Florida Department of Environmental Protection

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

Rick Scott
Governor

Jennifer Carroll
Lt. 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. 1050059-068-AC
Permit Expires: 12/31/2013
Site Name : Riverview Facility
Minor Air Construction Permit
Project Name: Installation of coating oil ribbon blenders in the No. 5 granulation plant and No. 6 AP plant

This is the final construction permit, which authorizes the installation coating oil ribbon blenders in the No. 5 granulation plant and No.6 ammoniated phosphate (AP) plant in a phosphate fertilizer manufacturing facility.

Mosaic Fertilizer, LLC, Riverview Facility (Standard Classification No. 2874) is located in Hillsborough County at 8813 U.S. 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

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

DRAFT

_____ _____

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.

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

_____ _____

(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 diammonium phosphate (DAP) plants, two monoammonium phosphate (MAP) plants, three sulfuric acid plants, one material handling system, one auxiliary boiler, two animal feed plants, and a molten sulfur storage and handling system.

Project Description and Affected/Proposed Emission Units

This construction permit authorizes the installation of coating oil ribbon blenders in the No. 5 granulation plant and No. 6 AP Plant downstream of polishing screens and before the product belt conveyor. The current practice is to apply the coating oil into the rotary coolers at both plants. This project will modify the following emission units:

Facility ID No. 0570008	
ID No.	Emission Unit Description
007	No. 6 AP Plant
055	No. 5 Granulation 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. 0570008-063-AV.

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 Hillsborough County Environmental Protection Commission (HCEPC). The mailing address and phone number of the Local Air Program is:

   Hillsborough County Environmental Protection Commission
   Air Quality 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; and
   d. 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 the following units: EU 007 and EU 055.

[Permit Application dated 03/02/2011; 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 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 or 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 most recent compliance test report required by Specific Condition No. A.13. if not previously submitted;

    c. a copy of the most recent month of log required by Specific Condition No. A.14.; and,

    d. The permittee shall submit a revised Operation and Maintenance (O&M) plan for particulate matter control. The revised O & M plan should be similar to the existing one in terms of contents.

    The application shall be submitted to the Permitting Authority with a copy to HCEPC.
    [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. 007 – No. 6 AP Plant and E.U. No. 055 – No. 5 Granulation Plant

This section of the permit addresses the following emissions units.

ID No.	Emission Unit Description
007	The No. 6 ammoniated phosphate (AP) plant has a maximum production capacity of 186.6 tons per hour of ammoniated phosphate. Emissions from the reactors and granulator are controlled by the RGCV venturi scrubber followed by the RGCV tower tailgas scrubber and followed by ammonia vaporizer. Emissions from the dryer are controlled by the dryer venturi scrubber followed by dryer packed-tower tailgas scrubber. The dryer tailgas scrubber~~s~~ and vaporizer discharge through a common stack. Emissions from cooler and miscellaneous points are controlled by cooler venturi scrubber followed by cooler tailgas scrubber. The cooler tailgas scrubber discharges through a separate 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.
055	The ammoniated phosphate (AP) manufacturing plant (No. 5 Granulation Plant) has a maximum daily average production capacity of 156.6 tons/hr. AP is manufactured by reacting anhydrous ammonia and phosphoric acid in a sealed reaction tank and then by further adding ammonia to the ammoniated acid in a rotary reactor-granulator. The granulated un-sized AP exits the granulator and is dried in a rotary dryer. The dried material is then screened and the oversized and undersized material is recycled back to the granulator. The product is then cooled in a rotary drum cooler, screened, and sent to storage. Emissions from the process are controlled by three venturi scrubbers in parallel, then two up-flow packed-bed scrubbers exhausting into a common stack.

Emissions generated from the emission units are controlled by the venturi and packed bed scrubbers. De-dusting coating oil application ribbon blenders are being installed between the polishing screens and the product belt conveyors downstream of the rotary coolers of No. 5 Granulation Plant and No. 6 AP Plant to further control PM emissions.

PERFORMANCE RESTRICTIONS

A.1. Federal Regulatory Requirements: These emission units are subject to 40 CFR 60, Subpart V – Standards of Performance of Phosphate Fertilizer Industry: Diammonium Phosphate Plants; 40 CFR 63, Subparts BB and A– National Emission Standards for Hazardous Air Pollutants from Phosphate Fertilizer Production Plants and General Provisions, which are adopted by reference in Rule 62-204.800, F.A.C.
[Rule 62-204.800(8) and (11), F.A.C.]

A.2. Permitted Capacity:

a. 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 P_2O_5 input daily average) or 4,478 tons per day of AP (186.6 tons per hour daily average) production. The process rate for the No. 5 granulation plant shall not exceed 73.5 tons per hour P_2O_5 input (daily average) and 156.6 tons per hour (daily average) of AP production (dry basis).

b. The heat input rate for the No. 6 AP Plant rotary dryer shall not exceed 80 mmBtu/hr (daily average) and that of No. 5 granulation plant shall not exceed 40 mmBtu/hr (monthly average).

[Rule 62-210.200, F.A.C.; Definitions – (PTE); Air Construction Permit Nos. AC29-196763 and 0570008-044-AC/PSD-FL-336]

A.3. Authorized Fuel: The No. 6 AP Plant and No. 5 granulation plant rotary dryer each 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 more than 400 hours per year for each plant.
[Air Construction Permits AC 29-227826 and AC 29-238303]

A.4. Restricted Operation: The hours of operation are not limited for either plant (8,760 per year).
[Rules 62-210.200(PTE) and 62-4.070(3), F.A.C.]

EMISSIONS STANDARDS

A.5. Particulate Matter (PM) Emissions Standards: Particulate matter (PM) emissions from these emission units shall not exceed the following limits:

Emission Unit	Maximum	Allowable	Emissions
	Pounds per ton of product	Pounds per hour	Tons per year
007	0.15	12.88	56.39
055		12.8	56.1

[Rules 62-296.700 (4)(b) and 62-296.705(2)(a), F.A.C.; Air Construction Permits 0570008-044-AC/PSD-FL-336 and AC29-238303]

A.6. Fluoride (F) & Sulfur Dioxide (SO_2) Emission Standards: Fluoride (F) and Sulfur Dioxide (SO_2) emissions from these emission units shall not exceed the following limits:

Emission Unit	Pollutant	Maximum	Allowable	Emissions
		Pounds per ton of 100% P_2O_5 input/Equiv. P_2O_5 Feed	Pounds per hour	Tons per year
007	F	0.035[1]	3.0	13.16
055	F	0.06[2]	3.3	14.5
055	SO_2		12.7	2.6

[1] Pounds F per ton of 100% P_2O_5 input, and
[2] Pounds per ton of Eqiv. P_2O_5 Feed
[Rules 62-296.700 (4)(b) and 62-296.705(2)(a), F.A.C.; Air Construction Permits 0570008-044-AC/PSD-FL-336 and AC29-238303]

A.7. Visible Emission (VE) Standards: Visible emissions (VE) shall not exceed the following:
No. 5 Granulation Plant: 10% Opacity. No. 6 AP Plant: 20% opacity.
[Rule 62-296.705(2)(a), F.A.C.; Air Construction Permit AC29-196763, BACT determination dated November 25, 1991]

TESTING REQUIREMENTS

A.8. Initial Compliance Tests: The emission units shall be tested to demonstrate initial compliance with the emissions standards for PM, F and Opacity. The initial tests shall be conducted no later than 90 days after commencing operation of the coating oil ribbon blenders.
[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(7)(a)9., 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 Sources – 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]

NOTIFICATION REQUIREMENTS

A.11. Test Notification: The permittee shall notify the Compliance Authority in writing at least 15 days prior to any required tests. 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.
[Rules 62-4.070(3) and 62-297.310(7)(a)9., F.A.C.]
{*Permitting Note: The notification should also include the relevant emission unit ID No(s)., test method(s) to be used, and pollutants to be tested.*}

A.12. Notification of Operation Commencement: The permittee shall notify the Compliance Authority in writing of the date of commencing operation of each of two coating oil ribbon blenders, 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)]

RECORDS AND REPORTS

A.13. 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. The test reports shall include, at a minimum, the following conditions for the test period:

a. Type of fuel being fired;
b. Heat input rate (mmBtu/hr) and firing rate (Million cubic feet (MCF) per hour or gallons per hour;
c. Material process input rate (tons per hour P_2O_5) and production rate (tons per hour);
d. Pressure drop across each scrubber (inch water gauge, " w.g.) and liquid flow rate to each scrubber (gallon per minute, gpm); and
e. 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:
    i. A Certificate of Fuel Oil Analysis from the fuel oil vendor for the fuel used during the compliance test; or,
    ii. A Certificate of Fuel Oil Analysis for a fuel oil sample taken during the compliance test.

[Rules 62-4.070(3), 62-213.440(1) and 62-297.310(8), F.A.C.]

A.14. Records: A record shall be maintained to document, at a minimum, the following in order to show compliance with the specific conditions A.2. and A.3.:

Daily

a. Facility Name, Facility ID No. (0570008), Emission Unit ID Nos. (EU 007 and EU 055);
b. Date;
c. Production Mode (DAP or MAP);
d. When operating, record hours of operation of the DAP/MAP production;
e. When operating, record the quantity, in tons, P_2O_5 input and AP production;
f. When operating, record the process rate, in tons per hour, P_2O_5 input and AP production (daily average);
g. The quantity of natural gas and the quantity of No. 2 oil (MCF and gallons) utilized in the rotary dryer;
h. The sulfur content (percent, by weight) of No. 2 oil utilized in the rotary dryer. The sulfur content may be based upon vendor supplied as-delivered oil sulfur content information, or an oil analysis;
i. The total hours of rotary dryer operation using No. 2 oil;
j. Heat input rate to the rotary dryer, mmBtu/hr (daily average).

Daily record should be completed within five (5) business days.

Monthly

k. The total hours of rotary dryer operation using No. 2 oil for rolling consecutive 12-month period.

Monthly record should be completed by the 15th day of the following month.

The record shall be retained at the facility for a minimum of five (5) years and shall be made available to the Permitting and Compliance Authorities upon request.
[Rule 62-213.440(1), F.A.C.]

{Permitting Note: All other specific conditions associated with these E.U Nos. 007 and 055 in 0570008-063-AV remain unchanged.}