Florida Department of Environmental Protection

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

Rick Scott
Governor

Herschel T. Vinyard Jr.
Secretary

DRAFT PERMIT

PERMITTEE

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

Authorized Representative:
Mr. Larry Simpson, Plant Manager

Air Permit No. 0570008-077-AC
Permit Expires: 12/31/2014
Site Name: Riverview Facility
Minor Air Construction Permit
Project Name: Modify Construction Permit No. 0570008-064-AC

This is the final air construction permit, which modifies Construction Permit No. 0570008-064-AC. The modification revises and removes all specific condition references and requirements related to the test protocol contained in Appendix F of Permit No. 0570008-064-AC. The proposed work will be conducted at the Mosaic Fertilizer, LLC, Riverview Facility (Standard Classification No. 2874). The facility is located in Hillsborough County at 8813 US Highway 41 South, Riverview, Florida. The UTM coordinates are Zone 17, 364.59 km East, and 3082.38 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

Due to 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
DRAFT

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Kelley M. Boatwright Effective Date
District Air Program Administrator
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 the date indicated below to the persons listed below.

Larry Simpson, Mosaic Fertilizer, LLC (larry.simpson@mosaicco.com)
Rama Iyer, P.E., Mosaic Fertilizer, LLC (rama.iyer@mosaicco.com)
Diana Lee, P.E., EPCHC (lee@epchc.org)

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.

DRAFT

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(Clerk) (Date)

FACILITY AND PROJECT DESCRIPTION

Existing Facility

This facility consists of several industrial processes that convert insoluble rock containing phosphorus ore into a soluble form suitable for agricultural use. The processes consist of one phosphoric acid plant (two trains), two ammoniated phosphate (AP) plants, three sulfuric acid plants, one material handling system, one auxiliary boiler, two animal feed plants, a molten sulfur storage and handling system and emergency compression ignition (CI) reciprocating internal combustion engines (RICE).

The following activities are undertaken to produce fertilizer with water-soluble phosphorus and nitrogen values.

1. Phosphate rock delivered by railcar is unloaded, conveyed to storage, and ground by rotary ball mills.
2. Molten sulfur is burned under controlled stoichiometry to produce sulfuric acid.
3. Ground phosphate rock is acidulated with sulfuric acid, producing wet process phosphoric acid and byproduct calcium sulfate (gypsum) with release of fluoride compounds, including HF.
4. The phosphoric acid, which is approximately 30% by weight phosphorus expressed as P_2O_5, is sent to evaporators for concentration to 54%.
5. Ammoniated phosphate (AP) are produced by combining blended 54% and 30% phosphoric acid with ammonia in various mole ratios to produce mono-ammonium phosphate (MAP) or di-ammonium phosphate (DAP).
6. AP products are conveyed to dry storage buildings by trip conveyors, dropped to storage piles. These storage buildings store, handle and loadout AP product to conveyors and associated transfer equipment, such as bulk totes, feed and loadout elevators, mini bin system, and ribbon blender to load ships, barges, railcars, trucks and containers.

Also included in the facility are miscellaneous unregulated/insignificant emissions units and/or activities.

Project Description and Affected Emissions Unit

This project revises Construction Permit No. 0570008-064-AC and authorizes the following:

Removes all specific condition references and requirements related to the Test Protocol contained in Appendix F and rescind the Appendix F.

Note: The Test Protocol (Appendix F) was previously referenced in Specific Condition Nos. A.5. and A.9. of Construction Permit No. 0570008-064-AC.

This project will modify the following emissions unit (EU).

Facility ID No. 0570008	
EU ID No.	**Emission Unit Description**
007	No. 6 AP Plant

NOTE: *Please reference the Permit No., Facility ID, and Emissions 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 Construction Permit No. 0570008-064-AC

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 Permitting Program
   13051 North Telecom Parkway
   Temple Terrace, Florida 33637-0926
   Telephone: 813-632-7600

   All documents related to applications for permits 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 Hillsborough County Environmental Protection Commission (HCEPC). The mailing address and phone number is:

   Hillsborough County Environmental Protection Commission
   Air Management Division
   3629 Queen Palm Dr
   Tampa, FL 33619
   Telephone: 813-627-2600

3. Appendices - The following Appendices are attached as part of this permit:

   a. Appendix A. Citation Formats and Glossary of Common Terms;
   b. Appendix B. General Conditions;
   c. Appendix C. Common Conditions;
   d. Appendix D. Common Testing Requirements;
   e. Appendix E. No. 6 AP Plant Process Flow Diagram

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 - 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 emissions unit or facility.
[Rules 62-210.200 - Definition of "Modification" and 62-210.300(1)(a), F.A.C.]

7. Source Obligation (PSD Major facilities only):

   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 - 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 fluoride (F) and particulate matter (PM and PM_{10}) emissions for EU No. 007.

[Permit Application dated 04/09/2013; Rules 62-212.300(1)(e) and 62-210.370, F.A.C.]

8. 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.]

9. Application for Title V Air Operation Permit: This permit authorizes construction of the permitted emissions unit 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. 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. 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 most recent compliance test report required by Specific Condition No. A.14., if not previously submitted; and,

   c. a copy of the most recent month of logs required by Specific Condition No. A.15.

   d. a revised Operation and Maintenance (O&M) plan for particulate matter control. The revised O & M plan shall be similar to the existing one in current Title V Permit in terms of format and contents.

   The application shall be submitted to the Permitting Authority with a copy to HCEPC.
   [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

A. EU No. 007 – No. 6 AP Plant

This section of the permit addresses the following emissions unit.

EU ID No.	Emission Unit Description
007	No. 6 AP Plant - The Ammoniated Phosphate (AP) manufacturing plant has a maximum production capacity of 186.6 tons per hour (daily average) ammoniated phosphate production. Emissions from the reactors and granulator are controlled by the RG Spray Cyclonic Pre-Scrubber followed by the RGV Venturi Cyclonic Scrubber and followed by ammonia vaporizer. Emissions from grinding mills, screens, elevators, drag flight conveyor cyclone are controlled by the RGV Venturi Cyclonic Scrubber. Emissions from the dryer are controlled by the Dryer Venturi Cyclonic Scrubber followed by Dryer Tail Gas Scrubber. The dryer tail gas scrubber and ammonia vaporizer discharge through a common stack (North Stack). Emissions from cooler and miscellaneous points (Cooler Circuit) are controlled by Cooler Venturi Scrubber followed by Cooler Tail Gas Scrubber. The Cooler Tail Gas Scrubber discharges through a separate stack (South Stack). The dryer is fired with natural gas as the primary fuel, with No. 2 fuel oil as back-up at a design rate of 80 MMBtu/hr.

PERFORMANCE RESTRICTIONS

A.1. Federal Regulatory Requirements - This emission unit is subject to 40 CFR 63, Subpart BB – National Emission Standards for Hazardous Air Pollutants From Phosphate Fertilizer Production Plants, which is adopted by reference in Rule 62-204.800, F.A.C.
[Rule 62-204.800(11), F.A.C.]

A.2. Permitted Capacity - The process rate for the No. 6 AP Plant shall not exceed 2,060 tons per day of P_2O_5 input (85.8 tons per hour daily average) or 4,478 tons per day of AP (ammoniated phosphates) (186.6 tons per hour daily average) production.
[Rules 62-4.160(2), and 62-210.200, F.A.C., Definitions - (PTE); Air Construction Permit No. 0570008-044-AC/PSD-FL-336]

A.3. Authorized Fuels - The No. 6 AP Plant rotary dryer shall be fired with natural gas only, except that No. 2 fuel oil with a maximum sulfur content of 0.5% by weight is allowed as a back-up fuel. No. 2 fuel oil shall not be fired for more than 400 hours per year.
[Air Construction Permit AC29-227826]

A.4. Hours of Operation - The hours of operation are not limited (8760 hours per year).
[Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

EMISSIONSS STANDARDS

A.5. Particulate Matter (PM) Emission Standards - Particulate Matter (PM) emissions from this emissions unit shall not exceed the following rates listed below:

	Pounds per Ton of Product	Pounds per Hour	Tons per Year
PM Emissions Limitations	0.15	12.88	56.39

[Rules 62-296.700(4)(b) & 62-296.705(2)(a), F.A.C., Air Construction Permit No. 0570008-044-AC/PSD-FL-336]

A.6. Fluoride (F) Emission Standards - Fluoride (F) emissions from this emission unit shall not exceed the following rates listed below:

	Pounds F per Ton of 100% P_2O_5 input	Pounds per Hour	Tons per Year
F Emissions Limitations	0.035	3.00	13.16

[Rule 62-204.800, F.A.C., 40 CFR 63.622(a), and Air Construction Permit No. 0570008-044-AC/PSD-FL-336]

A.7. Visible Emissions (VE) Standards - Visible emissions shall not be equal to or exceed 20% opacity.
[62-296.320(4)(b)1., F.A.C.]

TESTING REQUIREMENTS

A.8. Initial Compliance Test - The emissions unit shall be tested to demonstrate initial compliance with the emissions standards for PM, F and VE. The initial tests shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup.
[Rules 62-4.070(3 and 62-297.310(7)(a)1, F.A.C.]

A.9. Test Requirements - Tests shall be conducted in accordance with the applicable requirements specified in Appendix D (Common Testing Requirements) of this permit.
[Rule 62-297.310, F.A.C.]

A.10. Test Method(s) - Required tests shall be performed in accordance with the following reference method(s):

Method(s)	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
5	Determination of Particulate Matter Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
13A	Determination of Total Fluoride Emissions from Stationary Sources – SPADNS –Zirconium Lake Method – 40 CFR 60, Appendix A.
13B	Determination of Total Fluoride Emissions from Stationary Source –Specific Ion Electrode Method – 40 CFR 60, Appendix A.

The above method(s) are described in Appendix A of 40 CFR 60 and are adopted by reference in Rule 62-204.800, F.A.C. No other method(s) may be used unless prior written approval is received from the Department.
[Rules 62-204.800 and 62-297.100, F.A.C.; and Appendix A of 40 CFR 60]

A.11. Fuel Analysis Requirement - If testing is conducted while firing No. 2 fuel oil in the dryer, compliance with the sulfur content requirement of Specific Condition A.3. shall be demonstrated during the test by submitting either of the following:

a. A Certificate of Fuel Oil Analysis from the fuel oil vendor for the fuel used during the compliance test; or,
b. A Certificate of Fuel Oil Analysis for a fuel oil sample taken during the compliance test.

[Rule 62-213.440(1), F.A.C.]

NOTIFICATION REQUIREMENTS

A.12. Test Notification - The permittee shall notify the Compliance Authority in writing at least 30 days prior to the date on which each formal compliance test is to begin. The notification must include the following information: the date, time, and location of each test; the name and telephone number of the facility's contact person who will be responsible for coordinating the test; and the name, company, and the telephone number of the person conducting the test.
[Rule 62-4.070(3), F.A.C.; 40 CFR 60.7(a)(6)]

{Permitting Note: The notification should also include the relevant emissions unit ID No, test method to be used, and pollutants to be tested.}

A.13. Notification of Operation Commencement - The permittee shall notify the Compliance Authority in writing of the date of commencing operation of the EU No. 007, after completing the construction authorized by this permit, no later than fifteen (15) days after that date. Commencing operation means setting into operation of any emissions unit for any purpose.
[Rules 62-4.070 and 62-210.200, F.A.C., (Definition of Commence Operation)]

RECORDS AND REPORTS

A.14. Test Reports - The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix D (Common Testing Requirements) of this permit.

A summary of the following production data shall be included in any compliance test report:
a. the production rate in tons per hour;
b. the raw material input rates in tons per hour, and;
c. the start and end time for the rate determination.

A summary of the following scrubbers' operating parameters during any compliance test shall be included in any compliance test report:

a. The scrubber identification;
b. Type of scrubber liquid;
c. Volumetric liquid flow rate (gpm), and;
d. Total gas scrubber pressure drop (inches water gauge).

[Rules 62-297.310(8) and 62-4.070(3), F.A.C.]

A.15. Daily Log - In order to document compliance with the specific conditions A.2., the permittee shall maintain the daily records of the following information:

a. Facility Name, Facility ID No. (0570008), Emission Unit ID No. (E.U. 007) and Description;
b. Date;
c. Product Mode (DAP or MAP);
d. When operating, Daily, record the hours of operation of the DAP/MAP production;
e. When operating, Daily, record the quantity, in tons, of the DAP/MAP production;
f. When operating, Daily, record the input rate, in tons/hour, of the DAP/MAP production;
g. When operating, Daily, record the material process input rate, in tons/hour of P_2O_5;

The daily log must be completed by the 3rd business day and shall be retained at the facility for a minimum of five (5) years and shall be made available to the Department and the Environmental Protection Commission of Hillsborough County (EPCHC) upon request.
[Rule 62-213.440(1), F.A.C.]

{Permitting Note - EU No. 007 remains subject to all valid conditions contained in the current Title V Air Operation permit.}