

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NOTICE OF FINAL PERMIT

In the Matter of an  
Application for Permit by:

Atlantic Sugar Association, Inc.  
P.O. Box 1570  
Belle Glade, FL 33430

Permit No. 0990016-005-AC  
PSD No. PSD-FL-078B  
Project: Boiler No 5  
CO/O<sub>2</sub> Modification

Authorized Representative:

John J. Fanjul, V.P. and General Manager

Enclosed is Final Air Permit No. PSD-FL-078B, which incorporates carbon monoxide and oxygen process parameters that represent good combustion practices for Boiler No. 5. As noted in the Final Determination (attached), only minor changes to correct typographical errors were made. This permit is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes, by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within thirty (30) days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.



C. H. Fancy, P.E., Chief  
Bureau of Air Regulation

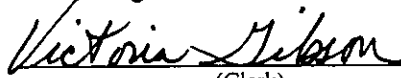
CERTIFICATE OF SERVICE ....

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Final Permit (including the Final permit) was sent by certified mail (\*) and copies were mailed by U.S. Mail before the close of business on 7/1/02 to the person(s) listed:

Mr. John J. Fanjul, Atlantic Sugar Association\*  
Mr. Hector Cardentey, ASA  
Mr. David Buff, Golder Associates  
Mr. Ron Blackburn, SD  
Mr. James Stormer, PBCHD  
Mr. Gregg Worley, EPA Region 4  
Mr. John Bunyak, NPS

Clerk Stamp

**FILING AND ACKNOWLEDGMENT FILED**, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

 July 1, 2002  
(Clerk) (Date)

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

John J. Fanjul  
 V.P. and General Manager  
 Atlantic Sugar Association, Inc.  
 PO Box 1570  
 Belle Glade, FL 33430

**COMPLETE THIS SECTION ON DELIVERY**

A. Received by (Please Print Clearly) B. Date of Delivery  
 7/9/02

C. Signature  
 X *Antonio Rodriguez*  Agent  Addressee

D. Is delivery address different from item 1?  Yes  
 If YES, enter delivery address below:  No

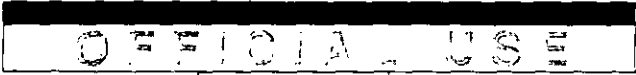
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 Insured Mail  C.O.D.

4. Restricted Delivery? (Extra Fee)  Yes

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 John J. Fanjul  
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 or PO Box  
 PO Box 1570  
 City, State, ZIP+4  
 Belle Glade, FL 33430

## FINAL DETERMINATION

### PERMITTEE

Atlantic Sugar Association, Inc.  
P.O. Box 1570  
Belle Glade, FL 33430

### PERMITTING AUTHORITY

Florida Department of Environmental Protection  
Division of Air Resources Management  
Bureau of Air Regulation  
New Source Review Section  
2600 Blair Stone Road, MS #5505  
Tallahassee, Florida, 32399-2400

### PROJECT

Project No. 0990016-005-AC  
PSD Permit No. PSD-FL-078B

The Atlantic Sugar Association, Inc. operates a sugar mill located approximately 16 miles east of Belle Glade on State Road 880 in Palm Beach County, Florida. This permit is a modification of previous Permit No. PSD-FL-078A to incorporate oxygen and carbon monoxide process parameters representing good combustion practices for Boiler No. 5 at the sugar mill.

### NOTICE AND PUBLICATION

The Department distributed an "Intent to Issue Permit" package on May 23, 2002. The applicant published the "Public Notice of Intent to Issue" in The Palm Beach Post on June 10, 2002. The Department received the proof of publication on June 24, 2002. No requests for administrative hearings were filed.

### COMMENTS

No comments on the Draft Permit were received from the public, the Department's South District Office, or the Palm Beach County Health Department. Comments were received from the applicant as noted below.

#### **Specific Condition No. 3, Permitting Note**

*Request:* The applicant requests clarification that the design steam conditions of 550° F, 250 psig, and an enthalpy of 1290 Btu/lb steam should be considered as a maximum and not as fixed values. In addition, the applicant notes that the nominal feedwater conditions of 240° F, 400 psig, and an enthalpy of 210 Btu/lb should be considered as typical parameters as long as the net enthalpy of 1080 BTU/lb remains as a maximum and no other significant changes are made to the plant.

*Response:* As mentioned later in the permitting note, the steam production limits define the permitted capacity of this boiler and are the basis of the limits on the maximum heat input and fuel firing rates. This is the justification for identifying the steam and feedwater parameters in the permit. The note does not indicate that the boiler must be operated at these conditions at all times, but does require advance notice of any changes that would affect the "designed" steam conditions. The note is clarified as follows:

"Any changes to these design steam conditions parameters shall require prior approval of the New Source Review Section and may require a permit modification.

## FINAL DETERMINATION

### **Specific Condition No. 23(e)**

*Request:* The applicant requests that the requirement to monitor the CO flue gas content be reported in “ppm” instead of “percent” to be consistent with Specific Condition No. 8 and Appendix GCP.

*Response:* The Department agrees and corrected the reporting units for flue gas CO content from “percent” to “ppm” accordingly.

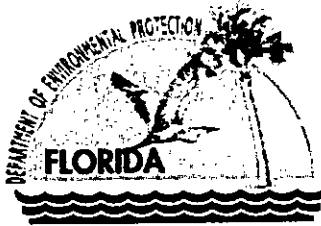
### **CONCLUSION**

#### **Specific Condition No. 8**

*Correction:* The Department identified an inconsistency in the first sentence of this specific condition with the last sentence of the paragraph under “Purpose of GCP Plan” in Appendix GCP. Specific Condition No. 8 was corrected to:

The boiler operators shall use the “good combustion practices (GCPs)” defined in *Appendix GCP* to minimize emissions of CO, ~~NO<sub>x</sub>~~, PM, and VOC while optimizing NO<sub>x</sub> emissions from Boiler No. 5.

In addition to the changes noted above, only minor revisions were made to correct typographical errors. The final action of the Department is to issue the permit with the changes described above.



# Department of Environmental Protection

Jeb Bush  
Governor

Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

David B. Struhs  
Secretary

## PERMITTEE

Atlantic Sugar Association, Inc.  
P.O. Box 1570  
Belle Glade, FL 33430

### Authorized Representative:

John J. Fanjul, V.P. and General Manager

<b>Permit No.</b> 0990016-005-AC
<b>PSD No.</b> PSD-FL-078B
<b>Project:</b> Boiler No 5 CO/O <sub>2</sub> Modification
<b>SIC No.</b> 2061
<b>Expires:</b> December 31, 2002

## PROJECT AND LOCATION

This facility is located approximately 16 miles east of Belle Glade on State Road 880 in Palm Beach County, Florida. The map coordinates are: UTM Zone 17, 552.9 km E and 2945.2 km N; and Latitude - 26° 37' 43", Longitude - 80° 28' 07". This project was a minor modification to add carbon monoxide and oxygen process parameters representing good combustion practices.

## STATEMENT OF BASIS

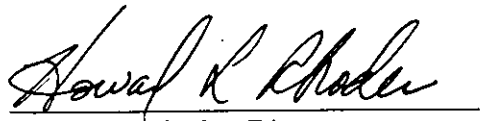
This air construction permit modification is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.). The permit establishes emissions standards based on a determination of Best Available Control Technology in accordance with Rule 62-212.400, F.A.C., the Prevention of Significant Deterioration (PSD) of Air Quality. The above named permittee is authorized to modify and operate the emissions unit 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 of Environmental Protection.

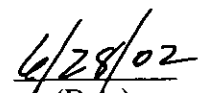
## APPENDICES

The attached appendices are a part of this permit:

Appendix A	Terminology, Definitions, and Citation Format
Appendix BD	Summary of BACT Determinations
Appendix ES	Emissions Summary
Appendix FC	Fuel Characteristics
Appendix GC	General Permit Conditions
Appendix GCP	Good Combustion Practices Plan

Executed in Tallahassee, Florida.

  
Howard L. Rhodes, Director  
Division of Air Resources Management

  
(Date)

"More Protection, Less Process"

Printed on recycled paper.

**AIR CONSTRUCTION PERMIT MODIFICATION  
SECTION I. FACILITY INFORMATION**

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**FACILITY DESCRIPTION**

Atlantic Sugar Association, Inc. operates an existing sugar mill located approximately 16 miles east of Belle Glade on State Road 880 in western Palm Beach County, Florida. Sugarcane is harvested from nearby fields and transported to the mill by truck. In the mill, sugarcane is cut into small pieces and passed through a series of presses to squeeze the juice from the cane. The cane juice undergoes clarification, separation, evaporation, and crystallization to produce raw, unrefined sugar. The fibrous byproduct remaining from the sugarcane is called bagasse and is burned as boiler fuel to provide steam and heat for the mill operation. Atlantic Sugar operates five bagasse boilers to meet the steam requirements of the mill. Wet impingement scrubbers control particulate matter emissions from each boiler. The final product is raw sugar, which is trucked off site.

**PROJECT DESCRIPTION**

This permit modification authorizes expanded operation of following emissions unit:

EU No.	Emissions Unit Description
005	<b>Sugar Mill Boiler No. 5:</b> Bagasse boiler with a maximum hourly steam production rate of 130,000 lb/hour.

**REGULATORY CLASSIFICATION**

Title III: The facility is believed to be a major source of hazardous air pollutants (HAPs).

Title IV: The facility is not subject to the Title IV acid rain provisions of the Clean Air Act.

Title V: Because potential emissions of at least one regulated air pollutant exceeds 100 tons per year, the facility is a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C.

PSD: Because potential emissions are greater than 250 tons per year for at least one regulated air pollutant, the facility is a major source of air pollution in accordance with Rule 62-212.400, F.A.C., the Prevention of Significant Deterioration (PSD) of Air Quality. Modifications to PSD major sources require a PSD applicability review. Projects resulting in net emissions increases greater than the Significant Emissions Rates specified in Table 62-212.400-2, F.A.C. must employ the Best Available Control Technology (BACT), as determined by the Department. For this project, emissions increases of CO, NO<sub>x</sub>, PM/PM<sub>10</sub>, and VOC are significant and subject to the BACT standards specified in this permit.

NSPS: The permittee did not identify any emissions units subject to a New Source Performance Standard (NSPS) of 40 CFR 60.

**RELEVANT DOCUMENTS**

The documents listed below are on file with the Department and form the basis of the permitting action.

- Complete application received on 05/14/02 to incorporate CO/O<sub>2</sub> process parameters.
- Correlation testing report and recommended CO/O<sub>2</sub> process parameters received on 02/18/02.
- Permit No. PSD-FL-078A issued on June 7, 2001 to increase operation.
- Permit No. PSD-FL-078 issued on 10/06/81 to construct Boiler No. 5.

**AIR CONSTRUCTION PERMIT MODIFICATION**  
**SECTION II. ADMINISTRATIVE PERMITTING REQUIREMENTS**

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1. Permitting Authorities: All documents related to applications for permits to construct or modify this emissions unit shall be submitted to the Department's Bureau of Air Regulation (BAR) at Mail Station #5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. All documents related to applications for operation permits shall be submitted to the Department's South District Office at Suite 364, 2295 Victoria Avenue, Fort Myers, Florida 33902-2549. Copies shall also be submitted to each Compliance Authority.
2. Compliance Authorities: All documents related to reports, tests, and notifications shall be submitted to the Air Pollution Control Section of the Palm Beach County Health Department at P.O. Box 29 in West Palm Beach, Florida 33402-0029 and phone number 561/355-3136. Copies of all documents shall also be submitted to the South District Office, Florida Department of Environmental Protection at 2295 Victoria Avenue, Suite 364 in Fort Myers, Florida 33902-2549 and phone number 941/332-6975.
3. Definitions: The terms used in this permit have specific meanings as defined in the applicable chapters of the Florida Administrative Code and specifically, Rule 62-210.200, F.A.C.
4. General Conditions: The owner and operator are subject to and shall operate under the attached General Conditions listed in *Appendix GC* of this permit. General conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]
5. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, of the Florida Statutes (F.S.); Chapters 62-4, 62-110, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.); and Title 40, Part 60 of the Code of Federal Regulations (CFR) adopted by reference in Chapter 62-204, F.A.C. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]
6. New or Additional Conditions: Pursuant to Rule 62-4.080, F.A.C., for good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
7. Expiration: For good cause, the permittee may request that this construction permit be extended. Such a request shall be submitted at least 60 days before the expiration of the permit to the Department's Bureau of Air Regulation. [Rules 62-210.300(1), 62-4.080, and 62-4.210, F.A.C.]
8. Modifications: No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit must be obtained prior to the beginning of construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
9. Title V Operation Permit Required: This permit authorizes modification of the permitted emissions unit and initial operation to determine compliance with Department rules. A Title V operation permit is required for routine operation of the permitted emissions units. The permittee shall apply for and obtain a Title V operation permit in accordance with Chapter 62-213, F.A.C. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the Department's Bureau of Air Regulation with copies to the Compliance Authorities. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

**AIR CONSTRUCTION PERMIT MODIFICATION  
SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS**

**SUBSECTION A. EU 005 - MILL BOILER NO. 5**

This portion of the permit addresses the following emissions unit.

EU No.	Emissions Unit Description
005	<b>Sugar Mill Boiler No. 5</b> is a traveling grate boiler (including economizer) with a maximum hourly steam production rate of 130,000 pounds per hour and a maximum hourly heat input of rate of 255.3 MMBtu per hour. The boiler fires bagasse as the primary fuel and fuel oil, wood chips, and rice hulls as supplemental fuels. The boiler has two fuel oil burners, each with a maximum designed firing rate of 235 gallons per hour. A Type D Joy Turbulaire wet impingement scrubber controls particulate matter emissions. Pollutant emissions exit the 5.5 feet diameter scrubber stack that is 90 feet above ground level with a volumetric flow rate of 90,000 acfm at 150°F.

*Note: The above description is based upon information provided in the application and is for informational purposes only.*

**APPLICABLE STANDARDS AND REGULATIONS**

1. **BACT Determinations:** Pursuant to Rule 62-212.400, F.A.C., Boiler No. 5 is subject to Best Available Control Technology (BACT) determinations for carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), particulate matter (PM/PM<sub>10</sub>), and volatile organic compounds (VOC). In addition, this emissions unit is subject to Rule 62-296.410, F.A.C., which regulates visible emissions and particulate matter emissions from carbonaceous fuel fired equipment.

**PERFORMANCE RESTRICTIONS**

2. **Hours of Operation:** Boiler No. 5 shall operate only during the 7-month sugarcane crop season defined as October 1<sup>st</sup> through April 30<sup>th</sup>. Operation of Boiler No. 5 is further restricted by Specific Condition No. 3 based on steam production. [Rule 62-210.200, F.A.C., Definitions - PTE]
3. **Permitted Capacity**
  - a. Boiler No. 5 shall not exceed a 1-hour steam production rate of 130,000 pounds of steam per hour (equivalent to a maximum heat input rate of 255.3 MMBtu per hour).
  - b. Boiler No. 5 shall not exceed a 24-hour steam production rate of 115,000 pounds of steam per hour (equivalent to a maximum heat input rate of 225.8 MMBtu per hour).
  - c. Boiler No. 5 shall not exceed a total steam production rate of 441,717,000 pounds of steam during any crop season (equivalent to 867,302 MMBtu per 7-month sugarcane crop season).

{Permitting Note: Steam production is based on: design steam conditions of 550° F, 250 psig, and an enthalpy of 1290 BTU/lb of steam; nominal feedwater conditions of 240° F, 400 psig, and enthalpy of 210 BTU/lb of feedwater; a net enthalpy of 1080 BTU/lb of steam; and a boiler thermal efficiency of 55%. Any changes to the design steam conditions shall require prior approval of the New Source Review Section and may require a permit modification. The steam production limits define the permitted capacity of this boiler and are the basis of the limits on the maximum heat input and fuel firing rates. Any requested changes to the steam production rates, heat input rates, or fuel-firing rates shall require a PSD applicability review and permit modification.} [Rule 62-210.200, F.A.C., Definitions - PTE]



**AIR CONSTRUCTION PERMIT MODIFICATION**  
**SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS**

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**SUBSECTION A. EU 005 - MILL BOILER NO. 5**

4. Allowable Fuels: Boiler No. 5 is authorized to fire the following types and amounts of fuels:
- a. *Primary Fuel*: Bagasse shall be fired as the primary fuel. Untreated wood chips and rice hulls may supplement bagasse firing. No more than 120,458 tons of total wet carbonaceous fuel shall be fired during any crop season. Of this total, no more than 2200 tons of wood chips and rice hulls (combined) shall be fired during any crop season. If oil is fired, the limit on total carbonaceous fuel shall be prorated based on the heat input from each fuel.
  - b. *Auxiliary Fuel*: As an auxiliary fuel, Boiler No. 5 may fire No. 6 fuel oil (or a superior grade), which shall contain no more than 1.0% sulfur by weight. Boiler No.5 shall fire no more than 470 gallons per hour and no more than 200,000 gallons during any crop season. The permittee shall install, calibrate, operate, and maintain fuel oil flow meters with integrators or continuous recording equipment. The sulfur content of the fuel oil shall be determined by ASTM Methods D-129, D-1552, D-2622, or D-4294.

Fuel consumption is also restricted by the limits on steam production as established in Specific Condition No. 3 of this subsection. The monitoring and record keeping requirements of this permit shall determine compliance with the fuel consumption limits.

[Applicant Request, Rule 62-210.200 (Definitions - PTE) and Rule 62-212.400 (BACT), F.A.C.]

5. Operating Procedures: The Best Available Control Technology (BACT) determinations established by this permit rely on "good combustion practices" to minimize CO, NO<sub>x</sub>, PM/PM<sub>10</sub>, and VOC emissions. Therefore, all boiler operators and supervisors shall be properly trained to operate and maintain the bagasse boiler and pollution control equipment in accordance with the guidelines and procedures established by each equipment manufacturer. The training shall include all "good combustion practices" including those specified in *Appendix GCP* of this permit. [Applicant Request; Rule 62-4.070(3); Rule 62-212.400 (BACT), F.A.C.]
6. Modification: Prior to initiating any physical changes to, or changes in the method of operation of Boiler No. 5, the permittee shall request approval from the Department's Bureau of Air Regulation. Such changes would include, but not be limited to: replacement or addition of burners; modification of the combustion air system; replacement of the furnace grate; replacement of the steam drum; re-tubing the boiler; altering the design steam conditions; adding a fuel not previously authorized; changes to the wet scrubber system; or replacing portions of the stack. Based on a review of the available information, the Department may determine that the proposed project is minor in nature or represents a substantial modification (triggers NSPS applicability, a PSD applicability review, a MACT determination, etc.). In either case, an air construction permit may be required before construction is commenced. [Rule 62-210.300(1)(a), F.A.C.]

**CONTROL EQUIPMENT AND TECHNIQUES**

7. Wet Scrubber: The permittee shall install, operate, and maintain a Type D Joy Turbulaire wet impingement scrubber to control emissions of particulate matter. The control efficiency of this device is approximately 93%. The wet scrubbing system shall be equipped with the following monitoring equipment:
- a. A *site glass* or similar device shall be installed and marked to indicate whether the liquid level is above or below the lip of the scrubber skirt, ensuring that the annular throttling gap is being properly maintained.
  - b. A *manometer* (or equivalent) shall be installed to measure the scrubber pressure drop in inches of water column. The pressure drop across the scrubber shall be maintained in accordance with the following:

Scrubber Pressure Drop (Continued)

**AIR CONSTRUCTION PERMIT MODIFICATION  
SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS**

**SUBSECTION A. EU 005 - MILL BOILER NO. 5**

Steam Production Rate 1-Hour Average	Minimum Scrubber Pressure Drop
≤ 110,000 lb/hour	6 inches water column
>110,000 to 115,000 lb/hour	7 inches water column
>115,000 to 125,000 lb/hour	8 inches water column
>125,000 to 130,000 lb/hour	10 inches water column

- c. *Pressure gages* shall be installed to monitor the water supply pressure to the scrubber nozzles. Based on 1-hour averages, the upper ring of 14 spray nozzles shall be maintained above 35 psig and the lower ring of 24 spray nozzles shall be maintained above 60 psig. Spray nozzles shall be equipped with quick release connections and shall be inspected daily.
- d. A *flow meter* shall be installed to measure the water flow rate through the scrubber. The total flow rate shall be maintained above 550 gallons per minute, based on a 1-hour average. If the scrubber flow rate drops below 550 gallons per minute, an alarm shall warn the operator.
- e. The *scrubber water pH* shall be measured and recorded at least once per day. The pH shall be maintained between 6 and 8.5.

The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations and within the optimum operating ranges indicated above. 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. Excluding scrubber water pH, the permittee shall begin reading and recording all monitored parameters at 30-minute intervals until successive readings indicate the unit has regained operation within the specified optimum range. For scrubber water pH, the permittee shall begin measuring and recording the scrubber water pH at 8-hour intervals until successive readings indicate the unit has regained operation within the specified optimum range. 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.]

8. Good Combustion Practices: The boiler operators shall use the "good combustion practices (GCPs)" defined in *Appendix GCP* to minimize emissions of CO, PM, and VOC while optimizing NOx emissions from Boiler No. 5. As a critical part of the GCPs, the permittee shall install, calibrate, operate, and maintain process monitors to indicate the oxygen (O<sub>2</sub>) and carbon monoxide (CO) contents of the boiler flue gas. The O<sub>2</sub> process monitor shall display both the instantaneous and 1-hour block average of the flue gas oxygen content in "percent oxygen". It shall be equipped with an alarm with a set point at 2.0% (minimum) flue gas oxygen content based upon a 1-hour block average. The CO process monitor shall display both the instantaneous and 1-hour block average of the flue gas CO concentration in "ppm". It shall be equipped with an alarm with a set point at 10,000 ppm (maximum) flue gas CO concentration based on a 1-hour block average.

The instrument readouts shall be located in the boiler control room to provide real time data to the operator and shall display the instantaneous and 1-hour block averages. Boiler operators shall be instructed in the use of the O<sub>2</sub> and CO flue gas process monitors for combustion control and to ensure sufficient excess air levels. The boiler operators shall periodically observe each process monitor and adjust the boiler operation, consistent with good combustion practices. The operator shall record each 1-hour block average in a

**AIR CONSTRUCTION PERMIT MODIFICATION**  
**SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS**

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**SUBSECTION A. EU 005 - MILL BOILER No. 5**

written log. When an alarm on either monitor is tripped, the operator shall take corrective actions to adjust the boiler operation consistent with good combustion practices. Corrective actions include, but are not limited to, adjusting the air-to-fuel ratio and adjusting the ratio of under-fire air to over-fire air. Corrective actions shall continue until the CO and oxygen flue gas concentrations are within the levels representing good combustion practices. For each such incident, the operator shall also summarize the event, corrective actions taken, and the approximate duration.

It is noted that the purpose of the CO process monitor is for the determination of efficient combustion and may not be representative of the actual CO emissions from the stack. The installed CO process monitor also responds to other combustibles in the flue gas, besides CO. Operation outside of the specified levels for O<sub>2</sub> and CO are not violations of this permit, in and of themselves. However, continued operation outside of the specified levels without corrective action may be considered circumvention of the specified "good combustion practices".

[Applicant Request; Rule 62-4.070(3); Rule 62-212.400 (BACT), F.A.C.]

**EMISSION LIMITING STANDARDS**

*{Permitting Note: Mass emission limits are based on the 1-hour maximum permitted capacity for Boiler No. 5}*

9. CO Standard: Carbon monoxide emissions shall not exceed 6.5 pounds per MMBtu of heat input and 1659.5 pounds per hour when firing carbonaceous fuel based on a 3-hour test average as determined by EPA Method 10. Emissions performance testing for CO and NO<sub>x</sub> shall be conducted concurrently. [Applicant Request; Rule 62-212.400 (BACT), F.A.C.; 40 CFR 60, Appendix A]
10. NO<sub>x</sub> Standard: Nitrogen oxide emissions shall not exceed 0.16 pounds per MMBtu of heat input or 40.8 pounds per hour when firing carbonaceous fuel based on a 3-hour test average as determined by EPA Method 7 or 7E. Emissions performance testing for CO and NO<sub>x</sub> shall be conducted concurrently. [Rule 62-212.400 (BACT), F.A.C.; Previous PSD Permit No. PSD-FL-078; 40 CFR 60, Appendix A]
11. PM/PM<sub>10</sub> Standard: Particulate matter emissions shall not exceed 0.15 pounds per MMBtu of heat input and 38.3 pounds per hour when firing carbonaceous fuel based on a 3-run test average as determined by EPA Method 5. Particulate matter emissions shall not exceed or 0.10 pounds per MMBtu of heat input and 7.05 pounds per hour when firing fuel oil based on a 3-run test average as determined by EPA Method 5. Compliance when firing both fuels shall be determined by prorating the emissions standards based on the heat input from each fuel. [Applicant Request; Rules 62-296.410(2)(b)2. and 62-212.400 (BACT), F.A.C.; 40 CFR 60, Appendix A]
12. SO<sub>2</sub> Standard: Emissions of sulfur dioxide shall not exceed 0.05 pounds per MMBtu of heat input and 12.8 pounds per hour when firing carbonaceous fuel based on a 3-run test average as determined by EPA Methods 6 or 6C. During each SO<sub>2</sub> performance test, the permittee shall sample and analyze the bagasse fuel for sulfur content. The sulfur content shall be used to calculate the potential uncontrolled SO<sub>2</sub> emissions as well as the control efficiency during the test. This information shall be submitted with each test report. Emissions of SO<sub>2</sub> from fuel oil firing are limited by the sulfur content restrictions specified by this permit. [Applicant Request; Rule 62-212.400 (BACT), F.A.C.; 40 CFR 60, Appendix A]
13. Visible Emissions Standard
  - a. *Boiler No. 5*: Visible emissions from the scrubber stack shall not exceed 20% opacity based on a 6-minute average except for one 2-minute period per hour of up to 40% opacity, as determined by DEP Method 9. The minimum observation period for demonstrating compliance with the standard shall be

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sixty (60) minutes and observations shall exclude any combined water vapor. [Rules 62-296.410(2)(b)1., 62-297.310(4)(a)2., and 62-212.400 (BACT), F.A.C.]

- b. *Bagasse Handling System*: Visible emissions from the bagasse handling system shall not exceed 10 percent opacity based on a 6-minute average, as determined by EPA Method 9. The minimum observation period for demonstrating compliance with the standard shall be thirty (30) minutes. This standard shall not apply during periods of excessive winds (18 miles per hour or greater) provided that reasonable precautions to control fugitive emissions have been taken, such as covering conveyers, installing windbreaks, and minimizing the height of drop points. The company shall maintain an anemometer (or equivalent device) to record the wind speed at the plant site. [Rule 62-212.400 (BACT), F.A.C.]

14. VOC Standard: Emissions of regulated volatile organic compounds shall not exceed 0.25 pounds per MMBtu and 63.8 pounds per hour when firing carbonaceous fuel based on a 3-run test average as determined by EPA Methods 18 and 25A, modified to include a means of sample dilution. The sample shall not be diluted below the minimum detection limit for the flame ionization detector. Total VOC emissions shall be determined by EPA Method 25A and reported in terms of pounds per MMBtu and pounds per hour, as propane. EPA Method 18 shall be used to determine emissions of methane, which shall be reported in terms of pounds per MMBtu and pounds per hour, as propane. Emissions of regulated VOC shall be defined as the difference between the total VOC emissions and methane emissions, reported in terms of pounds per MMBtu and pounds per hour, as propane. [Applicant Request; Rule 62-212.400 (BACT), F.A.C.; 40 CFR 60, Appendix A; and ASP No. 96-H-01]

**EXCESS EMISSIONS**

15. Excess Emissions Allowed: Providing the permittee adheres to best operational practices to minimize the amount and duration of excess emissions, visible emissions during startup and shutdown shall not exceed 40% opacity for up to 2.0 hours in any 24-hour period. Visible emissions shall not include combined water vapor. Because emissions of other pollutants are determined only during scheduled performance tests, the compliance status of other pollutants is typically unknown. However, the requirements to monitor and maintain critical control parameters as specified in this permit shall remain in effect at all times and shall also be used to determine adherence to "best operational practices to minimize the amount and duration of excess emissions". If excess emissions occur due to malfunction, the owner or operator shall notify the Compliance Authority within one (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. [Rule 62-210.700(1) and (6), F.A.C.]

**REPORTING AND RECORD KEEPING REQUIREMENTS**

16. Daily Operational Records: To demonstrate compliance with the performance requirements of this permit, the permittee shall record the following information for Boiler No. 5.
- a. *Startup and Shutdown*: The permittee shall record the time and date the boiler undergoes startup, shutdown, or malfunction. The permittee shall also log the time when the boiler achieves normal operation after startup or regains normal operation after malfunction.
  - b. *Steam Parameters*: The steam pressure (psig), steam temperature (°F), and steam production rate (pounds per hour) shall be continuously monitored and recorded with a chart recorder.
  - c. *Combustion Parameters*: After completing installation, the permittee shall record the oxygen and carbon monoxide contents of the boiler flue at least once per hour of operation.

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- d. *Wet Scrubber Parameters:* The permittee shall record the following information at least once during each 4-hour period of operation: scrubber liquid level in site glass is within marked range (yes or no); pressure drop across wet scrubber (inches of water column); scrubber spray nozzle pressures (psig); and wet scrubber liquid flow rate (gpm). The scrubber pH shall be measured and recorded at least once per day.
- e. *Oil Firing:* Prior to firing any oil, the permittee shall record the oil flow meter integrator reading. The permittee shall observe and record the oil flow rate (gph, instantaneous) and the oil flow meter integrator readings at least once each day that oil is fired. At the end of each recorded interval, the permittee shall calculate and record the average hourly oil-firing rate for the interval (gph).
- f. *Oil Delivery:* For each fuel oil delivery, the permittee shall record and retain the following: the date; the gallons of fuel delivered; and a fuel oil analysis, including the heat content (MMBtu per gallon), the density (pounds per gallon), the sulfur content (percent by weight), and the name of the test methods used. A certified analysis supplied by the fuel oil vendor is acceptable.
- g. *Monitoring Equipment:* In accordance with the manufacturer's recommendations, the permittee shall install, calibrate, operate, and maintain all monitoring equipment including steam flow meters, steam integrators, strip chart recorders, pressure gages, manometers, scrubber water flow meters, fuel oil flow meters, and all other monitoring devices used to demonstrate compliance with the conditions of this permit. Each device shall be calibrated at least annually. All calibrations and repairs shall be recorded as part of the Daily Operational Records.
- h. *Daily Summary:* For each day of operation, the permittee shall calculate and record the following by the end of the next workday.
- Hours of Operation: total hours per day;
  - Steam Production Rate: total pounds per day, pounds per hour of operation (24-hour average), and maximum pounds per hour during the day;
  - Wood Chip and Rice Hull Deliveries: tons of wood chips and rice hulls delivered to mill; and
  - Oil Firing Rate: total gallons of oil fired per day.

Alternatively, - the permittee may install automated monitoring equipment to satisfy a monitoring requirement. All records shall indicate the date and time the information was recorded, and in the case of manual recordings, the name of the person who recorded the information. For data that indicates operation outside of the specified permitted levels of the above parameters, the permittee shall record a summary of the incident and any corrective actions taken to regain proper operation, if any. [Rules 62-212.400 (BACT) and 62-4.070(3), F.A.C.]

17. Monthly Operations Summary: By the tenth day of each month, the permittee shall calculate and record the following information for the previous month of operation.
- *Hours of Operation:* total hours per month;
  - *Steam Production Rate:* pounds per month and pounds per crop season (to date);
  - *Heat Input:* MMBtu per month and MMBtu per crop season (to date);
  - *Wet Bagasse Firing Rate:* tons per month and tons per crop season (to date);
  - *Wet Wood Chip Firing Rate\*:* tons per month and tons per crop season (to date);
  - *Wet Rice Hull Firing Rate\*:* tons per month and tons per crop season (to date); and
  - *Oil Firing Rate:* gallons per month and gallons per crop season (to date).

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**SUBSECTION A. EU 005 - MILL BOILER NO. 5**

- \* For the purpose of these records, it shall be assumed that wood chips and rice hulls are fired during the month delivered. The permittee shall not build up excess stockpiles of wood chips or rice hulls.

All records shall indicate the date and time the information was recorded, and in the case of manual recordings, the name of the person who recorded the information. If recorded data indicates operation in excess of the specified permit limits for steam production or oil firing, then the permittee shall submit a written notification and summary to the Compliance Authorities within three (3) calendar days of recording the data. [Rules 62-212.400 (BACT) and 62-4.070(3), F.A.C.]

**PERFORMANCE TESTING REQUIREMENTS**

18. Performance Test Methods: Compliance tests shall be performed in accordance with the following reference methods as described in 40 CFR 60, Appendix A, and adopted by reference in Chapter 62-204.800, F.A.C.

- (a) *EPA Method 5*, Determination of Particulate Emissions from Stationary Sources;
- (b) *EPA Method 6 or 6C*, Determination of Sulfur Dioxide Emissions from Stationary Sources;
- (c) *EPA Method 7 or 7E*, Determination of Nitrogen Oxide Emissions from Stationary Sources;
- (d) *DEP Method 9*, Visual Determination of the Opacity of Emissions from Stationary Sources;
- (e) *EPA Method 10*, Determination of Carbon Monoxide Emissions from Stationary Sources;
- (f) *EPA Methods 18 and 25A*, Determination of Volatile Organic Concentrations;
- (g) *ASME Boiler Efficiency Short Form Method*, Boiler Thermal Efficiency Test Method; and
- (h) *ASTM Methods D-129, D-1552, D-2622, or D-4294*, Determination of Fuel Oil Sulfur Contents.

No other test methods may be used for compliance testing unless prior DEP approval is received, in writing, from the DEP Administrator of the Emissions Monitoring Section in accordance with an alternate sampling procedure pursuant to Rule 62-297.620, F.A.C.

19. Initial Tests Required: Initial compliance with the emission standards specified in this permit shall be determined within 90 days after startup of this unit for the 2001/2002 crop season. Initial tests shall be conducted for CO, NO<sub>x</sub>, PM, SO<sub>2</sub>, VOC, visible emissions, and the boiler thermal efficiency. The permittee shall also sample and analyze the fuel oil from the tank that supplies Boiler No. 5 and report the sulfur content. *{Permitting Note: This condition has been satisfied.}* [Rule 62-297.310(7)(a)1, F.A.C.]
20. Annual Performance Tests: During each federal fiscal year, the permittee shall conduct annual performance tests for CO, PM, VOC, and visible emissions to demonstrate compliance with the standards specified in this permit. If the initial test or the test prior to permit renewal of the boiler thermal efficiency indicates an efficiency of less than 50%, the permittee shall begin conducting annual thermal efficiency tests. If routine maintenance and repair of the boiler result in regaining a thermal efficiency of at least 55%, subsequent thermal efficiency testing is only required during the federal fiscal year prior to renewal. The federal fiscal year is defined as October 1<sup>st</sup> through September 30<sup>th</sup>. The permittee shall also sample and analyze the fuel oil from the tank that supplies Boiler No. 5 and report the sulfur content. [Rules 62-212.400 (BACT), 62-4.070(3), 62-296.570(4)(a)3, and 62-297.310(7)(a)4, F.A.C.]
21. Tests Prior to Renewal: During the federal fiscal year prior to renewal of the air operation permit, the permittee shall conduct performance tests for CO, NO<sub>x</sub>, PM, SO<sub>2</sub>, VOC, visible emissions, and the boiler thermal efficiency to demonstrate compliance with the standards and conditions specified in this permit. The federal fiscal year is defined as October 1<sup>st</sup> through September 30<sup>th</sup>. The permittee shall also sample

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and analyze the fuel oil from the tank that supplies Boiler No. 5 and report the sulfur content. [Rules 62-112.400 (BACT), 62-4.070(3), F.A.C.]

22. Tests After Substantial Modifications: All performance tests required for initial startup shall also be conducted after any substantial modification and appropriate shakedown period of the boiler or air pollution control equipment. Shakedown periods shall not exceed 90 days after re-starting the unit. Tests shall be conducted within 60 days of establishing normal operations. [Rule 62-297.310(7)(a)4, F.A.C.]

23. General Testing Conditions

- a. All required emission performance tests shall be conducted when firing only carbonaceous fuel.
- b. For all initial tests, Boiler No. 5 shall be tested between 117,000 and 130,000 pounds of steam per hour for the 3-run test average. Otherwise, the Department shall modify this PSD permit to reflect the lower actual capacity of the unit.
- c. For all required annual tests, Boiler No. 5 shall be tested between 117,000 and 130,000 pounds of steam per hour (90% to 100% of permitted maximum operation) for the 3-run test average. If it is impractical to conduct annual tests within this range, an emissions unit may be tested at less than the minimum steam production rate. In this case, subsequent steam production is limited to 110 percent of the tested rate until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.
- d. For all required tests conducted prior to renewal of the operation permit, Boiler No. 5 shall be tested between 117,000 and 130,000 pounds of steam per hour for the 3-run test average. If it is impractical to conduct tests within this range, an emissions unit may be tested at less than the minimum steam production rate. In this case, subsequent steam production is limited to 110 percent of the tested rate until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. The Department shall include any restrictions on steam production imposed by this testing condition as a specific limit in the renewed operation permit. This operational limit shall be in addition to the defined maximum steam production limits of the PSD permit. If the unit is tested and regains authority to operate at the permitted capacity, the permittee shall submit an application for a revised operation permit.
- e. At 15-minute intervals during each test run, the permittee shall monitor and record the scrubber pressure drop (inches of water column), the scrubber water spray nozzle pressures (psig), the scrubber water flow rate (gpm), the flue gas oxygen content (percent O<sub>2</sub>), and the flue gas carbon monoxide content (ppm CO). For each test run, the permittee shall also record the scrubber water pH, the steam production rate (lb/hour), the average steam temperature (° F), the average steam pressure (psig), the feed water flow rate (gpm), the average feed water temperature (° F), the average feed water pressure (psig), the oil flow rate (gph), and the calculated heat input (MMBtu per hour).

[Rules 62-297.310(2) and Rule 62-297.310(5), F.A.C.]

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**SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS**

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**SUBSECTION B. ALL EMISSIONS UNITS - COMMON CONDITIONS**

**EMISSION LIMITING AND PERFORMANCE STANDARDS**

1. General Visible Emissions Standard: Unless otherwise specified in this permit, no person shall cause, let, permit, suffer, or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than 20% opacity. The test method for visible emissions shall be EPA Method 9, incorporated and adopted by reference in Chapter 62-297, F.A.C. Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C. [Rule 62-296.320(4)(b)1, F.A.C.]
2. Unconfined Particulate Emissions: During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]
3. Objectionable Odor Prohibited: No person shall cause, suffer, allow or permit the discharge of air pollutants that cause or contribute to an objectionable odor. An objectionable odor is defined as any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rules 62-296.320(2) and 62-210.200(203), F.A.C.]
4. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by hazard of fire, wind or by other cause, the permittee shall immediately notify the Department's district office and, if applicable, appropriate local program. The notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its recurrence, and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with Department rules. [Rule 62-4.130, F.A.C.]
5. Circumvention: No person shall circumvent any air pollution control device or allow the emission of air pollutants without the applicable air pollution control device operating properly. [Rule 62-210.650, F.A.C.]
6. Excess Emissions Prohibited: Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]

*{Permitting Note: Excess emission provisions cannot be used to vary any NSPS requirement from any subpart of 40 CFR 60.}*

**COMPLIANCE MONITORING AND TESTING REQUIREMENTS**

7. Test Methods: The appropriate test methods are specified in the permit, Chapter 62-297, F.A.C., and 40 CFR 60, Appendix A. Test procedures and methods shall meet all applicable requirements of Rule 62-297.310(4), F.A.C. The following test methods may also be required as part of these tests.
  - a. *EPA Method 1*, "Sample and Velocity Traverses for Stationary Sources".
  - b. *EPA Method 2*, "Determination of Stack Gas Velocity and Volumetric Flow Rate".
  - c. *EPA Method 3*, "Gas Analysis for Carbon Dioxide, Oxygen, Excess Air, and Dry Molecular Weight".
  - d. *EPA Method 4*, "Determination of Moisture Content in Stack Gases".
8. Required Number of Test Runs: For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured; provided, however, that three complete and separate determinations shall not be required if the process



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**SUBSECTION B. ALL EMISSIONS UNITS - COMMON CONDITIONS**

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variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five-day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five-day period allowed for the test, the Secretary or his or her designee may accept the results of two complete runs as proof of compliance, provided that the arithmetic mean of the two complete runs is at least 20% below the allowable emission limiting standard. [Rule 62-297.310(1), F.A.C.]

9. Calculation of Emission Rate: The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]
10. Determination of Process Variables: [Rule 62-297.310(5), F.A.C.]
  - a. Required Equipment: The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.
  - b. Accuracy of Equipment: Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.
11. Required Stack Sampling Facilities: Sampling facilities include sampling ports, work platforms, access to work platforms, electrical power, and sampling equipment support. All stack sampling facilities must meet any Occupational Safety and Health Administration (OSHA) Safety and Health Standards described in 29 CFR Part 1910, Subparts D and E. Sampling facilities shall also conform to the requirements of Rule 62-297.310(6), F.A.C. [Rule 62-297.310(6), F.A.C.]
12. Test Notification: The permittee shall notify the Compliance Authority in writing at least 30 days prior to initial performance tests for NSPS sources and at least 15 days prior to any other required tests. Notification shall include the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator. [Rule 62-297.310(7)(a)9, F.A.C. and 40 CFR 60.7, 60.8]
13. Special Compliance Tests: When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the facility to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions units and to provide a report on the results of said tests to the Department. [Rule 62-297.310(7)(b), F.A.C.]

**REPORTING AND RECORD KEEPING REQUIREMENTS**

14. Records: All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. Records shall be made available to DEP representatives upon request. [Rules 62-4.160(14) and 62-213.440(1)(b)2, F.A.C.]

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**SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS**  

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**SUBSECTION B. ALL EMISSIONS UNITS - COMMON CONDITIONS**

15. Test Reports: The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test. The required test report shall be filed with the Department as soon as practical but *no later than 45 days after the last sampling run of each test is completed*. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the applicable information listed in Rule 62-297.310(8)(c), F.A.C. [Rule 62-297.310(8), F.A.C.]
16. Excess Emissions Report: If excess emissions occur, the owner or operator shall notify the Department within one (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident. [Rule 62-4.130, F.A.C.]
17. Excess Emissions Report - Malfunctions: In case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department or the appropriate local program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report if requested by the Department. [Rule 62-210.700(6), F.A.C.]
18. Annual Operating Report for Air Pollutant Emitting Facility: The Annual Operating Report for Air Pollutant Emitting Facility shall be completed each year and shall be submitted to the Compliance Authority by March 1 of the following year. [Rule 62-210.370(3), F.A.C.]

SECTION IV.

APPENDIX A - TERMINOLOGY

ABBREVIATIONS AND ACRONYMS

<b>BACT</b>	-	Best Available Control Technology
<b>DARM</b>	-	Division of Air Resource Management
<b>EPA</b>	-	United States Environmental Protection Agency
<b>DEP</b>	-	State of Florida, Department of Environmental Protection
<b>°F</b>	-	Degrees Fahrenheit
<b>F.A.C.</b>	-	Florida Administrative Code
<b>F.S.</b>	-	Florida Statute
<b>SOA</b>	-	Specific Operating Agreement
<b>UTM</b>	-	Universal Transverse Mercator

RULE CITATIONS

*The following examples illustrate the methods used in this permit to abbreviate and cite the references of rules, regulations, permit numbers, and identification numbers.*

Florida Administrative Code (F.A.C.) Rules:

*Example:* [Rule 62-213.205, F.A.C.]

*Where:* 62 - refers to Title 62 of the Florida Administrative Code (F.A.C.)  
62-213 - refers to Chapter 62-213, F.A.C.  
62-213.205 - refers to Rule 62-213.205, F.A.C.

Facility Identification (ID) Number:

*Example:* Facility ID No. 099-0001

*Where:* 099 - 3 digit number indicates that the facility is located in Palm Beach County  
0221 - 4 digit number assigned by state database identifies specific facility

New Permit Numbers:

*Example:* Permit No. 099-2222-001-AC or 099-2222-001-AV

*Where:* AC - identifies permit as an Air Construction Permit  
AV - identifies permit as a Title V Major Source Air Operation Permit  
099 - 3 digit number indicates that the facility is located in Palm Beach County  
2222 - 4 digit number identifies a specific facility  
001 - 3 digit sequential number identifies a specific permit project

Old Permit Numbers:

*Example:* Permit No. AC50-123456 or AO50-123456

*Where:* AC - identifies permit as an Air Construction Permit  
AO - identifies permit as an Air Operation Permit  
123456 - 6 digit sequential number identifies a specific permit project

**SECTION IV.**

**APPENDIX BD - SUMMARY OF EMISSIONS STANDARDS AND BACT DETERMINATIONS**

The following table summarizes the final Best Available Control Technology determinations for this project and the corresponding emissions standards. [Rules 62-212.400(BACT) and 62-4.070(3), F.A.C.]

**Emissions Unit No. 9 - Sugar Mill Boiler No. 5**

Pollutant	Fuel	BACT Controls	Emission Standards	Emission Factors	Capacity Factor	Potential Emissions (TPY)	
CO	Carbonaceous Fuel	Good Combustion Practices	6.5 lb/MMBtu	NA	867,302 MMBtu/year <sup>c</sup>	2818.7	2818.7
	Fuel Oil	Good Combustion Practices	NA	0.033 lb/MMBtu <sup>a</sup>	NA	NA	
NOx	Carbonaceous Fuel	Good Combustion Practices	0.16 lb/MMBtu	NA	837,302 <sup>c</sup> MMBtu/year	67.0	71.7
	Fuel Oil	Good Combustion Practices	NA	0.31 lb/MMBtu <sup>a</sup>	30,000 <sup>d</sup> MMBtu/year	4.7	
PM	Carbonaceous Fuel	Wet Scrubber Good Combustion Practices	0.15 lb/MMBtu	NA	867,302 MMBtu/year <sup>c</sup>	65.0	65.0
	Fuel Oil	Wet Scrubber Good Combustion Practices	0.10 lb/MMBtu	NA	NA	NA	
PM10	Carbonaceous Fuel	Wet Scrubber Good Combustion Practices	NA	0.14 lb/MMBtu	867,302 MMBtu/year <sup>c</sup>	60.7	60.7
	Fuel Oil	Wet Scrubber Good Combustion Practices	NA	0.10 lb/MMBtu	NA	NA	
SO <sub>2</sub> (Not BACT)	Carbonaceous Fuel	Low Sulfur W/Wet Scrubber	0.05 lb/MMBtu	NA	837,302 <sup>c</sup> MMBtu/year	20.9	37.1
	Fuel Oil	Restricted Sulfur and Firing	1.0% Sulfur by wt.	1.08 lb/MMBtu <sup>b</sup>	30,000 <sup>d</sup> MMBtu/year	16.2	
VOC	Carbonaceous Fuel	Good Combustion Practices	0.25 lb/MMBtu	NA	867,302 MMBtu/year <sup>c</sup>	108.4	108.4
	Fuel Oil	Good Combustion Practices	NA	0.0019 lb/MMBtu <sup>a</sup>	NA	NA	
Visible Emissions	Boiler No. 5 Stack	Wet Scrubber	≤ 20% opacity, except for up to 40% for 2 min.		NA	NA	NA
	All Fuels	Good Combustion Practices					
	Bagasse Conveyor	Reasonable Precautions	≤ 10% opacity, unless winds are > 18 mph		NA	NA	NA

- Notes:
- a. AP-42, Section 1.3, Fuel Oil Combustion
  - b. Fuel oil characteristics: 1.0% S by wt., 8.1 lb fuel/gallon oil, 150,000 BTU/gallon oil
  - c. Maximum steam production rate of 441,717,000 lb/year based on this heat input
  - d. Based on 200,000 gallons/year of oil and fuel oil characteristics
  - e. Difference between 867,302 MMBtu/year (total) and 30,000 MMBtu/year (oil)
  - f. Steam production limits and heat input equivalents are based on 7-month rolling totals.

**SECTION IV.**

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**APPENDIX BD - SUMMARY OF EMISSIONS STANDARDS AND BACT DETERMINATIONS**

**BACT DETERMINATIONS**

The previous table summarizes the determinations of Best Available Control Technology (BACT) for carbon monoxide, nitrogen oxides, particulate matter, and volatile organic compounds made by the Department in Permit No. PSD-FL-078A (Project No. 0990016-004-AC) issued on June 7, 2001. The determinations were based on the best available information for this industry and consider modification of an existing unit as well as previous permitting actions. Minor revisions were made to this permit (PSD-FL-078B) to incorporate operating ranges for flue gas oxygen and carbon monoxide contents that represent good combustion practices. These revisions did not result in any changes to the previous BACT determinations.

## SECTION IV.

## APPENDIX FC - FUEL CHARACTERISTICS AND FIRING RATES

Table A. Boiler No. 5 Fuel Characteristics

Parameter	Fuel Type			
	Bagasse	Wood Chips	Rice Hulls	Fuel Oil
Heat Content	7.2 MMBtu/ton, wet (3600 BTU/lb, wet)	10.0 MMBtu/ton, wet (5000 BTU/lb, wet)	12.4 MMBtu/ton, wet (6200 BTU/lb, wet)	150 MMBtu/1000 gal (150,000 BTU/gallon)
Moisture Content	50% by wt.	50% by wt.	< 25% by wt.	NA
Sulfur Content	< 0.1 – 0.4% S by wt.	0.02 - 0.002%	< 0.002%	1.0% S by wt., max. (8.1 lb oil/gallon)

Table B. Boiler No. 5 Fuel Firing Rates (130,000 lb/hour Steam, 1-Hour Average)

Fuel Option	Primary Fuel	Supplemental Fuel	Total Heat Input
Bagasse Only	255.3 MMBtu/hr (35.5 TPH bagasse)	NA	255.3 MMBtu/hr
Bagasse and Oil	184.8 MMBtu/hr (25.7 TPH bagasse)	70.5 MMBtu/hr (470 GPH oil, max.)	255.3 MMBtu/hr*
Wood Chips	255.3 MMBtu/hr (25.5 TPH Wood Chips)	(Wood chips and rice hulls limited to < 2200 tons per crop season)	255.3 MMBtu/hr
Rice Hulls	193.3 MMBtu/hr (26.8 TPH bagasse)	62.0 MMBtu/hr (5.0 TPH Rice Hulls)	255.3 MMBtu/hr

Table C. Boiler No. 5 Fuel Firing Rates (115,000 lb/hour Steam, 24-Hour Average)

Fuel Option	Primary Fuel	Supplemental Fuel	Total Heat Input
Bagasse Only	225.8 MMBtu/hr (31.4 TPH bagasse)	NA	225.8 MMBtu/hr
Bagasse and Oil	155.3 MMBtu/hr (21.6 TPH bagasse)	70.5 MMBtu/hr (470 GPH oil, max.)	225.8 MMBtu/hr*
Wood Chips	225.8 MMBtu/hr (22.6 TPH wood Chips)	(Wood chips and rice hulls limited to < 2200 tons per crop season)	225.8 MMBtu/hr
Rice Hulls	163.8 MMBtu/hr (22.8 TPH bagasse)	62.0 MMBtu/hr (5.0 TPH Rice Hulls)	225.8 MMBtu/hr

**SECTION IV.**

**APPENDIX GC - CONSTRUCTION PERMIT GENERAL CONDITIONS**

- G.1 The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
- G.2 This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings or exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
- G.3 As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
- G.4 This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
- G.5 This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
- G.6 The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
- G.7 The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:
- (a) Have access to and copy and records that must be kept under the conditions of the permit;
  - (b) Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
  - (c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

- G.8 If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
- (a) A description of and cause of non-compliance; and
  - (b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

**SECTION IV.**

**APPENDIX GC - CONSTRUCTION PERMIT GENERAL CONDITIONS**

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

- G.9 In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
- G.10 The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.
- G.11 This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
- G.12 This permit or a copy thereof shall be kept at the work site of the permitted activity.
- G.13 This permit also constitutes:
  - (a) Determination of Best Available Control Technology (X);
  - (b) Determination of Prevention of Significant Deterioration (X); and
  - (c) Compliance with New Source Performance Standards (X).
- G.14 The permittee shall comply with the following:
  - (a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
  - (b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
  - (c) Records of monitoring information shall include:
    - 1. The date, exact place, and time of sampling or measurements;
    - 2. The person responsible for performing the sampling or measurements;
    - 3. The dates analyses were performed;
    - 4. The person responsible for performing the analyses;
    - 5. The analytical techniques or methods used; and
    - 6. The results of such analyses.
- G.15 When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.



## SECTION IV.

### APPENDIX GCP - GOOD COMBUSTION PRACTICES

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#### Purpose of GCP Plan

The determination of Best Available Control Technology for CO, NO<sub>x</sub>, PM and VOC emissions from Boiler No. 5 (EU-005) relied on "good combustion practices (GCPs)". The purpose of this document is to summarize the operational, maintenance, and monitoring procedures that will lead to the minimization of CO, PM and VOC emissions and the optimization of NO<sub>x</sub> emissions, consistent with good combustion practices.

#### Off Season Equipment Preparation

Prior to each harvest season, the following activities shall be performed.

1. Inspect, clean, and perform routine maintenance for the boiler proper, its air ductwork, air heaters and scrubber.
2. Inspect and repair all refractory and boiler casing where needed.
3. Remove loose scale removed from outside of boiler tubes and remove loose scale, sand and other debris from boiler.
4. Inspect, clean, and check the boiler grate for proper mechanical operation.
5. Inspect and repair all fans and fan drives as needed.
6. Inspect and repair all pumps and pump drives as needed.
7. Inspect and clean all oil burners, related oil piping, atomizing steam and air registers.
8. Identify and mark the skirt level of the scrubber on the outside to provide a permanent reference.
9. As required, inspect, repair, and calibrate all instruments for boiler operation and control, including the process monitors for carbon monoxide and oxygen. The instrument shop shall record all such information in its repair log.

#### Training

Prior to each harvest season, an instructional program shall be developed and presented to all boiler operators and boiler room supervisors regarding the following items:

- Efficient combustion: minimizing CO, PM and VOC emissions while optimizing NO<sub>x</sub> emissions;
- Reducing startup emissions;
- Proper wet scrubber operation; and
- Record keeping required by the air permit.
- Using process monitors for carbon monoxide and oxygen to promote good combustion characteristics in the boiler.

The senior most experienced boiler supervisor shall instruct other boiler room supervisors, boiler operators, and other appropriate personnel in proper boiler and scrubber operations. The training will impress upon supervisors and operators the importance of proper boiler operation in order to minimize emissions.

#### Good Combustion Practices - Operation

Emissions of carbon monoxide (CO), particulate matter (PM), and volatile organic compounds (VOC) shall be minimized by ensuring efficient combustion through the proper application of Good Combustion Practices (GCPs). To provide reasonable assurance that GCPs are being employed, the boiler operator shall:

1. Maintain the steam production rate at the optimal rate by controlling feed of bagasse fuel into the boiler. Sufficient combustion air shall be maintained to promote good combustion.

## SECTION IV.

### APPENDIX GCP - GOOD COMBUSTION PRACTICES

2. Periodically view the stack plume to visually confirm that good combustion is taking place. If an abnormal plume is observed, the operator shall immediately take corrective action. The boiler operator will log the occurrence and duration of all such events in the boiler operation log, along with the corrective action taken. These records will be kept for a period of at least two years.
3. Examine the boiler grates at least twice per shift for proper fuel distribution and make appropriate adjustments. Unusual observations shall be logged.
4. Perform a walk-around inspection of the boiler once per day shift to check and repair the following: Fans, pumps, casing, ducting, scrubber, and monitoring equipment.
5. Inspect the burners once per shift and clean as necessary.

These actions may be performed by the operator or other personnel under the operator's supervision. The information collected shall be reported to the boiler operator.

6. Process monitors shall be installed to monitor the oxygen (O<sub>2</sub>) content and the carbon monoxide (CO) content of the boiler flue gas. The instrument readout shall be located in the boiler control room to provide real time data to the boiler operator and will display the instantaneous and 1-hour block average. The boiler operators will be instructed in the use of the O<sub>2</sub> and CO flue gas process monitors for combustion control and to ensure sufficient excess air levels. The boiler operators shall periodically observe each process monitor and adjust the boiler operation, consistent with good combustion practices. The O<sub>2</sub> process monitor shall be equipped with an alarm with a set point at 2.0% (minimum) flue gas oxygen content based upon a 1-hour block average. The CO process monitor shall be equipped with an alarm with a set point at 10,000 ppm (maximum) flue gas CO concentration based on a 1-hour block average. When an alarm on either monitor is tripped, the operator shall take corrective actions to adjust the boiler operation consistent with good combustion practices. Corrective actions include, but are not limited to, adjusting the air-to-fuel ratio and adjusting the ratio of under-fire air to over-fire air. Corrective actions shall continue until the CO and O<sub>2</sub> flue gas concentrations are within the levels representing good combustion practices.

*Note: Emissions of nitrogen oxides (NO<sub>x</sub>) shall be optimized by the proper application of good combustion practices. However, the same operating practices that result in efficient combustion (higher furnace temperatures and excess air rates) may tend to raise NO<sub>x</sub> levels. The good combustion practices indicated above encourage the reduction of CO emissions while maintaining NO<sub>x</sub> emissions within acceptable levels.*

Florida Department of  
Environmental Protection

Memorandum

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TO: Howard Rhodes  
THRU: Clair Fancy *CAF*  
Al Linero *AL* 4/26  
FROM: Jeff Koerner *JK*  
DATE: June 25, 2002  
SUBJECT: Project No. 0990016-005-AC  
Final Air Construction Permit No. PSD-FL-078B  
Atlantic Sugar Association, Inc.  
Boiler No 5, CO/O<sub>2</sub> Modification

The Final Permit for this project is attached for your approval and signature, which incorporates oxygen and carbon monoxide process parameters representing good combustion practices for Boiler No. 5 at the sugar mill. The Department distributed an "Intent to Issue Permit" package on May 23, 2002. The applicant published the "Public Notice of Intent to Issue" in The Palm Beach Post on June 10, 2002. The Department received the proof of publication on June 24, 2002. No requests for administrative hearings were filed.

Day #90 is September 25, 2002. I recommend your approval of the attached Final Permit for this project.

Attachments

CHF/AAL/jfk