



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

RICK SCOTT
GOVERNOR

CARLOS LOPEZ-CANTERA
LT. GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

FINAL PERMIT

PERMITTEE

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

Air Permit No. 1050046-039-AC
Permit Expires: 12/31/2017
Bartow Facility
Minor Air Construction Permit
Project: SAP 5 Miscellaneous Modifications

Authorized Representative:
Mr. George Katzaras, General Manager

This is the final construction permit to carry out the miscellaneous modifications in the Sulfuric Acid Plant (SAP) No. 5, Emissions Unit (EU) ID No. 033. The proposed work will be conducted at the Mosaic Fertilizer, LLC, Bartow Facility (Standard Classification No. 2874). The facility is located in Polk County at 3200 Highway 60 West, Bartow, Florida. The UTM coordinates are Zone 17, 409.77 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

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

SECTION 1. GENERAL INFORMATION (FINAL)

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, two auxiliary boilers, and a molten sulfur storage and handling system and a phosphogypsum stack.

The existing facility consists of the following emissions units (EUs).

Facility ID No. 1050046	
EU No.	Brief Description
<i>Regulated Emissions Units</i>	
001	No. 3 Fertilizer (DAP/MAP) Plant
002	No. 4 Fertilizer Shipping Plant
004	No. 3 Fertilizer Shipping Plant
010	Phosphoric Acid Plant (No. 4 -- V-Train, and No. 5 -- U-Train)
012	No. 4 Sulfuric Acid Plant
021	No. 4 Fertilizer (DAP) Plant
032	Phosphoric Acid Plant (West)
033	No. 5 Sulfuric Acid Plant
045	Molten Sulfur System -- Stack 45 from West 200 ton molten sulfur pit
046	Molten Sulfur System -- Vent 44 and 44A from 6,000 ton tank
047	Molten Sulfur System -- Vent 43, 43A, 43B, 43C and 43D from 3,000 ton tank
050	Molten Sulfur System -- Stack 47 from East 300 ton molten sulfur pit
051	Package Watertube Boiler
052	Bartow Phosphogypsum Stack
073	NG Fired 75 mmBtu/hr boiler at Greenbay
<i>Unregulated Emissions Units and Activities</i>	
053	Facility Wide Fugitive Emissions
061	Waste Heat Boiler/Flash Tank Discharge
062	Tank Truck Loading/Unloading of Sulfuric Acid
063	Industrial Cooling Towers
064	Process and Product Storage Tanks
065	Auxiliary Power Generators and Diesel Fuel Tanks
066	Molten Sulfur Fire and Spill Cleanup
067	VOC From Solvent Cleaning of Small Parts
068	Welding, Grinding, and Cutting Metal from Maintenance Vehicles

SECTION 1. GENERAL INFORMATION (FINAL)

069	Fugitive Dust/Exhaust Emissions From Maintenance Vehicles
070	Miscellaneous Painting and Relining Rubber-Lined Vessels
071	Vehicle Fleet Fuel Storage Tanks
072	Sulfuric Acid Plant Catalyst Removal and Classifying
079	Green Bay Phosphogypsum Stacks I & II

Project Description and Affected/Proposed Emission Units

This project is to carry out miscellaneous modifications in the sulfuric acid plant (SAP) 5, EU ID # 033 as detailed below:

- Replace the Interpass Absorption (IPA) Tower Packing Material.
- Replace IPA Tower Mist Eliminator.
- In addition to the items listed above, minor maintenance related tasks may be carried out during the plant turnaround, such as repair or replace pumps, valves, blowers, piping, ducting, and dampers, etc.

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

EU ID No.	Emissions Unit Description
033	No. 5 Sulfuric Acid 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 (HAPs).
- 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 62-213, 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

This permit References with current Title V Permit No. 1050046-038-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 Office's Air and Solid Waste Permitting Program. The mailing address and phone number is:

Florida Department of Environmental Protection
Southwest District Office
Air and Solid Waste Permitting Program
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926
Telephone: 813-470-5700

All documents related to applications for permits shall be submitted to the above address.

2. Compliance Authority - The compliance authority for this project is the Florida Department of Environmental Protection (Department), Southwest District Office's Compliance Assurance Program. The mailing address and phone number is:

Florida Department of Environmental Protection
Southwest District Office
Compliance Assurance Program
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926
Telephone: 813-470-5700

All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the above address.

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

SECTION 2. ADMINISTRATIVE REQUIREMENTS (FINAL)

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 - 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 SO₂ and SAM emissions for the Emissions Unit No. 033.

[Permit Application dated 10/13/2014; Rules 62-212.300(1)(e) and 62-210.370, F.A.C.]

SECTION 2. ADMINISTRATIVE REQUIREMENTS (FINAL)

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 or 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 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:
- 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 initial compliance test report required by Specific Condition No. A.16, if not previously submitted.

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

SECTION 3. EMISSION UNIT SPECIFIC CONDITIONS (FINAL)

A. EU No. 033: N.5 Sulfuric Acid Plant

This section of the permit addresses the following emissions unit (EU).

EU ID No.	Emissions Unit Description
033	Sulfuric Acid Plant (SAP) No. 5: Sulfur dioxide emissions from the sulfuric acid plant No. 5 is controlled by a dual absorption tower, and acid mist is controlled by high volume (HV) and high efficiency (HE) mist eliminators. This plant produces a maximum of 2600 tons per day of sulfuric acid (100% H ₂ SO ₄ basis).

PERFORMANCE RESTRICTIONS

- A.1.** Federal Regulatory Requirements - This emissions unit is subject to the requirement of the federal regulation: 40 CFR 60, Subpart H—Standards of Performance for Sulfuric Acid Plants, adopted and incorporated by reference in Rule 62-204.800, F.A.C.
[Rule 62-204.800(8)11., F.A.C. and 40 CFR 60, Subpart H]
- A.2.** Restricted Operation - The hours of operation are not limited (8,760 hours per year).
[Rules 62-4.070(1) & (3) and 62-210.200 (Definitions – Potential to Emit (PTE)), F.A.C.]

EMISSIONS STANDARDS

- A.3.** Visible emissions from this emissions unit shall not be equal to or greater than 10% opacity. The visible emissions test shall be conducted by a certified observer and be a minimum of thirty minutes in duration, unless otherwise specified. The test observation period shall include the period during which the highest opacity can reasonably be expected to occur.
[Rule 62-204.800(7)(b)(10)., F.A.C., Rule 62-297.310(4)(a)(2), and 40 CFR 60.83(a)(2)]
- A.4.** Sulfur dioxide emissions from this emissions unit shall not exceed any of the following:
a. 4 pounds per ton of 100% H₂SO₄ produced;
b. 433.3 pounds per hour;
c. 1898 tons per year.
[Rule 62-204.800(7)(b)10, F.A.C., 40 CFR 60.82(a); Air Construction Permit AC53-271436/PSD-FL-229]
- A.5.** Sulfuric Acid Mist (SAM) emissions from this emissions unit shall not exceed any of the following:
a. 0.15 pounds per ton of 100% H₂SO₄ produced;
b. 16.25 pounds per hour;
c. 71.2 tons per year.
[Rule 62-204.800(7)(b)10, F.A.C., 40 CFR 60.83(a), Air Construction Permit AC53-271436/PSD-FL-229]
- A.6.** Nitrogen oxides emissions from this emissions unit shall not exceed any of the following:
a. 0.12 pounds per ton of 100% H₂SO₄ produced;
b. 13.0 pounds per hour;
c. 57.0 tons per year.
[Air Construction Permit AC53-271436/PSD-FL-229]

SECTION 3. EMISSION UNIT SPECIFIC CONDITIONS (FINAL)

A. EU No. 033: N.5 Sulfuric Acid Plant

COMPLIANCE TESTING REQUIREMENTS

- A.7. Initial Compliance Tests** - The emissions unit shall be tested to demonstrate initial compliance with the emissions standards for SO₂, SAM, NO_x and VE. The initial tests shall be conducted no later than 60 days after initial operation of the emissions unit after the completion of the modifications.
[Rules 62-4.070(3) and 62-297.310(7)(a)1, F.A.C.]
- A.8. 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.
[Rule 62-297.310, F.A.C.]
- A.9. NO_x Compliance Testing** - Nitrogen Oxide (NO_x) emissions are to be tested every five years prior to 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 emissions unit shall be tested to demonstrate compliance with the emissions standards for NO_x.
[Rule 62-297.310(7), F.A.C.]
- A.10. Compliance Test Requirements** - Compliance 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.11. Compliance Test Method(s)** - Required compliance 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
8	Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources

The above methods are described in Appendix A of 40 CFR 60 and are 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.

[Rule 62-204.800, F.A.C.; Appendix A of 40 CFR 60]

MONITORING REQUIREMENTS

- A.12. 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 of SO₂.
[Rules 62-204.800(8) and 62-296.402(4), F.A.C.; 40 CFR 60.84]

SECTION 3. EMISSION UNIT SPECIFIC CONDITIONS (FINAL)

A. EU No. 033: N.5 Sulfuric Acid Plant

NOTIFICATION REQUIREMENTS

A.13. 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. 033 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.

[Rules 62-4.070, and 62-210.200, F.A.C., (definition of Commence Operation)]

RECORDKEEPING AND REPORTING REQUIREMENTS

A.16. Compliance Test Reports - The permittee shall prepare and submit reports for all required compliance tests in accordance with the requirements specified in Appendix D (Common Testing Requirements) of this permit.

[Rule 62-297.310(8), F.A.C.]

{Permitting Note - EU No. 033 remains subject to all valid conditions contained in the current Title V Air Operation permit.}