TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

APPLICANT

Clover Leaf Gin, Inc.
Post Office Box 366
Donalsonville, Georgia 39845

Marianna Plant
Facility ID No. 0630039

PROJECT

Project No. 0630039-009-AC
Application for Minor Source Air Construction Permit
Dryer/Cyclone Replacement & Modification

COUNTY

Jackson, Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Air Resource Section
Northwest District Office
160 W. Government Street, Room 308
Pensacola, Florida 32502-5740

September 6, 2011

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); 62-296 (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

Clover Leaf Gin, Inc., is an existing cotton ginning facility, which is categorized under Standard Industrial Classification Code No. 0724. The facility is located in Jackson County at 4455 Highway 162 in Marianna, Florida. The UTM coordinates of the existing facility are Zone 16, 670.3 km East and 3416.3 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

This existing emissions unit consists of raw cotton unloading, seed cotton cleaning, lint cotton handling and trash/mote handling. The conditionally exempt LP gas-fired heaters are used to dry the seed cotton during unloading and conveying. Cyclones are used to control particulate emissions. This construction permit authorizes the replacement of Tower Dryer #1 and #2 with Jet Dryers of the same heat input of 8 MMBtu/hr and 4 MMBtu/hr, respectively. The new Jet Dryers will be fired exclusively by LP gas. This construction permit also authorizes the replacement of the existing 52” diameter cyclones 3 and 4 by new 54” diameter cyclones and using the 52” diameter cyclones removed from cyclones 3 and 4 to replace the existing 46” diameter Cyclones 5 and 6. The purpose is to increase efficiency and reduce fuel consumption without an increase in emissions.

Compliance History

Facility inspections for 2010, 2008, 2006 - “In Compliance.” No VE test performed for 2007. Warning Letter issued as well as a Consent Order and the facility was assessed a penalty. The case was closed out 3/2009.

Processing Schedule

July 14, 2011	Received the application for a minor source air pollution construction permit.
August 12, 2011	Requested additional information.
August 19, 2011	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 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

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 (TPY)	Pre-Project Potential Emissions	Contempo-raneous Emissions Change	Project 009 Potential Emissions Change	Total Post Project Potential Emissions	Total Emissions Change	Significa nt Emission s Rate	Subject to PSD
CO	0.29	0	0	0.29	0	100	**NO**
NO_X	2.10	0	0	2.10	0	40	**NO**
PM/PM_{10}	*82.6	0	*-10.6	*72.0	*-10.6	25/15	**NO**
SO_2	0.02	0	0	0.02	0	40	**NO**
VOC	0.08	0	0	0.08	0	40	**NO**

* EU production limit of 60,000 bales/yr remains unchanged. The apparent PM emissions decrease is due to different PM emissions factors used by different engineers. The pre-project PM emissions were based on an emission factor of 2.75 lb/bale, while the post-project emissions are based on emission factor of 2.4 lb/bale – ref AP 42 Table 9.7-1.

The facility is not an existing major stationary source with respect to PSD because its potential emissions are less than 250 TPY of a regulated pollutant, the facility is not on the list of 28 and does not emit 100 TPY of a regulated pollutant. The project's potential emissions increase is less than 250 TPY of a regulated pollutant. Based on these facts, the project is not subject to PSD preconstruction review.

3. APPLICATION REVIEW

Application Fee

AC/1F ($250 fee) – Emissions less than 5 tons per year.

Discussion of Emissions

The project's equipment changes do not result in any increases in actual or potential emissions of particulate matter. It is not likely that this facility would ever exceed Title V thresholds due to the short cotton ginning season lasting three to five months.

State Requirements

This unit remains subject to the conditions of all other valid air construction and operations permits.

Federal NSPS Provisions

N/A

Federal NESHAP Provisions

N/A

Other Draft Permit Requirements

The facility is required to have visible emissions tests run on the worst case cyclone or stack from each of the raw cotton unloading; seed cotton cleaning; lint cotton handling; and trash/mote handling. The visible emissions tests must be conducted annually and shall be scheduled once per year, during the first month of the ginning season. Records must be kept to comply with fuel usage limits on steam generators and humidifiers.

This permit does not require any additional monitoring.

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. Angelia Jackson 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 850/595-0598 or angelia.jackson@dep.state.fl.us.