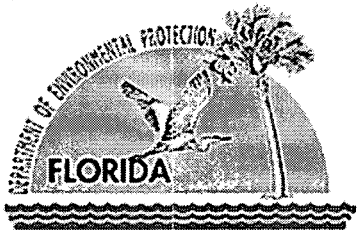


# TECHNICAL EVALUATION
# &
# PRELIMINARY DETERMINATION

## PROJECT

Draft Air Construction Permit No. 0510003-031-AC
Miscellaneous Air Construction Permit Revisions
Concurrent with Title V Permit No. 0510003-032-AV

## APPLICANT

United States Sugar Corporation
Clewiston Sugar Mill and Refinery
111 Ponce DeLeon Avenue
Clewiston, FL 33440

ARMS Facility ID No. 0510003

## PERMITTING AUTHORITY

Bureau of Air Regulation
Division of Air Resource Management
Florida Department of Environmental Protection
2600 Blairstone Road, MS #5505
Tallahassee, Florida 32399-2400

February 8, 2008

*{Filename: 0510003-031-AC - TEPD.DOC}*

## 1. GENERAL PROJECT INFORMATION

### Facility Description and Location

U.S. Sugar operates a sugar mill and refinery in Hendry County located at the intersection of W.C. Owens Avenue and State Road 832 in Clewiston, Florida. The UTM map coordinates are Zone 17, 506.1 E, and 2956.9 N. Sugarcane is harvested from nearby fields and transported to the mill by train. In the mill, sugarcane is cut into small pieces and processed in a series of presses to squeeze juice from the cane. The juice undergoes clarification, separation, evaporation, and crystallization to produce raw, unrefined sugar. In the refinery, raw sugar is decolorized, concentrated, crystallized, dried, conditioned, screened, packaged, stored, and distributed as refined sugar. The fibrous byproduct remaining from the sugarcane is called bagasse and is burned as boiler fuel to provide steam and heating requirements for the mill and refinery. The existing facility is:

- A Title V major source of air pollution in accordance with Chapter 62-213, Florida Administrative Code (F.A.C.);
- A major stationary source in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality;
- A major source of hazardous air pollutants;
- Subject to the New Source Performance Standards (NSPS) in 40 CFR 60, including: Subpart A (General Provisions) and Subpart Db (Boilers);
- Not subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) in Title 40, Part 63 of the Code of Federal Regulations (CFR 63); and
- Not subject to the Title IV acid rain provisions of the Clean Air Act (CAA).

### Project Description

On June 2, 2005, the Department received a single application to renew the Title V permits for the Clewiston sugar mill in Hendry County and the Bryant sugar mill in Palm Beach County. Processing of the Title V application was delayed for several reasons including: a request to consider the Clewiston and Bryant facilities as a single facility based on issues such as common control, adjacency, etc.; several revisions requested to incorporate numerous air construction permits processed since the last issuance and during the processing period; a request to incorporate the applicable NESHAP Subpart DDDDD provisions from 40 CFR 63; a revision requested for a health-based compliance alternative to the NESHAP DDDDD provisions for existing boilers; and requests to modify Permit PSD-FL-333 for newly constructed Boiler 8. During the processing, U.S. Sugar decided to permanently shut down the Bryant sugar mill and sell the existing equipment. The Title V permit for the Bryant sugar mill was expired by the Department on September 28, 2007. Also during processing, the court vacated NESHAP DDDDD and it is no longer applicable. Once these issues were resolved, permit processing went forward.

The application also requested concurrent processing of an air construction permit to make miscellaneous changes to several previously issued air construction permits. The changes under consideration include the following.

- Permit PSD-FL-272A: Revise oil firing restrictions for Boilers 1, 2 and 4 based on low sulfur distillate oil.
- Permit PSD-FL-272A: Revise monitoring of wet scrubber parameters for Boiler 4.
- Permit No. 0510003-029-AC: Remove the fuel nitrogen content for Boiler 7
- Permit No. PSD-FL-208: and remove redundant VOC emissions limit for Boiler 7.
- Permit No. PSD-FL-333C: Remove monitoring requirement for cyclones on Boiler 8.
- Reduce $NO_X$ and VOC testing frequency for Boilers 4 and 7 from annual to renewal.
- Authorize greater than 2 hours of excess emissions from the boilers due to startup and shutdown.

Each proposed revision will be discussed in the following sections.

## 2. APPLICABLE REGULATIONS

This project is subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.), which authorize the Department of Environmental Protection to establish rules and regulations regarding air quality as part of the Florida Administrative Code (F.A.C.). This project is subject to the applicable rules and regulations defined in the following Chapters of the F.A.C.: 62-4 (Permitting Requirements); 62-204 (Ambient Air Quality Requirements, PSD Increments, and Federal Regulations Adopted by Reference); 62-210 (Permits Required, Public Notice, Reports, Stack Height Policy, Circumvention, Excess Emissions, and Forms); 62-212 (Preconstruction Review, Preconstruction Review for the Prevention of Significant Deterioration (PSD) of Air Quality and BACT, and Preconstruction Review for Nonattainment Areas and LAER); 62-213 (Title V Air Operation Permits for Major Sources of Air Pollution); 62-296 (Emission Limiting Standards); and 62-297 (Test Methods and Procedures, Continuous Monitoring Specifications, and Alternate Sampling Procedures). The proposed changes do not impose any new specific state regulations and will not result in actual emissions increases. Therefore, the project is not subject to preconstruction review for the Prevention of Significant Deterioration (PSD) of Air Quality.

## 3. DEPARTMENT REVIEW

This section discusses each issue and the Department's conclusion. For revised permit conditions, deletions are shown with ~~strikethrough~~ and additions with double underline.

### Permit PSD-FL-272A, Oil Firing Restrictions Boilers 1, 2 and 4

Boilers 7 and 8, as well as smaller combustion sources throughout the facility, are permitted to fire distillate oil with a maximum sulfur content of 0.05% by weight. Boilers 1, 2 and 4 were formerly permitted to fire high sulfur fuel oil. Permit 0510003-039-AC authorized modifications of the oil firing systems for Boilers 1, 2 and 4 to accommodate distillate oil with a maximum sulfur content of 0.05% by weight. Higher sulfur fuel oil is no longer fired at this facility. Based on the typical properties for distillate oil, the maximum $SO_2$ emission factor is estimated as follows.

$$EF\ (SO_2) = \frac{(0.05\ lb\ S)}{(100\ lb\ oil)} \times \frac{(lb\ oil)}{(19{,}910\ Btu)} \times \frac{(2\ lb\ SO_2)}{(lb\ S)} \frac{(10^{+06}\ Btu)}{(MMBtu)} = \underline{0.05\ lb\ SO2/MMBtu}$$

For the Clewiston sugar mill, a maximum $SO_2$ emission factor of 0.06 lb/MMBtu has been developed from past $SO_2$ emissions tests on boilers firing bagasse. This emissions factor has been used in air quality modeling analyses performed for this facility. This means that bagasse firing now results in the maximum $SO_2$ emission rates from the boilers. Previous permit conditions referring to higher sulfur fuel oil are obsolete.

For clarity, Condition 6 in Subsection III.B of Permit PSD-FL-272A is revised as follows.

"~~Fuel Oil Consumption~~

~~a. **Boiler Nos. 1 – 4, Crop Season**: From October through April of each year, the total fuel oil consumption for Boiler Nos. 1 – 4 shall not exceed 16,200 gallons during any 3-hour period and 88,800 gallons during any 24-hour period.~~

~~b. **Boiler Nos. 1 – 4, Off Season**: From May through September of each year, the total fuel oil consumption for Boiler Nos. 1 – 4 shall not exceed 11,700 gallons during any 3-hour period and 54,000 gallons during any 24-hour period.~~

~~The permittee shall install, calibrate, operate, and maintain individual fuel oil flow meters with integrators. [Applicant Request, Supporting Air Quality Analysis for PSD-FL-272A]~~"

Distillate oil consumption is limited by the physical capacity of the individual oil firing systems and the restriction of 6,000,000 gallons during any consecutive 12 months for Boilers 1, 2 and 4 specified in Permit 0510003-039-AC.

**Permit PSD-FL-272A, Wet Scrubber Parameters for Boiler 4**

In Permit PSD-FL-272A, Condition 8 in Subsection III.A specifies monitoring frequencies and target operating ranges for the scrubber pressure drop, scrubber water supply pressure and scrubber flow rate. The initial ranges were established based on data available at that time. Since the goal of this condition reflects that of the Continuous Assurance Monitoring (CAM) provisions, the applicant requests revision of this condition to allow the parametric monitoring to be established through the CAM plan.

*Conclusion*: Based on additional test information provided, the Department will revise this condition as follows.

Wet Scrubber: To control emissions of particulate matter, the permittee shall install, operate, and maintain a Type D, Size 200 Joy Turbulaire wet impingement scrubber. To ensure the annular throttling gap is being properly maintained, this system shall provide constant make-up water overflow to the scrubber as indicated by the weir box. The wet scrubber shall also be equipped with the following monitoring equipment.

a. A **manometer** (or equivalent) shall be installed to measure the scrubber pressure drop in inches of water column. ~~The~~ In accordance with the CAM provisions of the Title V permit, the minimum pressure drop across the scrubber (excursion level) shall be ~~maintained between~~ 8 ~~and 11~~ inches of water column.

b. A **pressure gage** shall be installed to monitor the water supply pressure to the scrubber nozzles. The typical operating line pressure is ~~This pressure shall be maintained~~ between 40 and 55 psi.

c. A **flow meter** shall be installed to measure the water flow rate to the scrubber spray nozzles. ~~This~~ In accordance with the CAM provisions of the Title V permit, the minimum flow rate (excursion level) shall be ~~maintained above 375~~ 300 gallons per minute~~, based on a 3-hour block average~~.

Monitoring of the scrubber pressure differential and scrubber water flow rate shall be included as part of the CAM plan for Boiler 4. ~~The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations. The permittee shall read and record each scrubber parameter once normal operations have been established after startup and at least once every 3 hours. Should any monitored parameter fall outside the specified operating range, the permittee shall investigate the cause and take corrective action to regain operation within the specified range. In addition, the permittee shall begin reading and recording all monitored parameters at 30-minute intervals until successive readings indicate operation within the specified range. The permittee may elect to install an automated recorder to satisfy the recording requirements. The permittee shall record any problems with operation of the wet scrubber and corrective actions taken in the Daily Operational Records required by this permit. Operation outside of the specified operating range for any monitored parameter is not a violation of this permit, in and of itself. However, continued operation outside of the specified operating range for any monitored parameter without corrective action may be considered circumvention of the air pollution control equipment.~~ [~~Applicant Request;~~ Rule 62-4.070(3); Rule 62-212.400 (BACT), F.A.C.; Permits PSD-FL-272 and 0510003-031-AC]

The following summarizes the rationale for these changes.

- Although the applicant requested a minimum scrubber pressure differential of "5.8 inches of water column", this level was based on only 90% of the minimum pressure drop measured during a 12/01/06 stack test conducted at an average of 535 MMBtu per hour. This is only 85% of the maximum 1-hour heat input rate of the boiler. *All* of the other test runs were to show a scrubber pressure differential of at least 8.5 inches of water column. Therefore, the minimum permitted pressure differential of 8 inches of water column was not changed. This is considered to be representative of normal minimum conditions for effective operation of the control device. The upper threshold of 11 inches of water column was determined to be unnecessary and was deleted.
- The line pressure of the scrubber water is helpful in troubleshooting potential problems with the scrubber system. However, continual monitoring is not necessary as long as the scrubber water pressure differential and flow rates are being observed and recorded. It was not included as a CAM parameter.

- The applicant requested a minimum scrubber flow rate of 220 gpm based on an 8-hour block average based on a 90% of the lowest compliance test run (245 gpm) conducted on 12/17/96. However, out of 41 test runs provided, 38 test runs were conducted at scrubber flow rates of 295 gpm or more and as high as 623 gpm (02/01/05). Compliance tests should be conducted under operating conditions representative of normal operation to determine compliance. Therefore, the minimum scrubber pressure differential was revised to 300 gpm.

Monitoring frequencies will be determined as part of the CAM plan.

**Permit No. 0510003-029-AC, Fuel Nitrogen Content for Boiler 7**

In a descriptive passage in Condition 6 of Permit PSD-FL-208, the permit states:

> "Nitrogen oxides emissions will be controlled by overfire air and good combustion practices; and, will be minimized using low-nitrogen fuel oil (max. 0.015% N content, by weight)."

This limit is repeated in Condition 21 in the same permit and was carried over to Permit 0510003-029-AC, which superseded the previous conditions for oil firing. A test conducted in 2003 indicated $NO_X$ emissions of 0.158 lb/MMBtu while firing 100% distillate oil (<0.05% sulfur by weight) near capacity, which is well below the permit limit of 0.20 lb/MMBtu. The nitrogen content is typically very low for distillate oil, which is primarily used as a startup and supplemental fuel restricted to an annual capacity factor of less than 10%. In comparison, the primary fuel of bagasse may have a nitrogen content of approximately 0.35% by weight. Also, the majority of $NO_X$ emissions generated from firing distillate oil will be thermal $NO_X$ and not fuel $NO_X$. The applicant requests removal of the fuel nitrogen limit for distillate oil.

*Conclusion*: It is agreed that distillate oil contains very low levels of fuel nitrogen. For comparison, Boiler 7 is also subject to NSPS Subpart Db for industrial boilers and 40 CFR 60.41b defines *distillate oil* as "fuel oils that contain 0.05 weight percent nitrogen or less and comply with the specifications for fuel oil numbers 1 and 2, as defined by the American Society of Testing and Materials in ASTM D396 (incorporated by reference, see §60.17)." However, 40 CFR 60.49b(r)(1) also states, "For the purposes of this section, the distillate oil need not meet the fuel nitrogen content specification in the definition of distillate oil." Record keeping of the fuel nitrogen content by fuel analysis is only required for residual oil. This indicates that fuel nitrogen at these levels contributes little to overall $NO_X$ emissions. Therefore, Condition 2 in Subsection 3B of Permit 0510003-029-AC will be revised as follows.

> "2. Oil Specification: Any fuel oil fired in this boiler shall be No. 2 distillate oil (or a superior grade) containing no more than 0.05% sulfur by weight as determined by ASTM Methods D-129, D-1552, D-2622, D-4294, or equivalent methods approved by the Department. ~~The nitrogen content of the distillate oil shall not exceed 0.015% nitrogen by weight as determined by ASTM Method D4629 or equivalent methods approved by the Department.~~ [~~Permit No. PSD-FL-208;~~ Rules 62-212.400 and 62-296.405, F.A.C.; and 40 CFR 60.42b(j)]

**Permit PSD-FL-208, Redundant VOC Emissions Limit for Boiler 7**

In Permit PSD-FL-208, Condition 1 specifies VOC limits of 0.212 lb/MMBtu of heat input and 157 lb/hour. In Condition 22, the following VOC emissions limits are also specified.

> "... Emissions of non-methane volatile organic compounds shall not exceed 1.7 lb/ton of wet bagasse or 0.21 lb/MMBtu as determined by EPA Method 25 or 25A in conjunction with EPA Method 18 and in accordance with 40 CFR 60, Appendix A."

Permits typically include a mass emissions rate (lb/hour) in addition to an industry standard. For boilers, the industry standard is generally recognized as "lb/MMBtu". A third limit of lb/ton of wet bagasse fired is redundant and really represents an equivalent for the lb/MMBtu limit based on an assumed heating value of bagasse for Boiler 7. The limit in terms of lb/ton limit of wet bagasse is unnecessary and should be removed.

*Conclusion*: The lb/hour and lb/MMBtu are sufficient to regulate short-term VOC emissions from Boiler 7. The conditions will be revised as follows.

> "... Emissions of non-methane volatile organic compounds shall not exceed ~~1.7 lb/ton of wet bagasse or~~ 0.21<u>2</u> lb/MMBtu as determined by EPA Method 25 or 25A in conjunction with EPA Method 18 and in accordance with 40 CFR 60, Appendix A."

For clarity, the condition was also revised from "0.21 lb/MMBtu" to "0.212 lb/MMBtu", which is specified in Condition 1 and is slightly more stringent.

**Permit PSD-FL-333C, Monitoring Requirement for Cyclones on Boiler 8**

The cyclones remove sand to protect the fan as well as large ash particles prior to the electrostatic precipitator. In Permit PSD-FL-333C, Condition 22 in Subsection 3A currently specifies:

> "<u>Cyclones</u>: In accordance with the manufacturer's recommendations, the permittee shall install, calibrate, operate and maintain the following equipment: flow meter to monitor the water flow rate (gph) for each wet cyclone and a manometer (or equivalent) to monitor the pressure drop (inches of water) across each cyclone. At least once each 8-hour work shift, the flow rate and pressure drop shall be observed and recorded in a written log."

The cyclones are static devices and the pressure drop is a function of the volumetric exhaust flow rate. The pressure drop cannot be otherwise adjusted for performance. The primary purpose of injecting water into the cyclones is to wash particulate buildup from the cyclones walls and not necessarily for particulate control. Continually recording these parameters is unnecessary. The applicant requests removal of this requirement.

*Conclusion*: Although the cyclones are considered pre-controls for the electrostatic precipitator, the function of particulate removal is more dependent on the exhaust flow rate than the water injection rate. Water is used to wash collected particles from the cyclone walls rather than for particulate control. The exhaust flow rate is a function of the boiler load, which is dependent on steam demand. The exhaust flow and water injection rates are not adjusted to tune the cyclone particulate removal efficiency. Therefore, it is not necessary to continually record the pressure drop and water flow rate of the cyclones to ensure adequate performance. However, the monitoring devices can be used during the required tests and at other times to troubleshoot potential problems with the overall control system. Therefore, the condition will be revised as follows.

> "<u>Cyclones</u>: In accordance with the manufacturer's recommendations, the permittee shall install, calibrate, operate and maintain the following equipment: flow meter to monitor the water flow rate (gph) for each wet cyclone and a manometer (or equivalent) to monitor the pressure drop (inches of water) across each cyclone. ~~At least once each 8-hour work shift,~~ <u>During each stack test conducted,</u> the flow rate and pressure drop shall be observed <u>at 15-minute intervals</u> and recorded in a written log."

**Permits PSD-FL-208 and PSD-FL-272, $NO_X$ and VOC Testing Frequency for Boilers 4 and 7**

Permits PSD-FL-208 and PSD-FL-272 require annual stack testing for $NO_X$ and VOC emissions from Boilers 4 and 7, respectively. The applicant provided information showing that each boiler has continually demonstrated compliance with the applicable standards for many years. Since there are no controls on these units, the applicant requests that the testing frequency be reduced from annual testing to testing prior to permit renewal (5 years).

*Conclusion*: Emissions of $NO_X$ and VOC are partially a function of how each boiler is operated. Potential emissions of these pollutants are well over 100 tons/year for each boiler. Rule 62-297.310(7)(a)3, F.A.C. specifies annual testing for units with emissions standards and potential emissions greater than 100 tons per year. While it is agreed that the units regularly show compliance with these standards, there are no other methods for monitoring that provide reasonable assurance of compliance with the emissions standards. In addition, each of these limits was established as a Best Available Control Technology (BACT) standard.

Therefore, this request is rejected and no changes were made to any air construction permits.

**Authorize Excess Emissions from the Boilers during Startup and Shutdown**

The applicant states that startup and shutdown of the boilers last much longer than 2 hours and emissions during startup and shutdown may exceed the emissions limits for the given unit. Therefore, the applicant requests authorization for excess emissions during startup and shutdown for the duration defined under startup and shutdown procedures (as high as 12 hours).

*Conclusion*: When compliance is continuously demonstrated by CEMS data, allowances for excess emissions may be provided for specific periods of operation in which the emissions unit, control device or technique may not be fully functional or has not achieved steady-state operation. Similarly, an alternate standard may be specified for opacity during startup and shutdown because compliance is readily observable. Only Boiler 8 has CEMS for which this issue has been addressed. Although emissions may be elevated during startup and shutdown, the applicant has not provided any emissions data to support this claim. There may be reason to believe that the mass emission rates (lb/hour) of these pollutants do not exceed the specified standards due to the reduced fuel firing rates for operation at low loads. Except for opacity, compliance with the standards is generally unknown. For opacity, the boilers operate control devices once bagasse is being fired and have relatively high standards. The Title V permit will include the startup and shutdown plans for each unit noting the estimated duration. This is sufficient to address this issue and no changes were made to any air construction permits.

## 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. No air quality modeling analysis is required because the project does not result in a significant increase in emissions.

# DRAFT PERMIT

**PERMITTEE**

United States Sugar Corporation
111 Ponce DeLeon Avenue
Clewiston, FL 33440

Authorized Reresentative:
Mr. Neil Smith, V.P. of Sugar Processing Operations

Permit No. 0510003-031-AC
Title V Permit Renewal
Clewiston Sugar Mill and Refinery
ARMS ID No. 0510003
Hendry County, Florida

**PROJECT AND LOCATION**

Enclosed is the final air construction permit processed concurrently with renewal Title V Permit No. 0510003-032-AV to revise specific conditions in several air construction permits. A copy of this letter shall be filed with the referenced permit and shall become part of the permit. This permit modification is issued pursuant to Chapter 403, Florida Statutes. The affected emissions units are installed at the Clewiston Sugar Mill and Refinery (SIC Nos. 2061 and 2062). The facility is located in Hendry County at the intersection of W.C. Owens Avenue and State Road 832 in Clewiston, Florida. The UTM map coordinates are Zone 17, 506.1 E and 2956.9 N.

**STATEMENT OF BASIS**

This air pollution construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department.

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Executed in Tallahassee, Florida

(DRAFT)

Joseph Kahn, Director
Division of Air Resource Management

(Date)

## FACILITY DESCRIPTION

U.S. Sugar operates a sugar mill and refinery in Hendry County located at the intersection of W.C. Owens Avenue and State Road 832 in Clewiston, Florida. The UTM map coordinates are Zone 17, 506.1 E, and 2956.9 N. Sugarcane is harvested from nearby fields and transported to the mill by train. In the mill, sugarcane is cut into small pieces and processed in a series of presses to squeeze juice from the cane. The juice undergoes clarification, separation, evaporation, and crystallization to produce raw, unrefined sugar. In the refinery, raw sugar is decolorized, concentrated, crystallized, dried, conditioned, screened, packaged, stored, and distributed as refined sugar. The fibrous byproduct remaining from the sugarcane is called bagasse and is burned as boiler fuel to provide steam and heating requirements for the mill and refinery.

## REGULATORY CATEGORIES

The existing facility is:

- A Title V major source of air pollution in accordance with Chapter 62-213, F.A.C.;
- A major stationary source in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality;
- A major source of hazardous air pollutants;
- Includes units subject to the New Source Performance Standards (NSPS) in 40 CFR 60 for: Subpart A (General Provisions) and Subpart Db (Industrial-Commercial-Institutional Steam Generating Units);
- Not subject to any National Emissions Standards for Hazardous Air Pollutants (NESHAP) in 40 CFR 63; and
- Not subject to the Title IV acid rain provisions of the Clean Air Act (CAA).

## SUMMARY OF AFFECTED EMISSIONS UNITS

| EU No. | Emissions Unit Description |
|---|---|
| 001 | Boiler 1 |
| 002 | Boiler 2 |
| 009 | Boiler 4 |
| 014 | Boiler 7 |
| 028 | Boiler 8 |

## SECTION 2. REVISED PERMIT CONDITIONS (DRAFT)

This permit revises several underlying conditions in previously issued air construction permits for the Clewiston Sugar Mill and Refinery. All construction is complete and no further construction is authorized by this action. Deletions are shown as ~~strikethrough~~ and additions with double underline. The permits and conditions are revised as follows. All other conditions are unchanged and the affected emissions units remain subject to the applicable requirements.

**Permit No. PSD-FL-272A, Boilers 1, 2 and 4 (EU-001, 002 and 009)**

Condition 6 in Subsection III.B of Permit PSD-FL-272A is deleted as follows.

"Fuel Oil Consumption:(Condition deleted.)

~~a. **Boiler Nos. 1 - 4, Crop Season**: From October through April of each year, the total fuel oil consumption for Boiler Nos. 1 - 4 shall not exceed 16,200 gallons during any 3-hour period and 88,800 gallons during any 24-hour period.~~

~~b. **Boiler Nos. 1 - 4, Off Season**: From May through September of each year, the total fuel oil consumption for Boiler Nos. 1 - 4 shall not exceed 11,700 gallons during any 3-hour period and 54,000 gallons during any 24-hour period.~~

~~The permittee shall install, calibrate, operate, and maintain individual fuel oil flow meters with integrators. [Applicant Request, Supporting Air Quality Analysis for PSD-FL-272A]~~"

**Permit No. PSD-FL-272A, Boiler 4 (EU-009)**

Condition 8 in Subsection III.A of Permit No. PSD-FL-272A

"Wet Scrubber: To control emissions of particulate matter, the permittee shall install, operate, and maintain a Type D, Size 200 Joy Turbulaire wet impingement scrubber. To ensure the annular throttling gap is being properly maintained, this system shall provide constant make-up water overflow to the scrubber as indicated by the weir box. The wet scrubber shall also be equipped with the following monitoring equipment.

a. A **manometer** (or equivalent) shall be installed to measure the scrubber pressure drop in inches of water column. ~~The~~ In accordance with the CAM provisions of the Title V permit, the minimum pressure drop across the scrubber (excursion level) shall be ~~maintained between~~ 8 ~~and 11~~ inches of water column.

b. A **pressure gage** shall be installed to monitor the water supply pressure to the scrubber nozzles. The typical operating line pressure is ~~This pressure shall be maintained~~ between 40 and 55 psi.

c. A **flow meter** shall be installed to measure the water flow rate to the scrubber spray nozzles. ~~This~~ In accordance with the CAM provisions of the Title V permit, the minimum flow rate (excursion level) shall be ~~maintained above 375~~ 300 gallons per minute~~, based on a 3-hour block average~~.

Monitoring of the scrubber pressure differential and scrubber water flow rate shall be included as part of the CAM plan for Boiler 4. ~~The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations. The permittee shall read and record each scrubber parameter once normal operations have been established after startup and at least once every 3 hours. Should any monitored parameter fall outside the specified operating range, the permittee shall investigate the cause and take corrective action to regain operation within the specified range. In addition, the permittee shall begin reading and recording all monitored parameters at 30-minute intervals until successive readings indicate operation within the specified range. The permittee may elect to install an automated recorder to satisfy the recording requirements. The permittee shall record any problems with operation of the wet scrubber and corrective actions taken in the Daily Operational Records required by this permit. Operation outside of the specified operating range for any monitored parameter is not a violation of this permit, in and~~

~~of itself. However, continued operation outside of the specified operating range for any monitored parameter without corrective action may be considered circumvention of the air pollution control equipment.~~ [~~Applicant Request;~~ Rule 62-4.070(3); Rule 62-212.400 (BACT), F.A.C.; Permits PSD-FL-272 and 0510003-031-AC]"

**Permit No. 0510003-029-AC, Boiler 7 (EU-014)**

Condition 2 in Subsection 3B of Permit 0510003-029-AC is revised as follows.

"2. Oil Specification: Any fuel oil fired in this boiler shall be No. 2 distillate oil (or a superior grade) containing no more than 0.05% sulfur by weight as determined by ASTM Methods D-129, D-1552, D-2622, D-4294, or equivalent methods approved by the Department. ~~The nitrogen content of the distillate oil shall not exceed 0.015% nitrogen by weight as determined by ASTM Method D4629 or equivalent methods approved by the Department.~~ [~~Permit No. PSD-FL-208;~~ Rules 62-212.400 and 62-296.405, F.A.C.; and 40 CFR 60.42b(j)]

**Permit No. PSD-FL-208, Boiler 7 (EU-014)**

Condition 22 in Permit PSD-FL-208 is revised as follows.

"... Emissions of non-methane volatile organic compounds shall not exceed ~~1.7 lb/ton of wet bagasse or~~ 0.212 lb/MMBtu as determined by EPA Method 25 or 25A in conjunction with EPA Method 18 and in accordance with 40 CFR 60, Appendix A."

**Permit No. PSD-FL-333C, Boiler 8 (EU-028)**

Condition 22 in Subsection 3A of Permit No. PSD-FL-333C is revised as follows.

"Cyclones: In accordance with the manufacturer's recommendations, the permittee shall install, calibrate, operate and maintain the following equipment: flow meter to monitor the water flow rate (gph) for each wet cyclone and a manometer (or equivalent) to monitor the pressure drop (inches of water) across each cyclone. ~~At least once each 8-hour work shift,~~ During each stack test conducted, the flow rate and pressure drop shall be observed at 15-minute intervals and recorded in a written log."