TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

APPLICANT

Southern Gardens Citrus Processing Corporation, Clewiston Facility
1820 County Road 833
Clewiston, Florida 33440

Clewiston Facility
Facility ID No. 0510015

PROJECT

Project No. 0510015-025-AC
Application for Air Construction Permit
Add Natural Gas/Increase Peel Dryer Heat Input

COUNTY

Hendry, Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Air Resource Section
South District Office
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33902

June 8, 2012

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

Southern Gardens Citrus Processing Corporation is an existing citrus processing plant, which is categorized under Standard Industrial Classification Code Nos. 2037 and 2033. The facility is be located in Hendry County at 1820 County Road 833, Clewiston, Florida. The UTM coordinates of the existing facility are Zone 17, 487.5 East and 2958.0 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

This project modifies the authorized fuels burned by the boilers [emission units (EU) 001, 002, 008 and 010] and the peel dryers (EU003 and EU019). This project also increases the heat input of peel dryer no. 1 (EU003). The boilers and peel dryer no. 1 are proposed to burn natural gas as the primary fuel. Peel dryer no. 2 will only burn No. 2 (with a maximum 0.1% sulfur content by weight).The boilers are authorized to burn fuel oil No. 2 (with a maximum 0.1% sulfur content by weight), d-limonene, cold pressed oil, and ethanol or blends of these fuels only during periods of loss of natural gas supply or during periods of natural gas curtailment. The heat input limit of peel dryer no. 1 will increase from 99 mmBtu/hr to 110 mmBtu/hr. As a result of the change of fuel to natural gas and the lower sulfur content in the fuel oil, the Department's previously imposed continuous monitoring for SO_2 and annual testing requirements for the peel dryers will no longer be required.

Processing Schedule

May 11, 2012 Received the application for an air pollution construction permit.

May 11, 2012 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

This project modifies the authorized fuels burned by the boilers [emission units (EU) 001, 002, 008 and 010] and the peel dryers (EU003 and EU019). The boilers and peel dryer no. 1 are proposed to burn natural gas as the primary fuel. The boilers will be authorized to burn fuel oil No. 2 (with a maximum 0.1% sulfur content by weight), d-limonene, cold pressed oil, and ethanol or blends of these fuels only during periods of loss of natural

gas supply or during periods of natural gas curtailment. Peel dryer no. 1 will only burn natural gas and peel dryer no. 2 will only burn No. 2 (with a maximum 0.1% sulfur content by weight). The new natural gas burner systems will be install in the four boilers and peel dryer no. 1. There will be no increase in capacity for the boilers or dryer as a result of the new natural gas burner systems. This project also increases the heat input of peel dryer no. 1 (EU003). The heat input limit of peel dryer no. 1 will increase from 99 mmBtu/hr to 110 mmBtu/hr. The facility is major for prevention significant deterioration (PSD). A PSD applicability review indicated that this project did not trigger a PSD review. 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	56.5	100	No
NO_X	11.22	40	No
PM/PM_{10}	11.42/9.83	25/15	No
SO_2	-33.47	40	No
VOC	36.9	40	No

Table B. Boiler No. 1 (EU001) Baseline and Projected Actual Emissions

Pollutant	Baseline Emissions (TPY)	Projected Actual Emissions (TPY)
CO	1.31	4.71
NO_X	7.17	8.23
PM/PM_{10}	0.524/0.262	0.823/0.412
SO_2	5.2	2.92
VOC	0.066	0.308

Table C. Boiler No. 2 (EU002) Baseline and Projected Actual Emissions

Pollutant	Baseline Emissions (TPY)	Projected Actual Emissions (TPY)
CO	1.10	4.81
NO_X	6.05	8.42
PM/PM_{10}	0.440/0.220	0.842/0.421
SO_2	6.1	2.99
VOC	0.055	0.315

Table D. Boiler No. 3 (EU008) Baseline and Projected Actual Emissions

Pollutant	Baseline Emissions (TPY)	Projected Actual Emissions (TPY)
CO	1.68	5.64

Pollutant	Baseline Emissions (TPY)	Projected Actual Emissions (TPY)
NO_X	8.16	9.87
PM/PM_{10}	0.671/0.336	0.987/0.493
SO_2	5.7	3.50
VOC	0.0846	0.369

Table E. Boiler No. 4 (EU010) Baseline and Projected Actual Emissions

Pollutant	Baseline Emissions (TPY)	Projected Actual Emissions (TPY)
CO	0.01	0.672
NO_X	0.80	1.18
PM/PM_{10}	0.006/0.003	0.118/0.059
SO_2	0.16	0.417
VOC	0.0007	0.044

Table F. Peel Dryer No. 1 (EU003) Baseline and Projected Actual Emissions

Pollutant	Baseline Emissions (TPY)	Projected Actual Emissions (TPY)
CO	638.8	659.3
NO_X	23.4	28.4
PM/PM_{10}	27.6/24.8	36.3/32.7
SO_2	26.4	0.11
VOC	608.0	618.7

Table F. Peel Dryer No. 2 (EU019) Baseline and Projected Actual Emissions

Pollutant	Baseline Emissions (TPY)	Projected Actual Emissions (TPY)
CO	9.2	33.5
NO_X	1.26	2.0
PM/PM_{10}	0.564/0.508	2.13/1.92
SO_2	1.35	1.46
VOC	11.0	36.3

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

As a result of the change of fuel to natural gas and lower sulfur content in the fuel oil, Department previously imposed continuous monitoring for SO_2 and annual testing requirements will no longer be required. The SO_2 emissions as a result of this project are proposed to decrease by 33.5 tons per year. Emissions are projected to increase for nitrogen oxides, carbon monoxide, particulate matter and volatile organic matter.

During Project 0510015-025-AC, the facility has used their one time election to resume combustion of fuel oil with a maximum fuel sulfur content of 0.1 % by weight and discontinue continuous pH monitoring per specific condition 5.e. in Permit No. 0510015-016-AC/PSD-FL-368 and 0510015-020-AC.

State Requirements

This permit is based on an analysis that compared baseline actual emissions with projected actual emissions and avoided the requirements of subsection 62-212.400(4) through (12), F.A.C. for several pollutants. Therefore, pursuant to Rule 62-212.300(1)(e), F.A.C., the permittee is subject to the following monitoring, reporting and recordkeeping provisions.For this project, the Department requires the annual reporting for 10 years of actual NO_X, CO, PM, PM_{10}, $PM_{2.5}$ and VOC emissions for the following units: EU001, EU002, EU008, EU010, EU003, EU019.

Federal NSPS Provisions

Emission units 001, 002 and 008 (boilers) are subject to Title 40 Code of Federal Regulations (CFR) Part 60 Subpart A (General Provisions) and Subpart Dc (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units).

Federal NESHAP Provisions

Emission units 001, 002, 008 and 010 (boilers) are subject to 40 CFR 63 Subparts A and DDDDD (General Provisions and National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters, respectively).

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 South District Office, 2295 Victoria Avenue, Suite 364, PO Box 2295, Fort Myers, Florida 33902 (phone is 239-344-5600).