TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

APPLICANT

Osceola Farms Company
32298 State Road 700
Pahokee, Florida 33476

Osceola Farms
Facility ID No. 0990019

PROJECT

Project No. 0990019-013-AC
Application for Air Construction Permit
Boiler Nos. 2 and 5 Stack Testing

COUNTY

Palm Beach, Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Air Resource Section
South District Office
2295 Victoria Avenue
Fort Myers, FL 33901

February 15, 2013

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

Osceola Farms Company is an existing sugarcane processing mill, which is categorized under Standard Industrial Classification Code No. 2061. The facility is located in Palm Beach County at U.S. 98 and Hatton Highway, Pahokee, Florida. The UTM coordinates of the existing facility are Zone 17, 544.200 km East, and 2968.000 km North. 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

Boiler No. 2 has two scrubbers that are used to control the PM emissions from Boiler No. 2. Boiler No. 5 also has two scrubbers. Each wet scrubber exhausts to a separate stack. This project authorizes stack tests to be performed on separate days for each of the stacks on the two scrubbers associated with Boiler No. 2 and for each of the stacks on the two scrubbers associated with Boiler No. 5. The stack tests are for the purpose of demonstrating compliance with permitted emissions limits for particulate matter (PM), volatile organic compounds (VOC) and nitrogen oxides (NO_X).

PBCHD and FDEP compliance personnel had requested that Osceola test simultaneously the two stacks for each boiler. In response, Osceola submitted an alternative sampling procedure request with their application for Title V permit renewal. Osceola has requested to be allowed to continue performing independent testing of the two stacks on each boiler.

Processing Schedule

September 4, 2012 Received the application for a minor source air pollution construction permit.

October 11, 2012 Requested additional information.

January 9, 2013 Received additional information; application incomplete.

January 18, 2013 Requested additional information.

January 31, 2013 Received additional information, application complete.

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 be constructed 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 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

This project is not subject to PSD applicability review since it only involves clarifying and amending stack test requirements. The project does not increase potential emissions or permitted capacities.

3. APPLICATION REVIEW

Discussion of Emissions and State Requirements

Osceola Farms has performed annual PM, NO_X and VOC compliance testing on each boiler No. 2 and No. 5 by independently testing each of the two stacks on each boiler for over 30 years. There have not been any violations of the permitted emissions limits as demonstrated by compliance testing. The Department held a teleconference on October 11 with Osceola Farms representatives and Golder Associates, their consultants, to discuss the stack testing for Boilers No. 2 and 5. Based on the information that the two stacks on these two boilers have been tested separately for over 30 years, that the stack tests have not resulted in non-compliance with any permitted emissions limits, that the Department has been accepting the test results, that Rule 62-297.310(1), F.A.C. allows for compliance test runs to be completed within a five consecutive day period, that EPA methods do not address this situation and that there appear to be no EPA determinations addressing this type of situation, the Department determined that each of the boilers' two stacks could be tested separately with conditions as stated in the construction permit.

Other Draft Permit Requirements

The Department has required the additional following conditions:

1. Stack Testing.

   a. Each of the two individual exhaust stacks on each of the two scrubbers associated with Boiler No. 2 and each of the two individual exhaust stacks on each of the two scrubbers associated with Boiler No. 5 are authorized to be independently (on separate days) tested for purposes of demonstrating compliance with permitted emissions limits. The stack test for the emissions unit's second exhaust stack shall begin within three days of the completion of the first exhaust stack's stack test, unless inclement weather, operational problems or other unforeseen or uncontrollable circumstances preclude such testing. If the second exhaust stack's stack test cannot be tested within three days after the completion of the first exhaust stack's stack test due to inclement weather, operational problems or other unforeseen or uncontrollable circumstances, the facility shall notify the compliance authority. The notification shall include a description of the circumstance preventing the second stack test from being performed within three days of the first stack test and date of rescheduled testing.

   b. Each exhaust stack shall be tested for PM, VOC and NO_X emissions.

   c. The pollutant emissions results (average of three test runs) from each exhaust stack's test shall be added together for compliance demonstration reporting.

   d. When Boiler No. 2 stack tests are performed over multiple days, the following shall apply:

      i. During the second and any subsequent days of testing either the South scrubber or the North scrubber, the steam flow achieved by Boiler No. 2 during the testing shall be within $\pm$15 percent of the steam flow achieved during the first day of testing for the boiler.

      ii. During the second and any subsequent days of testing either the South scrubber or the North scrubber, the pressure drop and water flow rate achieved by each scrubber (i.e., South or North scrubber) during the testing shall be within $\pm$15 percent of the scrubber minimum and maximum pressure drop and water flow rates achieved by each individual scrubber (South or North) during the first test run on the first day of testing, regardless of which scrubber stack is being tested.

e. When Boiler No. 5 stack tests are performed over multiple days, the following shall apply:

i. During the second and any subsequent days of testing either the East scrubber or the West scrubber, the steam flow achieved by Boiler No. 5 during the testing shall be within ±15 percent of the steam flow achieved during the first day of testing for the boiler.

ii. During the second and any subsequent days of testing either the East scrubber or the West scrubber, the pressure drop and water flow rate achieved by each scrubber (i.e., East or West scrubber) during the testing shall be within ±15 percent of the scrubber minimum and maximum pressure drop and water flow rates achieved by each individual scrubber (East or West) during the first test run on the first day of testing, regardless of which scrubber stack is being tested.

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

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. Susan Machinski 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 Department's South District Office at 2295 Victoria Avenue, Suite 364, Fort Myers, Florida 33902.