



Florida Department of Environmental Protection

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PERMITTEE

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

Authorized Representative:
Mr. Joseph Kline, General Manager

Air Permit No. 1050059-111-AC
Permit Expires: May 17, 2019
Minor Air Construction Permit
New Wales Facility
Phosphoric Acid Plants East, West, & No. 3, Sludge to Evaporators
Polk County, Florida

PROJECT

This is the final air construction permit, which authorizes the installation of piping to transfer acid sludge to evaporators at the Phosphoric East, West & No. 3 Acid Plants (E.U. ID Nos. 008, 017 & 039, respectively). The proposed work will be conducted at the existing New Wales Facility, which is an existing phosphate fertilizer manufacturing facility categorized under Standard Industrial Classification No. 2874. The existing facility is in Polk County near 3095 Highway 640, Mulberry, Florida. UTM coordinates are: Zone 17, 396.7 km East and 3079.3 km North; Latitude: 27° 50'03" North and Longitude: 82°02'57" West.

This final permit is organized into 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.

STATEMENT OF BASIS

This air pollution construction 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 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 Tallahassee, Florida

For:
Syed Arif, P.E., Program Administrator
Office of Permitting and Compliance
Division of Air Resource Management
SA/dlr/sms

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination and Final Permit) 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.

Mr. Joseph Kline, Mosaic Fertilizer, LLC: joseph.kline@mosaicco.com

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Ms. Lynn Searce, DEP OPC: lynn.searce@dep.state.fl.us

Ms. Ana Oquendo-Vazquez, U.S. EPA Region 4: oquendo.ana@epa.gov

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.

PERMIT

FACILITY DESCRIPTION

This existing 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 molten sulfur storage & handling system; a limestone storage silo/rock grinding operation; and a phosphogypsum stack. Also at the facility are miscellaneous unregulated and insignificant emission units and/or activities.

A summary of the existing emission units at the facility is given in table below.

E.U. ID No.	Brief Description
<i>Regulated Emissions Units</i>	
002	No. 1 Sulfuric Acid Plant
003	No. 2 Sulfuric Acid Plant
004	No. 3 Sulfuric Acid Plant
042	No. 4 Sulfuric Acid Plant
044	No. 5 Sulfuric Acid Plant
008	Phosphoric Acid Plant (East)
017	Phosphoric Acid Plant (West)
039	Phosphoric Acid Plant No. 3
053	Phosphoric Acid Clarification and Storage Area
048	30% Clarification Area (Area 10)
009	DAP Plant No. 1
045	DAP Plant No. 2 - East Train
046	DAP Plant No. 2 - West Train
011	MAP Prill Plant
055	MAP Plant Cooler
015	Animal Feed Ingredients (AFI) Shipping/Truck Loadout
023	AFI Storage Silos (3)-North Side
024	AFI Storage/Shipping/Rail Car Loading
025	AFI Limestone Storage Silos (2)
026	AFI Silica Storage Bin
027	AFI Granulation Plant
086	AFI Defluorination Batch Tanks
028	AFI Storage Silos (3) - South Side
052	AFI Limestone Feed Bin
030	Soda Ash Unloading System

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E.U. ID No.	Brief Description
060	7,500 Ton Rail Storage Molten Sulfur Storage Tank
062	15,000 Ton Molten Sulfur Storage Tank
063	1,500 Ton Truck Unloading Pit, Sulfur Pit (North)
067	1,500 Ton Truck Unloading Pit, Sulfur Pit Front Vent
068	1,500 Ton Truck Unloading Pit, Sulfur Pit Rear Vent
064	350 Ton Truck Unloading Pit, Sulfur Pit (South)
069	350 Ton Truck Unloading Pit, Sulfur Pit Vent
065	800 Ton Railcar Unloading Pit
066	200 Ton Molten Sulfur Transfer Pit
080	1 Molten Sulfur Loading Station
070	Limestone Storage Silo/Rock Grinding
071	Phosphogypsum Stack
078	GMAP Plant
087	Existing Emergency CI RICE \leq 500 HP
090	Prilled Sulfur Transfer
091	Sulfur Melter
092	Concrete Batch Plant
093	New Emergency CI ICE
<i>Unregulated Emissions Units and Activities (see Appendix U, List of Unregulated Emissions Units and/or Activities)</i>	
072	<p>Facility-Wide Fugitive Emissions</p> <ul style="list-style-type: none"> - SO₂, SO₃, SAM and NO_x emissions from the 1, 2, 3, 4 and 5 Sulfuric Acid Plants (SAPs) - Fluoride emissions from the Phosphoric Acid Plants (PAPs) East and West and No. 3 PAP - Fluoride, NH₃, PM emissions from Diammonium Phosphate (DAP), Monoammonium Phosphate (MAP) and Granular Monoammonium Phosphate (GMAP) Plants. - Hydrogen Fluoride (HF) emissions from the Phosphogypsum Stack and Cooling Pond <p><i>Note: For this emission unit, Annual Operation Report (AOR) emissions estimates are required only for Hydrogen Fluoride emissions from the Phosphogypsum Stack and Cooling Pond.</i></p>
012	GMAP Plant Storage Building

PROPOSED PROJECT

The proposed project is for the installation of piping to transfer acid sludge to evaporators at the Phosphoric Acid East, West & No. 3 Acid Plants (E.U. ID Nos. 008, 017 & 039, respectively).

Details of the project are provided in the application and the Technical Evaluation & Preliminary Determination.

REGULATORY CLASSIFICATION

- Title III: The facility is a major source of hazardous air pollutants (HAP).
- Title IV: The facility does not operate units subject to the acid rain provisions of the Clean Air Act.

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- Title V: The facility is a Title V major source of air pollution in accordance with Chapter 62-213, Florida Administrative Code (F.A.C.).
- PSD: The facility is a Prevention of Significant Deterioration (PSD)-major stationary source in accordance with Rule 62-212.400, F.A.C.
- NSPS: The facility operates units subject to the New Source Performance Standards (NSPS) of 40 CFR 60.
- NESHAP: The facility operates units subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) of 40 CFR 61 and 63.

SECTION II. REQUIREMENTS

1. Permitting Authority: The Permitting Authority for this project is the Office of Permitting and Compliance (OPC) in the Division of Air Resource Management of the Department. The mailing address for the OPC is 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. All documents related to applications for permits to operate an emissions unit shall be submitted to the OPC Section.
2. Compliance Authority: All documents related to compliance activities, such as reports, tests, and notifications, shall be submitted to the Compliance Authority. The Compliance Authority is listed on the cover page of the Title V air operation permit.
3. Appendices: The following Appendices are attached as part of this permit:
 - a. Appendix A. Citation Formats and Definitions;
 - 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: No emissions unit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
7. Source Obligation:
 - (a) Authorization to construct shall expire if construction is not commenced within 18 months after receipt of the permit, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. This provision does not apply to the time period between construction of the approved phases of a phased construction project except that each phase must commence construction within 18 months of the commencement date established by the Department in the permit.
 - (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 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
 - (c) 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. Construction: This permit authorizes the Project and the initial operation to determine compliance with Department rules. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Department's Office of Permitting and Compliance prior to the expiration of this permit. [Rules 62-210.300(1), 62-4.070(4) 62-4.080, and 62-4.210, F.A.C.]

SECTION II. REQUIREMENTS

PSD AVOIDANCE REQUIREMENTS

{Permitting Note: As part of this proposed project aggregated with another project, fluoride (F) emissions were calculated to be below the PSD SER of 3 TPY. To demonstrate that the proposed project and the aggregated project escape PSD for F emissions this permit contains specific conditions for reasonable assurances.}

9. Baseline Actual Emissions vs. Projected Actual Emissions Used under this Project: This air construction permit was issued with part of the project to avoid the PSD BACT requirements of Rule 62-212.400(4) through (12), F.A.C., based in whole or in part on projected actual emissions. The projected actual emissions are shown in the table below.

PSD-(Air) Pollutant	Baseline Actual Emissions, TPY (tons/year)	Projected Actual Emissions, TPY	Increase in Emissions, TPY	PSD SER, TPY	PSD SER exceeded?
Fluoride (F)	12.375	14.881	+ 2.51	3	No

{Permitting Note: A future increase of 0.49 [3-2.51] TPY of F emissions from modified and/or newly constructed emissions unit(s) (e.u.'s) at the facility may subject those e.u.'s along with the e.u.'s under Project Nos. 1050059-109-AC & 1050059-111-AC to a PSD BACT determination.}

10. 5-Year Emissions Monitoring - PSD Avoidance Requirements:

- a. Monitoring. 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. The changes (proposed project under Permit Nos. 1050059-109-AC & 1050059-111-AC) shall not increase the design capacity of any emissions unit or its potential to emit that PSD pollutant. Emissions shall be computed in accordance with Rule 62-210.370, F.A.C.

- The Department identified the following PSD pollutants that could increase from this project: **F**.
- The permittee shall use the same calculation methodology for emissions before and after the completed project under Permit Nos. 1050059-109-AC & 1050059-111-AC.

[Rule 62-212.300(1)(e)1., F.A.C.; and, Applicant Request.]

- b. Reporting. The permittee shall report to the Department by March 1st based on the records required to be generated under subparagraph 62-212.300(1)(e)1., F.A.C., 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 specific dates for commencement of the project and completion of the project;
- (3) The annual emissions as calculated pursuant to subparagraph 62-212.300(1)(e)1., F.A.C.;
- (4) If the emissions differ from the preconstruction projection, an explanation as to why there is a difference;
- (5) Any other information that the owner or operator wishes to include in the report;
- (6) The baseline actual emissions to which the annual emissions were compared to; and,
- (7) For the Department identified PSD pollutants: a statement indicating whether or not the applicable PSD significant emission rates (SERs) defined in Rule 62-210.200, F.A.C., were exceeded. If and when a PSD SER is exceeded, the permittee shall submit a PSD permit application with a BACT analysis or if the permittee determines that a PSD permit application with a BACT analysis is not required, the permittee shall provide specific citations as to why the project is exempt from a PSD permit application with a BACT analysis.

[Rule 62-212.300(1)(e)2., F.A.C.; and, Rule 62-4.070(1)&(3), *Reasonable Assurance*, F.A.C.; Rule 62-4.030, *General Prohibition*, F.A.C.; and, Rule 62-4.210, *Construction Permits*, F.A.C.]

SECTION II. REQUIREMENTS

- c. Recordkeeping. 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.

[Rule 62-212.300(1)(e)3., F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Phosphoric Acid East, West & No. 3 Acid Plants - E.U. ID Nos. 008, 017 & 039

This section of the permit addresses the following emissions unit.

E.U. ID No.	Brief Description
008	Phosphoric Acid Plant (East)
017	Phosphoric Acid Plant (West)
039	Phosphoric Acid Plant No. 3

General Description:

The Phosphoric Acid East & West plants are sister units. These plants commenced operations in March 1975. Phosphoric acid is produced by reacting the phosphate rock with sulfuric acid. Emissions from the attack tank, filter and seal tanks are controlled by a cross flow scrubber which uses process water.

Fluoride emissions from phosphoric acid train No. 3 are controlled by a cross-flow packed scrubber (using cooling pond water) followed by a cyclonic demister.

All three phosphoric acid trains (E.U. ID Nos. 008, 017 & 039) share a common acid clarification system.

Descriptions Specifically Related to this Permit Authorization:

This permit allows the installation of piping to transfer acid sludge to evaporators at the Phosphoric Acid East, West & No. 3 Acid Plants (E.U. ID Nos. 008, 017 & 039).

This permit does not authorize changes in capacities of the Phosphoric Acid East, West & No. 3 Acid Plants.
{Note:

The maximum production rates (capacities) for each plant are:

Phosphoric Acid Plant (East): 2,134 tons P₂O₅ per day.

Phosphoric Acid Plant (West): 2,134 tons P₂O₅ per day.

Phosphoric Acid Plant No. 3: 2,500 tons P₂O₅ per day.

The equivalent P₂O₅ feed rates for each plant are:

Phosphoric Acid Plant (East): 2,200 tons per day.

Phosphoric Acid Plant (West): 2,200 tons per day.

Phosphoric Acid Plant No. 3: 2,577 tons per day.}

{Permitting notes: These emission units are regulated under NESHAP - 40 CFR 63, Subpart A - General Provisions; 40 CFR 63 Subpart AA - National Emissions Standards for Hazardous Air Pollutants from Phosphoric Acid Manufacturing Plants, adopted and incorporated by reference in Rule 62-204.800, F.A.C.; DEP Order 06-H-AP; and, Rule 62-296.403, F.A.C., Phosphate Processing.

Phosphoric Acid Plant No. 3 is regulated under Rule 62-212.300, F.A.C., General Preconstruction Review Requirements; and, Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD).}

PREVIOUS APPLICABLE REQUIREMENTS

1. Effect on Other Permits: The conditions of this permit supplement all previously issued air construction and operation permits for these emissions units. Unless otherwise specified, these conditions are in addition to all other applicable permit conditions and regulations. [Rule 62-4.070(1)&(3), *Reasonable Assurance*, F.A.C.]

AUTHORIZATION

2. Authorization - Components of the Phosphoric Acid East, West & No. 3 Acid Plant: The control equipment (scrubbers) will not be changed in this project. This permit authorizes the permittee to physically change components within the Phosphoric Acid East, West & No. 3 Acid Plants as listed below:
 - a. Install piping to transfer 40% acid sludge from the current 40-clarifier underflow discharge lines to the 1st Stage Evaporators.

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Phosphoric Acid East, West & No. 3 Acid Plants - E.U. ID Nos. 008, 017 & 039

- b. Install piping to transfer 50% acid sludge from the current ROP tanks underflow discharge lines to the 2nd & 3rd stage evaporators.

[Application No. 1050059-111-AC; Applicant Request; and, Rule 62-210.200, *Definitions - Potential to Emit (PTE)*, F.A.C.]

COMPLIANCE DEMONSTRATION

3. Initial Compliance Demonstration: After the project's completion, the modified Phosphoric Acid East, West & No. 3 Acid Plants shall be tested for initial compliance for fluoride emissions. The compliance demonstration report shall be submitted within 45 days of completion of the test. The permittee shall include in the report a statement as to whether or not the modified Phosphoric Acid East, West & No. 3 Acid Plants are in compliance with the specific emission standard/limitation for fluoride. [Rules 62-4.070(1)&(3) and 62-297.310(10), F.A.C.]
4. Additional Initial Compliance Test Requirements: At a minimum the following parameters shall be monitored and recorded during the compliance test and a summary of this data shall be included with the fluoride emissions test report:
 - a. Scrubber operating parameters for each scrubber: pressure drop, liquid flow rate, and fan motor amperage. [MACT AA.3.(a), (b), and DEP Order 06-H-AP, Attachment B.]
 - b. the "equivalent P₂O₅ feed" rate.

{Permitting Note: These parameters are required by the current, valid Title V air operation permit.}
[Rule 62-4.070(1)&(3), *Reasonable Assurance*, F.A.C.]
5. Test Methods and Procedures: The test methods and procedures specified in the current, valid Title V air operation permit shall be used for the initial compliance demonstration under this permit. [Application No. 1050059-111-AC; Rule 62-4.070(1)&(3), *Reasonable Assurance*, F.A.C.; Rule 62-4.030, *General Prohibition*, F.A.C.; and, Rule 62-4.210, *Construction Permits*, F.A.C.]

REPORTING

6. Reporting: The permittee shall notify the compliance authority of when the project was completed. [Application No. 1050059-111-AC; and, Rule 62-4.070(1)&(3), *Reasonable Assurance*, F.A.C.]