TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

APPLICANT

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

Argos Newberry Cement Plant
Facility ID No. 0010087

PROJECT

Project No. 0010087-049-AC (PSD-FL-228G and PSD-FL-350E)
Application for Minor Source Air Construction Permit
Conveyor C11 and Minor Air Permit Revisions

COUNTY

Alachua County, Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Division of Air Resource Management
Office of Permitting and Compliance
2600 Blairstone Road, MS#5505
Tallahassee, Florida 32399-2400

March 9, 2015

1. GENERAL PROJECT INFORMATION

1.1. Air Pollution Regulations

Projects at stationary sources with the potential to emit air pollution are subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The statutes authorize the Department of Environmental Protection (Department) to establish regulations regarding air quality as part of the Florida Administrative Code (F.A.C.), which includes the following applicable chapters: 62-4 (Permits); 62-204 (Air Pollution Control – General Provisions); 62-210 (Stationary Sources – General Requirements); 62-212 (Stationary Sources – Preconstruction Review); 62-213 (Operation Permits for Major Sources of Air Pollution); 62-296 (Stationary Sources - Emission Standards); and 62-297 (Stationary Sources – Emissions Monitoring). Specifically, air construction permits are required pursuant to Chapters 62-4, 62-210 and 62-212, F.A.C.

In addition, the U. S. Environmental Protection Agency (EPA) establishes air quality regulations in Title 40 of the Code of Federal Regulations (CFR). Part 60 specifies New Source Performance Standards (NSPS) for numerous industrial categories. Part 61 specifies National Emission Standards for Hazardous Air Pollutants (NESHAP) based on specific pollutants. Part 63 specifies NESHAP based on the Maximum Achievable Control Technology (MACT) for numerous industrial categories. The Department adopts these federal regulations in Rule 62-204.800, F.A.C.

1.2. Glossary of Common Terms

Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of this permit.

1.3. Facility Description and Location

Argos Cement, LLC, Newberry Cement Plant, is an existing Portland cement plant and associated quarry, and raw material and cement handling operations. Argos Newberry Cement Plant is categorized under Standard Industrial Classification Code No. 3241. The plant is located in Alachua County at 4000 Northwest County Road 235 in Newberry, Florida. The UTM coordinates of the facility are Zone 17, 346.4 kilometers (km) East, and 3,285.7 km North. **Figure 1** shows the location of the Argos Cement Plant while **Figure 2** shows an aerial view of the facility.

Figure 1. Location of Argos Newberry Cement Plant.

Figure 2. Argos Newberry Cement Plant.

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 electrostatic precipitator (ESP).

1.4. Facility Regulatory Categories

- 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.

1.5. Project Description

Argos is requesting authorization to install a new conveyor and conveyor transfer point to accommodate the relocation of the existing lime rock crushers. The new conveyors and transfer points will be part of the raw material handling operations under the Raw Material Handling and Storage (EU 001) identified as Conveyor Transfer Point C11, emission point (EP) 18. This project also includes a revision/clean-up of several old permit conditions.

Table 1 list the emission units (EU) that will be affected by this project.

TABLE 1 – EMISSION UNITS AFFECTED BY THIS PROJECT.

EU No.	Brief Description
001	Raw Materials Handling and Storage
003	In Line Kiln System/Raw Mill - Line 1
004	Clinker Cooler – Line 1
010	In-Line Kiln System/Raw Mill - Line 2
011	Clinker Handling - Line 2
012	Finish Grinding Operations

1.6. Processing Schedule

- 06/06/2014 Received the application for a minor source air pollution construction permit; application incomplete.
- 07/02/2014 Issued Request for Additional Information (RAI).
- 08/08/2014 Received response to RAI; application incomplete.
- 08/20/2014 Issued 2nd RAI.
- 10/02/2014 Received response to 2nd RAI; application incomplete.
- 10/30/2014 Issued 3rd RAI.
- 11/18/2014 Received response to 3rd RAI; application complete.

2. PSD APPLICABILITY

2.1. PSD Applicability for Project

The project is located in Alachua County which is in an area that is currently in attainment with the Ambient Air Quality Standards (AAQS) or is otherwise designated as unclassifiable. As provided in the application, the annual processing rate of the raw materials will not change. The potential emissions from the project consist of 0.313 tons/year of PM and 0.103 tons/year of PM with a mean diameter of 10 microns or less (PM_{10}). Therefore, the project is not subject to PSD preconstruction review.

3. DEPARTMENT REVIEW

3.1. Proposed Conveyor and Transfer Point C11 (EP18)

Argos is proposing to relocate the existing crushers and reconfigure the existing conveyor system (see **Figure 3**) to accommodate the new location of the crushers. Lime rock is loaded onto the existing conveyors and is transported to the crushers for processing. The crushers and conveyor C20 will be moved approximately 500 feet west of their existing location. The new conveyor C11 will be used to transport and transfer the lime rock from conveyor C10 to conveyor C20 as shown in **Figure 4**. Therefore, the applicant is requesting authorization to install the new conveyor and transfer point.

Figure 3. Existing Crusher and Conveyor System.

Figure 4. Proposed Crusher and Conveyor System.

3.1.1. Conveyor C11

The conveyor transfer point (C11) will be added to the Raw Material Handling and Storage (EU 001) area. The design specifications of the new conveyor will consist of the following:

- 42-inches wide and 500 feet horizontal pulley centers by 14.5 feet lift belt conveyor;
- 2,000 tons/hour (1,400 tons/hour, normal) of lime rock at a constant belt speed of 480 feet/minute.

3.1.2. Emissions

The potential emissions from the product were estimated to be:

- PM: 0.186 lb/hour and 0.313 tons/year
- PM_{10}: 0.0612 lb/hour and 0.103 tons/year

The applicant is proposing to use water sprays and moisture as needed to control emissions of PM.

3.1.3. NSPS Provisions

The conveyor and transfer point are subject to applicable NSPS provisions in 40 CFR 60 for Subpart A (General Provisions) and Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants). These regulations establish operating limitations and a visible emissions standard for conveyors.

3.1.4. Conclusion.

Based on the information provided in the application, the Department has determined that the permit issued for the conveyor and transfer point will include the following provisions:

- Visible emissions shall not exceed 7% opacity in accordance with EPA Method 9.
- An annual visible emission test shall be performed demonstrating compliance with the opacity limit.

The following description will be added to the emission points in Raw Material Handling and Storage (EU 001):

Conveyor Transfer Point C11 (EP18) – C11 Conveyor system point from C10 conveyor onto C20 conveyor.

3.2. Permits Being Revised

The applicant is requesting the following revisions to various emissions units and multiple air construction permits. The proposed revisions to permit language do not affect emissions, production rates or any other significant change. Descriptions of these requests are stated below, followed by the Department's position on the

requested changes. This permit is being processed simultaneously with the Title V Air Operation Renewal Permit No. 0010087-050-AV.

Emission sources associated with the following revisions include the In-Line Kiln/Raw Mill – Line 1 (EU 003) and Clinker Cooler – Line 1 (EU 004).

Permit No. AC01-267311 (PSD-FL-228)

1. *Specific Conditions 6 – Only the following portion of this condition was revised. (EU 003 and EU 004)*

   Request. As part of the Title V revision application, the applicant requested removal of the requirement for an annual visible emission test since the kiln and clinker cooler ESP stacks are equipped with continuous opacity monitoring systems (COMS) to continuously monitor opacity.

   Response. The Department concurs with the applicant that the COMS located on the ESP stacks demonstrate continuous compliance with opacity. Therefore, the Department removed annual visible emission testing requirements for Kiln No. 1 and clinker cooler stacks.

2. *Specific Condition 16 (EU 003)*

   Request. As part of the Title V revision application, the applicant requested to change the requirement for waste tires to be received in only closed vans to closed vehicles.

   Response. The Department will revise the language as requested.

Permit No. 0010087-006-AC (PSD-FL-228C)

3. *Section III, Specific Condition 3. (EU 003)*

   Request. As part of the Title V revision application, the applicant requested language to be revised for clarity and an obsolete test method be removed for the nitrogen oxide (NO_X) and sulfur dioxide (SO_2) continuous emission monitoring systems (CEMS) operating requirements.

   Response. The Department removed the referenced test method as requested by the applicant. However, the Department added to the permitting note that Method 19 may be used in conjunction with the other methods to convert a concentration (ppmvd) to a mass emission rate (lb/hour) for NO_X and SO_2 emissions.

Emission sources associated with the following revisions include the In-Line Kiln/Raw Mill – Line 2 (EU 010) and Clinker Cooler – Line 2 (EU 0011).

Permit No. 0010087-031-AC (PSD-FL-350A)

4. *Section III, Specific Condition 11. (EU 010)*

   Request. As part of the Title V revision application, the applicant requested removal of the requirement to conduct performance tests for dioxin/furan (D/F) in accordance with NESHAP Subpart LLL in 40 CFR 63 as no longer applicable.

   Response. This Title V permitting action recognizes the cements kilns as "Commercial and Industrial Solid Waste Incineration (CISWI) Units" subject to Rule 62-204.800(9)(f), F.A.C., which adopts the federal emissions guidelines of Subpart DDDD in 40 CFR 60. As such, the kilns are no longer subject to the requirements of Subpart LLL in 40 CFR 63. However, Subpart DDDD in 40 CFR 60 does require D/F performance testing with a compliance date of no later than February 7, 2018. The Department will replace the D/F test requirements of Subpart LLL in 40 CFR 63 with the applicable D/F testing requirements of Subpart DDDD in 40 CFR 60 prior to the effective date of this subpart.

5. *Section III, Specific Condition 23. (EU 010 and 011)*

   Request. As part of the Title V revision application, the applicant requested to remove the requirement for an annual visible emission test since the kiln and clinker cooler ESP stacks are equipped with continuous opacity monitoring systems (COMS) to continuously monitor opacity.

Response. The Department concurs with the applicant that the COMS located on the ESP stacks demonstrate continuous compliance with opacity. Therefore, the Department removed annual visible emission testing requirements for Kiln No. 2 and the clinker cooler stacks.

Emission sources associated with the following revisions include the Finish Grinding Operations (EU 012).

Permit No. 0010087-031-AC (PSD-FL-350A)

6. *Section III, Specific Condition 18. (EU 012)*

Request. As part of the Title V revision application, the applicant requested to remove the emission point (EP18) clinker/additives to Mill No. 2 baghouse located in the finish grinding operations (EU 012) since this emission point has been removed.

Response. The Department will remove EP18 (clinker/additives to Mill No. 2 baghouse) from the permit. The Department revised the maximum PM and PM_{10} total emissions for all points in this emission unit accordingly.

4. PRELIMINARY DETERMINATION

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the draft permit. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the conditions specified in the draft permit. No air quality modeling analysis is required because the project does not result in a significant increase in emissions. Tammy McWade is the project engineer responsible for reviewing the application and drafting the permit. Additional details of this analysis may be obtained by contacting the project engineer at the Department's Office of Permitting and Compliance at Mail Station #5505, 2600 Blairstone Road, Tallahassee, Florida 32399-2400, by phone at (850) 717-9086 or by email at tammy.mcwade@dep.state.fl.us.