TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

APPLICANT

Sem-Chi Rice Products Corporation
One North Clematis Street, Suite 400
West Palm Beach, Florida 33401

Sem-Chi Rice Products
Facility ID No. 0990011

PROJECT

Project No. 0990011-009-AC
Application for Minor Source Air Construction Permit
Non-Title V Air Construction Permit
[Increase production capacity, add additional dryer (No.3), four (4) silos and seven (7) tempering bins]

COUNTY

Palm Beach, Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
South District Office
2295 Victoria Avenue
Fort Myers, FL 33901
SouthDistrict@dep.state.fl.us

February 27, 2015

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

Sem-Chi Rice Products Corporation is an existing plant, which is categorized under Standard Industrial Classification Code No. 2044. The facility is be located in Palm Beach County, 4 miles west of U.S. 98, and 1 mile south of S.R.80 in Loxahatchee, Florida. The UTM coordinates of the existing facility are Zone 17, 553.99 km East, and 2949.65 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 not 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 not a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is not 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

The project is to increase the facility production capacity by installing additional equipment. The maximum capacity is to be <u>increased from 40,000 TPY of grain to 75,000 TPY</u>. In addition, the Rice Drying operations capacity is to be <u>increased from 84,000 TPY to 157,500 TPY</u>. To achieve the increased capacities, the following equipment is to be added to the facility:

One (1) GSS Column Dryer Model R453G (Dryer No. 3)
Two (2) Tempering Bins (for Pit No. 1)
Five (5) Tempering Bins (for Pit No. 2)
Four (4) Storage Bins

The only equipment added as a numbered emission unit is Dryer No. 3 which is designated as emission unit EU 010. (The Tempering Bins and Storage Bins are classified as "Insignificant Emissions").

Note: Rice cleaning for Pit Nos. 1 and 2 are controlled by Cyclone Nos. 1 (EU 005) and 3 (EU 007). The emission units include a cleaner in the receiving line for Pit No. 1, and a cleaner/aspirator in the receiving line

for Pit No. 2. Cyclone No. 1 controls emissions from the cleaner in Pit No. 1 and Cyclone No. 3 controls dust from the cleaner/aspirator in Pit No. 2.

This project increases the total facility process and production rates. As a result, Cyclone Nos. 1 and 3 will have an increase in throughput. However, only potential emissions from Cyclone No. 1 will increase due to increase of throughput. Cyclone No. 3 potential emissions are based upon the manufacture guaranteed exhaust grain loading which will not be changed as a result of this project.

Processing Schedule

February 23, 2015 Received the application for a minor source air pollution construction permit.

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

Note: Existing Dryer Nos. 1 and 2 will have an increase in throughput limits and emissions. Dryer No. 3 is a NEW installation.

As provided in the application, the following table summarizes potential emissions and PSD applicability for the project.

Table A. Potential Emissions (Tons/Year) and PSD Applicability

Pollutant	**Project Potential Emissions (TPY)**	**Significant Emissions Rate (TPY)**	**Subject To PSD?**
CO	1.40	100	No
NO_X	2.43	40	No
PM/PM_{10}	30.5	25/15	No
SO_2	0.028	40	No
VOC	0.150	40	No

As shown in the above table, total project emissions will not exceed the PSD significant emissions rates; therefore, the project is not subject to PSD preconstruction review.

3. APPLICATION REVIEW

Discussion of Emissions

a) Maximum Heat Input Rate:
Dryer No. 1……..7.16 MMBtu/hr
Dryer No. 2……17.91 MMBtu/hr
Dryer No. 3 (New)…. 7.00 MMBTU/hr

b) Emissions: (Total facility).

Rice Receiving, Cleaning and Drying

Source	Emission Unit (EU)	PM (TPY)	SO2 (TPY)	NOx (TPY)	CO (TPY)	VOC (TPY)
Dryers1, 2 and 3	008, 009, 010	0.131	0.028	2.43	1.4	0.15
Cyclones 1 and 3	005, 007	9.58	---	---	---	. ---
Process	-----	13.05	---	---	---	---

Rice Mill

Source	Emission Unit (EU)	PM (TPY)
Bag Filter (BF-1)	002	3.52
Bag Filter (BF-2)	003	3.23
Bag Filter (BF-3)	004	0.55

c) Permitted Capacity (For information only.)

Process Area	Capacity
Rice Mill	75,000 TPY
Pit No. 1	37.5 TPH
Pit No. 2	60 TPH
Rice Drying	157,000 TPY

d) Insignificant Emissions: The following listing defines the sources of area wide emissions including multiple sources, where each specific source is determined to be an insignificant emission of less than 5 tons per year.

Source	**PM** (TPY)
Hopper/Truck Pit No.1	0.35
Hopper/Truck Pit No.2	0.35
Waste Bin No. 1	0.012
Waste Bin No. 2	0.012
Drop to truck, Waste Bin for Pit No. 1	0.012
Drop to truck, Waste Bin for pit No. 2	0.012
Total facility, belts, conveyors, scales	2.560
Total Facility Storage Bins	1.050
Silo to Truck –Rice Mill	0.23

[Permit No. 0990011-004-AC and Permit No. 0990011-006-AO]

e) Authorized Fuel: The authorized fuel for dryer No. 1 (EU008), No. 2 (EU009) and No. 3 (EU010) is propane.

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. Carter B. Endsley, P.E. 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.