



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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Secretary

DRAFT PERMIT

PERMITTEE

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

Air Permit No. 1050059-073-AC
Permit Expires: 12/31/2014
Mosaic New Wales Facility
Minor Air Construction Permit
Project Name: SAP No. 5 Modification

Authorized Representative:

Mr. Ghani Baig, Environmental Manager

This is the final construction permit to replace the Drying Tower Mist Eliminator; 0A and 4A Superheaters; 3B, 4A and 4C Economizers; Interpass Absorption (IPA) Tower Bottom; IPA Acid Cooler and Final Absorption Tower (FAT) Mist Eliminator and carry out necessary repairs to the stack in the Sulfuric Acid Plant (SAP) No. 5, EU ID No. 044. The proposed work will be conducted at the Mosaic Fertilizer, LLC, New Wales Facility (Standard Classification No. 2874). The facility is located in Polk County at 3095 Highway 640, Mulberry, Florida. The UTM coordinates are Zone 17, 396.67 km East, and 3079.30 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

SECTION 1. GENERAL INFORMATION (DRAFT)

FACILITY AND PROJECT DESCRIPTION

Existing Facility

This facility is a phosphate fertilizer manufacturing complex. The fertilizer complex processes phosphate rock into several different fertilizer products and animal feed ingredients. This is accomplished by reacting the phosphate rock with sulfuric acid to produce phosphoric acid and then converting the phosphoric acid to fertilizer and animal feed ingredient products. This facility consists of five double absorption sulfuric acid plants; three phosphoric acid plants; a phosphoric acid clarification and storage area; three diammonium phosphate (DAP) plants; a monoammonium phosphate (MAP) plant; a granular monoammonium phosphate (GMAP) plant; an animal feed ingredients (AFI) plant; a multifos production plant; a molten sulfur storage & handling system; a limestone storage silo/rock grinding operation; and phosphogypsum stacks.

Project Description and Affected Emission Unit

This construction permit is for the replacement of the Drying Tower Mist Eliminator; 0A and 4A Superheaters; 3B, 4A and 4C Economizers; Interpass Absorption (IPA) Tower Bottom; IPA Acid Cooler and Final Absorption Tower (FAT) Mist Eliminator and carry out necessary repairs to the stack in the Sulfuric Acid Plant (SAP) No. 5, EU ID No. 044. This project will modify the following emission unit:

Facility ID No. 1050059	
ID No.	Emission Unit Description
044	Sulfuric Acid Plant No. 5

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

Replaces Permit No. 1050059-064-AC

**SECTION 2. ADMINISTRATIVE REQUIREMENTS AND FACILITY-WIDE SPECIFIC
CONDITIONS (DRAFT)**

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 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:
- 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 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 emission 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

**SECTION 2. ADMINISTRATIVE REQUIREMENTS AND FACILITY-WIDE SPECIFIC
CONDITIONS (DRAFT)**

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 {change to "10 years" if project increases design capacity or the potential to emit a PSD pollutant} 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 {change to "10-year period" if project increases design capacity or potential to emit PSD pollutant} 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 sulfur dioxide (SO₂), sulfuric acid mist (SAM) and nitrogen oxides (NO_x) emissions for the emission unit EU 044.
[Permit Application dated 04/19/2012; Rules 62-212.300(1)(e) and 62-210.370, F.A.C.]

**SECTION 2. ADMINISTRATIVE REQUIREMENTS AND FACILITY-WIDE SPECIFIC
CONDITIONS (DRAFT)**

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.16., if not previously submitted; and,
 - c. a copy of the most recent month of logs required by Specific Condition No. A.17.

[Rules 62-4.030, 62-4.050, 62-4.220 and Chapter 62-213, F.A.C.]

SECTION 3. EMISSION UNIT SPECIFIC CONDITIONS (DRAFT)

A. EU No. 044 – Sulfuric Acid Plant No. 5

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
044	Sulfuric Acid Plant No. 5 consists of a double absorption system. The plant produces 2,900 tons per day of sulfuric acid (100% H ₂ SO ₄ basis). Sulfur dioxide emissions are controlled by the final absorption tower. Acid mist emissions are controlled by a mist eliminator section in the final absorption tower. The plant is equipped with a continuous emission monitor (CEM) that assures continuous compliance monitoring of SO ₂ emissions.

PERFORMANCE RESTRICTIONS

- A.1. Federal Regulatory Requirements: This emission unit is subject to 40 CFR 60, Subpart H – Standards of Performance for Sulfuric Acid Plants, which is adopted by reference in Rule 62-204.800, F.A.C.
[Rule 62-204.800(8), F.A.C.]
- A.2. Permitted Capacity: The sulfuric acid production at Sulfuric Acid Plant No. 5 shall not exceed 2,900 tons per day of 100% H₂SO₄.
[Rule 62-210.200(PTE), F.A.C.; and Construction Permit AC 53-192221]
{Permitting note: See Appendix D, Condition 1, for Operation Rate during Testing requirements.}
- A.3. Operating Hours: The hours of operation are not limited (8,760 hours per year).
[Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

EMISSIONS STANDARDS

- A.4. Sulfur dioxide (SO₂) Emissions Limit: Sulfur dioxide (SO₂) emissions shall not exceed any of the following:
 - a. 4 pounds per ton of 100% H₂SO₄ produced;
 - b. 483.3 pounds per hour; and
 - c. 2117 tons per year.[Rule 62-296.402, F.A.C.; 40 CFR 60 Subpart H and Construction Permit AC53-192221]
- A.5. Sulfuric Acid Mist (SAM) Emission Limit: Sulfuric Acid Mist (SAM) emissions shall not exceed any of the following:
 - a. 0.15 pounds per ton of 100% H₂SO₄ produced;
 - b. 18.1 pounds per hour; and
 - c. 79.4 tons per year.[Rule 62-296.402, F.A.C.; 40 CFR 60 Subpart H and Construction Permit AC53-192221]
- A.6. Nitrogen Oxides (NO_x) Emissions Limit: Nitrogen Oxides (NO_x) emissions shall not exceed any of the following:
 - a. 0.12 pounds per ton of 100% H₂SO₄ produced
 - b. 14.5 pounds per hour; and

SECTION 3. EMISSION UNIT SPECIFIC CONDITIONS (DRAFT)

A. EU No. 044 – Sulfuric Acid Plant No. 5

c. 63.5 tons per year.
[Construction Permit AC53-192221]

- A.7. Visible Emissions (VE) Limit: Visible emissions (VE) shall not be equal to or greater than 10% opacity.
[Rule 62-296.402, F.A.C.; 40 CFR 60 Subpart H]

TESTING REQUIREMENTS

- A.8. Initial Compliance Tests: The emissions unit shall be tested to demonstrate initial compliance with the emissions standards for SO₂, SAM, NO_x and visible emissions (VE). The initial test shall be conducted not later than 90 days after initial operation of the replaced Drying Tower Mist Eliminator, 0A and 4A Superheaters, 3B, 4A and 4C Economizers, Interpass Absorption (IPA) Tower Bottom, IPA Acid Cooler and Final Absorption Tower (FAT) Mist Eliminator and the stack after some necessary repairs.
[Rules 62-4.070(3) and 62-297.310(7)(a)1, F.A.C.]
- A.9. Compliance Tests After Initial Testing: During each federal fiscal year (October 1st to September 30th), the emissions unit shall be tested to demonstrate compliance with the emissions standards for SO₂, SAM and VE. NO_x emissions are to be tested every five years prior to permit renewal (see Specific Condition A.10).
[Rule 62-297.310, F.A.C.]
- A.10. Tests Prior to Permit Renewal: Within the 12-month period prior to but not later than 270 days prior to the expiration date of the facility's Title V Air Operation Permit, the emission unit shall be tested to demonstrate compliance with the emissions standard for NO_x.
[Rule 62-297.310(7), F.A.C.]
- A.11. 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.12. 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
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources (Instrumental Analyzer Procedure)
8	Determination of Sulfuric Acid Mist and Sulfur Dioxide emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources

SECTION 3. EMISSION UNIT SPECIFIC CONDITIONS (DRAFT)

A. EU No. 044 – Sulfuric Acid Plant No. 5

The above methods are 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]

MONITORING REQUIREMENTS

- A.13. Continuous Emission Monitoring (CEM): A continuous emission monitoring system for the measurement of SO₂ shall be calibrated, maintained and operated as specified in 40 CFR 60.84. The span value of the continuous monitor shall be set at 1000 ppm.
[Rules 62-204.800(8) and 62-296.402(4), F.A.C.; 40 CFR 60.84]

NOTIFICATION REQUIREMENTS

- A.14. 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.

{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.}

[Rules 62-4.070(3) and 62-297.310(7)(a)9., F.A.C.]

- A.15. Notification of Operation Commencement: The permittee shall notify the Compliance Authority in writing of the date of commencing operation of the EU No. 044 after completing the modifications 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.
[Rule 62-4.070, F.A.C., and Rule 62-210.200, F.A.C., (Definition of Commence Operation)]

RECORDS AND REPORTS

- A.16. 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.17. Daily Log: In order to document compliance with the specific conditions A.2. and A.4., the permittee shall maintain the daily records of the following information:
- the facility and Emission Unit ID Number;
 - the hours of operation for the plant;
 - the daily acid production (in tons as 100% H₂SO₄);
 - the daily average pounds/ton SO₂ emissions;

SECTION 3. EMISSION UNIT SPECIFIC CONDITIONS (DRAFT)

A. EU No. 044 – Sulfuric Acid Plant No. 5

- e. a conversion factor shall be established for the purpose of converting sulfur dioxide monitoring data into units of the applicable standard (lb/ton). The conversion factor shall be determined, at a minimum, three times daily in accordance with 40 CFR 60.84(b). The lb/ton conversion factor determined and calculation procedure may be incorporated into electronic report programming or software. The lb/ton conversion factor determination and calculation procedure shall be accessible to the Department and made available upon request.

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.

[Rule 62-213.440(1)(b)2.b., F.A.C.; 40 CFR 60.84(b) & (c)]

{Permitting Note: Specific Condition Nos. A.2., A.4., A.5., A.6., A.7., and A.17. are taken directly from the facility's current Title V Air Operation Permit 1050059-069-AV and are included here for the purpose of convenience. All other valid conditions associated with this E.U. No. 044 contained in 1050059-069-AV remain unchanged}.