuel gas quality delivered to combustion units; 4) Operator and maintenance practices including good burner maintenance and operation; 5) High temperatures and low oxygen levels in the primary combustion zone; and 6) Overall excess oxygen levels high enough to complete combustion while maximizing thermal efficiency. <p>State Only: No</p> <p>Testing: None Required</p> <p>Monitoring/Record Keeping/Reporting/Other: Each Kiln is permitted to burn only natural gas and propane as fuel. The use of any other substances as fuel is prohibited without prior written approval from the Bureau of Air Quality.</p> <p>The owner/operator shall record and maintain records of the amounts and types of each fuel combusted by the calcining kilns. The amount and type of fuel combusted shall be recorded monthly. The records of fuel consumption shall be maintained on-site and be available for review by Department personnel.</p> |
| 5.B.25 | Boilers B1 and B2 | VOC/PSD - BACT | <p>Limits/Standards:</p> <p>The facility is a major source as defined in SC Regulation 61-62.5, Standard No. 7, Prevention of Significant Deterioration (PSD).</p> <p>The Best Available Control Technology (BACT for the boilers has been determined to be the combustion of natural gas and propane and fuels and good combustion technique.</p> <p>These good combustion practices will be developed and maintained in an Operations and Maintenance Manual (O & M Manual) which specifies proper operation and repair of the boilers.</p> <p>As a minimum this O & M Manual shall include:</p> <ol style="list-style-type: none"> 1) The vendor requirements for maintenance and operation and manufacturer updates as applicable to the purchased equipment (i.e. vendor manual with updates). Any deviation from the vendor requirements shall be supported in detail to not be effective. 2) Facility's response to source test results, visual observations, or change in any process variables such as change in fuel supply. 3) Methods for minimizing emissions during start-up, shut-down and malfunctions, while continuing to meet BACT limits. |

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PART 5.B.3 - CONDITIONS FOR CONSTRUCTION PERMIT 0160-0023-CA

| Condition Number | Equipment/Control Device ID | Regulated Pollutant/Standard | Conditions |
|------------------|--------------------------------------|------------------------------|--|
| | | | <p>The original O & M Plan should be submitted within 180 days of startup.</p> <p>Deficiencies or omissions in the O & M Manual will be corrected within six (6) months of notification from this Bureau. This O & M Manual will be updated as required to reflect changes in operations, equipment, and emissions.</p> <p>The facility must have as a minimum the following as good combustion practices:</p> <ol style="list-style-type: none"> 1) Good air/fuel mixing in the combustion zone; 2) Sufficient residence time to complete combustion; 3) Proper fuel gas supply system design and operation in order to minimize the effect of contaminants and fluctuations in pressure and flow on the fuel gas quality delivered to combustion units; 4) Operator and maintenance practices including good burner maintenance and operation; 5) High temperatures and low oxygen levels in the primary combustion zone; and 6) Overall excess oxygen levels high enough to complete combustion while maximizing thermal efficiency. <p>State Only: No</p> <p>Testing: None Required</p> <p>Monitoring/Record Keeping/Reporting/Other: The permittee must record the type and quantity of fuel consumed on a monthly basis. Records of fuel consumption shall be maintained on site for a period of at least five (5) years from the date generated and shall be made available to a Department representative upon request.</p> |
| 5.B.26 | Engine 1 – 8, EG1 -8 Fire Pump | VOC/PSD - BACT | <p>Limits/Standards: The facility is a major source as defined in SC Regulation 61-62.5, Standard No. 7, Prevention of Significant Deterioration (PSD).</p> <p>The Best Available Control Technology (BACT for the emergency engines and fire pump has been determined to be compliance with NSPS, subpart IIII, 40 CFR60.4202 and 40 CFR60.4205. Hours of operation are limited to 100 hours for maintenance and testing purposes.</p> <p>The BACT Emission limits are: Fire Pump NMHC + NO_x = 4.0 g/kW-hr Engine 1 – 8 NMHC + NO_x = 7.5 g/kW-hr (each engine) EG1 – 8 NMHC + NO_x = 4.0 g/kW-hr (each engine)</p> <p>State Only: No</p> <p>Testing: None Required</p> <p>Monitoring/Record Keeping/Reporting/Other:</p> |

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PART 5.B.3 - CONDITIONS FOR CONSTRUCTION PERMIT 0160-0023-CA

| Condition Number | Equipment/Control Device ID | Regulated Pollutant/Standard | Conditions |
|------------------|--|---|---|
| | | | <p>PyraMax will purchase engines certified by the manufacturer to meet the requirements of NSPS subpart III. Facility shall maintain records required to show compliance with NSPS Subpart III.</p> |
| 5.B.27 | <p>Each Pelletizer: 12-27-1100/ 12-12-1141, 22-27-1100/ 22-12-1141, 32-27-1100/ 32-12-1141, 42-27-1100/ 42-12-1141</p> | <p>CO₂e /PSD- BACT</p> | <p>Limits/Standards: The facility is a major source as defined in SC Regulation 61-62.5, Standard No. 7, Prevention of Significant Deterioration (PSD).</p> <p>The Best Available Control Technology (BACT) for the pelletizers for CO₂e is determined to be Energy Efficient design and operation, waste heat recovery design (heat recovery generator installed at the outlet of the kilns to preheat combustion gas for the pelletizers) and use of natural gas/propane.</p> <p>The BACT CO₂e emission limit for each pelletizer is established 44,446 tpy CO₂e on a 12-month rolling sum.</p> <p>These energy efficient design and operation practices will be developed and maintained in an Operations and Maintenance Manual (O & M Manual) which specifies proper operation and maintenance of the pelletizers.</p> <p>As a minimum this O & M Manual shall include:</p> <ol style="list-style-type: none"> 1) The vendor requirements for installation, maintenance and operation and manufacturer updates as applicable to the purchased equipment (i.e. vendor manual with updates). Any deviation from the vendor requirements shall be supported in detail to not be effective. 2) Facility's response to source test results, visual observations, or change in any process variables such as throughput, raw materials etc. 3) Methods for minimizing emissions during start-up, shut-down and malfunctions, while continuing to meet BACT limits. <p>The original O & M Plan should be submitted within 180 days of startup.</p> <p>Deficiencies or omissions in the O & M Manual will be corrected within six (6) months of notification from this Bureau. This O & M Manual will be updated as required to reflect changes in operations, equipment, and emissions.</p> <p>State Only: No</p> <p>Testing: In accordance with SC Regulation 61-62.5, Standard No. 7, an initial source test for CO₂ emissions shall be conducted within 180 days after startup for each process line to demonstrate compliance, verify emission estimates and establish the emission factor for the 12-month rolling sum. The CO₂ emissions established by the source testing will be added to the other calculated pollutants to establish the total emissions for CO₂e. An additional source test must be conducted every two years. Less frequent source testing for CO₂ may be approved if at least two (2) consecutive stack tests shows that the emissions are at or below 75% of the emission limitation on a rolling 12-month basis, and if there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions. If less frequent testing is approved the next source test must be completed no more than 48 months after the previous source test. Results of greater than 75% of the emissions limitation will result in reinstating the two year test cycle.</p> |

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PART 5.B.3 - CONDITIONS FOR CONSTRUCTION PERMIT 0160-0023-CA

| Condition Number | Equipment/Control Device ID | Regulated Pollutant/Standard | Conditions |
|------------------|--|------------------------------|---|
| | | | <p>All test plans, notifications and final reports shall be submitted to the Bureau of Air Quality's Source Evaluation Section according to S.C. Regulation 61-62.1 Section IV. A protocol shall be submitted to the Source Test Evaluation Section of this Bureau for approval indicating the proposed initial source test date and test procedure at least 45 days prior to the proposed test date. The Bureau must be notified at least two weeks prior to a source test so that a Bureau Representative may be present, and the final test report must be submitted no later than 30 days after completion of on-site testing.</p> <p>Monitoring/Record Keeping/Reporting/Other: Each pelletizer is permitted to burn only natural gas and propane as fuel. The use of any other substances as fuel is prohibited without prior written approval from the Bureau of Air Quality.</p> <p>(1) The owner/operator shall record and maintain records of the amounts and types of each fuel combusted by the pelletizer. The amount and type of fuel combusted shall be recorded monthly. The records of fuel consumption shall be maintained on-site and be available for review by Department personnel.</p> <p>(2) The owner/operator shall record and maintain records of the material processed in each pelletizer on a monthly basis. These records shall be maintained on-site and be available for review by Department personnel. The owner/operator shall demonstrate compliance with the CO₂e emission limit on a 12 month rolling sum.</p> |
| 5.B.28 | <p>Each Calcining Kiln: 14-21-1410/ 14-09-1421& 14-12-1412, 24-21-1410/ 24-09-1421& 24-12-1412, 34-21-1410/ 34-09-1421& 34-12-1412, 44-21-1410/ 44-09-1421& 44-12-1412</p> | CO ₂ e /PSD-BACT | <p>Limits/Standards: The facility is a major source as defined in SC Regulation 61-62.5, Standard No. 7, Prevention of Significant Deterioration (PSD).</p> <p>The Best Available Control Technology (BACT) for the boilers for CO₂e is determined to be energy efficient design and operation, waste heat recovery design (air from the cooler routed through the kiln; heat recovery generator installed at the outlet of the kiln to preheat combustion gas for the pelletizers) and use of natural gas/propane.</p> <p>The BACT CO₂e emission limit for each calcining kiln is established as 0.218 lb/ton of material processed based on a 12-month rolling sum.</p> <p>These energy efficient design and operation practices will be developed and maintained in an Operations and Maintenance Manual (O & M Manual) which specifies proper operation and maintenance of the kilns.</p> <p>As a minimum this O & M Manual shall include:</p> <ol style="list-style-type: none"> 1) The vendor requirements for installation, maintenance and operation and manufacturer updates as applicable to the purchased equipment (i.e. vendor manual with updates). Any deviation from the vendor requirements shall be supported in detail to not be effective. 2) Facility's response to source test results, visual observations, or change in any process variables such as throughput, raw materials etc. 3) Methods for minimizing emissions during start-up, shut-down and malfunctions, while continuing to meet BACT limits. |

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PART 5.B.3 - CONDITIONS FOR CONSTRUCTION PERMIT 0160-0023-CA

| Condition Number | Equipment/Control Device ID | Regulated Pollutant/Standard | Conditions |
|------------------|-----------------------------|------------------------------|--|
| | | | <p>The original O & M Plan should be submitted within 180 days of startup.</p> <p>Deficiencies or omissions in the O & M Manual will be corrected within six (6) months of notification from this Bureau. This O & M Manual will be updated as required to reflect changes in operations, equipment, and emissions.</p> <p>State Only: No</p> <p>Testing: In accordance with SC Regulation 61-62.5, Standard No. 7, an initial source test for CO₂ emissions shall be conducted within 180 days after startup of each process line to demonstrate compliance, verify emission estimates and establish the emission factor for the 12-month rolling sum. The CO₂ emissions established by the source testing will be added to the other calculated pollutants to establish the total emissions for CO₂e. An additional source test must be conducted every two years. Less frequent source testing for CO₂ may be approved if at least two (2) consecutive stack tests shows that the emissions are at or below 75% of the emission limitation on a rolling 12-month basis, and if there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions. If less frequent testing is approved the next source test must be completed no more than 48 months after the previous source test. Results of greater than 75% of the emissions limitation will result in reinstating the two year test cycle.</p> <p>All test plans, notifications and final reports shall be submitted to the Bureau of Air Quality's Source Evaluation Section according to S.C. Regulation 61-62.1 Section IV. A protocol shall be submitted to the Source Test Evaluation Section of this Bureau for approval indicating the proposed initial source test date and test procedure at least 45 days prior to the proposed test date. The Bureau must be notified at least two weeks prior to a source test so that a Bureau Representative may be present, and the final test report must be submitted no later than 30 days after completion of on-site testing.</p> <p>Monitoring/Record Keeping/Reporting/Other: Each kiln is permitted to burn only natural gas and propane as fuel. The use of any other substances as fuel is prohibited without prior written approval from the Bureau of Air Quality.</p> <p>(1) The owner/operator shall record and maintain records of the amounts and types of each fuel combusted by the calcining kilns. The amount and type of fuel combusted shall be recorded monthly. The records of fuel consumption shall be maintained on-site and be available for review by Department personnel.</p> <p>(2) The owner/operator shall sample and maintain records for carbon content (% by weight) on a weekly basis for the clay received at the facility. Semiannual reports shall be submitted.</p> <p>(3) The owner/operator shall record and maintain records of the material processed and product produced, including sorbent usage, fuel throughput and carbon content of the raw material, in each kiln on a monthly basis. These records shall be maintained on-site and be available for review by Department personnel. The owner/operator shall demonstrate compliance with the CO₂e emission limit on a 12 month rolling average.</p> |

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PART 5.B.3 - CONDITIONS FOR CONSTRUCTION PERMIT 0160-0023-CA

| Condition Number | Equipment/Control Device ID | Regulated Pollutant/Standard | Conditions |
|------------------|-----------------------------|------------------------------|--|
| 5.B.29 | Boilers-B1 & B2 | CO ₂ e /PSD-BACT | <p>Limits/Standards: The facility is a major source as defined in SC Regulation 61-62.5, Standard No. 7, Prevention of Significant Deterioration (PSD).</p> <p>The Best Available Control Technology (BACT) for the boilers for CO₂e is determined to be Good Design Combustion Practices.</p> <p>These good combustion practices will be developed and maintained in an Operations and Maintenance Manual (O & M Manual) which specifies proper operation and repair of the boilers.</p> <p>As a minimum this O & M Manual shall include:</p> <ol style="list-style-type: none"> 1) The vendor requirements for maintenance and operation and manufacturer updates as applicable to the purchased equipment (i.e. vendor manual with updates). Any deviation from the vendor requirements shall be supported in detail to not be effective. 2) Facility's response to source test results, visual observations, or change in any process variables such as throughput, raw materials etc. 3) Methods for minimizing emissions during start-up, shut-down and malfunctions, while continuing to meet BACT limits. <p>The original O & M Plan should be submitted within 180 days of startup.</p> <p>Deficiencies or omissions in the O & M Manual will be corrected within six (6) months of notification from this Bureau. This O & M Manual will be updated as required to reflect changes in operations, equipment, and emissions.</p> <p>The facility must have as a minimum the following as good design and combustion practices:</p> <ol style="list-style-type: none"> 1) Good air/fuel mixing in the combustion zone; 2) Sufficient residence time to complete combustion; 3) Proper fuel gas supply system design and operation in order to minimize the effect of contaminants and fluctuations in pressure and flow on the fuel gas quality delivered to combustion units; 4) Operator and maintenance practices including good burner maintenance and operation; 5) High temperatures and low oxygen levels in the primary combustion zone; and 6) Overall excess oxygen levels high enough to complete combustion while maximizing thermal efficiency. <p>State Only: No</p> <p>Testing: None Required</p> <p>Monitoring/Record Keeping/Reporting/Other: Each boiler is permitted to burn only natural gas and propane as fuel. The use of any other substances as fuel is prohibited without prior written approval from the Bureau of Air Quality.</p> |

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PART 5.B.3 - CONDITIONS FOR CONSTRUCTION PERMIT 0160-0023-CA

| Condition Number | Equipment/Control Device ID | Regulated Pollutant/Standard | Conditions |
|------------------|--|------------------------------|---|
| | | | <p>The owner/operator shall record and maintain records of the amounts and types of each fuel combusted by the boilers. The amount and type of fuel combusted shall be recorded monthly. The records of fuel consumption shall be maintained on-site and be available for review by Department personnel.</p> |
| 5.B.30 | <p>Each Pelletizer: 12-27-1100/ 12-12-1141, 22-27-1100/ 22-12-1141, 32-27-1100/ 32-12-1141, 42-27-1100/ 42-12-1141 Each Calcining Kiln: 14-21-1410/ 14-12-1412, 24-21-1410/ 24-12-1412, 34-21-1410/ 34-12-1412, 44-21-1410/ 44-12-1412</p> | NSPS/ subpart UUU | <p>40 CFR 60, subpart UUU, Standards Of Performance For Calciners And Dryers In Mineral Industries, will apply to this facility.</p> <p>The permittee shall comply with all applicable parts of Subparts A and UUU, to include but not limited to:</p> <p>40 CFR §60.730 Applicability And Designation Of Affected Facility. (a) The affected facility to which the provisions of this subpart apply is each calciner and dryer at a mineral processing plant. Feed and product conveyors are not considered part of the affected facility. For the brick and related clay products industry, only the calcining and drying of raw materials prior to firing of the brick are covered.</p> <p>40 CFR §60.732 Standards For Particulate Matter. Each owner or operator of any affected facility that is subject to the requirements of this subpart shall comply with the emission limitations set forth in this section on and after the date on which the initial performance test required by §60.8 is completed, but not later than 180 days after the initial startup, whichever date comes first. No emissions shall be discharged into the atmosphere from any affected facility that:</p> <p>(a) Contains particulate matter in excess of 0.092 gram per dry standard cubic meter (g/dscm) [0.040 grain per dry standard cubic foot (gr/dscf)] for calciners and for calciners and dryers installed in series and in excess of 0.057 g/dscm (0.025 gr/dscf) for dryers; and</p> <p>(b) Exhibits greater than 10 percent opacity, unless the emissions are discharged from an affected facility using a wet scrubbing control device.</p> <p>40 CFR §60.734 Monitoring Of Emissions And Operations. (a) With the exception of the process units described in, paragraphs (b), (c), and (d) of this section the owner or operator of an affected facility subject to the provisions of this subpart who uses a dry control device to comply with the mass emission standard shall install, calibrate, maintain, and operate a continuous monitoring system to measure and record the opacity of emissions discharged into the atmosphere from the control device.</p> <p>(b) In lieu of a continuous capacity monitoring system, the owner or operator of a ball clay vibrating grate dryer, a bentonite rotary dryer, a diatomite flash dryer, a diatomite rotary calciner, a feldspar rotary dryer, a fire clay rotary dryer, an industrial sand fluid bed dryer, a kaolin rotary calciner, a perlite rotary dryer, a roofing granules fluid bed dryer, a roofing granules rotary dryer, a talc rotary calciner, a titanium dioxide spray dryer, a titanium dioxide fluid bed dryer, a vermiculite fluid bed dryer, or a vermiculite rotary dryer who uses a dry control device may have a certified visible emissions observer measure and record three 6-minute averages of the opacity of visible emissions to the atmosphere each day of operation in accordance with Method 9 of appendix A of part 60.</p> |

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PART 5.B.3 - CONDITIONS FOR CONSTRUCTION PERMIT 0160-0023-CA

| Condition Number | Equipment/Control Device ID | Regulated Pollutant/Standard | Conditions |
|------------------|--------------------------------------|------------------------------|--|
| | | | <p>The owner/operator shall maintain on file all measurements including continuous monitoring system or monitoring device performance measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required in a permanent form suitable for inspection by Department personnel.</p> <p>40 CFR §60.735 Recordkeeping And Reporting Requirements.</p> <p>(a) Records of the measurements required in §60.734 of this subpart shall be retained for at least 2 years.</p> <p>(c) Each owner or operator shall submit written reports semiannually of exceedances of control device operating parameters required to be monitored by §60.734 of this subpart. For the purpose of these reports, exceedances are defined as follows:</p> <p>(c)(1) All 6-minute periods during which the average opacity from, dry control, devices is greater than 10 percent;</p> <p>40 CFR §60.736 Test Methods And Procedures.</p> <p>(a) In conducting the performance tests required in §60.8, the owner or operator shall use the test methods in Appendix A of this part or other, methods and procedures as specified in this section except as provided in §60.8(b).</p> <p>(b) The owner or operator shall determine compliance with the particulate matter standards in §60.732 as follows:</p> <p>(b)(1) Method 5 shall be used to determine the particulate matter concentration. The sampling time and volume for each test run shall be at least 2 hours and 1.70 dscm.</p> <p>(b)(2) Method 9 and the procedures in §60.11 shall be used to determine opacity from stack emissions.</p> |
| 5.B.31 | Engine 1 – 8, EG1 -8 Fire Pump | NSPS/ subpart III | <p>Limits/Standards: These engines are subject to New Source Performance Standards (NSPS) 40 CFR 60 Subparts A (General Provisions) and IIII (Stationary Compression Ignition Internal Combustion Engines).</p> <p>State Only: No</p> <p>Testing: None Required</p> <p>Monitoring/Record Keeping/Reporting/Other: PyraMax will purchase engines certified by the manufacturer to meet the requirements of NSPS subpart IIII. Facility shall maintain records required to show compliance with NSPS Subpart IIII</p> |

PART 5.C. - CONDITIONS FOR FACILITY WIDE - LIMITATIONS, MONITORING AND REPORTING

| Condition Number | Regulated Pollutant/ Standard | Conditions |
|------------------|---|---|
| 5.C.1 | Fugitive Emissions PM/PM ₁₀ /PM _{2.5} PSD- BACT | <p>Limits/Standards: The facility is a major source as defined in SC Regulation 61-62.5, Standard No. 7, Prevention of Significant Deterioration (PSD). The Best Available Control Technology (BACT for the Fugitive emissions will be Good Operating Practices.</p> <p>As a minimum the Good Operating Practices will consist of:</p> <ul style="list-style-type: none"> • Minimizing the distance that haul trucks travel on the property overall and limiting the travel to paved roads. The trucks will back into the crude shed (a least partially enclosed on three sides and covered) to dump the clay. The procedures are designed to minimize the potential for clay to be spilled outside of the shed. • Minimizing the drop distance that the material must fall from mobile equipment discharge, conveyor belts, chutes, etc. • Each truck will pass through a tire washing station before leaving the facility to minimize clay and dust carryover. • The street sweeper will be utilized at least weekly and more frequently as conditions require. • The crude pad, where the material is transferred via front end loader from the shed to the feeder, will be evaluated once per shift to determine whether the water hoses need to be used to clean the area. PyraMax is committed to minimizing overall water use at the facility, so during times where no water use is needed (e.g., during days with rain or no dusty conditions), PyraMax will limit the use of additional water. • PyraMax will maintain a boundary layer of vegetation/wetlands to minimize the amount of dust that is transported off-property. <p>State Only: No</p> <p>Testing: None Required</p> <p>Monitoring/Record Keeping/Reporting/Other: Compliance will be demonstrated by the maintenance of an operator’s log, indicating dates of inspections and demonstrating satisfactory application of the operating procedure.</p> <p>These records shall be maintained on-site and be available for review by Department personnel.</p> |

PART 6 - ADDITIONAL CONDITIONS

PART 6.A - OPERATIONAL FLEXIBILITY

| Condition Number | Conditions |
|------------------|------------|
| N/A | N/A |

N/A = Not Applicable

PART 6.B – OTHER

| Condition Number | Conditions |
|------------------|------------|
| N/A | N/A |

N/A = Not Applicable

PART 7 – NESHAP REQUIREMENTS

PART 7.A - NESHAP PERIODIC REPORTING SCHEDULE SUMMARY

| NESHAP Part | NESHAP Subpart | Compliance Monitoring Report Submittal Frequency | Reporting Period | Report Due Date |
|-------------|----------------|--|--|---|
| 63 | ZZZZ | Initial Only (for EG 1 – 8) N/A (for Fire Pump and Engine 1 – 8) | One Time (for EG 1 – 8) N/A (for Fire Pump and Engine 1 – 8) | Upon Start-up (for EG 1 – 8) N/A (for Fire Pump and Engine 1 – 8) |
| 63 | DDDDD | To be Determined (TBD) | TBD | TBD |

Note:

1. This table summarizes only the periodic compliance reporting schedule. Additional reports may be required. See specific NESHAP Subpart for additional reporting requirements and associated schedule.
2. This reporting schedule does not supersede any other reporting requirements including but not limited to 40 CFR Part 60, 40 CFR Part 61, and/or 40 CFR Part 63.

PART 7.B - NESHAP - GENERAL REQUIREMENTS

| Condition Number | Condition |
|------------------|---|
| 7.B.1 | All NESHAP notifications and reports shall be sent to the South Carolina Department of Health and Environmental Control - Bureau of Air Quality (SCDHEC - BAQ) at the following address: SCDHEC - BAQ Air Toxics Section 2600 Bull Street Columbia, SC 29201 |
| 7.B.2 | All NESHAP notifications and the cover letter to periodic reports shall be sent to the United States Environmental Protection Agency (US EPA) at the following address: US EPA, Region 4 Air, Pesticides and Toxics Management Division 61 Forsyth Street Atlanta, GA 30303 |

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| Condition Number | Equipment/ Control Device ID | Regulated Pollutant/ Standard | Conditions |
|------------------|------------------------------|--|---|
| 7.C.1 | Rotary/ Calcining Kilns | 40 CFR 63, subpart A, General Provisions | This facility is subject to the provisions of S.C. Regulation 61-62.63 and 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants, and shall comply with all applicable requirements contained in 40 CFR Part 63, Subpart A. |
| 7.C.2 | Rotary/ Calcining Kilns | HF/HCl / MACT-112(g) | <p>Limits/Standards: The 112(g) Case-by-Case MACT analysis for the Rotary/Calcining Kilns for HF & HCl is determined to be a Catalytic Baghouse achieving 0.044 lb/ton of kiln feed on a 3 hour average or 4.52 tpy on a 12 month rolling average for HF and 0.029 lb/ton of kiln feed on a 3 hour average or 2.94 tpy on a 12 month rolling average for HCl (per kiln).</p> <p>State Only: No</p> <p>Testing: A source test to measure HF & HCl emissions shall be conducted while the Rotary/Calcining Kilns are operating under maximum capacity within 180 days of start up of each process line. Source tests conducted under any other conditions may result in testing limitations.</p> <p>All test plans, notifications and final reports shall be submitted to the Bureau of Air Quality's Source Evaluation Section according to S.C. Regulation 61-62.1 Section IV. A protocol shall be submitted to the Source Test Evaluation Section of this Bureau for approval indicating the proposed initial source test date and test procedure at least 45 days prior to the proposed test date. The Bureau must be notified at least two weeks prior to a source test so that a Bureau Representative may be present, and the final test report must be submitted no later than 30 days after completion of on-site testing.</p> <p>After the initial testing has been conducted, the owner/operator must conduct a performance test before renewing the 40 CFR part 70 operating permit or at least every 5 years following the initial performance test.</p> <p>Monitoring/Record Keeping/Reporting/Other: The owner/operator shall establish parametric monitoring of the sorbent injection rates for each catalytic baghouse. The owner/operator shall continuously monitor the injection rate and maintain an injection rate within the established operational range.</p> <p>Operational ranges for the monitored parameters shall be established initially as recommended by the control device manufacturer to provide a reasonable assurance of compliance. Future operational ranges for the monitored parameters shall be derived from stack test data, vendor certification, and/or operational history and visual inspections, which demonstrate the proper operation of the equipment in compliance. These ranges, with supporting documentation and quality assurance procedures, shall be submitted to the Bureau for approval within 180 days of start up.</p> <p>The operating ranges may be updated using this procedure, following Bureau approval.</p> <p>The owner/operator shall install, continue to operate and maintain pressure drop gauge(s) on the baghouse. Pressure drop readings shall be recorded each shift during source operation. Operation and maintenance checks will be made on at least a weekly basis for the baghouse cleaning systems and dust collection hoppers and conveying systems for proper operation. The baghouse shall be in place and operational whenever processes controlled by the baghouse are running, except during periods of baghouse malfunction or</p> |

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PART 7.B - NESHAP - GENERAL REQUIREMENTS

| Condition Number | Condition | | |
|------------------|--------------|-------------------------|--|
| | | | mechanical failure. |
| 7.C.3 | Pelletizers | Methanol/ PSD-112(g) | <p>Limits/Standards: The 112(g) Case-by-Case MACT analysis for the Pelletizers for methanol is determined to be Pollution Prevention achieving 0.23 lb/ton of kiln feed on a 3 hour average or 24 tpy on a 12 month rolling average per pelletizer.</p> <p>State Only: No</p> <p>Testing: A source test for methanol shall be conducted while the Pelletizers are operating at maximum capacity within 180 days from the pollution prevention. Source tests conducted under any other conditions may result in testing limitations. All test plans, notifications and final reports shall be submitted to the Bureau of Air Quality's Source Evaluation Section according to S.C. Regulation 61-62.1 Section IV. A protocol shall be submitted to the Source Test Evaluation Section of this Bureau for approval indicating the proposed initial source test date and test procedure at least 45 days prior to the proposed test date. The Bureau must be notified at least two weeks prior to a source test so that a Bureau Representative may be present, and the final test report must be submitted no later than 30 days after completion of on-site testing.</p> <p>After the initial testing has been conducted, the owner/operator must conduct a performance test before renewing the 40 CFR part 70 operating permit or at least every 5 years following the initial performance test.</p> <p>Monitoring/Record Keeping/Reporting/Other: The owner/operator will record HAP emissions from the Pelletizers to ensure continuous compliance with the applicable emissions limitations set forth in this permit. The facility shall record the type of additive, HAP content of the additive, and quantity of the additive used, at a minimum. The owner/operator will calculate single and total HAP emissions for each additive on a monthly basis and a twelve-month rolling sum shall be calculated for total HAP emissions. Reports of the calculated values and the twelve-month rolling sum shall be submitted to the Department semiannually.</p> <p>An algorithm, including example calculations and emission factors, explaining the method used to determine emission rates shall be included in the initial report. Subsequent submittals of the algorithm and example calculations are unnecessary, unless the method of calculation is found to be unacceptable by the Department or if the facility changes the method of calculating emissions and/or changes emission factors.</p> |
| 7.C.4 | Boilers | Subpart DDDDD | <p>Limits/Standards: This facility is subject to the provisions of 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants, Subparts A and Subpart DDDDD--National Emission Standards For Hazardous Air Pollutants For Industrial, Commercial, And Institutional Boilers And Process Heaters.</p> <p>Existing affected sources shall comply with the applicable provisions by the compliance date specified in Subpart DDDDD. Any new affected sources shall comply with the requirements of these Subparts upon initial start-up unless otherwise noted.</p> |
| 7.C.5 | EG1 thru EG8 | Subpart ZZZZ | The eight emergency generators have been defined as emergency generators, in accordance with 40 CFR 63 Subpart ZZZZ and South Carolina Regulation 61-62.63, |

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PART 7.B - NESHAP - GENERAL REQUIREMENTS

| Condition Number | Condition | | |
|------------------|-----------------------------------|--------------|---|
| | | | Subpart ZZZZ. Therefore, they do not have to meet the requirements of the subpart or of Subpart A of 40 CFR 63 or Subpart A of South Carolina Regulation 61-62.63, except for the initial notification requirements of 40 CFR 63.6645(d). |
| 7.C.6 | Fire Pump, Engine 1 thru Engine 8 | Subpart ZZZZ | The Fire Pump engine and Engines 1 thru 8 have been defined as affected source, in accordance with 40 CFR 63 Subpart ZZZZ. In accordance with 40 CFR 63.6590(c), an affected source that is an emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP must meet the requirements of this part by meeting the requirements of 40 CFR 60 Subpart IIII, for compression ignition engines or 40 CFR 60 Subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part. |

N/A = Not applicable

PART 8 - REPORTING REQUIREMENTS

PART 8.A - PERIODIC REPORTING SCHEDULE

| Compliance Monitoring Report Submittal Frequency | Reporting Period (Begins on the startup date of the source.) | Report Due Date |
|--|---|---|
| Quarterly | January-March April-June July-September October-December | April 30 July 30 October 30 January 30 |
| Semiannual | January-June April-September July-December October-March | July 30 October 30 January 30 April 30 |
| Annual | January-December April-March July-June October-September | January 30 April 30 July 30 October 30 |

Note: This reporting schedule does not supersede any federal reporting requirements including but not limited to 40 CFR Part 60, 40 CFR Part 61, and 40 CFR Part 63. All federal reports must meet the reporting time frames specified in the federal standard unless the Department or EPA approves a change.

PART 8.B - REPORTING CONDITIONS

| Condition Number | Condition |
|------------------|--|
| 8.B.1 | Reporting required in this permit, shall be submitted in a timely manner as directed in Part 8.A of this permit. |
| 8.B.2 | Unless elsewhere specified within this permit, all reports required under this permit shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality, at the address listed below. SCDHEC - BAQ Technical Management Section 2600 Bull Street Columbia, SC 29201 |

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Modeled Emission Rates

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The emission rates listed herein are not considered enforceable limitations but are used to evaluate ambient air quality impact. Until the Department makes a determination that a facility is causing or contributing to an exceedance of a state or federal ambient air quality standard, increases to these emission rates are not in themselves considered violations of these ambient air quality standards (see conditions 3.2 and 3.3).

| STANDARD NO. 2 - MODELED AAQS EMISSION RATES (LBS/HR) | | | | | | | |
|--|------------------------|-------------------------|-----------------------|-----------------------------------|-----------|-------------|-----------|
| STACK ID | PM₁₀ | PM_{2.5} | SO₂ | NO_x^a | CO | Lead | HF |
| Line 1 Weigh Bin Vent Filter | 0.002 | 0.001 | -- | -- | -- | -- | -- |
| Line 1 Loading Operations Baghouse | 0.690 | 0.363 | -- | -- | -- | -- | -- |
| Line 1 Silo #1 Bin Vent Filter | 0.010 | 0.005 | -- | -- | -- | -- | -- |
| Line 1 Silo #2 Bin Vent Filter | 0.010 | 0.005 | -- | -- | -- | -- | -- |
| Line 1 Silo #3 Bin Vent Filter | 0.010 | 0.005 | -- | -- | -- | -- | -- |
| Line 1 Silo #4 Bin Vent Filter | 0.010 | 0.005 | -- | -- | -- | -- | -- |
| Line 1 Silo #5 Bin Vent Filter | 0.010 | 0.005 | -- | -- | -- | -- | -- |
| Line 1 Final Product Screening and QC Baghouse | 0.371 | 0.195 | -- | -- | -- | -- | -- |
| Line 1 Kiln Baghouse | 8.531 | 6.982 | 11.600 | 36.25 | 56.100 | -- | 1.03176 |
| Line 1 Green Pellet Screening Baghouse | 0.321 | 0.169 | -- | -- | -- | -- | -- |
| Line 1 Kiln Recycle Feed Bin Vent Filter | 0.010 | 0.005 | -- | -- | -- | -- | -- |
| Line 1 Dry Milling Baghouse | 0.001 | 0.000 | -- | -- | -- | -- | -- |
| Line 1 Pelletizer Baghouse | 7.699 | 4.257 | 0.045 | 2.25 | 13.725 | -- | -- |
| Line 1 Feed Bin Vent Filter | 0.002 | 0.001 | -- | -- | -- | -- | -- |
| Line 1 Baghouse Kiln Dust Recycle to Feed Bin | 0.032 | 0.017 | -- | -- | -- | -- | -- |
| Line 1 Boiler | 0.038 | 0.038 | 0.003 | 0.710 | 0.055 | -- | -- |
| Line 1 Sodium Bicarbonate Silo Bin Vent Filter | 0.021 | 0.011 | -- | -- | -- | -- | -- |
| Line 1 Fly Ash Silo Bin Vent Filter | 0.086 | 0.045 | -- | -- | -- | -- | -- |
| Line 1 Additive Silo Bin Vent Lines 1 and 2 | 0.021 | 0.011 | -- | -- | -- | -- | -- |
| Line 2 Weigh Bin Vent Filter | 0.002 | 0.001 | -- | -- | -- | -- | -- |
| Line 2 Loading Operations Baghouse | 0.690 | 0.363 | -- | -- | -- | -- | -- |
| Line 2 Silo #1 Bin Vent Filter | 0.010 | 0.005 | -- | -- | -- | -- | -- |

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Modeled Emission Rates

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| STANDARD NO. 2 - MODELED AAQS EMISSION RATES (LBS/HR) | | | | | | | |
|--|-------|-------|-------|-------|------|----|---------|
| Line 2 Silo #2 Bin Vent Filter | 0.010 | 0.005 | -- | -- | -- | -- | -- |
| Line 2 Silo #3 Bin Vent Filter | 0.010 | 0.005 | -- | -- | -- | -- | -- |
| Line 2 Silo #4 Bin Vent Filter | 0.010 | 0.005 | -- | -- | -- | -- | -- |
| Line 2 Silo #5 Bin Vent Filter | 0.010 | 0.005 | -- | -- | -- | -- | -- |
| Line 2 Final Product Screening and QC Baghouse | 0.371 | 0.195 | -- | -- | -- | -- | -- |
| Line 2 Kiln Baghouse | 8.531 | 6.982 | 11.6 | 36.25 | 56.1 | -- | -- |
| Line 2 Green Pellet Screening Baghouse | 0.321 | 0.169 | -- | -- | -- | -- | -- |
| Line 2 Kiln Recycle Feed Bin Vent Filter | 0.010 | 0.005 | -- | -- | -- | -- | 1.03176 |
| Line 2 Dry Milling Baghouse | 0.001 | 0.000 | -- | -- | -- | -- | -- |
| Line 2 Pelletizer Baghouse | 7.699 | 4.257 | 0.045 | 2.25 | 13.7 | -- | -- |
| Line 2 Feed Bin Vent Filter | 0.002 | 0.001 | -- | -- | -- | -- | -- |
| Line 2 Baghouse Kiln Dust Recycle to Feed Bin | 0.032 | 0.017 | -- | -- | -- | -- | -- |
| Line 2 Sodium Bicarbonate Silo Bin Vent Filter | 0.021 | 0.011 | -- | -- | -- | -- | -- |
| Line 2 Fly Ash Silo Bin Vent Filter | 0.086 | 0.045 | -- | -- | -- | -- | -- |
| Line 3 Weigh Bin Vent Filter | 0.002 | 0.001 | -- | -- | -- | -- | -- |
| Line 3 Loading Operations Baghouse | 0.690 | 0.001 | -- | -- | -- | -- | -- |
| Line 3 Silo #1 Bin Vent Filter | 0.010 | 0.005 | -- | -- | -- | -- | -- |
| Line 3 Silo #2 Bin Vent Filter | 0.010 | 0.005 | -- | -- | -- | -- | -- |
| Line 3 Silo #3 Bin Vent Filter | 0.010 | 0.005 | -- | -- | -- | -- | -- |
| Line 3 Silo #4 Bin Vent Filter | 0.010 | 0.005 | -- | -- | -- | -- | -- |
| Line 3 Silo #5 Bin Vent Filter | 0.010 | 0.005 | -- | -- | -- | -- | -- |
| Line 3 Final Product Screening and QC Baghouse | 0.371 | 0.195 | -- | -- | -- | -- | -- |
| Line 3 Kiln Baghouse | 8.531 | 6.982 | 11.6 | 36.25 | 56.1 | -- | 1.03176 |
| Line 3 Green Pellet Screening Baghouse | 0.321 | 0.169 | -- | -- | -- | -- | -- |
| Line 3 Kiln Recycle Feed Bin Vent Filter | 0.010 | 0.005 | -- | -- | -- | -- | -- |
| Line 3 Dry Milling Baghouse | 0.001 | 0.000 | -- | -- | -- | -- | -- |

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Modeled Emission Rates

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| STANDARD NO. 2 - MODELED AAQS EMISSION RATES (LBS/HR) | | | | | | | |
|--|-------|-------|-------|-------|-------|----|---------|
| Line 3 Pelletizer Baghouse | 7.699 | 4.257 | 0.045 | 2.25 | 13.7 | -- | -- |
| Line 3 Feed Bin Vent Filter | 0.002 | 0.001 | -- | -- | -- | -- | -- |
| Line 3 Baghouse Kiln Dust Recycle to Feed Bin | 0.032 | 0.017 | -- | -- | -- | -- | -- |
| Boiler | 0.038 | 0.038 | 0.003 | 0.712 | 0.055 | -- | -- |
| Line 3 Sodium Bicarbonate Silo Bin Vent Filter | 0.021 | 0.011 | -- | -- | -- | -- | -- |
| Line 3 Fly Ash Silo Bin Vent Filter | 0.086 | 0.045 | -- | -- | -- | -- | -- |
| Line 4 Weigh Bin Vent Filter | 0.002 | 0.001 | -- | -- | -- | -- | -- |
| Line 4 Loading Operations Baghouse | 0.690 | 0.363 | -- | -- | -- | -- | -- |
| Line 4 Silo #1 Bin Vent Filter | 0.010 | 0.005 | -- | -- | -- | -- | -- |
| Line 4 Silo #2 Bin Vent Filter | 0.010 | 0.005 | -- | -- | -- | -- | -- |
| Line 4 Silo #3 Bin Vent Filter | 0.010 | 0.005 | -- | -- | -- | -- | -- |
| Line 4 Silo #4 Bin Vent Filter | 0.010 | 0.005 | -- | -- | -- | -- | -- |
| Line 4 Silo #5 Bin Vent Filter | 0.010 | 0.005 | -- | -- | -- | -- | -- |
| Line 4 Final Product Screening and QC Baghouse | 0.371 | 0.195 | -- | -- | -- | -- | -- |
| Line 4 Kiln Baghouse | 8.531 | 6.982 | 11.6 | 36.25 | 56.1 | -- | 1.03176 |
| Line 4 Green Pellet Screening Baghouse | 0.321 | 0.169 | -- | -- | -- | -- | -- |
| Line 4 Kiln Recycle Feed Bin Vent Filter | 0.010 | 0.005 | -- | -- | -- | -- | -- |
| Line 4 Dry Milling Baghouse | 0.001 | 0.000 | -- | -- | -- | -- | -- |
| Line 4 Pelletizer Baghouse | 7.699 | 4.257 | 0.045 | 2.25 | 13.7 | -- | -- |
| Line 4 Feed Bin Vent Filter | 0.002 | 0.001 | | | | -- | -- |
| Line 4 Baghouse Kiln Dust Recycle to Feed Bin | 0.032 | 0.017 | -- | -- | -- | -- | -- |
| Line 4 Sodium Bicarbonate Silo Bin Vent Filter | 0.021 | 0.011 | -- | -- | -- | -- | -- |
| Line 4 Fly Ash Silo Bin Vent Filter | 0.086 | 0.045 | -- | -- | -- | -- | -- |
| Line 4 Additive Silo Bin Vent Lines 3 and 4 | 0.021 | 0.011 | -- | -- | -- | -- | -- |
| ADD1 | 0.021 | 0.001 | | | | | |
| ADD2 | 0.021 | 0.001 | | | | | |

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Modeled Emission Rates

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| STANDARD NO. 2 - MODELED AAQS EMISSION RATES (LBS/HR) | | | | | | | |
|--|--------|--------|--------|---------|--------|----|---------|
| FACILITY TOTAL | 71.424 | 48.022 | 46.586 | 155.423 | 279.34 | -- | 4.12704 |
| a. Rates shown are the full NOx rates, but the modeling was based on the application of the ARM (0.8). | | | | | | | |

| STANDARD NO. 7 - MODELED PSD CLASS II INCREMENT EMISSION RATES (LBS/HR) | | | |
|--|-------------------------------|-----------------|------------------------------|
| STACK ID | Minor Source Baseline Date(s) | | |
| | 12/27/2007 | 12/27/2007 | 12/27/2007 |
| | PM ₁₀ | SO ₂ | NO _x ^a |
| Line 1 Weigh Bin Vent Filter | 0.002 | -- | -- |
| Line 1 Loading Operations Baghouse | 0.690 | -- | -- |
| Line 1 Silo #1 Bin Vent Filter | 0.010 | -- | -- |
| Line 1 Silo #2 Bin Vent Filter | 0.010 | -- | -- |
| Line 1 Silo #3 Bin Vent Filter | 0.010 | -- | -- |
| Line 1 Silo #4 Bin Vent Filter | 0.010 | -- | -- |
| Line 1 Silo #5 Bin Vent Filter | 0.010 | -- | -- |
| Line 1 Final Product Screening and QC Baghouse | 0.371 | -- | -- |
| Line 1 Kiln Baghouse | 8.531 | 11.600 | 36.250 |
| Line 1 Green Pellet Screening Baghouse | 0.321 | -- | -- |
| Line 1 Kiln Recycle Feed Bin Vent Filter | 0.010 | -- | -- |
| Line 1 Dry Milling Baghouse | 0.001 | -- | -- |
| Line 1 Pelletizer Baghouse | 7.699 | 0.045 | 2.250 |
| Line 1 Feed Bin Vent Filter | 0.002 | -- | -- |
| Line 1 Baghouse Kiln Dust Recycle to Feed Bin | 0.032 | -- | -- |
| Line 1 Boiler | 0.038 | 0.003 | 0.710 |
| Line 1 Sodium Bicarbonate Silo Bin Vent Filter | 0.021 | -- | -- |
| Line 1 Fly Ash Silo Bin Vent Filter | 0.086 | -- | -- |
| Line 1 Additive Silo Bin Vent Lines 1 and 2 | 0.021 | -- | -- |
| Line 2 Weigh Bin Vent Filter | 0.002 | -- | -- |
| Line 2 Loading Operations Baghouse | 0.690 | -- | -- |
| Line 2 Silo #1 Bin Vent Filter | 0.010 | -- | -- |
| Line 2 Silo #2 Bin Vent Filter | 0.010 | -- | -- |

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Modeled Emission Rates

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| STANDARD NO. 7 - MODELED PSD CLASS II INCREMENT EMISSION RATES (LBS/HR) | | | |
|--|--------------------------------------|-----------------------|-----------------------------------|
| STACK ID | Minor Source Baseline Date(s) | | |
| | 12/27/2007 | 12/27/2007 | 12/27/2007 |
| | PM₁₀ | SO₂ | NO_x^a |
| Line 2 Silo #3 Bin Vent Filter | 0.010 | -- | -- |
| Line 2 Silo #4 Bin Vent Filter | 0.010 | -- | -- |
| Line 2 Silo #5 Bin Vent Filter | 0.010 | -- | -- |
| Line 2 Final Product Screening and QC Baghouse | 0.371 | -- | -- |
| Line 2 Kiln Baghouse | 8.531 | 11.6 | 36.250 |
| Line 2 Green Pellet Screening Baghouse | 0.321 | -- | -- |
| Line 2 Kiln Recycle Feed Bin Vent Filter | 0.010 | -- | -- |
| Line 2 Dry Milling Baghouse | 0.001 | -- | -- |
| Line 2 Pelletizer Baghouse | 7.699 | 0.045 | 2.25 |
| Line 2 Feed Bin Vent Filter | 0.002 | -- | -- |
| Line 2 Baghouse Kiln Dust Recycle to Feed Bin | 0.032 | -- | -- |
| Line 2 Sodium Bicarbonate Silo Bin Vent Filter | 0.021 | -- | -- |
| Line 2 Fly Ash Silo Bin Vent Filter | 0.086 | -- | -- |
| Line 3 Weigh Bin Vent Filter | 0.002 | -- | -- |
| Line 3 Loading Operations Baghouse | 0.690 | -- | -- |
| Line 3 Silo #1 Bin Vent Filter | 0.010 | -- | -- |
| Line 3 Silo #2 Bin Vent Filter | 0.010 | -- | -- |
| Line 3 Silo #3 Bin Vent Filter | 0.010 | -- | -- |
| Line 3 Silo #4 Bin Vent Filter | 0.010 | -- | -- |
| Line 3 Silo #5 Bin Vent Filter | 0.010 | -- | -- |
| Line 3 Final Product Screening and QC Baghouse | 0.371 | -- | -- |
| Line 3 Kiln Baghouse | 8.531 | 11.6 | 36.25 |
| Line 3 Green Pellet Screening Baghouse | 0.321 | -- | -- |
| Line 3 Kiln Recycle Feed Bin Vent Filter | 0.010 | -- | -- |
| Line 3 Dry Milling Baghouse | 0.001 | -- | -- |
| Line 3 Pelletizer Baghouse | 7.699 | 0.045 | 2.25 |
| Line 3 Feed Bin Vent Filter | 0.002 | -- | -- |

ATTACHMENT A

Modeled Emission Rates

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| STANDARD NO. 7 - MODELED PSD CLASS II INCREMENT EMISSION RATES (LBS/HR) | | | |
|--|--------------------------------------|-----------------------|-----------------------------------|
| STACK ID | Minor Source Baseline Date(s) | | |
| | 12/27/2007 | 12/27/2007 | 12/27/2007 |
| | PM₁₀ | SO₂ | NO_x^a |
| Line 3 Baghouse Kiln Dust Recycle to Feed Bin | 0.032 | -- | -- |
| Boiler | 0.038 | 0.003 | 0.712 |
| Line 3 Sodium Bicarbonate Silo Bin Vent Filter | 0.021 | -- | -- |
| Line 3 Fly Ash Silo Bin Vent Filter | 0.086 | -- | -- |
| Line 4 Weigh Bin Vent Filter | 0.002 | -- | -- |
| Line 4 Loading Operations Baghouse | 0.690 | -- | -- |
| Line 4 Silo #1 Bin Vent Filter | 0.010 | -- | -- |
| Line 4 Silo #2 Bin Vent Filter | 0.010 | -- | -- |
| Line 4 Silo #3 Bin Vent Filter | 0.010 | -- | -- |
| Line 4 Silo #4 Bin Vent Filter | 0.010 | -- | -- |
| Line 4 Silo #5 Bin Vent Filter | 0.010 | -- | -- |
| Line 4 Final Product Screening and QC Baghouse | 0.371 | -- | -- |
| Line 4 Kiln Baghouse | 8.531 | 11.6 | 36.25 |
| Line 4 Green Pellet Screening Baghouse | 0.321 | -- | -- |
| Line 4 Kiln Recycle Feed Bin Vent Filter | 0.010 | -- | -- |
| Line 4 Dry Milling Baghouse | 0.001 | -- | -- |
| Line 4 Pelletizer Baghouse | 7.699 | -- | 2.25 |
| Line 4 Feed Bin Vent Filter | 0.002 | -- | -- |
| Line 4 Baghouse Kiln Dust Recycle to Feed Bin | 0.032 | -- | -- |
| Line 4 Sodium Bicarbonate Silo Bin Vent Filter | 0.021 | -- | -- |
| Line 4 Fly Ash Silo Bin Vent Filter | 0.086 | -- | -- |
| Line 4 Additive Silo Bin Vent Lines 3 and 4 | 0.021 | -- | -- |
| ADD1 | 0.021 | -- | -- |
| ADD2 | 0.021 | -- | -- |
| FACILITY TOTAL | 71.424 | 46.541 | 155.422 |

a. Rates shown are the full NO_x rates, but the modeling was based on the application of the ARM (0.8).

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INSIGNIFICANT ACTIVITIES

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The following table contains a list of activities which are considered insignificant pursuant to South Carolina Regulation 61-62.70.5(c). Sources listed below are not exempt from any otherwise applicable state or federal requirements including, but not limited to, opacity standards, ambient air quality standards, and air toxic standards.

| INSIGNIFICANT ACTIVITIES | | | |
|---------------------------------|---|--------------------------|---|
| Equipment ID | Source Description | Installation Date | Basis |
| Flare | Propane Flare used during Start up of Propane System | | SC Regulation 61-62.1, Section II (B)(2)(h) |
| V1 | Propane Vaporizer | | SC Regulation 61-62.1, Section II (B)(2)(b) |
| PelletFeed1 | Pelletizer Feed Storage Tank for Line # 1 | | SC Regulation 61-62.1, Section II (B)(2)(h) |
| PelletFeed2 | Pelletizer Feed Storage Tank for Line # 2 | | |
| PelletFeed3 | Pelletizer Feed Storage Tank for Line # 3 | | |
| PelletFeed4 | Pelletizer Feed Storage Tank for Line # 4 | | |
| OpenTank1 | Two (2) Open Top Storage Tanks, Line #1, prior to Wet Screens | | SC Regulation 61-62.1, Section II (B)(2)(h) |
| OpenTank2 | Two (2) Open Top Storage Tanks, Line #2, prior to Wet Screens | | |
| OpenTank3 | Two (2) Open Top Storage Tanks, Line #3, prior to Wet Screens | | |
| OpenTank4 | Two (2) Open Top Storage Tanks, Line #4, prior to Wet Screens | | |
| WetScreens 1 | Eight (8) Wet Screens and One (1) Surge Tank, to separate reject grit from Pelletizer feed. Line #1 | | SC Regulation 61-62.1, Section II (B)(2)(h) |
| WetScreens 2 | Eight (8) Wet Screens and One (1) Surge Tank, to separate reject grit from Pelletizer feed. Line #2 | | |
| WetScreens 3 | Eight (8) Wet Screens and One (1) Surge Tank, to separate reject grit from Pelletizer feed. Line #3 | | |
| WetScreens 4 | Eight (8) Wet Screens and One (1) Surge Tank, to separate reject grit from Pelletizer feed. Line #4 | | |
| T-A1, thru T-A8 | Eight (8) each, 19,000 gallon, Aboveground, Storage Tanks for pure Aqueous Ammonia | | SC Regulation 61-62.1, Section II (B)(2)(h) |
| TD1 | One (1) 7,000 gallon Aboveground Diesel Storage Tank | | SC Regulation 61-62.1, Section II (B)(2)(h) |
| TD2 | One (1) 1,000 gallon Aboveground Diesel Storage Tank | | SC Regulation 61-62.1, Section II (B)(2)(h) |
| TD3, TD4, TD5, TD6 | Four (4) each, 2,375 gallon Aboveground Diesel Storage Tanks | | SC Regulation 61-62.1, Section II (B)(2)(h) |

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INSIGNIFICANT ACTIVITIES

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| INSIGNIFICANT ACTIVITIES | | | |
|---------------------------------|--|--------------------------|--|
| Equipment ID | Source Description | Installation Date | Basis |
| T-P1 thru T-P4 | Four (4) each, 60,000 gallon Aboveground Propane Storage Tanks | | SC Regulation 61-62.1, Section II (B)(2)(h) |
| TDisp1 & TDisp2 | Two (2) 14,250 gallon Dispersant Tanks. | | SC Regulation 61-62.1, Section II (B)(2)(h) |