FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

NORTHEAST DISTRICT
8800 BAYMEADOWS WAY WEST, SUITE 100
JACKSONVILLE, FLORIDA 32256

RICK SCOTT
GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

Sent by Electronic Mail – Received Receipt Requested

PERMITTEE

White Springs Agricultural Chemicals, Inc.
P. O. Box 300
White Springs, Florida 32096

Authorized Representative:

Mr. Terry L. Baker, General Manager

Air Permit No. 0470002-086-AC
Permit Expires: February 6, 2016

Suwannee River/Swift Creek Complex
Air Construction Permit

Y and Z Trains Micronutrient Project

This is the final air construction permit, which authorizes the addition of micronutrients to the process at both of its existing Y and Z Trains. The process change will require the usage rate of sulfuric acid to increase above present operating scenarios and the addition of zinc to the process. There will be an initial trial arrangement for the introduction of zinc from bags during the construction period to be followed by a permanent arrangement with a storage silo that will supply both emissions units, as needed.

The proposed work will be conducted at the Suwannee River/Swift Creek Complex, which is a phosphate mining and chemical production facility (Standard Industrial Classification No. 2874). The facility is located in Hamilton County at 15843 SE 78th Street, White Springs, Florida. The UTM coordinates are Zone 17, 328.3 km East and 3368.8 km North; and, Latitude: 30° 26’ 27” North and Longitude: 82° 47’ 16” West.

As noted in the Final Determination provided with this final permit, 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 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 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 Jacksonville, Florida

Richard S. Rachal III, P.G.
Program Administrator
Waste and Air Resource Management

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 September 9, 2013 to the persons listed below.

Terry L. Baker, General Manager- White Springs Agricultural Chemicals, Inc. (tbaker@pcsphosphate.com)
Pradeep Raval, Koogler and Associates (praval@kooglerassociates.com)
John Koogler, Ph.D., P.E. -Koogler and Associates (jkoogler@kooglerassociates.com)
Bill Ellis, White Springs Agricultural Chemicals, Inc. (wjellis@pcsphosphate.com)
Ana Oquendo, EPA Region 4 (oquendo.ana@epamail.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.

(Clerk) September 9, 2013

FACILITY AND PROJECT DESCRIPTION

Existing Facility

This facility processes phosphate rock to produce several products at the Suwannee River/Swift Creek Complex (two plants). The facility consists of one rock grinder, two phosphoric acid plants, two defluorinated phosphate (DFP) plants, one monocal/dical process, two monoammonium/diammonium phosphate (MAP/DAP) plants, one Storage and Shipping building, one screening/shipping building, four sulfuric acid plants, two phosphoric acid filters, three superphosphoric acid plants, one green superphosphoric plant, the Swift Creek Mine (SCM) rock dryer, and one acid clarification plant. The facility also has storage silos associated with the Swift Creek Mine and the DFP plant.

Proposed Project

This project is for an air construction permit, which authorizes the addition of micronutrients to the process at both of its existing Y and Z Trains. The process change will require the usage rate of sulfuric acid to increase above present operating scenarios and the addition of zinc to the process. There will be an initial trial arrangement for the introduction of zinc from bags during the construction period to be followed by a permanent arrangement with a storage silo that will supply both emissions units, as needed.

This project will modify the following emissions units.

Facility ID No. 0470002

ID No.	Emission Unit Description
008	“Y” Train-#1 MAP/DAP Plant
032	“Z”-Train #2 MAP/ DAP

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.

SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting and Compliance Authority: The permitting authority for this project is the Northeast District, Florida Department of Environmental Protection (Department). The Northeast District Office's mailing address is 8800 Baymeadows Way West, Suite 100, Jacksonville, Florida 32256, (904) 256-1700. All documents related to applications for permits to operate an emissions unit shall be submitted to the Northeast District Office.

2. 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.

3. 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.

4. 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.]

5. Modifications: The permittee shall notify the Compliance Authority upon commencement of construction. No new emissions unit shall be constructed and no existing emissions unit shall be 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.]

6. 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.]

7. 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 FL and $PM/PM_{10}/PM_{2.5}$ emissions for the following units: Emissions Units 008 and 032.

   [Application 0470002-086-AC; and Rules 62-212.300(1)(e) and 62-210.370, F.A.C.]

SECTION 3. FACILITY SPECIFIC CONDITIONS

A. MICRONUTRIENT STORAGE AND HANDLING SYSTEM

This section of the permit addresses the following emissions activity:

ID No.	Emission Unit Description
---	Zinc (zinc oxide or zinc sulfate) storage silo and associated dust collector

PROPOSED CONSTRUCTION WORK

1. The permittee is authorized to install at the facility as a part of this project:

- One storage silo for the receipt and storage of zinc (zinc oxide or zinc sulfate) to be delivered by rail or truck.
- One associated dust collector to control particulate matter emissions
- Conveying system (pneumatic, screw-conveyor, etc.) from delivery vehicle to storage silo
- Weighing system at the storage silo discharge
- Conveyance system and piping for connection to the acid tanks

The implementation period of this task, along with the initial trial period, may last up to a maximum of 2 years from the issuance of this construction permit.

[Application No. 0470002-086-AC]

2. Trial Period. During the initial trial period (estimated being 6 months to a year), zinc (zinc oxide or zinc sulfate) shall be received at the facility in bags to be introduced into the existing acid tanks in the Y and Z Trains.

[Application No. 0470002-086-AC]

PERFORMANCE RESTRICTIONS

3. Methods of Operation. The zinc (zinc oxide or zinc sulfate) received at this storage silo shall only be of a commercial grade. The zinc shall be received, unloaded, handled, and processed such that emissions from these activities are captured by the dust collector.

The zinc (zinc oxide or zinc sulfate) shall be added to the existing acid tanks in the Y and Z Trains.

[Application No. 0470002-086-AC]

4. Capacity. The zinc (zinc oxide or zinc sulfate) shall be transferred from a railcar or truck at a maximum rate of approximately 100 tons per hour. A maximum total annual quantity of approximately 40,291 tons of zinc sulfate (approximately 20,313 tons zinc oxide) shall be used in the Y and Z trains (Emissions Unit Nos. 008 and 032), i.e. approximately 1% by weight of the product.

[Application No. 0470002-086-AC]

A. MICRONUTRIENT STORAGE AND HANDLING SYSTEM

5. Control Device. To control particulate matter emissions, the permittee shall operate a dust collector at the storage silo. The dust collector shall be in operation when transferring material to/from the storage silo.

[Application No. 0470002-086-AC; Rule 62-4.070, F.A.C.]

6. Equipment Information Submittal. At least 30 days prior to commencement of construction, the Permittee shall submit the specific vendor information for the dust collector to the Department in a written or electronic format: Manufacturer's name, model no., control efficiency, size of storage silo, etc. for all installed equipment, and description and a flow diagram of the final designed transfer system.

[Rule 62-4.070(3), F.A.C.]

B. EU008 "Y"-Train No. 1 MAP/DAP Plant

This section of the permit addresses the following emissions unit:

ID No.	Emission Unit Description
008	"Y"-Train – No. 1 MAP/DAP Plant

EU008: The "Y" Train DAP/MAP Plant is permitted for an input rate of 36.33 TPH of P_2O_5 feed (daily average) and 290,112 TPY of P_2O_5 input basis. The plant is capable of producing fertilizer by six different modes (Mode 1: DAP by Split Flows of 30% & 50% P_2O_5 phosphoric acid; Mode 2: DAP by 40% P_2O_5 acid; Mode 3: MAP by Split Flows of 30% & 50% P_2O_5 acid; Mode 4: MAP by 40% P_2O_5 acid; Mode 5: MAP by reacting ammonia and acid in two pipe reactors; Mode 6: MAP/DAP by 40% P_2O_5 acid with the addition of micronutrients**.**

The plant consists of the two separate pipe reactors (Mode 5), a tank reactor for the other modes, two pug mills, granulator, dryer, cooler, screens, mills, and other associated process equipment.

Particulate matter, fluoride, and sulfur dioxide emissions are controlled by cyclones, venturi and cyclonic scrubbers. Emissions from the pipe reactors are vented to the reactor scrubber for ammonia removal and then to a scrubber for fluoride control. The permittee conducted testing on the pond water scrubbers for CAM applicability. CAM does not apply for this emissions unit. Fluoride emissions are regulated by 40 CFR 63 Subpart BB. Testing was performed by the permittee to show the pond water scrubbers are not designed for PM control.

{Permitting note(s): This emissions unit is regulated under NSPS - 40 CFR 60, Subpart V, Standards of Performance for the Phosphate Fertilizer Industry: Diammonium Phosphate Plants, adopted and incorporated by reference in Rule 62-204.800(7)(b)28., F.A.C.; Rule 62-212.300, F.A.C., General Preconstruction Review Requirements; 62-212.400, F.A.C., Prevention of Significant Deterioration; Rule 62-296.320, F.A.C., General Pollutant Emission Limiting Standards; and Rule 62-296.403, F.A.C., Phosphate Processing; 40 CFR 63, Subpart A - General Provisions; 40 CFR 63, Subpart BB - National Emission Standards for Hazardous Air Pollutants From Phosphate Fertilizers Production Plants. This emissions unit is subject to 40 CFR 60 Subpart V for DAP production.

The Part 40 CFR 63 Subparts A and BB take precedence, however this unit is subject to all applicable State Implementation Plan (SIP) rules if this unit is out of compliance with the NESHAP}.

RELATION TO OTHER PERMITS

1. The conditions of this permit supplements all other previously issued air construction and operation permits for these emissions units. These conditions are in addition to all other applicable permit conditions and regulatory requirements. The Permittee shall continue to comply with the conditions of those permits, which include restrictions and standards regarding capacities, production, operation, fuels, emissions, monitoring, recordkeeping, reporting, and the like.

[Rules 62-4.210, 62-4.030, and 62-210.300(1)(b), F.A.C.]

B. EU008 "Y"-Train No. 1 MAP/DAP Plant

PROPOSED CONSTRUCTION WORK

2. The permittee is authorized to conduct this project for Emission Unit No. 008 as follows:

- Upgrade the existing sulfuric acid pump and piping such that the feed rate to the Y Train process is increased from less than 5 gpm to an estimated maximum of 25 gpm.

[Application No. 0470002-086-AC]

PERFORMANCE RESTRICTIONS

3. Methods of Operation- Mode 6. This construction permit authorizes the mode of operation at this emissions unit of MAP/DAP production with added micronutrients. The zinc (zinc oxide or zinc sulfate) received and used in this method of operation shall be only of a commercial grade.

Only one of the six permitted operating modes shall be in operation at any one time.

[Application No. 0470002-086-AC; Rule 62-4.070, F.A.C.; Rule 62-213.410, F.A.C.]

4. Capacity- Zinc. A maximum total annual quantity of approximately 40,291tons of zinc sulfate (approximately 20,313 tons of zinc oxide) shall be used in the Y and Z trains (Emissions Unit Nos. 008 and 032) combined, i.e. approximately 1% by weight of the product at each emissions unit.

[Application No. 0470002-086-AC]

5. Capacity- Sulfuric Acid. A maximum feed rate of 98% Sulfuric Acid (H_2SO_4) while in Mode 6 is estimated to be 25 gallons per minute to the Y Train process.

[Application No. 0470002-086-AC]

6. This permit does not alter, change or establish any emissions standards for Total Fluoride, SO_2, VE, PM that are stated in any of the existing, valid, Department permits for this emissions unit.

[Application No. 0470002-086-AC]

RECORDS AND REPORTS

7. Operational Records. The permittee shall maintain in an operational log of the following records in either a written or electronic format: the date, time, duration of production with and without micronutrients, a totalized quantity on an annual basis of zinc input to the acid tank of this emissions unit, and the feed rate of sulfuric acid while operating in Mode 6. These records are to be reported upon request of the Department.

[Rule 62-4.070, F.A.C.]

C. EU032 "Z"-Train – No. 2 MAP/DAP Plant

This section of the permit addresses the following emissions unit:

ID No.	Emission Unit Description
032	"Z"-Train – No. 2 MAP/DAP Plant

EU032: The "Z" Train DAP/MAP Plant is permitted for input rate of 45.7 TPH of P_2O_5 feed (daily average) and 362,737 TPY of P_2O_5 input basis. The plant is capable of producing fertilizer by six different modes Mode 1: DAP (Diammonium Phosphate) produced by Split Acid (30% & 50% P_2O_5 input) phosphoric acid; Mode 2: MAP (Monoammonium Phosphate) produced by Split Acid (30% & 50% P_2O_5 input) phosphoric acid; Mode 3: DAP (Diammonium Phosphate) produced by 40% P2O5 input phosphoric acid; Mode 4: MAP (Monoammonium Phosphate) produced by 40% P_2O_5 input phosphoric acid; Mode 5: MAP produced by reacting ammonia and acid in two pipe reactors. The Z-Train has been modified to allow the producing of granular MAP using a pipe reactor as an alternate to the tank reactor; Mode 6: MAP/DAP by 40% P_2O_5 acid with the addition of micronutrients**.**

Z-Train (#2 DAP Plant) with two emissions points (EP). The first EP is the main part of DAP process which is controlled by several cyclones followed by several cyclonic and venturi scrubbers (EP TG). The cooler (EP C) is controlled by a cyclone and a venturi scrubber. The permittee conducted testing on the pond water scrubbers for CAM applicability for particulate matter. CAM does not apply for this emissions unit. Fluoride emissions are regulated by 40 CFR 63 Subpart BB. Testing was conducted by the permittee to show the pond water scrubbers are not designed for PM control.

{Permitting note(s): This emissions unit is regulated under NSPS - 40 CFR 60, Subpart V, Standards of Performance for the Phosphate Fertilizer Industry: Diammonium Phosphate Plants, adopted and incorporated by reference in Rule 62-204.800(7)(b)28., F.A.C.; Rule 62-212.300, F.A.C., General Preconstruction Review Requirements; 62-212.400, F.A.C., Prevention of Significant Deterioration; Rule 62-296.320, F.A.C., General Pollutant Emission Limiting Standards; and Rule 62-296.403, F.A.C., Phosphate Processing; 40 CFR 63, Subpart A - General Provisions; 40 CFR 63, Subpart BB - National Emission Standards for Hazardous Air Pollutants From Phosphate Fertilizers Production Plants.

The Part 40 CFR 63 Subparts A and BB take precedence, however this unit is subject to all applicable State Implementation Plan (SIP) rules if these units are out of compliance with the NESHAP}.

RELATION TO OTHER PERMITS

1. The conditions of this permit supplements all other previously issued air construction and operation permits for these emissions units. These conditions are in addition to all other applicable permit conditions and regulatory requirements. The Permittee shall continue to comply with the conditions of those permits, which include restrictions and standards regarding capacities, production, operation, fuels, emissions, monitoring, recordkeeping, reporting, and the like.

[Rules 62-4.210, 62-4.030, and 62-210.300(1)(b), F.A.C.]

C. EU032 "Z"-Train – No. 2 MAP/DAP Plant

PROPOSED CONSTRUCTION WORK

2. The permittee is authorized to conduct this project for Emission Unit No. 032 as follows:

- Upgrade the existing sulfuric acid pump and piping such that the feed rate to the Z Train process is increased from less than 5 gpm to an estimated maximum of 30 gpm.

[Application No. 0470002-086-AC]

PERFORMANCE RESTRICTIONS

3. Methods of Operation- Mode 6. This construction permit authorizes the mode of operation at this emissions unit of MAP/DAP production with added micronutrients. The zinc (zinc oxide or zinc sulfate) received and used in this method of operation shall be only that that is of commercial grade.

Only one of the six permitted operating modes shall be in operation at any one time.

[Application No. 0470002-086-AC; Rule 62-4.070, F.A.C.; Rule 62-213.410, F.A.C.]

4. Capacity- Zinc. A maximum total annual quantity of approximately 40,291tons of zinc sulfate (approximately 20,313 tons of zinc oxide) shall be used in the Y and Z trains (Emissions Unit Nos. 008 and 032) combined, i.e. approximately 1% by weight of the product at each emissions unit.

[Application No. 0470002-086-AC]

5. Capacity- Sulfuric Acid. A maximum feed rate of 98% Sulfuric Acid (H_2SO_4) while in Mode 6 is estimated to be 30 gallons per minute to the Z Train process.

[Application No. 0470002-086-AC]

6. This permit does not alter, change or establish any emissions standards for Total Fluoride, SO_2, VE, PM that are stated in any of the existing, valid, Department permits for this emissions unit.

[Application No. 0470002-086-AC]

RECORDS AND REPORTS

7. Operational Records. The permittee shall maintain in an operational log the following records in either a written or electronic format: the date, time, duration of production with and without micronutrients, a totalized quantity on an annual basis of zinc (zinc oxide or zinc sulfate) input to the acid tank of this emissions unit, and the feed rate of sulfuric acid while operating in Mode 6. These records are to be reported upon request of the Department.

[Rule 62-4.070, F.A.C.]