FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

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HERSCHEL T. VINYARD JR.
SECRETARY

Sent by Electronic Mail – Received Receipt Requested

PERMITTEE

White Springs Agricultural Chemicals, Inc.-dba
PCS Phosphate, White Springs
P. O. Box 300
White Springs, Florida 32096

Authorized Representative:
William L. Donohue, General Manager

Air Permit No. 0470002-090-AC
Permit Expires: xx/xx/xxxx

Suwannee River and Swift Creek Complex

EU036 "B" Superphosphoric Acid (SPA) Plant and a 54% Acid Clarifier Tank

This is the final air construction permit, which authorizes the relocation of (only) the evaporator of EU036 "B" Superphosphoric Acid (SPA) Plant (Vacuum Evaporation Process, from the Suwannee River Chemical site to the existing EU070 "C" & "D" Superphosphoric Acid (SPA) Plants (Vacuum Evaporation Process) at the Swift Creek Chemical site within the same existing Title V facility. This project will also add a 54% Acid Clarifier Tank. The EU036 "B" Superphosphoric Acid (SPA) Plant (Vacuum Evaporation Process) and the 54% Acid Clarifier Tank will be vented to the existing EU070 scrubber. As part of the proposed project, EU036 will be removed from service. 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.

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.

DRAFT

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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 DRAFT to the persons listed below.

William L. Donohue, General Manager- PCS Phosphate, White Springs (bdonohue@pcsphosphate.com)
Pradeep Raval, Koogler and Associates (praval@kooglerassociates.com)
John Koogler, Ph.D., P.E. -Koogler and Associates (jkoogler@kooglerassociates.com)
David Still, P.E.- PCS Phosphate, White Springs (DAStill@potashcorp.com)

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.

_DRAFT__ _____
(Clerk) (Date)

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 is the final air construction permit, which authorizes the relocation of (only) the evaporator of EU036 "B" Superphosphoric Acid (SPA) Plant (Vacuum Evaporation Process, from the Suwannee River Chemical site to the existing EU070 "C" & "D" Superphosphoric Acid (SPA) Plants (Vacuum Evaporation Process) at the Swift Creek Chemical site within the same existing Title V facility. This project will also add a 54% Acid Clarifier Tank. The EU036 "B" Superphosphoric Acid (SPA) Plant (Vacuum Evaporation Process) and the 54% Acid Clarifier Tank will be vented to the existing EU070 scrubber. As part of the proposed project, EU036 will be removed from service.

Facility ID No. 0470002

ID No.	Emission Unit Description
036	"B" Superphosphoric Acid (SPA) Plant (Vacuum Evaporation Process)
070	"C" & "D" Superphosphoric Acid (SPA) Plants (Vacuum Evaporation Process)

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 Authority: The permitting authority for this project is the Northeast District Office, Waste and Air Resource Management, 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. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Northeast District Office, Compliance Assurance. The mailing address and phone number of the Northeast District Office is: 8800 Baymeadows Way West, Suite 100, Jacksonville, Florida 32256, (904) 256-1700.

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: 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.]

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. Application for Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V air operation permit is required for regular 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. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the appropriate Permitting Authority with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220 and Chapter 62-213, F.A.C.]

M. EU036 "B" Superphosphoric Acid (SPA) Plant (Vacuum Evaporation Process)

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
036	"B" Superphosphoric Acid (SPA) Plant (Vacuum Evaporation Process)

"B" Superphosphoric Acid (SPA) Plant emits fluoride, and is ducted to the South Phosphoric Acid Filters counter-current packed wet scrubber (EU 034). Test for fluoride at EU 036 (SPA) is conducted upstream of the scrubber, in the connecting duct. CAM does not apply for fluoride for this emissions unit.

{Permitting note(s): This emissions unit is regulated under NSPS - 40 CFR 60, Subpart U, Standards of Performance for Phosphate Fertilizer Industry: Superphosphoric Acid Plants, adopted and incorporated by reference in Rule 62-204.800(7)(b)27., F.A.C.; Rule 62-212.300, F.A.C., General Preconstruction Review Requirements; Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD); 40 CFR 63, Subpart A - General Provisions; 40 CFR 63, Subpart AA - National Emission Standards for Hazardous Air Pollutants (NESHAP) From Phosphoric Acid Manufacturing Plants. The Part 40 CFR 63 Subparts A and AA 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}.

PROPOSED CONSTRUCTION WORK

M.1. The permittee is authorized to relocate (only) the evaporator from Emissions Unit No. 036, "B" Superphosphoric Acid (SPA) Plant (Vacuum Evaporation Process), from Suwannee River Chemical site to the Swift Creek Chemical site. The evaporator will be vented to the existing scrubber at EU070 "C" & "D" Superphosphoric Acid (SPA) Plants (Vacuum Evaporation Process).

[Air Construction Permit Application No. 0470002-090-AC]

M.2. **Commencement of Construction.** The permittee shall submit to the Air Compliance Authority of this Office written notification of the date of commencement of construction to remove the evaporator at **EU036**. This notification shall be submitted or postmarked within as many days prior to the date of construction as practical, but no later than thirty (30) business day following commencement of construction and operation.

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

M.3. The remainder of EU036 will be removed from service.

BB. EU070 "C" & "D" Superphosphoric Acid (SPA) Plants (Vacuum Evaporation Process)

ID No.	Emission Unit Description
070	"C" & "D" Superphosphoric Acid (SPA) Plants (Vacuum Evaporation Process)

"C" & "D" Superphosphoric Acid (SPA) Plants and east & west phosphoric acid storage tanks emit fluoride, and are controlled by a scrubber. CAM does not apply for fluoride for this emissions unit.

{Permitting note(s): These emissions units are regulated under NSPS - 40 CFR 60, Subpart U, Standards of Performance for Phosphate Fertilizer Industry: Superphosphoric Acid Plants, adopted and incorporated by reference in Rule 62-204.800(7)(b)27., F.A.C.; Rule 62-212.300, F.A.C., General Preconstruction Review Requirements; Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD); 40 CFR 63, Subpart A - General Provisions; 40 CFR 63, Subpart AA - National Emission Standards for Hazardous Air Pollutants (NESHAP) From Phosphoric Acid Manufacturing Plants. The Part 40 CFR 63 Subparts A and AA take precedence, however these units are subject to all applicable State Implementation Plan (SIP) rules if these units are out of compliance with the NESHAP}.

BB.1. **Relation to Other Permits.** 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.]

PROPOSED CONSTRUCTION WORK

BB.2. The permittee is authorized to relocate the evaporator from EU036 "B" Superphosphoric Acid (SPA) Plant (Vacuum Evaporation Process) moved from Suwannee River Chemical site to the Swift Creek Chemical site, and to add a new 54% Acid Clarifier Tank, both of which will be vent to the existing EU070 scrubber.

[Air Construction Permit Application No. 0470002-090-AC]

BB.3. The permittee is authorized to install at the facility as a part of this project:

- New foundations,
- Support steel,
- Pumps,
- Piping,
- Valves
- Wiring and controls.

BB.3. continued:

The construction shall be in accordance with the application and associated documents provided to the Permitting Authority for the issuance of this permit. Any changes to the project that are contrary to these documents and permit shall be reported in writing to the Permitting Authority by the P.E. of Record.

[Air Construction Permit Application No. 0470002-090-AC]

PERFORMANCE RESTRICTIONS

BB.4. **Permitted Capacity**. This permit does not authorize any changes to the existing permitted capacity. The combined operation rate shall not exceed the Maximum Daily 1-Hour Average Rate = 110 tons of 100% P_2O_5 input. The operation rate shall not exceed 876,000 tons during any 12 consecutive months of 100% P_2O_5 input.

[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; Construction Permit No. 0470002-034-AC, and PSD-FL-297]

BB.5. **Hours of Operation**. The hours of operation for this emissions unit is allowed to operate continuously 8760 hours/year (8784 in any Leap Year).

[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]

EMISSIONS STANDARDS

BB.6. **Total Fluorides**. This permit does not modify or add any new emission standards. Total Fluoride emissions at the sample port shall not exceed 0.0087 lb/ton of equivalent P_2O_5 feed; 0.96 lbs/hr and 3.8 TPY.

[Rule 62-204.800(7)(b), F.A.C.; 40 CFR 60.212; 40 CFR 63.602(b)(1), and PSD-FL-297]

TESTING REQUIREMENTS

BB.7. **Initial Total Fluorides Compliance Tests**. After the evaporator from EU036 has been vented to the existing EU070 scrubber; and the unit is operational, the emissions unit shall be tested to demonstrate initial compliance with the emissions standards for Fluoride. The initial tests shall be conducted within 60 days after achieving permitted capacity, but not later than 180 days after initial operation of the unit. However, if this date is close to the next scheduled compliance testing date the facility can demonstrate initial compliance at that time.

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

BB.8. The Permittee shall use the following procedures:

(a) In conducting the performance tests required in § 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in § 60.8(b).

(b) The owner or operator shall determine compliance with the total fluorides standard in **Specific Condition No. BB.6.** (§ 60.212) as follows:

(1) The emission rate (E) of total fluorides shall be computed for each run using the following equation:

$$E = \left(\sum_{i=1}^{N} C_{si} Q_{sdi} \right) / (PK)$$

where:

E=emission rate of total fluorides, g/Mg (lb/ton) of equivalent P_2O_5 feed.
Csi=concentration of total fluorides from emission point "i," mg/dscm (gr/dscf).
Qsdi=volumetric flow rate of effluent gas from emission point "i," dscm/hr (dscf/hr).
N=number of emission points associated with the affected facility.
P=equivalent P_2O_5 feed rate, Mg/hr (ton/hr).
K=conversion factor, 1000 mg/g (7,000 gr/lb).

(2) Method 13A or 13B shall be used to determine the total fluorides concentration (Csi) and volumetric flow rate (Qsdi) of the effluent gas from each of the emission points. The sampling time and sample volume for each run shall be at least 60 minutes and 0.85 dscm (30 dscf).
(3) The equivalent P_2O_5 feed rate (P) shall be computed for each run using the following equation:

$$P = Mp\ Rp$$

where:

Mp=total mass flow rate of phosphorus-bearing feed, Mg/hr (ton/hr).
Rp= P_2O_5 content, decimal fraction.
(i) The accountability system of § 60.213(a) shall be used to determine the mass flow rate (Mp) of the phosphorus-bearing feed.
(ii) The Association of Official Analytical Chemists (AOAC) Method 9 (incorporated by reference - see § 60.17) shall be used to determine the P_2O_5 content (Rp) of the feed.

[Rule 62-204.800, F.A.C.; 40 CFR 60.214]

BB.9. <u>Commencement of Construction and Operation</u>. After the evaporator and new tank are installed, the permittee shall submit to the Air Compliance Authority of this Office written notification of the date of commencement of construction and operation of **EU070**. This notification shall be submitted or postmarked within as many days prior to the date of construction and operation commencement as practical, but no later than thirty (30) business day following commencement of construction and operation.

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