**FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION**
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**PERMITTEE**

Argos Cement, LLC
4000 Northwest County Road (CR) 235
Newberry, Florida 32669

Authorized Representative:
Chris Horner, Plant Manager

Air Permit No. 0010087-053-AC
PSD-FL 228F and PSD-FL-350D
Permit Expires: 06/01/2017
Minor Air Construction Permit

Argos Newberry Cement Plant
Kiln Lines 1 and 2 ESP Conversion Project

**PROJECT**

This is the final air construction permit, which authorizes the replacement of the existing electrostatic precipitators (ESP) with fabric filter, pulse-jet baghouses on the existing In-Line Kiln Systems Lines 1 and 2. The proposed work will be conducted at the existing Argos Newberry Cement Plant, which is a Portland cement plant categorized under Standard Industrial Classification No. 3241. The existing facility is located in Alachua County at 4000 Northwest CR 235 in Newberry, Florida. The UTM coordinates are Zone 17, 346.4 kilometers (km) East and 3,285.7 km North.

This final permit is organized into the following sections: Section 1 (General Information); Section 2 (Administrative Requirements); Section 3 (Emissions Unit Specific Conditions); and Section 4 (Appendices). Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this permit.

**STATEMENT OF BASIS**

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

Upon issuance of this final permit, any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida

*for* Jeffery F. Koerner, Program Administrator
Office of Permitting and Compliance
Division of Air Resource Management

## CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Air Permit package was sent by electronic mail, or a link to these documents made available electronically on a publicly accessible server, with received receipt requested before the close of business on the date indicated below to the following persons.

Mr. Chris Horner, Plant Manager, Argos: chorner@argos-us.com
Mr. Henry Gotsch, Environmental Manager, Argos: ogotsch@argos-us.com
Dr. Max Lee, Ph.D. P.E., Koogler: mlee@kooglerassociates.com
Mr. Richard Rachal, Administrator, NED: richard.rachal@dep.state.fl.us
Ms. Heather Ceron, US EPA Region 4: ceron.heather@epa.gov
Ms. Lorinda Shepherd, EPA Region 4: shephard.lorinda@epa.gov
Ms. Lynn Scearce, DEP OPC: lynn.scearce@dep.state.fl.us

Clerk Stamp

**FILING AND ACKNOWLEDGMENT FILED**, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

## FACILITY DESCRIPTION

Argos Cement, LLC, Argos Newberry Cement Plant, is a Portland cement plant and associated quarry, and raw material and cement handling operations. The plant combines raw materials and utilizes preheater/precalciner kilns with in-line raw mill to produce clinker. The clinker is milled and combined with gypsum to produce Portland cement. The facility consists of the following major activities: raw material handling and storage; raw mill systems; kiln systems clinker handling; finish grinding operations; cement handling, loading, and bagging operations; and coal handling and grinding operations.

Each In-Line Kiln System (EU 003 and EU 010) includes a 157 foot kiln, a 4-stage preheater tower, a multi-stage combustion calciner, a tire feed system, two coal burners and ancillary equipment. To control emissions of particulate matter (PM), the kiln systems are equipped with an ESP.

## PROPOSED PROJECT

The applicant is requesting to remove the existing ESP's on the In-Line Kiln Systems, Lines 1 and 2, and to replace them with fabric filter baghouses to control emissions of PM. The applicant is proposing to install a fabric filter, pulse-jet baghouse design on each kiln system with a design efficiency of 99% or greater control of PM. The new baghouses are needed to further reduce emissions of PM on the In-Line Kiln Systems.

This project will modify the following emissions units.

| EU No. | Emission Unit Description |
|---|---|
| 003 | In-Line Kiln System/Raw Mill - Line 1 |
| 010 | In-Line Kiln System/Raw Mill - Line 2 |

## FACILITY REGULATORY CLASSIFICATION

- The facility is a major source of hazardous air pollutants (HAP).
- The facility does not operate units subject to the acid rain provisions of the Clean Air Act.
- The facility is a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.
- The facility does operate units subject to the New Source Performance Standards (NSPS) of 40 Code of Federal Regulations (CFR) 60.
- The facility does operate units subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) of 40 CFR 63.

## SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: The permitting authority for this project is the Office of Permitting and Compliance in the Division of Air Resource Management of the Department of Environmental Protection (Department). The Office of Permitting and Compliance mailing address is 2600 Blairstone Road (MS #5505), Tallahassee, Florida 32399-2400.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Northeast District Office at: 8800 Baymeadows Way West, Suite 100, Jacksonville, Florida 32256-7590. Phone: 904/256-1700, Fax: 904/256-1588.

3. Appendices: The following Appendices are attached as a part of this permit: Appendix A (Citation Formats and Glossary of Common Terms); Appendix B (General Conditions); Appendix C (Common Conditions); and Appendix D (Common Testing Requirements).

4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.

5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

6. Modifications: The permittee shall notify the Compliance Authority upon commencement of construction. No new emissions unit shall be constructed and no existing emissions unit shall be modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

7. Construction and Expiration. The expiration date shown on the first page of this permit provides time to complete the physical construction activities authorized by this permit, complete any necessary compliance testing, and obtain an operation permit. Notwithstanding this expiration date, all specific emissions limitations and operating requirements established by this permit shall remain in effect until the facility or emissions unit is permanently shut down. For good cause, the permittee may request that that a permit be extended. Pursuant to Rule 62-4.080(3), F.A.C., such a request shall be submitted to the Permitting Authority in writing before the permit expires. [Rules 62-4.070(4), 62-4.080 & 62-210.300(1), F.A.C.]

8. Source Obligation:

   (a) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

   (b) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by exceeding its projected actual emissions, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

   [Rule 62-212.400(12), F.A.C.]

9. Application for Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V air operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V air operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the appropriate Permitting Authority with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220 and Chapter 62-213, F.A.C.]

10. Shutdown of Existing Control Equipment: Upon startup, shakedown and commissioning of the kiln system fabric filter, pulse-jet baghouses for In-Line Kiln Systems Lines 1 and 2 (EU 003 and EU 010) at the Argos Newberry Cement Plant, the kiln systems ESPs shall be permanently shut down. The exact timing of the shutdown of these control devices shall be done in consultation with the Compliance Authority. The Compliance Authority shall be notified 30 days prior to the startup of the baghouses. A new construction permit shall be obtained, including a PSD applicability analysis, if the applicant wishes authorization to restart any of the ESP's shutdown. [Application No. 0010087-053-AC; and, Rule 62-212.400(12), F.A.C.]

## A. In-Line Kiln System/Raw Mill Line 1 (EU 003)

This section of the permit addresses the following emissions unit.

| EU No. | Emission Unit Description |
|---|---|
| 003 | In-Line Kiln System/Raw Mill - Line 1 |

The kiln system (or pyroprocessing system) includes the 156.5 foot kiln, a four stage preheater tower, a 25,300 cubic foot multi-stage combustion calciner, a tire feed system, two coal burners and ancillary equipment. A fabric filter baghouse ~~efficiency electrostatic precipitator~~ controls particulate emissions.

*{Permitting Note: This emissions unit is regulated under NESHAP Subpart A (General Provisions) and Subpart LLL (NESHAP from the Portland Cement Manufacturing Industry) of 40 CFR 63, adopted and incorporated in Rule 62-204.800(11)(b)48, F.A.C.; NSPS Subpart A (General Provisions) and Subpart F (Standards of Performance for Portland Cement Plants) of 40 CFR 60, adopted and incorporated in Rule 62-204.800(8)(b)9, F.A.C.; and, Rule 62-212.400, F.A.C. PSD (PSD-FL-228).}*

### PREVIOUS APPLICABLE REQUIREMENTS

**1.** Other Permits: The conditions of this permit supplement all previously issued air construction and operation permits for the In-Line Kiln System/Raw Mill - Line 1. Unless otherwise specified, these conditions are in addition to all other applicable permit conditions and regulations. [Rule 62-4.070, F.A.C.]

### EQUIPMENT

**2.** Fabric Filter Baghouse: The permittee is authorized to replace the existing ESP (E-21) by installing a fabric filter, pulse-jet type baghouse on In-Line Kiln System Line 1 (E19-01). The general design specifications for the baghouse will consist of a 99% or more removal of PM emissions. The permittee shall submit the final design specifications to the Compliance Authority within 30 days of final equipment selection. [Design, Application No. 0010087-053-AC; and Rule 62-4.070(3), F.A.C.]

### PERMIT BEING MODIFIED

**3.** The following revisions replaces the following Specific Conditions in **Permit No. AC01-267311 (PSD-FL-228).**

*Specific Conditions 19 and 20*

**19.** No RCRA hazardous waste or used oil may be burned. Recycled Cement Kiln Dust (CKD) collected ~~in the kiln ESP~~ will be returned to the process. Any CKD not returned to the process shall be handled in accordance with Subtitle C rules under development by EPA. In the interim, the permittee shall develop a contingent management practices (CMP) for storage, sales or disposal of any CKD nor reused. The CMP will be a condition of the operating permit. [Permit No. AC01-267311 (PSD-FL-228)]

**20.** In the event that the fabric filter baghouses ~~or ESP~~ catches come in contact with the soil, the waste shall be collected and a hazardous waste determination performed for metals in accordance with 40 CFR 262.11 and Rule 62-730.160. If the material is not hazardous, it shall be reused, sold or disposed a permitted lined landfill. If the material is hazardous, it shall be disposed in a permitted hazardous waste disposal facility. [Permit No. AC01-267311 (PSD-FL-228)]

## A. In-Line Kiln System/Raw Mill Line 1 (EU 003)

**4.** The following revisions replaces Table 1 in **Permit No. 0010087-052-AC (PSD-FL-228E).**

**Table 1 – Allowable Opacity Limitations**

| Stack No. | Description | Grain Loading | Opacity (%) |
|---|---|---|---|
| Emission Unit 1: Raw Material<br>Process Rate = 1,360,000 TPY Dry Feed | | | |
| Fugitive | Material Processing | --- | 10 |
| Fugitive | Handling and Storage | --- | 10 |
| Fugitive | Crusher | --- | 15 |
| Emission Unit 2: Raw Mill System<br>Process Rate = 255 TPH Recycle Dust plus Raw Meal (peak) | | | |
| E-28 | Recycle dust + raw meal to homogenization silo | 0.01 gr/dscf | 5 |
| G-07 | Recycle dust + raw meal to homogenization silo | 0.01 gr/dscf | 5 |
| H-08 | Raw meal + recycle dust to preheater | 0.01 gr/dscf | 5 |
| Emission Unit 3: Kiln System<br>Process Rate = 364 MMBtu/hr heat input | | | |
| ~~E-21~~E19-01 | Kiln Operations (~~ESP~~ Baghouse) | --- | 10 |
| ~~E-21~~E19-01 | In-Process fuel: coal | --- | 10 |
| ~~E-21~~E19-01 | In-Process fuel: tires | --- | 10 |
| | Tires (30% of total heat input) | --- | --- |
| Emission Unit 4: Clinker Handling<br>Process Rate = 115 TPH Clinker (peak) | | | |
| L-03 | Clinker cooler discharge and breaker | 0.01 gr/dscf | 5 |
| L-06 | Clinker into clinker silos | 0.01 gr/dscf | 5 |
| K-15 | Clinker Cooler (Baghouse) | --- | 10 |
| Emission Unit 5: Finish Grinding Operations<br>Process Rate = 136 TPH Clinker | | | |
| M-08 | Clinker to finish mill | 0.01 gr/dscf | 5 |
| N-09 | Finish mill air separator | 0.01 gr/dscf | 5 |
| N-12 | Finish mill | 0.01 gr/dscf | 5 |
| N-19 | Cement handling in finish mill | 0.01 gr/dscf | 5 |
| Q-25 | Cement storage silos | 0.01 gr/dscf | 5 |
| Q-26 | Cement storage silos | 0.01 gr/dscf | 5 |
| Emission Unit 6: Cement Handling<br>Process Rate = 500 TPH Cement Unloading | | | |
| Q-14 | Cement silo loadout | 0.01 gr/dscf | 5 |
| Q-17 | Cement silo loadout | 0.01 gr/dscf | 5 |
| Q-21 | Cement silo loadout | 0.01 gr/dscf | 5 |
| R-12 | Cement bagging operation | 0.01 gr/dscf | 5 |
| Emission Unit 7: Coal Handling and Grinding<br>Process Rate = 14 TPH Pulverized Coal | | | |
| S-17 | Coal Mill | 0.01 gr/dscf | 5 |
| S-21 | Pulverized coal storage bin | 0.01 gr/dscf | 5 |
| Fugitive | Coal Handling and Storage | --- | 5/20 |

[Rule 62-212.400(BACT), F.A.C.; and Permit No. 0010087-052-AC (PSD-FL-228E)]

## B. In-Line Kiln System/Raw Mill Line 2 (EU 010)

This section of the permit addresses the following emissions unit.

| EU No. | Emission Unit Description |
|---|---|
| 010 | In-Line Kiln System/Raw Mill - Line 2 |

*{Permitting Note: This emissions unit is regulated under NESHAP Subpart A (General Provisions) and Subpart LLL (NESHAP from the Portland Cement Manufacturing Industry) of 40 CFR 63, adopted and incorporated in Rule 62-204.800(11)(b)48, F.A.C.; NSPS Subpart A (General Provisions) and Subpart F (Standards of Performance for Portland Cement Plants) of 40 CFR 60, adopted and incorporated in Rule 62-204.800(8)(b)9, F.A.C.; and, Rule 62-212.400, F.A.C. PSD (PSD-FL-350).}*

### PREVIOUS APPLICABLE REQUIREMENTS

1. Other Permits: The conditions of this permit supplement all previously issued air construction and operation permits for In-Line Kiln System/Raw Mill - Line 2. Unless otherwise specified, these conditions are in addition to all other applicable permit conditions and regulations. [Rule 62-4.070, F.A.C.]

### EQUIPMENT

2. Fabric Filter Baghouse: The permittee is authorized to replace the existing ESP by installing a fabric filter, pulse-jet type baghouse on In-Line Kiln System Line 2 (2E19-01). The general design specifications for the baghouse will consist of a 99% or more removal of PM emissions. The permittee shall submit the final design specifications to the Compliance Authority within 30 days of final equipment selection. [Design, Application No. 0010087-053-AC; and Rule 62-4.070(3), F.A.C.]

### PERMIT BEING MODIFIED

3. The following revisions replaces the following Specific Conditions in **Permit No. 0010087-031-AC (PSD-FL-350A).**

*Section III, Specific Conditions 8, 14 and 20*

**8.** O&M Plan for Baghouses ~~and ESP~~: The owner or operator shall prepare, update and maintain an operation and maintenance plan (O&M plan) for emissions unit 009, 010, 011, and 012. The O&M plan shall address the schedule for inspection of this equipment and required preventive maintenance and shall require records of the condition of the equipment upon each inspection and any maintenance activities performed. The O&M plan shall be submitted to the Department's Northeast District office prior to expiration of this permit. [Rule 62-4.070(3), F.A.C.]

*The following revision only revises the following portion of Specific Condition 14.*

**14.** Emissions Unit 010: Emissions unit 010 shall have one emission point, the stack of the in-line kiln/raw mill, designated by the applicant as 2E21. PM emissions from this emissions unit shall be controlled by a fabric filter baghouse ~~an ESP~~.

**20.** Continuous Emission Monitoring Systems: The owner or operator shall install, calibrate, maintain, and operate a continuous emission monitoring (CEM) system in the in-line kiln/raw mill stack to measure and record the emissions of $NO_X$, $SO_2$, CO and VOC from the in-line kiln/raw mill, in a manner sufficient to demonstrate compliance with the emission limits of this permit. Compliance with the emission limit for $NO_X$ and the initial 30-day CO limit shall be based on a 30-day calendar rolling average that shall be recomputed daily from the individual hourly averages. Compliance with the emission limit for $SO_2$ and the 24-hour CO limits shall be based on a rolling 24-hour average that shall be recomputed every hour from the individual hourly averages for the current hour and the preceding 23 hours. Each hourly average shall be computed from a minimum of one measurement every minute. Compliance with the 30 day

emission limit for VOC shall be based on a 30 day block average that shall be computed from a minimum of one measurement every minute. The CEM system shall express the results in units of pounds per ton of clinker produced, and pounds per hour. [Rule 62-4.070(3), F.A.C., and BACT]

Continuous opacity monitor (COM) systems shall be installed, operated, and maintained at the kiln/raw mill baghouse ~~ESP~~ outlet and the outlet of the clinker cooler baghouse pursuant to 40 CFR 60.63. A continuous emission monitor for emissions of total hydrocarbon is required pursuant to 40 CFR 63.1349 and 63.1350. A continuous monitor for the temperature at the inlet to the in-line kiln/raw mill baghouse ~~ESP~~ is required pursuant to 40 CFR 63.1349 and 63.1350 at two locations.