Florida Department of Environmental Protection

Southwest District Office
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926

Rick Scott
Governor

Jennifer Carroll
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Herschel T. Vinyard Jr.
Secretary

FINAL PERMIT

PERMITTEE

Mosaic Fertilizer, LLC
Bartow Facility
13830 Circa Crossing Drive
Lithia, FL 33547

Authorized Representative:
Mr. Jeffry Golwitzer, Plant Manager

Air Permit No. 1050046-031-AC
Permit Expires: 12/31/2014
Site Name : Bartow Facility
Minor Air Construction Permit
Project Name: Upgrade granulator, screens, product elevator and cooler at No. 3 Fertilizer Plant.

This is the final construction permit, which authorizes the upgrade of equipment at No. 3 Fertilizer Plant in a phosphate fertilizer manufacturing facility.

Mosaic Fertilizer, LLC, Bartow Facility (Standard Classification No. 2874) is located in Polk County at 3200 Highway 60 West, Bartow, Florida. The UTM coordinates are Zone 17, 409.77 kilometer (km) East, and 3087.26 km North. As noted in the Final Determination provided with this final permit, no changes or only minor changes and clarifications were made to the draft permit.

This final permit is organized by the following sections:

Section 1. General Information

Section 2. Administrative Requirements

Section 3. Emissions Unit Specific Conditions

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.

This air pollution 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 Hillsborough County, Florida

_____ _____

Cindy Zhang-Torres, P.E. Effective Date
Air Permitting Manager
Southwest District

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination, the Final Permit and the Appendices) 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 _____ to the persons listed below.

Jeffry Golwitzer, Mosaic Fertilizer, LLC (jeff.golwitzer@mosaicco.com)
John. B. Koogler, Ph.D., P.E., Koogler and Associates, Inc. (jkoogler@kooglerassociates.com)
Rama Iyer, P.E., Mosaic Fertilizer, LLC (rama.iyer@mosaicco.com)
Holland Thompson, Mosaic Fertilizer, LLC (holland.thompson@mosaicco.com)

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.

_____ _____

(Clerk) (Date)

FACILITY AND PROJECT DESCRIPTION

Existing Facility

This facility consists of one phosphoric acid plant (two trains), one monoammonium phosphate/ diammonium phosphate (MAP/DAP) plant, one DAP fertilizer plant, three sulfuric acid plants, two fertilizer shipping plants, one auxiliary boiler, and a molten sulfur storage and handling system.

Project Description and Affected/Proposed Emission Units

This construction permit authorizes the upgrade of equipment at No. 3 Fertilizer Plant. The following equipment will be upgraded:

1. Improve product sizing by installing additional screens and increasing the screening area;
2. Increase granulator diameter and length to provide additional capacity to handle the increase in recycle stream due to improved screening operation;
3. Minimize spills by installing a larger product elevator; and,
4. Increase the capacity of the motor and gearbox of the existing cooler.

Specifically, the following upgrades are proposed:

	Existing	Proposed
Product Screens	3 each 4'x15' single deck screens 2 each 4'x15' double deck screens 7 each 4'x20' single deck screens	3 each 4'x15' single deck screens 2 each 4'x15' double deck screens 5 each 4'x20' single deck screens 2 each 4'x20' riffle deck screens (equal to 4 single deck screens)
Polishing Screens	2 each 4'x15' single deck screens	2 each 4'x20'single deck screens
Product Elevator	102' height 1.32 cubic feet bucket capacity	112' height 1.66 cubic feet bucket capacity
Granulator	11' dia x 25' long, 9.7 rpm 3/4" slope	13' dia x 30' long, 7.6 rpm 5/8" slope
Cooler Drive	5.1 rpm gearbox, 100 hp motor	6.0 rpm gearbox, 150 hp motor

{Note: Riffle deck screens split inlet flow into two, one going to an upper screen and the other to a lower screen, thus providing twice the screen area and more efficient screening.}

There will be no change to the process input rate or the plant reactor.

This project will modify the following emission unit:

Facility ID No. 1050046	
ID No.	Emission Unit Description
001	No. 3 Fertilizer (DAP/MAP) Plant

NOTE: *Please reference the Permit No., Facility ID, and Emission Unit ID in all correspondence, test report submittals, applications, etc.*

FACILITY REGULATORY CLASSIFICATION

- The facility is a major source of hazardous air pollutants (HAP).
- The facility has no units subject to the acid rain provisions of the Clean Air Act (CAA).
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400(PSD), F.A.C.

PERMIT HISTORY/AFFECTED PERMITS

Modifies Permit No. 1050046-027-AV.

SECTION 2. ADMINISTRATIVE REQUIREMENTS (FINAL)

1. Permitting Authority: The permitting authority for this project is the Florida Department of Environmental Protection (Department), Southwest District's Air Resource Management Section. The Southwest District's mailing address and phone number is:

   Florida Department of Environmental Protection
   Southwest District Office
   Air Resource Management Section
   13051 North Telecom Parkway
   Temple Terrace, Florida 33637-0926
   Telephone: 813-632-7600

   All documents related to applications for permits to operate an emissions unit shall be submitted to the above address.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Southwest District Office's Air Resource Management Section (see above mailing address and phone number).

3. Appendices: The following Appendices are attached as 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 unit 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.
   [Rule 62-210.300, F.A.C.]

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: Unless otherwise exempt by rule, the permittee shall not initiate any construction, reconstruction, or modification at the facility and shall not install/modify any pollution control device at the facility without obtaining prior authorization from the Department. Modification is defined as: Any physical change or changes in the method of operations or addition to a facility that would result in an increase in the actual emissions of any air pollutant subject to air regulations, including any not previously emitted, from any emission unit or facility.
   [Rules 62-210.200 - Definition of "Modification" and 62-210.300(1)(a), F.A.C.]

7. 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.]

8. Actual Emissions Reporting (PSD Major Facilities only): This permit is based on an analysis that compared baseline actual emissions with projected actual emissions and avoided the requirements of subsection 62-212.400(4) through (12), F.A.C. for several pollutants. Therefore, pursuant to Rule 62-212.300(1)(e), F.A.C., the permittee is subject to the following monitoring, reporting and recordkeeping provisions.

   a. The permittee shall monitor the emissions of any PSD pollutant that the Department identifies could increase as a result of the construction or modification and that is emitted by any emissions unit that could be affected; and, using the most reliable information available, calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change. Emissions shall be computed in accordance with the provisions in Rule 62-210.370, F.A.C., which are provided in Appendix C of this permit.

   b. The permittee shall report to the Department within 60 days after the end of each calendar year during the 5-year period setting out the unit's annual emissions during the calendar year that preceded submission of the report. The report shall contain the following:

      1) The name, address and telephone number of the owner or operator of the major stationary source;

      2) The annual emissions as calculated pursuant to the provisions of 62-210.370, F.A.C., which are provided in Appendix C of this permit;

      3) If the emissions differ from the preconstruction projection, an explanation as to why there is a difference; and

      4) Any other information that the owner or operator wishes to include in the report.

   c. The information required to be documented and maintained pursuant to subparagraphs 62-212.300(1)(e)1 and 2, F.A.C., shall be submitted to the Department, which shall make it available for review to the general public.

   For this project, the Department requires the annual reporting of actual particulate matter (PM and PM_{10}) and fluoride (F) emissions for EU 001.
   [Rules 62-212.300(1)(e) and 62-210.370, F.A.C.]

9. Annual Operating Report: On or before **April 1** of each year, the permittee shall submit a completed DEP Form 62-210.900(5), "Annual Operating Report for Air Pollutant Emitting Facility" (AOR) for the preceding calendar year. The report may be submitted electronically in accordance with the instructions received with the AOR package sent by the Department, or a hardcopy may be sent to the Compliance Authority.
   [Rule 62-210.370(3), F.A.C.]

10. Application for Title V Air Operation Permit: This permit authorizes construction modification of the permitted emissions unit(s) and initial operation to determine compliance with Department rules. A Title V air operation permit is required for continued operation of the permitted emissions unit(s). 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 as modified. Commencing operation means setting into operation of any emissions unit for any purpose. To apply for a Title V air operation permit, the applicant shall submit the following:

    a. the appropriate permit application form *(see current version of Rule 62-210.900, F.A.C. (Forms and Instructions), and/or FDEP Division of Air Resource Management website at: http://www.dep.state.fl.us/air/)*;

    b. a copy of the compliance test report for the tests required by Specific Condition No. A.2. if not previously submitted.

    [Rules 62-4.030, 62-4.050, 62-4.070(3), 62-4.220, 62-296.700(6) and Chapter 62-213, F.A.C.]

A. EU No. 001 – No. 3 Fertilizer (DAP/MAP) Plant

This section of the permit addresses the following emissions units.

ID No.	Emission Unit Description
001	The No. 3 Fertilizer (DAP/MAP) Plant has a design capacity of 3,000 tons per day of monoammonium/diammonium phosphate (MAP/DAP), which may be enhanced with addition of commercially available zinc, copper, boron, manganese and/or sulfur micronutrients. The process consists of a reactor, granulator, dryer, cooler, mills, screens, and ancillary equipment. The reactor emissions, along with those from elevators, screens, mills, hoppers, and such ancillary equipment areas go through the RV venturi cyclonic scrubber which uses product recovery solution as the scrubbing liquid. Emissions from the granulator go to the granulator venturi cyclonic scrubber which uses product recovery solution as the scrubbing liquid. Emissions from the dryer go to the dryer venturi cyclonic scrubber which uses product recovery solution as the scrubbing liquid. Emissions from the cooler go to the cooler venturi cyclonic scrubber which uses diammonium phosphate (DAP) pond water and effluent from the two tailgas packed bed scrubbers, i.e., the RGCV tailgas packed bed scrubber and dryer tailgas packed bed scrubber. The exhaust from the cooler venturi cyclonic scrubber, the granulator venturi cyclonic scrubber and the RV venturi cyclonic scrubber, all three streams, go to RGCV tailgas packed bed scrubber which uses DAP pond water and re-use water as the scrubbing liquid. Exhaust from the dryer venturi cyclonic scrubber goes to the dryer tailgas packed bed scrubber which uses DAP pond water and re-use water as scrubbing liquid. The two tailgas packed bed scrubbers exhaust to a common stack. The dryer is fired with natural gas, or fuel oil with a maximum sulfur content of 1.5 percent, at a design heat input rate of 40 mmBtu per hour.

PREVIOUS APPLICABLE REQUIREMENTS

A.1. Title V Air Operation Permit No. 1050046-027-AV and Air Construction Permit No. 1050046-029-AC contains specific permit conditions for this emission unit. These conditions remain unchanged. The following are additional requirements for this project:

TESTING REQUIREMENTS

A.2. Initial Compliance Tests: The emission unit shall be tested to demonstrate initial compliance with the emissions standards for VE, PM and F. The initial tests shall be conducted no later than 90 days after completion of the upgrade of granulator, screens, product elevator and cooler. [Rules 62-4.070(3) and 62-297.310(7)(a)1, F.A.C.]

NOTIFICATION REQUIREMENTS

A.3. Notification of Operation Commencement: The permittee shall notify the Compliance Authority in writing of the date of commencing operation of the upgraded granulator, screens, product elevator and cooler, no later than fifteen (15) days after that date. [Rule 62-4.070(3), F.A.C., and Rule 62-210.200, F.A.C., (Definition of Commence Operation)]