



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

FINAL PERMIT

PERMITTEE

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

Air Permit No. 0570008-075-AC
Permit Expires: 12/31/2015
Site Name: Riverview Facility
Minor Air Construction Permit
Project Name: Auxiliary Boiler
Replacement

Authorized Representative:
Mr. Larry Simpson, Plant Manager

This is the final air construction permit, which authorizes the installation of an auxiliary boiler (E.U. ID 112) that will replace the existing auxiliary boiler (E.U. ID 043). The project also includes minor maintenance related tasks such as repair or replacement of pumps, valves, piping, ducting and dampers, etc. 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 FINAL 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

Kelley M. Boatwright

05/07/2013

Kelley M. Boatwright
District Air Program Administrator
Southwest District

Effective Date

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.

Rhonda Hughes

May 7, 2013

(Clerk)

(Date)

SECTION 1. GENERAL INFORMATION (FINAL)

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 is for the installation of an auxiliary boiler (E.U. ID 112) that will replace the facility's existing auxiliary boiler (E.U. ID 043). The facility's existing auxiliary boiler has been permanently shut down and will be dismantled. The auxiliary boiler that will be installed will have a maximum design heat capacity of 112 MMBTU Btu/hr.

This project also includes minor maintenance related tasks such as repair or replacement of pumps, valves, piping, ducting and dampers, etc.

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

Facility ID No. 0570008	
EU ID No.	Emission Unit Description
112	Auxiliary Boiler

SECTION 1. GENERAL INFORMATION (FINAL)

***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

Reference with Permit No. 0570008-066-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 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. 40 CFR 60, Subpart Db, Standards of Performance for Industrial – Commercial – Institutional Steam Generating Units;
 - f. Appendix F. Best Available Control Technology (BACT) Determination; and
 - g. Appendix G. 40 CFR 63, Subpart DDDDD – National Emissions Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters.
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.]

SECTION 2. ADMINISTRATIVE REQUIREMENTS (FINAL)

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):
- 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.
 - 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. 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:
- 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/>;
 - a copy of the most recent compliance test report required by Specific Condition No. A.13., if not previously submitted; and,
 - a copy of the most recent month of logs required by Specific Condition No. A.14.
- [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (FINAL)

A. EU No. 112 – Auxiliary Boiler

This section of the permit addresses the following emissions unit.

EU ID No.	Emission Unit Description
112	<u>Auxiliary Boiler</u> . The 112 MMBtu per hour, Model No. KD3-68 L auxiliary boiler manufactured by INDECK POWER EQUIPMENT COMPANY is located at the sulfuric acid complex. The auxiliary boiler is equipped to fire on natural gas only and will be used as a limited-use boiler operating at ≤ 10% annual capacity factor.

PERFORMANCE RESTRICTIONS

A.1. Federal Regulatory Requirements - This emissions unit is subject to the applicable provisions of 40 CFR 60, Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units, which is adopted by reference in Rule 62-204.800, F.A.C. This emissions unit is also subject to the applicable provisions of 40 CFR 63, Subpart DDDDD, National Emissions Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, which is adopted by reference in Rule 62-204.800, F.A.C.

[Rules 62-204.800(8)(b) and 62-204.800(11)(b), F.A.C.]

{Permitting Note – The provisions of 40 CFR 60, Subpart Db and 40 CFR 63, Subpart DDDDD are attached as part of this permit in Appendix E and Appendix G, respectively.}

A.2. Permitted Capacity -

a. Hourly Fuel Usage Rate: The following hourly usage rate is for the purpose of emissions testing only. The permittee is not required to show compliance with this rate during normal operation - The maximum natural gas usage rate is 109,780 cu ft/hour (@ 1020 Btu/SCF, 112 MMBTU/hour).

b. Annual Heat Input Capacity: The boiler is limited to a maximum annual heat input of 98,112 MMBtu/year (≤ 10% annual capacity factor) for a 12-month rolling average period. This annual capacity is based on the total heat input from the natural gas operation.

[Rule 62-210.200(PTE), F.A.C.; as requested by the applicant in the Construction Permit Application dated 2/18/2013]

{Permitting Notes:

(1) In the application dated 2/18/2013, the applicant requested a ≤ 10% annual capacity factor for the boiler with a maximum design heat input capacity of 112 MMBTU/ hour. This is equivalent to an annual capacity of 98,112 MMBTU/year for a 12-month rolling average period. This makes the boiler a limited-use boiler.

(2) See Appendix D, Condition 1, for Operation Rate during Testing requirements. Annual Capacity Factor was requested by the applicant.}

A.3. Authorized Fuel - The boiler is permitted to use natural gas only as firing fuel. Natural gas shall have a maximum sulfur content of 0.05%, by weight.

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (FINAL)

A. EU No. 112 – Auxiliary Boiler

[Rule 62-210.200(PTE), F.A.C.; Best Available Control Technology (BACT) Determination dated April 12, 2013]

- 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.]

EMISSIONS STANDARDS

- A.5. Visible Emissions Standard** - Visible emissions from the boiler stack shall not exceed 20% opacity, except for one six-minute period per hour during which the opacity shall not exceed 27%.
[Rule 62-296.406(1), F.A.C.; 40 CFR 60.42b (Subpart Db)]

{Permitting Note: 40 CFR 60, Subpart Db SO₂ Emissions Limit - Compliance with the BACT fuel sulfur limit of 0.05% will also satisfy the “sulfur dioxide emissions standard contained in 40 CFR 60.42b(k)(2) (Subpart Db)” .}

TESTING REQUIREMENTS

- A.6. Initial Compliance Tests** - The auxiliary boiler shall be tested to demonstrate initial compliance with the visible emissions standards and to demonstrate the boiler’s maximum capacity per 40 CFR 60.46b(g). The initial tests shall be conducted within 60 days after achieving the maximum gas firing rate at which the emissions unit will be operated, but not later than 180 days after initial startup.
[Rules 62-4.070(3), F.A.C.; 40 CFR 60.8 and 60.46b(g)]
- A.7. Compliance Tests After Initial Testing** - The permittee is required to perform a visible emissions test once every five years prior to permit renewal.
[Rules 62-297.310(7) and 62-4.070(3), F.A.C.]
- A.8. Compliance with Tune-up** – The auxiliary boiler (limited-use boiler) must complete a tune-up according the manufacturer’s specifications once every 5 years prior to permit renewal.
[40 CFR 63.7500(c) and Rule 62-4.070(3), 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
9	Visual Determination of the Opacity of Emissions from Stationary Sources (The minimum test duration shall be sixty minutes)

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (FINAL)

A. EU No. 112 – Auxiliary Boiler

The above method is described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods 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 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.12. Notification of Operation Commencement: The permittee shall notify the Compliance Authority in writing of the date of commencing operation of the EU No. 112, 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.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.
[Rule 62-297.310(8), F.A.C.]

A.14. Daily and Monthly Records: The permittee shall maintain the following records for the auxiliary boiler:

a. Daily Records

- (1) Facility Name, Emission Unit No. 112 and Date;
- (2) Natural gas usage record:
 - (a) the hours of operation of the boiler, and
 - (b) the amount of natural gas combusted in the boiler.

b. Monthly Records

- (1) Facility Name, Emission Unit No. 112, Month and Year.
- (2) Natural gas usage record: the hours of operation for the most recent 12-month rolling average period.
- (3) The annual heat input calculated on a 12-month rolling average basis with a new annual heat input calculated at the end of each calendar month.

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (FINAL)

A. EU No. 112 – Auxiliary Boiler

- (4) The annual capacity factor calculated on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.

Daily records shall be completed by the end of the 5th business day and monthly records shall be completed by the end of the following month.

[Rules 62-213.440(1)(b)2.b., 62-4.070(3) and 62-204.800(8)(b), F.A.C.; 40 CFR 60.49b(d)(Subpart Db)]

- A.15. Natural Gas Usage Documentation** – Compliance with the natural gas’s 0.05%, by weight, sulfur content limitation specified in Specific Condition No. A.3., shall be demonstrated as follows: The facility shall obtain and maintain fuel receipts (such as a current, valid purchase contract, tariff sheet, or transportation contract) from the fuel supplier that certify that the gaseous fuel meets the definition of natural gas as defined in 40 CFR 60.41b and the applicable sulfur limit.

[Rules 62-213.440(1)(b)2.b., 62-4.070(3) and 62-204.800(8)(b), F.A.C.; 40 CFR 60.49b(r) (40 CFR 60, Subpart Db)]

- A.16. Boiler Tune-up Documentation** – Compliance with the boiler tune-up specified in Specific Condition No. A.8. shall be demonstrated as follows: The facility shall conduct the tune-up per manufacturer’s specification and maintain record of the tune-up. A copy of the tune-up record shall be submitted along with the permit renewal application.

[Rules 62-213.440(1)(b)2.b., 62-4.070(3) and 62-204.800(8)(b), F.A.C.; 40 CFR 63.7500(c) (40 CFR 63, Subpart DDDDD)]