Fugitive Dust Control Plan
Florida Rock Industries, Inc./Florida Cement, Inc.

Tampa Plant
2001 Maritime Boulevard
Tampa, Florida 33605

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SECTION 1 - INTRODUCTION

1.1 Purpose

Florida Rock Industries, Inc./Florida Cement, Inc. (Florida Cement) currently operates under a Title V operating permit (Permit No. 0570018-010-AV) issued by the Hillsborough County Environmental Protection Commission (EPC).

Section II Facility-wide Conditions, Condition No. 5 of this permit requires that reasonable precautions be utilized to prevent emissions of unconfined particulate matter. The purpose of this Fugitive Dust Control Plan (FDCP) is to assist the facility in minimizing the generation of fugitive dust in and around the operating processes and support activities. This FDCP contains provisions that address material handling activities associated with bulk Coarse/Granular materials receiving and processing, bulk Coarse/Granular materials storage piles, and plant roads (both paved and unpaved). This document describes the procedures, equipment, and products employed to control fugitive dust from these sources at the Tampa Plant.

1.2 Regulatory Constraints

In addition to Permit Conditions, there are other regulations covering fugitive PM emissions that must be considered in developing a FDCP and maintaining compliance with the regulatory requirements. These requirements are addressed in existing permit conditions and are summarized in the following paragraphs.

1.3 Fugitive Opacity Limits

1.3.1 FDEP PM RACT (Rule 62-296.700, FAC)

Many sources at the plant are subject to the Florida DEP PM RACT Rule (62-296.700, FAC). This Rule establishes a 5% opacity limit for these emissions units.

1.3.2 FDEP General Pollutant Emission Limiting Standards (Rule 62-296.320, FAC)

All fugitive dust generated at this plant is subject to FDEP's General Pollutant Emission Limiting Standards, specifically 62-296.320(4)(c). This is required within the current air operating permit (Permit No. 0570018-010-AV) within Section II, Condition 5. The intent of this rule will be met with the implementation of this FDCP and through adherence of the specific Permit Conditions found within this permit.

This rule reads as follows:
FAC 62-296.320(4)(c), Unconfined Emissions of Particulate Matter

1. No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction, alteration, demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions.

2. Any permit issued to a facility with emissions of unconfined particulate matter shall specify the reasonable precautions to be taken by that facility to control the emissions of unconfined particulate matter.

3. Reasonable precautions include the following:

a. Paving and maintenance of roads, parking areas and yards.
b. Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing.
c. Application of asphalt, water, oil, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities.
d. Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent reentrainment, and from buildings or work areas to prevent particulate from becoming airborne.
e. Landscaping or planting of vegetation.
f. Use of hoods, fans, filters, and similar equipment to contain, capture and/or vent particulate matter.
g. Confining abrasive blasting where possible.
h. Enclosure or covering of conveyor systems.

4. In determining what constitutes reasonable precautions for a particular facility, the Department shall consider the cost of the control technique or work practice, the environmental impacts of the technique or practice, and the degree of reduction of emissions expected from a particular technique or practice.

1.4 Process Improvements and Program Flexibility

Florida Cement is committed to the process of evaluating potential improvements to the procedures, equipment, and products it uses for controlling fugitive dust at the Tampa Plant. In order to adequately evaluate new equipment and procedures, Florida Cement may periodically substitute methods, equipment, or products that are different from those described in this document, on a trial basis. If such new procedures provide significant performance improvements, Florida Cement will implement these process improvements and notify EPC of these changes.

1.5 Plan Implementation

Florida Cement continues to employ previously established fugitive dust control practices at the plant. Elements of this plan that have not yet been implemented,

will be fully implemented as described herein within 60 days of receiving EPC's approval of the plan.

SECTION 2 | FACILITY DESCRIPTION

2.1 General Plant Description

Florida Cement, Inc. operates a material handling facility located at 2001 Maritime Boulevard in Tampa, Florida. This facility produces bulk powder products. All products produced or received by this facility are either bagged, via bagging operations (including jumbo bags), or bulk loaded, via truck or ship load out operations.

The facility will handle two general types of materials through several general handling operations.

<u>Material Handling Facility</u>

- Bulk Powder Materials
  - Includes but not limited to:
    - Portland cement, masonry cement, slag cement, white cement
    - Fly ash
    - Milled limestone
  - Particulate matter control through use of baghouses

- Bulk Coarse/Granular Materials
  - Includes but not limited to:
    - Gypsum, natural and synthetic
    - Slag, blast-furnace, white, black, other
    - Limestone
    - Sand
    - Pumice
    - Emathlite
    - Kitty Litter
  - Particulate matter control through use by moisture and reasonable precautions

- <u>Material Handling Operations</u>
  - Receiving
    - Ship, clamshell or pneumatic
    - Truck, dump or pneumatic
  - Transport
    - Pneumatic, includes air slides
    - Conveyor, includes bucket elevators
  - Processing
    - Screening

        - Drying
        - Milling
        - Blending
        - Packaging
            - Bags, 50 kg or less
            - Jumbo bags, 1 ton or more
    - Storage
    - Shipping
        - Ship
            - Bulk pneumatic
            - Bulk conveyor
            - Jumbo bags
            - Palletized bags
        - Truck
            - Pneumatic tanker
            - Dump bulk Coarse/Granular material
            - Flatbed jumbo bags
            - Flatbed palletized bags

As part of these processes, this facility generates particulate matter (PM) emissions which are controlled via several methods. These methods include appropriate work practices, reasonable precautions, and implementation of control devices. All processes at this facility that require utilization of control devices have implemented the use of baghouses or fabric filters. This plant may also have unconfined particulate matter emissions generated as part of these processes. These emissions are controlled via reasonable precautions as outlined within the current Air Permit, Standard Operating Procedures (SOP), and provisions outlined within this plan.

2.2 Facility Process Groups

For the purposes of this FDCP, the fugitive emission sources will be grouped via functional areas within the plant. This section describes only those functional areas covered by this plan and does not reflect the entire plant process.

2.2.1 Bulk Coarse/Granular Material Stockpiles

Outdoor storage piles include any of the bulk Coarse/Granular materials. Pile materials that are high in moisture are not otherwise controlled. Materials that are dusty and subject to surface drying may have periodic water spray applications as required.

2.2.2 Paved and Unpaved Plant Roads

The plant receives various bulk Coarse/Granular materials, bulk powder materials, fuels, and supplies by truck. Bagged cement and bulk cement is shipped out by truck. The plant entrance and main roads are paved. Employee parking is paved and located at various locations throughout the plant. All of the truck shipping routes are on paved roads. The paved roads are periodically swept with a vacuum sweeper and/or watered via a water truck. A facility wide speed limit has also been established and posted at 10 mph.

Trucks delivering materials and fuels travel on a combination of paved and unpaved roads. Front end loaders transporting materials from piles to hoppers and/or trucks also travel on unpaved roads or surfaces. Unpaved roads are subject to periodic watering, as required.

2.2.3 Bulk Coarse/Granular Material Handling and Drying

Bulk Coarse/Granular materials are unloaded from ships using self unloading equipment or clamshells. The materials are unloaded into receiving hoppers. An enclosed conveyor system transports material from the hoppers to radial stackers that empty into a bulk material pile area. As an alternate mode of operation, the bulk Coarse/Granular materials can also be transported from the hoppers to truck loading chutes. The chute-loaded materials, as well as bulk Coarse/Granular materials delivered from offsite by trucks, are transported to piles using open trucks. The bulk Coarse/Granular materials storage areas consist of uncovered areas of the plant that use open stockpiles.

Front-end loaders take the bulk Coarse/Granular materials from the stockpiles to the dryer hopper. The hopper empties onto a covered conveyor which delivers the materials to the inlet of a natural gas fired parallel-flow rotary drum dryer. The dried materials are transported by an enclosed drag conveyor to a belt and to the foot of a bucket elevator and then to the top of the Finish Mill Feed Silos or to the bulk Coarse/Granular material silo.

SECTION 3 | FUGITIVE DUST ASSESSMENT

Florida Cement will periodically conduct a review of current fugitive dust sources and control practices employed at least once every 12 months. The review will include generation or updating of a list of sources and an assessment of the effectiveness of the control measures employed. This process will assist the plant in developing improved methods for minimizing and controlling fugitive dust and maintaining compliance with the regulatory requirements.

3.1 Fugitive Source Types

Development of fugitive dust prevention, minimization, and control options requires consideration of each applicable type or category of fugitive emissions source. The following general types of fugitive PM sources have been identified as potentially applicable to the plant.

- Material loading and unloading
- Conveying
- Storage piles
- Paved roads
- Unpaved roads and travel surfaces
- Equipment leaks and dust buildup

3.2 Potential Fugitive Dust Sources

Florida Cement has identified potential fugitive dust sources at the plant as described within this plan. This does not indicate that visible PM emissions have been observed at this location, only that fugitive emissions could be possible under worst-case conditions based on the type of equipment and/or operation.

SECTION 4 | FUGITIVE DUST CONTROL METHODS

This section presents the fugitive dust prevention, minimization, and control methods that Florida Cement will employ to manage the specific fugitive dust sources at the plant. The methods, practices, and equipment described represent control options that are reasonably available and will be implemented as described.

4.1 Bulk Coarse/Granular Material Storage Piles

The materials are generally received with adequate moisture thereby preventing fugitive dust within the storage area. To prevent unconfined fugitive emissions from piles, the following control methods will be employed:

- Natural material moisture.
- Water sprays (as required).

  Watering will not occur at any regular frequency but rather on an as-needed basis. As-needed will be determined based on actual site conditions at the time (high winds, lack of rain, etc.)
- Minimizing material stockpile height, as practicable.

  Typical heights are up to the height of the radial stacker belts. This height is considered a reasonable practice for this type of process. Stock pile heights will be based on the ability of the stacker and therefore based on stacker height. Pile height will be limited to 60 feet.

• Wetting of material stockpiles, as needed, prior to allowing vehicles to travel on top of the piles.

Vehicle access onto these piles is typically required to move stockpiled materials to minimize stockpile heights. Bulldozers and front-end loaders are the only vehicles to travel on the piles. If needed, portable sprinkler head(s) will be run to the areas on the pile affected.

4.2 Roads and Vehicle Travel Surfaces

4.2.1 Plant Unpaved Roads and Loader Routes

Unpaved roads are regularly used to receive materials by trucks and for loader travel routes. The surface of permanent unpaved plant roads may consist of crushed stone or gravel. Material spills will be removed from these surfaces when observed. Road crown and adequate surface drainage will be maintained.

Active unpaved roads and loader routes are typically watered down once per day using a designated water tank truck. As weather conditions accelerate road surface drying, selected roads may be watered more frequently. Water is not applied during rain events or when road surfaces remain wet. All plant roads are subject to a 10 mph speed limit.

To prevent unconfined fugitive emissions from this source, the following control methods will be employed:

• Watering (as needed)
• Removal of spilled materials
• 10 mph speed limit (monitor and warn, as needed)
• Periodic road maintenance.

4.2.2 Paved Plant Roads

General traffic in and out of the plant consists of a mix of trucks (tractor-trailers), mobile equipment (e.g., forklifts, loaders, utility vehicles) cars and light duty trucks. Most of this traffic is confined to paved plant roadways and parking areas.

However, some vehicles also travel on unpaved access roads. “Track out” of wet material onto paved surfaces from an unpaved area can occur. When observed, tracked materials and any spilled materials will be removed from paved surfaces to prevent drying and dust formation. All trucks hauling bulk materials are required to be covered in order to prevent wind-blown dust and spillage from truck beds. A truck rinse near Silos 27 and 28 will be used as needed. When necessary, paved surfaces are cleaned by vacuum/brush sweeper truck or sprayed/flushed with water. All plant roads are subject to a 10 mph speed limit.

To prevent unconfined fugitive emissions from this activity, the following control methods will be employed:

• Removing spilled/tracked material;
• Cleaning with vacuum/brush sweeper truck or watering/flushing;
• 10 mph speed limit (monitor and warn, as needed);
• Cover truck beds carrying bulk materials.

4.3 Bulk Coarse/Granular Material Handling and Drying

4.3.1 Bulk Coarse/Granular Material Handling - Piles

Bulk Coarse/Granular materials are stored within open storage piles at the plant. These piled materials are transferred from the storage piles via front-end loaders. These materials form an exterior crust as they dry from atmospheric exposure. This crust effectively stabilizes the pile and effectively reduces wind-blown dust from these piles. Pile materials also maintain a natural moisture content that reduces fugitive emission generation from the pile. As needed, water sprays may be used to maintain adequate pile moisture.

When pile materials are gathered from a pile, it is typical for the front-end loader operator to extract a “mixed” load, by gathering material from both the exterior “crust” and interior pile. This practice keeps the average material moisture sufficient to reduce fugitive emissions generated during transfer of these materials from the pile.

To prevent unconfined fugitive emissions from this activity, the following control methods will be employed:

• Extracting a well-mixed load;
• Applying water, as needed;
• Perform employee training and annual refreshers on Standard Operating Procedures (SOP);
• Only trained operators are allowed to work in this process area.
• Employee training records

4.3.2 Bulk Coarse/Granular Material Hoppers and Transfers

Bulk Coarse/Granular material removed from the stockpiles is typically transported to the dryer hopper for transfer to material dryer. A front-end loader will transfer this material from the pile into the feed hopper. The feed hopper then transfers material onto an enclosed conveyor belt that feeds material into the dryer system.

Florida Cement has found that the combination of the material moisture in the piles (>6%) and the execution of the Material Handling SOP have proven to be

very effective dust control methods while wind screens have shown to be difficult to maintain and do not help in the additional prevention of unconfined fugitive emissions from the slag feed hopper. For these reasons, wind screens are not utilized.

Florida Cement has developed Standard Operating Procedures (SOP) to facilitate efficient material transfer to reduce material spillage and reduce the generation of fugitive dust emissions. These procedures are outlined as follows:

1. As the front-end loader operator enters the hopper area, begin to lower the loader bucket. This is intended to allow the loader bucket to clear the hopper by a few inches.

2. Once the loader bucket is above the hopper grate, begin to tilt the bucket so that the material falls less than 1 foot onto the hopper grate.

3. Gradually feed the material in the hopper by continuing to tilt the bucket slowly. The operator should continually make adjustments to the loader bucket height to maintain a fall of less than 1 foot onto the grate.

4. If dusting is observed, use a water spray to wet the material within the feed hopper.

To prevent unconfined fugitive emissions from this activity, the following control methods will be employed:

• Water spray, as needed
• Perform employee training and annual refreshers on SOP;
• Only trained operators are allowed to work in this process area.
• Employee training records