TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

APPLICANT

White Springs Agricultural Chemicals, Inc.-dba
PCS Phosphate, White Springs
P. O. Box 300
White Springs, Florida 32096
Suwannee River/Swift Creek Complex
Facility ID No. 0470002

PROJECT

Project No. 0470002-088-AC
Application for Air Construction Permit
Relocate EU061 Green SPA

COUNTY

Hamilton, Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Waste and Air Resource Management Program
Northeast District Office
8800 Baymeadows Way West, Suite 100
Jacksonville, Florida 32256

COMPLIANCE AUTHORITY

Florida Department of Environmental Protection
Northeast District Office
Compliance Assurance
8800 Baymeadows Way West, Suite 100
Jacksonville, Florida 32256

January 30, 2014

1. GENERAL PROJECT INFORMATION

Air Pollution Regulations

Projects at stationary sources with the potential to emit air pollution are subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The statutes authorize the Department of Environmental Protection (Department) to establish regulations regarding air quality as part of the Florida Administrative Code (F.A.C.), which includes the following applicable chapters: 62-4 (Permits); 62-204 (Air Pollution Control – General Provisions); 62-210 (Stationary Sources – General Requirements); 62-212 (Stationary Sources – Preconstruction Review); 62-213 (Operation Permits for Major Sources of Air Pollution); 62-296 (Stationary Sources - Emission Standards); and 62-297 (Stationary Sources – Emissions Monitoring). Specifically, air construction permits are required pursuant to Rules 62-4, 62-210 and 62-212, F.A.C.

In addition, the U. S. Environmental Protection Agency (EPA) establishes air quality regulations in Title 40 of the Code of Federal Regulations (CFR). Part 60 specifies New Source Performance Standards (NSPS) for numerous industrial categories. Part 61 specifies National Emission Standards for Hazardous Air Pollutants (NESHAP) based on specific pollutants. Part 63 specifies NESHAP based on the Maximum Achievable Control Technology (MACT) for numerous industrial categories. The Department adopts these federal regulations on a quarterly basis in Rule 62-204.800, F.A.C.

Glossary of Common Terms

Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of this permit.

Facility Description and Location

White Springs Agricultural Chemicals, Inc.-dba PCS Phosphate, White Springs is an existing 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 site is in an area that is in attainment (or designated as unclassifiable) for all air pollutants subject to state and federal Ambient Air Quality Standards (AAQS).

Facility Regulatory Categories

- 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.
- 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, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

Project Description

This project is for an air construction permit, which authorizes the relocation of Emissions Unit No. 061, Green Superphosphoric Acid Plant (SPA), from Suwannee River Chemical site to the Swift Creek Chemical site within the same existing Title V facility.

Processing Schedule

1/24/14 Received the application for a air pollution construction permit.

SITE PLAN

EU061 Green Superphosphoric Acid Plant (SPA) new coordinates are Latitude: 30° 26’ 57” North and Longitude: 82° 51’ 55” West.

DIATOMACEOUS EARTH (DE) SILO

ATTACHMENT 1

PROJECT INFORMATION

This application is submitted for a construction permit to relocate EU 061, Green Superphosphoric Acid Plant, from the Suwannee River Chemical (SRC) site to the Swift Creek Chemical (SCC) site within the same existing Title V facility. There will be no changes to the plant capacity or air emissions as a result of the proposed project.

There is no change in the rule applicability, as referenced in the current Title V permit, as the same equipment is being moved from one location to another within the same facility. However, new foundations will need to be prepared at the new location. Some of the components will be new to avoid relocating the old components, as described below.

New foundations and support steel will be erected at SCC. The layout and general arrangement of the reaction area and the scrubber system at SRC will be duplicated to allow maximum reuse of equipment and connecting high-alloy piping. A process flow diagram and equipment layout map are attached.

A new condensate receiver and transfer pump will be provided for the heater condensate. The existing pressure filter at SRC will be relocated into the existing Purification Building at SCC into an available bay. An existing unused tank on the ground floor of the Purification Building will be used as the sludge tank. A new agitator drive will be provided for the existing agitator. New pumps will be installed for the sludge tank. A new precoat tank with an agitator and pump will be installed on the ground floor of the Purification Building. A new sluice tank and pumps will be installed on the ground floor. All connecting piping will be new.

An existing diatomaceous earth (DE) silo at SCC will be re-commissioned to serve the precoat tank. A new top deck will be installed on the silo, and a new bin vent filter will be installed. Alternatively, an available filter will be relocated. A new screw feeder will be installed on the outlet of the silo to feed the DE into the precoat tank. A new filtered acid stand pipe and pump will be installed on the ground floor. A new transfer line will be installed from the filtered acid pump to the existing South BSPA storage tank at SCC; this tank will be re-purposed to become the product shipping tank. Two new loadout lines will be installed from the loadout heaters to the existing rail loading rack at SCC. Valved branch connections will be provided for installation of lines to the existing truck loading rack. Two new gangways and two new loading arms will be installed at the rail loading rack for loading the product into rail cars.

The DE bin and filter item is considered an insignificant activity, with PM emissions less than 5 tpy. Using uncontrolled PM emissions factor for sand transfer, from EPA reference AP-42, Table 11.12-2, the emissions can be estimated as follows:

PM, uncontrolled = 0.0021 lb/ton x 250 tons/yr x 2 transfers = 0.52 lb/yr

There is no change in the rule applicability, as referenced in the current Title V permit, as the same equipment is being moved from one location to another within the same facility. As explained above, some minor components, pumps and piping will be new as well as the foundations.

The coordinates of the new location for EU 061 are Latitude 30/26/57 and Longitude 82/51/55.

2. PSD APPLICABILITY

General PSD Applicability

For areas currently in attainment with the state and federal AAQS or areas otherwise designated as unclassifiable, the Department regulates major stationary sources of air pollution in accordance with Florida's PSD preconstruction review program as defined in Rule 62-212.400, F.A.C. Under preconstruction review, the Department first must determine if a project is subject to the PSD requirements ("PSD applicability review") and, if so, must conduct a PSD preconstruction review. A PSD applicability review is required for projects at new and existing major stationary sources. In addition, proposed projects at existing minor sources are subject to a PSD applicability review to determine whether potential emissions *from the proposed project itself* will exceed the PSD major stationary source thresholds. A facility is considered a major stationary source with respect to PSD if it emits or has the potential to emit:

- 250 tons per year or more of any regulated air pollutant; or
- 100 tons per year or more of any regulated air pollutant and the facility belongs to one of the following 28 PSD-major facility categories: fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input, coal cleaning plants (with thermal dryers), Kraft pulp mills, portland cement plants, primary zinc smelters, iron and steel mill plants, primary aluminum ore reduction plants, primary copper smelters, municipal incinerators capable of charging more than 250 tons of refuse per day, hydrofluoric, sulfuric, and nitric acid plants, petroleum refineries, lime plants, phosphate rock processing plants, coke oven batteries, sulfur recovery plants, carbon black plants (furnace process), primary lead smelters, fuel conversion plants, sintering plants, secondary metal production plants, chemical process plants, fossil fuel boilers (or combinations thereof) totaling more than 250 million British thermal units per hour heat input, petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels, taconite ore processing plants, glass fiber processing plants and charcoal production plants.

Once it is determined that a project is subject to PSD preconstruction review, the project emissions are compared to the "significant emission rates" defined in Rule 62-210.200, F.A.C. for the following pollutants: carbon monoxide (CO); nitrogen oxides (NO_X); sulfur dioxide (SO_2); particulate matter (PM); particulate matter with a mean particle diameter of 10 microns or less (PM_{10}); volatile organic compounds (VOC); lead (Pb); fluorides (Fl); sulfuric acid mist (SAM); hydrogen sulfide (H_2S); total reduced sulfur (TRS), including H_2S; reduced sulfur compounds, including H_2S; municipal waste combustor organics measured as total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans; municipal waste combustor metals measured as particulate matter; municipal waste combustor acid gases measured as SO_2 and hydrogen chloride (HCl); municipal solid waste landfills emissions measured as non-methane organic compounds (NMOC); and mercury (Hg). In addition, significant emissions rate also means any emissions rate or any net emissions increase associated with a major stationary source or major modification which would construct within 10 kilometers of a Class I area and have an impact on such area equal to or greater than 1 $\mu g/m^3$, 24-hour average.

If the potential emission exceeds the defined significant emissions rate of a PSD pollutant, the project is considered "significant" for the pollutant and the applicant must employ the Best Available Control Technology (BACT) to minimize the emissions and evaluate the air quality impacts. Although a facility or project may be *major* with respect to PSD for only one regulated pollutant, it may be required to install BACT controls for several "significant" regulated pollutants.

PSD Applicability for Project

There are no expected changes in emissions from the relocating of EU061.

3. APPLICATION REVIEW

Discussion of Emissions

Permitted Capacity. This permit does not modify or add any new permitted capacities. The rate shall not exceed the Maximum 12-MRA Hourly Rate = 40 tons of 100% P_2O_5 input or Maximum Daily 1-Hour Average Rate = 44.0 tons of 100% P_2O_5 input.
12-MRA (MRA - Monthly Rolling Average) Hourly Rate Maximum shall not be exceeded by the 12-MRA hourly rate calculated by averaging each monthly hourly average with the previous 11 monthly hourly averages.

[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; permit 0470002-034-AC, (Applicant requested on July 10, 2006 and August 7, 2006) Air Construction Permit No. 0470002-054-AC]

Emissions Standards. This permit does not modify or add any new emission standards. At sample port, fluoride emissions shall not exceed 0.5 lb/hr and 2.2 TPY.

[Requested by applicant; Permit #AC24-205170; and Air Construction Application for Permit No. 0470002-054-AC Application]

Other Draft Permit Requirements

No additional production, operation limitations or monitoring requirements, etc. This project does not trigger any new rule applicability. A construction permit was issued because it meets the definition of construction as per Rule 62-210.200(88), F.A.C.

NSPS Requirements

This EU is not subject to any NSPS requirements.

NESHAPS

This EU is not subject to any NESHAPS requirements.

4. PRELIMINARY DETERMINATION

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the draft permit. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the conditions specified in the draft permit. Leslie Maybin is the project engineer responsible for reviewing the application and drafting the permit. Additional details of this analysis may be obtained by contacting the project engineer at the Northeast District Office's address at 8800 Baymeadows Way West, Suite 100, Jacksonville, Florida 32256, (904) 256-1700.