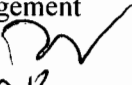



Florida Department of  
Environmental Protection

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**Memorandum**

TO: Joe Kahn, Division of Air Resource Management  
THROUGH: Trina Vielhauer, Bureau of Air Regulation   
FROM: Jeff Koerner, Air Permitting North Section   
DATE: December 5, 2007  
SUBJECT: Final Air Permit No. PSD-FL-389  
Project No. 0510003-044-AC  
U.S. Sugar Corporation, Clewiston Sugar Mill and Refinery  
Limited Firing of Wood Chips in Boiler 7

Attached for your review is the final permit authorizing the firing of wood chips in Boiler 7 limited to an annual capacity factor of 25% based on the heat input rate. Wood chips will be used to offset distillate oil during initial mill startup for the crop season as well as during the refinery season. I recommend your approval of the attached final permit.

Attachments

JK/tlv/jk

## FINAL DETERMINATION

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### PERMITTEE

U.S. Sugar Corporation  
111 Ponce DeLeon Avenue  
Clewiston, FL 33440

### PERMITTING AUTHORITY

Florida Department of Environmental Protection  
Division of Air Resource Management  
Bureau of Air Regulation, Air Permitting North Section  
2600 Blair Stone Road, MS #5505  
Tallahassee, Florida 32399-2400

### PROJECT

Air Permit No. PSD-FL-389  
Project No. 0510003-044-AC  
Clewiston Sugar Mill and Refinery

This permit authorizes the firing of limited amounts of wood chips in Boiler 7 at the existing Clewiston sugar mill and sugar refinery, which is located in Hendry County at the intersection of W.C. Owens Avenue and State Road 832 in Clewiston, Florida.

### NOTICE AND PUBLICATION

The Department distributed a draft permit package on September 13, 2007. The applicant published the Public Notice of Intent to Issue in The Clewiston News on October 11, 2007. The Department received the proof of publication on October 24, 2007.

### COMMENTS

No comments on the Draft Permit were received from the public, the Department's South District Office, the National Park Service or the applicant.

### EPA Region 4 Office

The draft permit included the applicant's proposed Alternate Sampling Procedure (ASP) for opacity in Appendix F to the permit. The ASP proposed to continuously monitor and record power input to the electrostatic precipitator (ESP) in lieu of the NSPS Subpart Db requirement to install and operate a continuous opacity monitoring system (COMS). The primary justification for the ASP was the concern for moisture interference caused by the wet cyclones installed prior to the ESP. With the draft permit, the Department concurrently requested approval from EPA Region 4 of the applicant's ASP.

On October 29, 2007, the Department received a letter from EPA Region 4 denying the proposed ASP. EPA indicated that the recent revisions to NSPS Subpart Db provided for the installation of a particulate matter continuous emissions monitoring system (PM CEMS) to satisfy monitoring requirements for opacity and PM emissions. If moisture interference will prevent the reliable measurement of opacity, then a PM CEMS should be installed. As further evidence of this interpretation, EPA Region 4 provided a similar January 2007 determination made by EPA Region 3.

Based on EPA's denial of the ASP, the Department made the following corrections and changes in Subsection 3A of the draft permit.

3c. *Visible Emissions*: As determined by EPA Method 9, visible emissions shall not exceed 20% opacity (6-minute average), except for one 6-minute period per hour of not more than 27% opacity. ~~In lieu of a continuous opacity monitoring system, this permit establishes an alternate monitoring~~

## FINAL DETERMINATION

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~~procedure in Condition 8 of this subsection.~~ The standard applies at all times, except during periods of startup, shutdown or malfunction. [40 CFR 60.43b(f) and (g)]

9. ~~Alternate Opacity Monitoring Procedure COMS:~~ The permittee shall ~~comply with the alternate opacity monitoring procedure specified in Appendix F in lieu of installing, calibrate and operate~~ a continuous opacity monitoring system (COMS) pursuant to the applicable provisions of NSPS Subparts A and Db in 40 CFR 60. The provisions in Subpart A and Db establish a process for requesting EPA approval of alternate sampling procedures (ASP) to be used in lieu of monitoring opacity. The permittee is notified that a COMS or EPA-approved ASP is required for firing wood chips. [40 CFR 60.13(i), 40 CFR 60.43b(f) and 40 CFR 60.48b(a); and Rules 62-4.070(3) and 62-212.400(PSD), F.A.C.]

12. NSPS Subpart Db: Boiler 7 is subject to the applicable requirements of NSPS Subpart Db in 40 CFR 60 when firing distillate oil and/or wood. [NSPS Subpart Db in 40 CFR 60]

Appendix F (Alternate Opacity Monitoring Procedure) and references to Appendix F were deleted from the permit.

### CONCLUSION

The above references to the ASP were included in the draft permit contingent on EPA approval of the ASP. Since EPA denied the request, the ASP references are removed. The applicant intends to submit a revised ASP directly to EPA Region 4 for approval. The proposal is to limit the combined heat input rate from firing of wood chips and distillate oil (fuels regulated by the NSPS) to an annual capacity factor of less than 10%. In previous NSPS Subpart Db applicability determinations, EPA considered this level of operation to be "limited use" and did not require the installation of COMS. This will require the applicant to request a revision of this permit to include the restriction on the annual capacity factor and recognition of the EPA-approved ASP. The final action of the Department is to issue the permit with the minor revisions, corrections and clarifications as described above.

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NOTICE OF FINAL PERMIT

*In the Matter of an  
Application for Permit by:*

U.S. Sugar Corporation  
111 Ponce DeLeon Avenue  
Clewiston, FL 33440

Authorized Representative:

Mr. Neil Smith, V.P. of Sugar Processing Operations

Air Permit No. PSD-FL-389  
Project No. 0510003-044-AC  
Clewiston Sugar Mill and Refinery  
Facility ID No. 0510003  
Limited Firing of Wood Chips in Boiler 7

Enclosed is the final PSD air construction permit, which authorizes the limited firing of wood chips in Boiler 7. This unit is in operation at the existing Clewiston Sugar Mill and Refinery, which is located in Hendry County at the intersection of W.C. Owens Avenue and State Road 832 in Clewiston, Florida. As noted in the attached Final Determination, minor changes and clarifications were made to the permit as drafted. 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 30 days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.



Trina Vielhauer, 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 and Final Determination) was sent by electronic mail with received receipt requested to the persons listed below.

Mr. Neil Smith, U.S. Sugar ([nsmith@ussugar.com](mailto:nsmith@ussugar.com))

Mr. Keith Tingberg, U.S. Sugar Corporate Environmental Manager ([ktingberg@ussugar.com](mailto:ktingberg@ussugar.com))

Mr. David Buff, Golder Associates ([dbuff@golder.com](mailto:dbuff@golder.com))

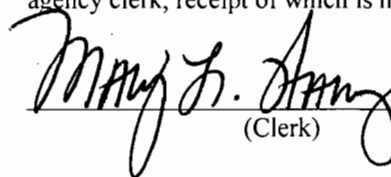
Mr. Ajaya Satyal, SD Office ([ajaya.satyal@dep.state.fl.us](mailto:ajaya.satyal@dep.state.fl.us))

Ms. Kathleen Forney ([forney.kathleen@epa.gov](mailto:forney.kathleen@epa.gov))

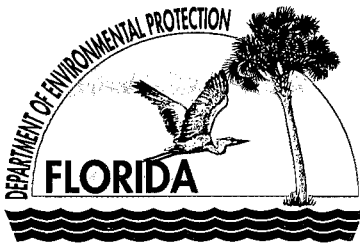
Mr. Dee Morse, National Park Service ([Dee\\_Morse@nps.gov](mailto:Dee_Morse@nps.gov))

Clerk Stamp

**FILING AND ACKNOWLEDGMENT FILED**, on this date,  
pursuant to Section 120.52(7), Florida Statutes, with the designated  
agency clerk, receipt of which is hereby acknowledged.

  
(Clerk)

12/6/07  
(Date)



# Florida Department of Environmental Protection

Bob Martinez Center  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Charlie Crist  
Governor

Jeff Kottkamp  
Lt. Governor

Michael W. Sole  
Secretary

## PERMITTEE

U.S. Sugar Corporation  
111 Ponce DeLeon Avenue  
Clewiston, FL 33440

### *Authorized Representative:*

Mr. Neil Smith, V.P. of Sugar Processing Operations  
Clewiston Sugar Mill and Refinery

Air Permit No. PSD-FL-389  
Project No. 0510003-044-AC  
Expires: October 1, 2008

Clewiston Sugar Mill and Refinery  
Facility ID No. 0510003  
Limited Firing of Wood Chips in Boiler 7

## FACILITY AND LOCATION

This permit authorizes the firing of limited amounts of wood chips in Boiler 7 at the existing Clewiston sugar mill and sugar 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.

## 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.) and Title 40, Parts 60 and 63 of the Code of Federal Regulations (CFR). Specifically, the project is subject to preconstruction review for the Prevention of Significant Deterioration (PSD) of Air Quality in accordance with Rule 62-212.400, F.A.C. The permittee is authorized to install the proposed equipment 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 (Department).

## CONTENTS

- Section 1. General Information
- Section 2. Administrative Requirements
- Section 3. Emissions Units Specific Conditions
- Section 4. Appendices

Joseph Kahn, Director  
Division of Air Resource Management

Effective Date

## SECTION 1. GENERAL INFORMATION

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### **FACILITY AND PROJECT DESCRIPTION**

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.

This project authorizes the firing of limited amounts of wood chips in existing Boiler 7 (EU-014). Primarily, wood chips will be fired during the off season (May through September) to support the refinery operations and as an initial startup fuel to begin the crop season when bagasse may not be readily available. In general, wood chips will displace distillate oil as the fuel fired during these limited periods.

### **REGULATORY CLASSIFICATION**

- The facility is a major source of hazardous air pollutants (HAP).
- The facility has no units subject to the acid rain provisions of the Clean Air Act.
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400 (PSD), F.A.C.

### **RELEVANT DOCUMENTS**

The following relevant documents are not a part of this permit, but helped form the basis for this permitting action: the permit application and additional information received to make it complete; the Draft Permit; the Department's Technical Evaluation and Preliminary Determination; the Written Notice of Intent to Issue Air Permit; the Public Notice of Intent to Issue Air Permit; the publication in a newspaper of general circulation; comments received on the Draft Permit package; and the Department's Final Determination.

## SECTION 2. ADMINISTRATIVE REQUIREMENTS

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1. Permitting Authority: The Permitting Authority for this project is the Bureau of Air Regulation in the Division of Air Resource Management of the Department. The mailing address for the Bureau of Air Regulation is 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. Copies of each application shall be submitted to the Compliance Authority.
2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Air Resource Section of the Department's South District Office at P.O. Box 2549, Fort Myers, Florida, 33902-2549.
3. Appendices: The following Appendices are attached in Section 4 as part of this permit: Appendix A (Citation Formats and Glossary of Common Terms), Appendix B (General Conditions), Appendix C (Common Conditions), Appendix D (Common Testing Requirements) and Appendix E (Summary of Best Available Control Technology Determinations).
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.
5. New or Additional Conditions: 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.]
6. Modifications: No emissions unit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
7. Source Obligation:
  - (a) Authorization to construct shall expire if construction is not commenced within 18 months after receipt of the permit, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. This provision does not apply to the time period between construction of the approved phases of a phased construction project except that each phase must commence construction within 18 months of the commencement date established by the Department in the permit.
  - (b) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.
  - (c) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by exceeding its projected actual emissions, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

[Rule 62-212.400(12), F.A.C.]

## SECTION 2. ADMINISTRATIVE REQUIREMENTS

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8. Title V Permit: This permit authorizes specific modifications and/or new construction on the affected emissions units as well as initial operation to determine compliance with conditions of this permit. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after completing the required work and commencing operation. 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 appropriate Permitting Authority with copies to each Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]



## SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

### A. Boiler 7 (EU-014)

This section of the permit addresses the following emissions unit.

#### Emissions Unit No. 014

Boiler 7 is a spreader-stoker, vibrating-grate boiler with a maximum 1-hour steam production rate of 385,000 pounds per hour at 750° F and 600 psig. The maximum heat input rate is 812 MMBtu/hour (1-hour average) and 738 MMBtu/hour (24-hour average). The primary fuel is bagasse with distillate oil fired as a startup fuel and restricted alternate fuel. Limited amounts of wood chips may also be fired as a startup fuel and restricted alternate fuel. Particulate matter emissions are controlled by a wet sand separator followed by an electrostatic precipitator. Exhaust gases exit a 225 feet tall stack at 335° F with an average flow rate of 355,000 acfm.

*{Permitting Note: For this project, Boiler 7 is subject to Best Available Control Technology (BACT) determinations for nitrogen oxides (NO<sub>x</sub>) in accordance with Rule 62-212.400(PSD), F.A.C. The final BACT determinations are presented in Appendix E of this permit. It is also subject to the applicable provisions of NSPS Subparts A and Db in 40 CFR 60 for industrial boilers.}*

#### PERFORMANCE RESTRICTIONS

1. **Authorized Fuel:** The permittee is authorized to fire wood chips in Boiler 7 as a startup and restricted alternate fuel. Wood chips shall consist of clean dry wood and vegetative materials. The wood chips shall be substantially free of plastics, rubber, glass, painted wood, chemically treated wood, and non-combustible materials. The firing of any household garbage, hazardous wastes, or toxic materials is prohibited. [Applicant Request; Rules 62-4.070(3) and 62-212.400(PSD), F.A.C.]
2. **Capacity:** Wood chips shall be fired at a heat input rate of no more than 369 MMBtu per hour based on a 24-hour average. The heat input rate from firing wood chips shall not exceed 1,616,220 MMBtu during any consecutive 12 months. Bagasse remains the primary fuel. [Applicant Request; Rules 62-210.200(PTE) and 62-212.400(PSD), F.A.C.]

#### EMISSIONS STANDARDS

3. **Emissions Standards:** The following emissions standards apply to Boiler 7 when firing wood chips alone or in combination with other authorized fuels.
  - a. **Nitrogen Oxides:** As determined by EPA Method 7E, nitrogen oxide emissions shall not exceed 0.31 lb/MMBtu of heat input and 228.8 lb/hour. [Rule 62-212.400(BACT), F.A.C. and PSD-FL-389]
  - b. **Particulate Matter:** As determined by EPA Method 5, particulate matter emissions shall not exceed 0.03 lb/MMBtu of heat input and 22 lb/hour. The standard applies at all times, except during periods of startup, shutdown or malfunction. [40 CFR 60.43b(g) and (h)(1)]
  - c. **Visible Emissions:** As determined by EPA Method 9, visible emissions shall not exceed 20% opacity (6-minute average), except for one 6-minute period per hour of not more than 27% opacity. The standard applies at all times, except during periods of startup, shutdown or malfunction. [40 CFR 60.43b(f) and (g)]
  - d. **Dust:** To minimize fugitive particulate matter, biomass conveyors shall be completely covered or enclosed except for the transfer points to/from the bagasse stockpile and the point associated with conveying bagasse from conveyor C9A to C9B in the drying mill. [Rules 62-4.070(3) and 62-296.310(4)(c), F.A.C.]

#### TESTING REQUIREMENTS

4. **Initial Compliance Tests:** When firing wood chips, Boiler 7 shall be tested to demonstrate initial

### SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

#### A. Boiler 7 (EU-014)

compliance with the emissions standards for nitrogen oxides, particulate matter and visible emissions. All initial tests shall be conducted when firing wood chips at a heat input rate of at least 332 MMBtu per hour. The initial tests shall be conducted within 30 operational days on wood chips after first fire on wood chips, but not later than August 30, 2007. The initial compliance tests for particulate matter and opacity while firing wood shall be conducted in accordance with the provisions of 40 CFR 60.46b(d). The initial test requirements for firing wood are in addition to any pre-existing test requirements for firing bagasse. [40 CFR 60.46b(d); and Rules 62-4.070(3), 62-297.310(7)(a)1, and 62-212.400(BACT), F.A.C.]

5. **Annual Compliance Tests:** During each federal fiscal year (October 1<sup>st</sup> to September 30<sup>th</sup>), Boiler 7 shall be tested to demonstrate compliance with the emissions standards for nitrogen oxides, particulate matter and visible emissions. Since bagasse is the worst-case fuel with regard to particulate matter, annual tests for particulate matter and visible emissions when firing bagasse may also be used to demonstrate compliance with the standards for firing wood chips. [Rules 62-4.070(3), 62-297.310(7)(a)1, and 62-212.400(BACT), F.A.C.]
6. **Test Requirements:** The permittee shall notify the Compliance Authority in writing at least 15 days prior to any required tests. Tests shall be conducted in accordance with the applicable requirements specified in Appendix D (Common Testing Requirements) of this permit. [Rule 62-297.310(7)(a)9, F.A.C.]
7. **Test Methods:** Required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
5 or 5B	Method for Determining Particulate Matter Emissions
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
17	Alternate Method for Determining Particulate Matter Emissions

The above methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Rules 62-204.800 and 62-297.100, F.A.C.; 40 CFR 60, Appendix A]

#### MONITORING, RECORDS AND REPORTS

8. **Fuel Monitoring:** The permittee shall maintain the following records for wood chips.
  - a. Representative samples of wood chips shall be taken each calendar quarter and analyzed for the heating value (modified ASTM D3286 in Btu/lb as fired) and moisture content (ASTM D3173 in percent by weight). Analytical results shall be determined and available for review within 30 days of the end of each calendar quarter. Such analysis is not required if no wood chips are stored on site during the calendar quarter.
  - b. For each 24-hour block of operation (midnight to midnight), the permittee shall maintain records of the amount of wood chips fired to demonstrate compliance with the heat input restrictions of this permit.
  - c. For each 24-hour block of operation (midnight to midnight), the permittee shall calculate and record the heat input rate from wood chips.

All records shall be maintained on site and made available upon request. [Rules 62-4.070(3) and 62-212.400(PSD), F.A.C.]

### SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

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#### A. Boiler 7 (EU-014)

9. COMS: The permittee shall install, calibrate and operate a continuous opacity monitoring system (COMS) pursuant to the applicable provisions of NSPS Subparts A and Db in 40 CFR 60. The provisions in Subpart A and Db establish a process for requesting EPA approval of alternate sampling procedures (ASP) to be used in lieu of monitoring opacity. The permittee is notified that a COMS or EPA-approved ASP is required for firing wood chips. [40 CFR 60.13, 40 CFR 60.43b(f) and 40 CFR 60.48b(a); and Rules 62-4.070(3) and 62-212.400(PSD), F.A.C.]
10. Monthly Operations Summary: Within 7 calendar days following each month, the permittee shall calculate and record the amount of wood chips fired (tons) and the corresponding heat input rate (MMBtu) from firing wood chips for the previous month and the previous consecutive 12 months. Records shall be maintained on site and made available upon request. [Rule 62-4.070(3), F.A.C.]
11. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix D of this permit. For each test run, the report shall also indicate the total heat input rate, the heat input rate from firing wood chips, the steam production rate, and the secondary power input to the electrostatic precipitator. [Rule 62-297.310(8), F.A.C.]

#### OTHER REQUIREMENTS

12. NSPS Subpart Db: Boiler 7 is subject to the applicable requirements of NSPS Subpart Db in 40 CFR 60 when firing distillate oil and/or wood. [NSPS Subpart Db in 40 CFR 60]

**SECTION 4. APPENDICES**  
**CONTENTS**

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- Appendix A. Citation Formats and Glossary of Common Terms
- Appendix B. General Conditions
- Appendix C. Common Conditions
- Appendix D. Common Testing Requirements
- Appendix E. Summary of Best Available Control Technology Determinations

**SECTION 4. APPENDIX A**  
**CITATION FORMATS AND GLOSSARY OF COMMON TERMS**

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**CITATION FORMATS**

The following illustrate the formats used in the permit to identify applicable requirements from permits and regulations.

**Old Permit Numbers**

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

Where: “AC” identifies the permit as an Air Construction Permit  
“AO” identifies the permit as an Air Operation Permit  
“123456” identifies the specific permit project number

**New Permit Numbers**

Example: Permit Nos. 099-2222-001-AC, 099-2222-001-AF, 099-2222-001-AO, or 099-2222-001-AV

Where: “099” represents the specific county ID number in which the project is located  
“2222” represents the specific facility ID number for that county  
“001” identifies the specific permit project number  
“AC” identifies the permit as an air construction permit  
“AF” identifies the permit as a minor source federally enforceable state operation permit  
“AO” identifies the permit as a minor source air operation permit  
“AV” identifies the permit as a major Title V air operation permit

**PSD Permit Numbers**

Example: Permit No. PSD-FL-317

Where: “PSD” means issued pursuant to the preconstruction review requirements of the Prevention of Significant Deterioration of Air Quality  
“FL” means that the permit was issued by the State of Florida  
“317” identifies the specific permit project number

**Florida Administrative Code (F.A.C.)**

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

Means: Title 62, Chapter 213, Rule 205 of the Florida Administrative Code

**Code of Federal Regulations (CFR)**

Example: [40 CFR 60.7]

Means: Title 40, Part 60, Section 7

**SECTION 4. APPENDIX A**  
**CITATION FORMATS AND GLOSSARY OF COMMON TERMS**

---

**GLOSSARY OF COMMON TERMS**

° F: degrees Fahrenheit

**acfm**: actual cubic feet per minute

**ARMS**: Air Resource Management System  
(Department's database)

**BACT**: best available control technology

**Btu**: British thermal units

**CAM**: compliance assurance monitoring

**CEMS**: continuous emissions monitoring system

**cfm**: cubic feet per minute

**CFR**: Code of Federal Regulations

**CO**: carbon monoxide

**COMS**: continuous opacity monitoring system

**DEP**: Department of Environmental Protection

**Department**: Department of Environmental Protection

**dscfm**: dry standard cubic feet per minute

**EPA**: Environmental Protection Agency

**ESP**: electrostatic precipitator (control system for reducing particulate matter)

**EU**: emissions unit

**F.A.C.**: Florida Administrative Code

**F.D.**: forced draft

**F.S.**: Florida Statutes

**FGR**: flue gas recirculation

**Fl**: fluoride

**ft<sup>2</sup>**: square feet

**ft<sup>3</sup>**: cubic feet

**gpm**: gallons per minute

**gr**: grains

**HAP**: hazardous air pollutant

**Hg**: mercury

**I.D.**: induced draft

**ID**: identification

**kPa**: kilopascals

**lb**: pound

**MACT**: maximum achievable technology

**MMBtu**: million British thermal units

**MSDS**: material safety data sheets

**MW**: megawatt

**NESHAP**: National Emissions Standards for Hazardous Air Pollutants

**NO<sub>x</sub>**: nitrogen oxides

**NSPS**: New Source Performance Standards

**O&M**: operation and maintenance

**O<sub>2</sub>**: oxygen

**Pb**: lead

**PM**: particulate matter

**PM<sub>10</sub>**: particulate matter with a mean aerodynamic diameter of 10 microns or less

**PSD**: prevention of significant deterioration

**psi**: pounds per square inch

**PTE**: potential to emit

**RACT**: reasonably available control technology

**RATA**: relative accuracy test audit

**SAM**: sulfuric acid mist

**scf**: standard cubic feet

**scfm**: standard cubic feet per minute

**SIC**: standard industrial classification code

**SNCR**: selective non-catalytic reduction (control system used for reducing emissions of nitrogen oxides)

**SO<sub>2</sub>**: sulfur dioxide

**TPH**: tons per hour

**TPY**: tons per year

**UTM**: Universal Transverse Mercator coordinate system

**VE**: visible emissions

**VOC**: volatile organic compounds

**SECTION 4. APPENDIX B**  
**GENERAL CONDITIONS**

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The permittee shall comply with the following general conditions from Rule 62-4.160, F.A.C.

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, F.S. 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.
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, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in Subsections 403.087(6) and 403.722(5), F.S., 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.
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.
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 F.S. and Department rules, unless specifically authorized by an order from the Department.
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.
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.

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.

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.

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 F.S. or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, F.S.. Such evidence

**SECTION 4. APPENDIX B**  
**GENERAL CONDITIONS**

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- shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
10. The permittee agrees to comply with changes in Department rules and F.S. after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by F.S. or Department rules.
  11. This permit is transferable only upon Department approval in accordance with 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.
  12. This permit or a copy thereof shall be kept at the work site of the permitted activity.
  13. This permit also constitutes:
    - a. Determination of Best Available Control Technology (NO<sub>x</sub>);
    - b. Determination of Prevention of Significant Deterioration (NO<sub>x</sub>); and
    - c. Compliance with New Source Performance Standards (Subpart Db in 40 CFR 60).
  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.
  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 4. APPENDIX C**  
**COMMON CONDITIONS**

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Unless otherwise specified in the permit, the following conditions apply to all emissions units and activities at the facility.

**EMISSIONS AND CONTROLS**

1. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the permittee shall notify each Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; steps being taken to correct the problem and prevent future 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 the conditions of this permit or the regulations. [Rule 62-4.130, F.A.C.]
2. Circumvention: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]
3. Excess Emissions Allowed: Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. Rule 62-210.700, F.A.C., cannot vary any NSPS or NESHAP provision. [Rule 62-210.700(1), F.A.C.]
4. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]
5. Excess Emissions - Notification: In case of excess emissions resulting from malfunctions, the permittee 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.]
6. VOC or OS Emissions: No person shall store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds (VOC) or organic solvents (OS) without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. [Rule 62-296.320(1), F.A.C.]
7. Objectionable Odor Prohibited: No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means 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(Definitions), F.A.C.]
8. General Visible Emissions: No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20% opacity. This regulation does not impose a specific testing requirement. [Rule 62-296.320(4)(b)1, F.A.C.]
9. 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.]

**RECORDS AND REPORTS**

10. Records Retention: All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least 5 years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. [Rule 62-213.440(1)(b)2, F.A.C.]
11. Annual Operating Report: The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year. [Rule 62-210.370(3), F.A.C.]

**SECTION 4. APPENDIX D**  
**COMMON TESTING REQUIREMENTS**

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Unless otherwise specified in the permit, the following testing requirements apply to all emissions units at the facility.

**COMPLIANCE TESTING REQUIREMENTS**

1. 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 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.]
2. Operating Rate During Testing: Testing of emissions shall be conducted with the emissions unit operating at permitted capacity. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the maximum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test 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. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. [Rule 62-297.310(2), F.A.C.]
3. Calculation of Emission Rate: For each emissions performance test, 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.]
4. Applicable Test Procedures
  - a. Required Sampling Time.
    - (1) Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes.
    - (2) Opacity Compliance Tests. When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:
      - (a) For batch, cyclical processes, or other operations which are normally completed within less than the minimum observation period and do not recur within that time, the period of observation shall be equal to the duration of the batch cycle or operation completion time.
      - (b) The observation period for special opacity tests that are conducted to provide data to establish a surrogate standard pursuant to Rule 62-297.310(5)(k), F.A.C., Waiver of Compliance Test Requirements, shall be established as necessary to properly establish the relationship between a proposed surrogate standard and an existing mass emission limiting standard.
      - (c) The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.
  - b. Minimum Sample Volume. Unless otherwise specified in the applicable rule or test method, the minimum sample volume per run shall be 25 dry standard cubic feet.

**SECTION 4. APPENDIX D**  
**COMMON TESTING REQUIREMENTS**

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- c. *Calibration of Sampling Equipment.* Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, F.A.C.
- d. *Allowed Modification to EPA Method 5.* When EPA Method 5 is required, the following modification is allowed: the heated filter may be separated from the impingers by a flexible tube.

[Rule 62-297.310(4), F.A.C.]

5. Determination of Process Variables

- 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.

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

6. Sampling Facilities: The permittee shall install permanent stack sampling ports and provide sampling facilities that meet the requirements of Rule 62-297.310(6), F.A.C. Sampling facilities include sampling ports, work platforms, access to work platforms, electrical power, and sampling equipment support. All stack sampling facilities must also comply with all applicable Occupational Safety and Health Administration (OSHA) Safety and Health Standards described in 29 CFR Part 1910, Subparts D and E.

- a. *Permanent Test Facilities.* The owner or operator of an emissions unit for which a compliance test, other than a visible emissions test, is required on at least an annual basis, shall install and maintain permanent stack sampling facilities.
- b. *Temporary Test Facilities.* The owner or operator of an emissions unit that is not required to conduct a compliance test on at least an annual basis may use permanent or temporary stack sampling facilities. If the owner chooses to use temporary sampling facilities on an emissions unit, and the Department elects to test the unit, such temporary facilities shall be installed on the emissions unit within 5 days of a request by the Department and remain on the emissions unit until the test is completed.
- c. *Sampling Ports.*
  - (1) All sampling ports shall have a minimum inside diameter of 3 inches.
  - (2) The ports shall be capable of being sealed when not in use.
  - (3) The sampling ports shall be located in the stack at least 2 stack diameters or equivalent diameters downstream and at least 0.5 stack diameter or equivalent diameter upstream from any fan, bend, constriction or other flow disturbance.
  - (4) For emissions units for which a complete application to construct has been filed prior to December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 15 feet or less. For stacks with a larger diameter, four sampling ports, each 90 degrees apart, shall be installed. For emissions units for which a complete application to construct is filed on or after December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 10 feet or less. For stacks with larger diameters, four sampling ports, each 90 degrees apart, shall be installed. On horizontal circular ducts, the ports shall be located so that the probe can enter the stack vertically, horizontally or at a 45 degree angle.
  - (5) On rectangular ducts, the cross sectional area shall be divided into the number of equal areas in accordance with EPA Method 1. Sampling ports shall be provided which allow access to each sampling point. The ports shall be located so that the probe can be inserted perpendicular to the gas flow.

**SECTION 4. APPENDIX D**  
**COMMON TESTING REQUIREMENTS**

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d. *Work Platforms.*

- (1) Minimum size of the working platform shall be 24 square feet in area. Platforms shall be at least 3 feet wide.
- (2) On circular stacks with 2 sampling ports, the platform shall extend at least 110 degrees around the stack.
- (3) On circular stacks with more than two sampling ports, the work platform shall extend 360 degrees around the stack.
- (4) All platforms shall be equipped with an adequate safety rail (ropes are not acceptable), toe board, and hinged floor-opening cover if ladder access is used to reach the platform. The safety rail directly in line with the sampling ports shall be removable so that no obstruction exists in an area 14 inches below each sample port and 6 inches on either side of the sampling port.

e. *Access to Work Platform.*

- (1) Ladders to the work platform exceeding 15 feet in length shall have safety cages or fall arresters with a minimum of 3 compatible safety belts available for use by sampling personnel.
- (2) Walkways over free-fall areas shall be equipped with safety rails and toe boards.

f. *Electrical Power.*

- (1) A minimum of two 120-volt AC, 20-amp outlets shall be provided at the sampling platform within 20 feet of each sampling port.
- (2) If extension cords are used to provide the electrical power, they shall be kept on the plant's property and be available immediately upon request by sampling personnel.

g. *Sampling Equipment Support.*

- (1) A three-quarter inch eyebolt and an angle bracket shall be attached directly above each port on vertical stacks and above each row of sampling ports on the sides of horizontal ducts.
  - (a) The bracket shall be a standard 3 inch × 3 inch × one-quarter inch equal-legs bracket which is 1 and one-half inches wide. A hole that is one-half inch in diameter shall be drilled through the exact center of the horizontal portion of the bracket. The horizontal portion of the bracket shall be located 14 inches above the centerline of the sampling port.
  - (b) A three-eighth inch bolt which protrudes 2 inches from the stack may be substituted for the required bracket. The bolt shall be located 15 and one-half inches above the centerline of the sampling port.
  - (c) The three-quarter inch eyebolt shall be capable of supporting a 500 pound working load. For stacks that are less than 12 feet in diameter, the eyebolt shall be located 48 inches above the horizontal portion of the angle bracket. For stacks that are greater than or equal to 12 feet in diameter, the eyebolt shall be located 60 inches above the horizontal portion of the angle bracket. If the eyebolt is more than 120 inches above the platform, a length of chain shall be attached to it to bring the free end of the chain to within safe reach from the platform.
- (2) A complete monorail or dual rail arrangement may be substituted for the eyebolt and bracket.
- (3) When the sample ports are located in the top of a horizontal duct, a frame shall be provided above the port to allow the sample probe to be secured during the test.

[Rule 62-297.310(6), F.A.C.]

7. Frequency of Compliance Tests: The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

a. *General Compliance Testing.*

1. The owner or operator of a new or modified emissions unit that is subject to an emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining an operation permit for such emissions unit.

**SECTION 4. APPENDIX D**  
**COMMON TESTING REQUIREMENTS**

2. For excess emission limitations for particulate matter specified in Rule 62-210.700, F.A.C., a compliance test shall be conducted annually while the emissions unit is operating under soot blowing conditions in each federal fiscal year during which soot blowing is part of normal emissions unit operation, except that such test shall not be required in any federal fiscal year in which a fossil fuel steam generator does not burn liquid and/or solid fuel for more than 400 hours other than during startup.
  3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to sub-subparagraph 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:
    - (a) Did not operate; or
    - (b) In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours,
  4. During each federal fiscal year (October 1 – September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:
    - (a) Visible emissions, if there is an applicable standard;
    - (b) Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and
    - (c) c. Each NESHAP pollutant, if there is an applicable emission standard.
  5. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid and/or solid fuel, other than during startup, for a total of more than 400 hours.
  6. For fossil fuel steam generators on a semi-annual particulate matter emission compliance testing schedule, a compliance test shall not be required for any six-month period in which liquid and/or solid fuel is not burned for more than 200 hours other than during startup.
  7. For emissions units electing to conduct particulate matter emission compliance testing quarterly pursuant to paragraph 62-296.405(2)(a), F.A.C., a compliance test shall not be required for any quarter in which liquid and/or solid fuel is not burned for more than 100 hours other than during startup.
  8. Any combustion turbine that does not operate for more than 400 hours per year shall conduct a visible emissions compliance test once per each five-year period, coinciding with the term of its air operation permit.
  9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of 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.
  10. An annual compliance test conducted for visible emissions shall not be required for units exempted from air permitting pursuant to subsection 62-210.300(3), F.A.C.; units determined to be insignificant pursuant to subparagraph 62-213.300(2)(a)1., F.A.C., or paragraph 62-213.430(6)(b), F.A.C.; or units permitted under the General Permit provisions in paragraph 62-210.300(4)(a) or Rule 62-213.300, F.A.C., unless the general permit specifically requires such testing.
- b. *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 emissions unit to conduct compliance tests which identify the nature and

**SECTION 4. APPENDIX D**  
**COMMON TESTING REQUIREMENTS**

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quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.

- c. *Waiver of Compliance Test Requirements.* If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of paragraph 62-297.310(7)(b), F.A.C., shall apply.

[Rule 62-297.310(7), F.A.C.]

**RECORDS AND REPORTS**

8. Test Reports:

- a. 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.
- b. 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.
- c. 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 following information.
  1. The type, location, and designation of the emissions unit tested.
  2. The facility at which the emissions unit is located.
  3. The owner or operator of the emissions unit.
  4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
  5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
  6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
  7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
  8. The date, starting time and duration of each sampling run.
  9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
  10. The number of points sampled and configuration and location of the sampling plane.
  11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
  12. The type, manufacturer and configuration of the sampling equipment used.
  13. Data related to the required calibration of the test equipment.
  14. Data on the identification, processing and weights of all filters used.
  15. Data on the types and amounts of any chemical solutions used.

**SECTION 4. APPENDIX D**  
**COMMON TESTING REQUIREMENTS**

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16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
17. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
18. All measured and calculated data required to be determined by each applicable test procedure for each run.
19. The detailed calculations for one run that relate the collected data to the calculated emission rate.
20. The applicable emission standard and the resulting maximum allowable emission rate for the emissions unit plus the test result in the same form and unit of measure.
21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

[Rule 62-297.310(8), F.A.C.]

**SECTION 4. APPENDIX E**

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**SUMMARY OF BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATIONS**

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**Unit Description**

U.S. Sugar Corporation operates existing Boiler 7, which is a spreader-stoker, vibrating-grate boiler with a maximum 1-hour steam production rate of 385,000 pounds per hour at 750° F and 600 psig. The maximum heat input rate is 812 MMBtu/hour (1-hour average) and 738 MMBtu/hour (24-hour average). The primary fuel is bagasse with distillate oil fired as a supplemental and alternate fuel.

**Air Pollution Control Equipment**

Particulate matter emissions are controlled by wet sand separators followed by an electrostatic precipitator. In accordance with original Permit No. PSD-FL-208, this equipment was specified as the Best Available Control Technology (BACT) for particulate matter emissions.

**New Project Description**

U.S. Sugar Corporation proposes to fire limited amounts of wood chips. Primarily, wood chips will be fired during the off season (May through September) to support the refinery operations and as an initial startup fuel to begin the crop season when bagasse may not be readily available. In general, wood chips will displace distillate oil as the fuel fired during these limited periods. With regard to emissions of nitrogen oxides (NO<sub>x</sub>), the project is subject to preconstruction review for the prevention of Significant Deterioration (PSD) of Air Quality pursuant to Rule 62-212.400, F.A.C., which requires a BACT determination.

**Final BACT Determination**

Pursuant to Rule 62-212.400, F.A.C., the Department establishes the following NO<sub>x</sub> BACT standards for Boiler 7. As determined by EPA Method 7E, NO<sub>x</sub> emissions shall not exceed 0.31 lb/MMBtu of heat input and 228.8 lb/hour. Compliance shall be demonstrated by conducting tests in accordance with EPA Method 7E.



**Harvey, Mary**

**From:** Harvey, Mary  
**Sent:** Thursday, December 06, 2007 2:50 PM  
**To:** 'Mr. Neil Smith, U.S. Sugar'; 'Mr. Keith Tingberg, U.S. Sugar Corporate Environmental Manager'; 'Mr. David Buff, Golder Associates'; Satyal, Ajaya; 'Ms. Kathleen Forney'; 'Mr. Dee Morse, National Park Service'  
**Cc:** Koerner, Jeff; Adams, Patty; Gibson, Victoria  
**Subject:** U.S. SUGAR CORPORATION - FINAL PERMIT #0510003-044-AC- PSD-FL-389  
**Attachments:** PSD-FL-389 - Appendix.PDF; PSD-FL-389 - Final Determination.PDF; PSD-FL-389 - Final Permit.PDF; PSD-FL-389 - Notice of Final Permit.PDF; Signed Documents - US Sugar - 0510003-044-AC-FINAL.pdf

Tracking:	Recipient	Read
✓	'Mr. Neil Smith, U.S. Sugar'	
✓	'Mr. Keith Tingberg, U.S. Sugar Corporate Environmental Manager'	
✓	'Mr. David Buff, Golder Associates'	
✓	Satyal, Ajaya	Read: 12/7/2007 8:02 AM
	'Ms. Kathleen Forney'	
✓	'Mr. Dee Morse, National Park Service'	
	Koerner, Jeff	
✓	Adams, Patty	Read: 12/6/2007 4:23 PM
	Gibson, Victoria	

Dear Sir/Madam:

Please send a "reply" message verifying receipt of the attached document(s); this may be done by selecting "Reply" on the menu bar of your e-mail software and then selecting "Send". We must receive verification of receipt and your reply will preclude subsequent e-mail transmissions to verify receipt of the document(s).

The document(s) may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible.

The document is in Adobe Portable Document Format (pdf). Adobe Acrobat Reader can be downloaded for free at the following internet site:  
<http://www.adobe.com/products/acrobat/readstep.html>.

The Bureau of Air Regulation is issuing electronic documents for permits, notices and other correspondence in lieu of hard copies through the United States Postal System, to provide greater service to the applicant and the engineering community. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record.

Thank you,

DEP, Bureau of Air Regulation

12/11/2007

Harvey, Mary

---

**From:** Neil Smith [nsmith@ussugar.com]  
**Sent:** Friday, December 07, 2007 7:48 AM  
**To:** Harvey, Mary  
**Subject:** RE: U.S. SUGAR CORPORATION - FINAL PERMIT #0510003-044-AC- PSD-FL-389

---

**From:** Harvey, Mary [mailto:Mary.Harvey@dep.state.fl.us]  
**Sent:** Thursday, December 06, 2007 2:50 PM  
**To:** Neil Smith; Keith Tingberg; Mr. David Buff, Golder Associates; Satyal, Ajaya; Ms. Kathleen Forney; Mr. Dee Morse, National Park Service  
**Cc:** Koerner, Jeff; Adams, Patty; Gibson, Victoria  
**Subject:** U.S. SUGAR CORPORATION - FINAL PERMIT #0510003-044-AC- PSD-FL-389

Dear Sir/Madam:

Please send a "reply" message verifying receipt of the attached document(s); this may be done by selecting "Reply" on the menu bar of your e-mail software and then selecting "Send". We must receive verification of receipt and your reply will preclude subsequent e-mail transmissions to verify receipt of the document(s).

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Thank you,

DEP, Bureau of Air Regulation

*The Department of Environmental Protection values your feedback as a customer. DEP Secretary Michael W. Sole is committed to continuously assessing and improving the level and quality of services provided to you. Please take a few minutes to comment on the quality of service you received. Simply click on [this link to the DEP Customer Survey](#). Thank you in advance for completing the survey.*

12/10/2007

## Harvey, Mary

---

**From:** Lisa Pickron [lpickron@ussugar.com]  
**To:** Harvey, Mary  
**Sent:** Thursday, December 06, 2007 4:26 PM  
**Subject:** Read: U.S. SUGAR CORPORATION - FINAL PERMIT #0510003-044-AC- PSD-FL-389

Your message

To: lpickron@ussugar.com  
Subject:

was read on 12/6/2007 4:26 PM.

## Harvey, Mary

---

**From:** Satyal, Ajaya  
**To:** Harvey, Mary  
**Sent:** Friday, December 07, 2007 8:02 AM  
**Subject:** Read: U.S. SUGAR CORPORATION - FINAL PERMIT #0510003-044-AC- PSD-FL-389

Your message

**To:** 'Mr. Neil Smith, U.S. Sugar'; 'Mr. Keith Tingberg, U.S. Sugar Corporate Environmental Manager'; 'Mr. David Buff, Golder Associates'; Satyal, Ajaya; 'Ms. Kathleen Forney'; 'Mr. Dee Morse, National Park Service'  
**Cc:** Koerner, Jeff; Adams, Patty; Gibson, Victoria  
**Subject:** U.S. SUGAR CORPORATION - FINAL PERMIT #0510003-044-AC- PSD-FL-389  
**Sent:** 12/6/2007 2:50 PM

was read on 12/7/2007 8:02 AM.

**Harvey, Mary**

---

**From:** Satyal, Ajaya  
**Sent:** Friday, December 07, 2007 8:03 AM  
**To:** Harvey, Mary  
**Subject:** RE: U.S. SUGAR CORPORATION - FINAL PERMIT #0510003-044-AC- PSD-FL-389

Thanks Mary, received the permit documents.

AJ Satyal

---

**From:** Harvey, Mary  
**Sent:** Thursday, December 06, 2007 2:50 PM  
**To:** 'Mr. Neil Smith, U.S. Sugar'; 'Mr. Keith Tingberg, U.S. Sugar Corporate Environmental Manager'; 'Mr. David Buff, Golder Associates'; Satyal, Ajaya; 'Ms. Kathleen Forney'; 'Mr. Dee Morse, National Park Service'  
**Cc:** Koerner, Jeff; Adams, Patty; Gibson, Victoria  
**Subject:** U.S. SUGAR CORPORATION - FINAL PERMIT #0510003-044-AC- PSD-FL-389

Dear Sir/Madam:

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Thank you,

DEP, Bureau of Air Regulation

Replying to: "RE: U.S. SUGAR CORPORATION - FINAL PERMIT #0510003-044-AC- PSD-FL-389"

## Harvey, Mary

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**From:** Dee\_Morse@nps.gov  
**Sent:** Thursday, December 06, 2007 5:04 PM  
**To:** Harvey, Mary  
**Subject:** U.S. SUGAR CORPORATION - FINAL PERMIT #0510003-044-AC- PSD-FL-389

### Return Receipt

Your document: U.S. SUGAR CORPORATION - FINAL PERMIT #0510003-044-AC-PSD-FL-389

was received by: Dee Morse/DENVER/NPS

at: 12/06/2007 03:04:04 PM

## Harvey, Mary

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**From:** Adams, Patty  
**To:** Harvey, Mary  
**Sent:** Thursday, December 06, 2007 4:23 PM  
**Subject:** Read: U.S. SUGAR CORPORATION - FINAL PERMIT #0510003-044-AC- PSD-FL-389

Your message

**To:** 'Mr. Neil Smith, U.S. Sugar'; 'Mr. Keith Tingberg, U.S. Sugar Corporate Environmental Manager'; 'Mr. David Buff, Golder Associates'; Satyal, Ajaya; 'Ms. Kathleen Forney'; 'Mr. Dee Morse, National Park Service'  
**Cc:** Koerner, Jeff; Adams, Patty; Gibson, Victoria  
**Subject:** U.S. SUGAR CORPORATION - FINAL PERMIT #0510003-044-AC- PSD-FL-389  
**Sent:** 12/6/2007 2:50 PM

was read on 12/6/2007 4:23 PM.

**Harvey, Mary**

---

**From:** Keith Tingberg [ktingberg@ussugar.com]  
**Sent:** Thursday, December 06, 2007 3:51 PM  
**To:** Harvey, Mary  
**Subject:** RE: U.S. SUGAR CORPORATION - FINAL PERMIT #0510003-044-AC- PSD-FL-389

Received – 12/6/07

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**From:** Harvey, Mary [mailto:Mary.Harvey@dep.state.fl.us]  
**Sent:** Thursday, December 06, 2007 2:50 PM  
**To:** Neil Smith; Keith Tingberg; Mr. David Buff, Golder Associates; Satyal, Ajaya; Ms. Kathleen Forney; Mr. Dee Morse, National Park Service  
**Cc:** Koerner, Jeff; Adams, Patty; Gibson, Victoria  
**Subject:** U.S. SUGAR CORPORATION - FINAL PERMIT #0510003-044-AC- PSD-FL-389

Dear Sir/Madam:

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Thank you,

DEP, Bureau of Air Regulation

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12/10/2007



Harvey, Mary

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**From:** Buff, Dave [DBuff@GOLDER.com]  
**To:** undisclosed-recipients  
**Sent:** Thursday, December 06, 2007 2:55 PM  
**Subject:** Read: U.S. SUGAR CORPORATION - FINAL PERMIT #0510003-044-AC- PSD-FL-389

Your message

To: DBuff@GOLDER.com  
Subject:

was read on 12/6/2007 2:55 PM.

## Harvey, Mary

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**From:** Keith Tingberg [ktingberg@ussugar.com]  
**To:** Harvey, Mary  
**Sent:** Thursday, December 06, 2007 3:21 PM  
**Subject:** Read: U.S. SUGAR CORPORATION - FINAL PERMIT #0510003-044-AC- PSD-FL-389

Your message

To: ktingberg@ussugar.com  
Subject:

was read on 12/6/2007 3:21 PM.



# Florida Department of Environmental Protection

Bob Martinez Center  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Charlie Crist  
Governor

Jeff Kottkamp  
Lt. Governor

Michael W. Sole  
Secretary

September 12, 2007

*Electronically Sent with Received Receipt Requested*

Mr. Neil Smith, V.P. of Sugar Processing Operations  
U.S. Sugar Corporation  
111 Ponce DeLeon Avenue  
Clewiston, FL 33440

Re: Draft Air Permit No. PSD-FL-389  
Project No. 0510003-044-AC  
Clewiston Sugar Mill and Refinery  
Limited Firing of Wood Chips in Boiler 7

Dear Mr. Smith:

On May 24, 2007, U.S. Sugar Corporation submitted an application for an air construction permit subject to the preconstruction review requirements for the Prevention of Significant Deterioration of Air Quality. The primary purpose of the project is to add wood chips as a startup fuel and restricted alternate fuel to existing Boiler 7. This work will be conducted at the Clewiston Sugar Mill and Refinery, which is located in Hendry County at the intersection of W.C. Owens Avenue and State Road 832 in Clewiston, Florida. Enclosed are the following documents:

- The Written Notice of Intent to Issue Air Permit provides important information regarding: the Bureau of Air Regulation's intent to issue an air permit for the proposed project; the requirements for publishing a Public Notice of the Bureau of Air Regulation's intent to issue an air permit; the procedures for submitting comments on the Draft Permit; the process for filing a petition for an administrative hearing; and the availability of mediation.
- The Public Notice of Intent to Issue Air Permit is the actual notice that you must have published in the legal advertisement section of a newspaper of general circulation in the area affected by this project.
- The Technical Evaluation and Preliminary Determination summarizes the Bureau of Air Regulation's technical review of the application and provides the rationale for making the preliminary determination to issue a draft permit.
- The proposed Draft Permit includes the specific conditions that will regulate the emissions units covered by the proposed project.

If you have any questions, please contact the project engineer, Jeff Koerner, at 850/921-9536.

Sincerely,

Trina Vielhauer, Chief  
Bureau of Air Regulation

Enclosures

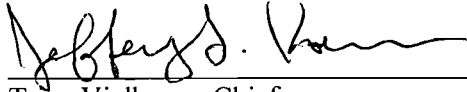
TLV/jfk

**WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT**

Notice of Intent to Issue Air Permit. Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

**Mediation:** Mediation is not available in this proceeding.

Executed in Tallahassee, Florida.



FOR  
//

Trina Vielhauer, Chief  
Bureau of Air Regulation

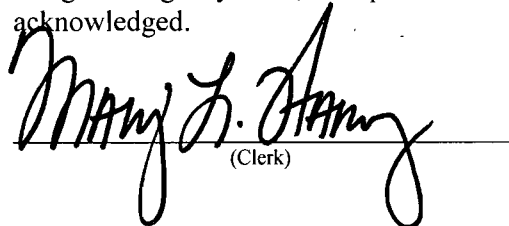
**CERTIFICATE OF SERVICE**

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Intent to Issue Air Permit package (including the Written Notice of Intent to Issue Air Permit, the Public Notice of Intent to Issue Air Permit, the Technical Evaluation and Preliminary Determination, and the Draft Permit) was sent by electronic mail with received receipt requested before the close of business on 9/13/07 to the persons listed below.

- Mr. Neil Smith, U.S. Sugar ([nsmith@ussugar.com](mailto:nsmith@ussugar.com))
- Mr. Peter Briggs, U.S. Sugar ([pbriggs@ussugar.com](mailto:pbriggs@ussugar.com))
- Mr. David Buff, Golder Associates ([dbuff@golder.com](mailto:dbuff@golder.com))
- Mr. Ajaya Satyal, SD Office ([ajaya.satyal@dep.state.fl.us](mailto:ajaya.satyal@dep.state.fl.us))
- Ms. Kathleen Forney ([forney.kathleen@epa.gov](mailto:forney.kathleen@epa.gov))
- Mr. Jim Little, EPA Region 4 ([little.james@epa.gov](mailto:little.james@epa.gov))
- Mr. Dee Morse, National Park Service ([Dee\\_Morse@nps.gov](mailto:Dee_Morse@nps.gov))

Clerk Stamp

**FILING AND ACKNOWLEDGMENT FILED**, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.



(Clerk)

9/13/07  
(Date)

Florida Department of  
Environmental Protection

Memorandum

---

TO: Trina Vielhauer, Bureau of Air Regulation  
FROM: Jeff Koerner, Air Permitting North Section *JK*  
DATE: September 12, 2007  
SUBJECT: Air Permit No. PSD-FL-389  
Project No. 0510003-044-AC  
U.S. Sugar Corporation, Clewiston Sugar Mill and Refinery  
Limited Firing of Wood Chips in Boiler 7

Attached for your review are the following items:

- Written Notice of Intent to Issue Air Permit;
- Public Notice of Intent to Issue Air Permit;
- Technical Evaluation and Preliminary Determination;
- Draft Permit; and
- P.E. Certification.

The Draft Permit authorizes the firing of limited amounts of wood chips in existing Boiler 7 at the Clewiston Sugar Mill and Refinery. The project is subject to PSD preconstruction review for nitrogen oxides. The Technical Evaluation and Preliminary Determination provides a detailed description of the project and the rationale for issuance. I recommend your approval of the attached Draft Permit.

Attachments

TV/jfk

**BEST AVAILABLE COPY**  
**P.E. CERTIFICATION STATEMENT**

**APPLICANT**

U.S. Sugar Corporation  
111 Ponce DeLeon Avenue  
Clewiston, FL 33440

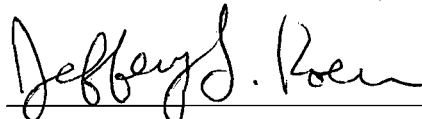
Air Permit No. PSD-FL-389  
Project No. 0510003-044-AC  
Clewiston Sugar Mill and Refinery  
Limited Firing of Wood Chips in Boiler 7  
Hendry County, Florida

**PROJECT DESCRIPTION**

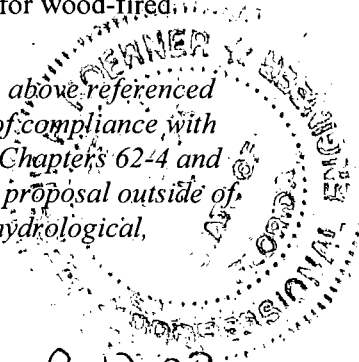
Boiler 7 (EU-014) has a peak steam production of 385,000 lb/hour with a maximum continuous steam production rate of approximately 350,000 lb/hour. Boiler 7 currently fires bagasse as the primary fuel with distillate oil fired as a startup and restricted alternate fuel. Bagasse is the preferred fuel because it is a byproduct of the milling process and the lowest cost boiler fuel. The applicant proposes to add wood chips as a startup fuel and restricted alternate fuel. The applicant would restrict wood firing to no more than 1,616,220 MMBtu/year, which is equivalent to an annual capacity factor of 25%. The purpose of the project is to displace distillate oil with wood chips, which is a renewable and carbon dioxide neutral fuel.

Based on projected actual emissions increases, the project is subject to the PSD preconstruction review requirements of Rule 62-212.400, F.A.C. for NO<sub>x</sub> emissions. The Department's preliminary NO<sub>x</sub> BACT determination for firing wood is 0.31 lb/MMBtu as determined by EPA Method 7E stack test. The determination is based on the following combinations of controls: low nitrogen fuels, combustion air staging (over-fire air), less excess air, reduce air preheat, low-NOX burners for oil and good combustion practices. The unit also becomes subject to the applicable provisions in NSPS Subpart Db of 40 CFR 60 for wood-fired boilers.

*I HEREBY CERTIFY that the air pollution control engineering features described in the above referenced application and subject to the proposed permit conditions provide reasonable assurance of compliance with applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-4 and 62-204 through 62-297. However, I have not evaluated and I do not certify aspects of the proposal outside of my area of expertise (including, but not limited to, the electrical, mechanical, structural, hydrological, geological, and meteorological features).*



Jeffery F. Koerner, P.E.  
Registration No. 49441

  
9-12-07

(Date)

## WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT

---

*In the Matter of an  
Application for Air Permit by:*

U.S. Sugar Corporation  
111 Ponce DeLeon Avenue  
Clewiston, FL 33440

Draft Air Permit No. PSD-FL-389  
Project No. 0510003-044-AC  
Clewiston Sugar Mill and Refinery  
Limited Firing of Wood Chips in Boiler 7

*Authorized Representative:*

Mr. Neil Smith, V.P. of Sugar Processing Operations  
Clewiston Sugar Mill and Refinery

Hendry County, Florida

**Facility Location:** The U.S. Sugar Corporation operates an existing sugar mill and refinery, which is located in Hendry County at the intersection of W.C. Owens Avenue and State Road 832 in Clewiston, Florida.

**Project:** The applicant proposes to add wood chips as a startup fuel and restricted alternate fuel to existing Boiler 7. The project is subject to preconstruction review for the Prevention of Significant Deterioration (PSD) of Air Quality for nitrogen oxides in accordance with Rule 62-212.400, F.A.C. Details of the project are provided in the application and the enclosed Technical Evaluation and Preliminary Determination.

**Permitting Authority:** Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210, and 62-212 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and an air permit is required to perform the proposed work. The Florida Department of Environmental Protection's Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination for this project. The Bureau of Air Regulation's physical address is 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301 and the mailing address is 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Bureau of Air Regulation's phone number is 850/488-0114.

**Project File:** A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at address indicated above for the Permitting Authority. The complete project file includes the Draft Permit, the Technical Evaluation and Preliminary Determination, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Permitting Authority's project review engineer for additional information at the address and phone number listed above.

**Notice of Intent to Issue Air Permit:** The Permitting Authority gives notice of its intent to issue an air permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of the proposed equipment will not adversely impact air quality and that the project will comply with all applicable provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C. The Permitting Authority will issue a Final Permit in accordance with the conditions of the proposed Draft Permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

**Public Notice:** Pursuant to Section 403.815, F.S. and Rules 62-110.106 and 62-210.350, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Public Notice of Intent to Issue Air Permit (Public Notice). The Public Notice shall be published one time only as soon as possible in the legal advertisement section of a newspaper of general circulation in the area affected by this project. The newspaper used must meet the requirements of Sections 50.011 and 50.031, F.S. in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the Permitting Authority at the address or phone number listed above. Pursuant to Rule 62-110.106(5) and (9), F.A.C., the applicant shall provide proof of publication to the Permitting Authority at the above address within 7 days of publication.

## WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT

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Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rule 62-110.106(11), F.A.C.

**Comments:** The Permitting Authority will accept written comments concerning the Draft Permit for a period of 30 days from the date of publication of the Public Notice. Written comments must be post-marked by the close of business (5:00 p.m.), on or before the end of this 30-day period by the Permitting Authority at the above address. As part of his or her comments, any person may also request that the Permitting Authority hold a public meeting on this permitting action. If the Permitting Authority determines there is sufficient interest for a public meeting, it will publish notice of the time, date, and location in the Florida Administrative Weekly and in a newspaper of general circulation in the area affected by the permitting action. For additional information, contact the Permitting Authority at the above address or phone number. If written comments or comments received at a public meeting result in a significant change to the Draft Permit, the Permitting Authority will issue a revised Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

**Petitions:** A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000 (Telephone: 850/245-2241; Fax: 850/245-2303). Petitions filed by the applicant or any of the parties listed below must be filed within 14 days of receipt of this Written Notice of Intent to Issue Air Permit. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of publication of the attached Public Notice or within fourteen 14 days of receipt of this Written Notice of Intent to Issue Air Permit, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within 14 days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner; the name, address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of when and how each petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action including an explanation of how the alleged facts relate to the specific rules or statutes; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this Written



## PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT

Florida Department of Environmental Protection  
Division of Air Resource Management, Bureau of Air Regulation

Project No. 0510003-044-AC / Draft Air Permit No. PSD-FL-389  
U.S. Sugar Corporation, Clewiston Sugar Mill and Refinery  
Hendry County, Florida

**Applicant:** The applicant for this project is the U.S. Sugar Corporation. The applicant's authorized representative and mailing address is: Mr. Neil Smith, V.P. of Sugar Processing Operations, Clewiston Sugar Mill and Refinery, U.S. Sugar Corporation, 111 Ponce DeLeon Avenue, Clewiston, FL 33440.

**Facility Location:** The U.S. Sugar Corporation operates an existing sugar mill and refinery, which is located in Hendry County at the intersection of W.C. Owens Avenue and State Road 832 in Clewiston, Florida.

**Project:** The applicant proposes to add wood chips as a startup fuel and restricted alternate fuel for existing Boiler 7. This unit is currently authorized to fire bagasse from the sugarcane milling process as the primary fuel and distillate oil as a startup and restricted alternate fuel. Wood chip firing will be restricted to an annual capacity factor of 25% or less. The purpose of the project is to displace distillate oil with wood chips, which is a renewable fuel and carbon dioxide neutral fuel.

Based on the air permit application, the project will result in emissions increases of: 98 tons/year of carbon monoxide; 122 tons/year of nitrogen oxides (NO<sub>x</sub>); 8 tons/year of particulate matter; 8 tons/year of particulate matter ≤ 10 microns; 1 ton/year of sulfuric acid mist; 5 tons/year of sulfur dioxide; and 9 tons/year of volatile organic compounds. As defined in Rule 62-210.200 of the Florida Administrative Code (F.A.C.), emissions of nitrogen oxides exceed the regulatory significant emissions rate of 40 tons per year. Therefore, the project is subject to preconstruction review for the Prevention of Significant Deterioration (PSD) of Air Quality for these pollutants in accordance with Rule 62-212.400, F.A.C. The unit also becomes subject to the applicable provisions of Subpart Db in 40 CFR 60 for wood fired boilers.

For each PSD-significant pollutant, the Department is required to determine the Best Available Control Technology (BACT) and approve the applicant's Air Quality Analysis regarding ambient impacts due to the project. To minimize emissions, the preliminary BACT determination for nitrogen oxides relies on low nitrogen fuels, combustion air staging with over-fire air, less excess air, reduce air preheat, low-NO<sub>x</sub> burners for oil and good combustion practices. The Department reviewed an air quality impact analysis prepared by the applicant. The analysis shows that maximum predicted NO<sub>x</sub> impacts from the proposed project are less than the applicable PSD Class I and Class II significant impact levels. Therefore, no further modeling was required. The results provide reasonable assurance that the project will comply with all applicable air quality regulations and will not cause or contribute to a violation of the state and federal ambient air quality and PSD increments.

**Permitting Authority:** Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210, and 62-212, F.A.C. The proposed project is not exempt from air permitting requirements and an air permit is required to perform the proposed work. The Florida Department of Environmental Protection's Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination for this project. The Bureau of Air Regulation's physical address is 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301 and the mailing address is 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Bureau of Air Regulation's phone number is 850/488-0114.

**Project File:** A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at address indicated above for the Permitting Authority. The complete project file includes the Draft Permit, the Technical Evaluation and Preliminary Determination, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Permitting Authority's project review engineer for additional information at the address and phone number listed above. In addition, electronic copies of these documents are available on the following web site: <http://www.dep.state.fl.us/air/eproducts/apds/default.asp>.

(Public Notice to be Published in the Newspaper)

## PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT

**Notice of Intent to Issue Air Permit:** The Permitting Authority gives notice of its intent to issue an air permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of the proposed equipment will not adversely impact air quality and that the project will comply with all applicable provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C. The Permitting Authority will issue a Final Permit in accordance with the conditions of the proposed Draft Permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

**Comments:** The Permitting Authority will accept written comments concerning the Draft Permit for a period of 30 days from the date of publication of the Public Notice. Written comments must be post-marked by the close of business (5:00 p.m.), on or before the end of this 30-day period by the Permitting Authority at the above address. As part of his or her comments, any person may also request that the Permitting Authority hold a public meeting on this permitting action. If the Permitting Authority determines there is sufficient interest for a public meeting, it will publish notice of the time, date, and location in the Florida Administrative Weekly and in a newspaper of general circulation in the area affected by the permitting action. For additional information, contact the Permitting Authority at the above address or phone number. If written comments or comments received at a public meeting result in a significant change to the Draft Permit, the Permitting Authority will issue a revised Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

**Petitions:** A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000 (Telephone: 850/245-2241; Fax: 850/245-2303). Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of publication of this Public Notice or receipt of a written notice, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within 14 days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner; the name, address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of when and how each petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action including an explanation of how the alleged facts relate to the specific rules or statutes; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this Public

**(Public Notice to be Published in the Newspaper)**

**PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT**

Notice of Intent to Issue Air Permit. Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

**Mediation:** Mediation is not available in this proceeding.

# DRAFT PERMIT

## PERMITTEE

U.S. Sugar Corporation  
111 Ponce DeLeon Avenue  
Clewiston, FL 33440

### *Authorized Representative:*

Mr. Neil Smith, V.P. of Sugar Processing Operations  
Clewiston Sugar Mill and Refinery

Air Permit No. PSD-FL-389  
Project No. 0510003-044-AC  
Expires: (Draft)

Clewiston Sugar Mill and Refinery  
Facility ID No. 0510003  
Limited Firing of Wood Chips in Boiler 7

## FACILITY AND LOCATION

This permit authorizes the firing of limited amounts of wood chips in Boiler 7 at the existing Clewiston sugar mill and sugar 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.

## 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.) and Title 40, Parts 60 and 63 of the Code of Federal Regulations (CFR). Specifically, the project is subject to preconstruction review for the Prevention of Significant Deterioration (PSD) of Air Quality in accordance with Rule 62-212.400, F.A.C. The permittee is authorized to install the proposed equipment 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 (Department).

## CONTENTS

- Section 1. General Information
- Section 2. Administrative Requirements
- Section 3. Emissions Units Specific Conditions
- Section 4. Appendices

(DRAFT)

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Joseph Kahn, Director  
Division of Air Resource Management

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Effective Date

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## SECTION 1. GENERAL INFORMATION (DRAFT PERMIT)

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### FACILITY AND PROJECT DESCRIPTION

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.

This project authorizes the firing of limited amounts of wood chips in existing Boiler 7 (EU-014). Primarily, wood chips will be fired during the off season (May through September) to support the refinery operations and as an initial startup fuel to begin the crop season when bagasse may not be readily available. In general, wood chips will displace distillate oil as the fuel fired during these limited periods.

### REGULATORY CLASSIFICATION

- The facility is a major source of hazardous air pollutants (HAP).
- The facility has no units subject to the acid rain provisions of the Clean Air Act.
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400 (PSD), F.A.C.

### RELEVANT DOCUMENTS

The following relevant documents are not a part of this permit, but helped form the basis for this permitting action: the permit application and additional information received to make it complete; the Draft Permit; the Department's Technical Evaluation and Preliminary Determination; the Written Notice of Intent to Issue Air Permit; the Public Notice of Intent to Issue Air Permit; the publication in a newspaper of general circulation; comments received on the Draft Permit package; and the Department's Final Determination.

## SECTION 2. ADMINISTRATIVE REQUIREMENTS (DRAFT PERMIT)

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1. Permitting Authority: The Permitting Authority for this project is the Bureau of Air Regulation in the Division of Air Resource Management of the Department. The mailing address for the Bureau of Air Regulation is 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. Copies of each application shall be submitted to the Compliance Authority.
2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Air Resource Section of the Department's South District Office at P.O. Box 2549, Fort Myers, Florida, 33902-2549.
3. Appendices: The following Appendices are attached in Section 4 as part of this permit: Appendix A (Citation Formats and Glossary of Common Terms), Appendix B (General Conditions), Appendix C (Common Conditions), Appendix D (Common Testing Requirements), Appendix E (Summary of Best Available Control Technology Determinations), and Appendix F (Alternative Opacity Monitoring Procedure).
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.
5. New or Additional Conditions: 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.]
6. Modifications: No emissions unit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
7. Source Obligation:
  - (a) Authorization to construct shall expire if construction is not commenced within 18 months after receipt of the permit, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. This provision does not apply to the time period between construction of the approved phases of a phased construction project except that each phase must commence construction within 18 months of the commencement date established by the Department in the permit.
  - (b) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.
  - (c) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by exceeding its projected actual emissions, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

[Rule 62-212.400(12), F.A.C.]

## SECTION 2. ADMINISTRATIVE REQUIREMENTS (DRAFT PERMIT)

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8. Title V Permit: This permit authorizes specific modifications and/or new construction on the affected emissions units as well as initial operation to determine compliance with conditions of this permit. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after completing the required work and commencing operation. 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 appropriate Permitting Authority with copies to each Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

## SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

### A. Boiler 7 (EU-014)

This section of the permit addresses the following emissions unit.

#### Emissions Unit No. 014

Boiler 7 is a spreader-stoker, vibrating-grate boiler with a maximum 1-hour steam production rate of 385,000 pounds per hour at 750° F and 600 psig. The maximum heat input rate is 812 MMBtu/hour (1-hour average) and 738 MMBtu/hour (24-hour average). The primary fuel is bagasse with distillate oil fired as a startup fuel and restricted alternate fuel. Limited amounts of wood chips may also be fired as a startup fuel and restricted alternate fuel. Particulate matter emissions are controlled by a wet sand separator followed by an electrostatic precipitator. Exhaust gases exit a 225 feet tall stack at 335° F with an average flow rate of 355,000 acfm.

*{Permitting Note: For this project, Boiler 7 is subject to Best Available Control Technology (BACT) determinations for nitrogen oxides (NO<sub>x</sub>) in accordance with Rule 62-212.400(PSD), F.A.C. The final BACT determinations are presented in Appendix F of this permit.}*

#### PERFORMANCE RESTRICTIONS

1. **Authorized Fuel:** The permittee is authorized to fire wood chips in Boiler 7 as a startup and restricted alternate fuel. Wood chips shall consist of clean dry wood and vegetative materials. The wood chips shall be substantially free of plastics, rubber, glass, painted wood, chemically treated wood, and non-combustible materials. The firing of any household garbage, hazardous wastes, or toxic materials is prohibited. [Applicant Request; Rules 62-4.070(3) and 62-212.400(PSD), F.A.C.]
2. **Capacity:** Wood chips shall be fired at a heat input rate of no more than 369 MMBtu per hour based on a 24-hour average. The heat input rate from firing wood chips shall not exceed 1,616,220 MMBtu during any consecutive 12 months. Bagasse remains the primary fuel. [Applicant Request; Rules 62-210.200(PTE) and 62-212.400(PSD), F.A.C.]

#### EMISSIONS STANDARDS

3. **Emissions Standards:** The following emissions standards apply to Boiler 7 when firing wood chips alone or in combination with other authorized fuels.
  - a. **Nitrogen Oxides:** As determined by EPA Method 7E, nitrogen oxide emissions shall not exceed 0.31 lb/MMBtu of heat input and 228.8 lb/hour. [Rule 62-212.400(BACT), F.A.C. and PSD-FL-389]
  - b. **Particulate Matter:** As determined by EPA Method 5, particulate matter emissions shall not exceed 0.03 lb/MMBtu of heat input and 22 lb/hour. The standard applies at all times, except during periods of startup, shutdown or malfunction. [40 CFR 60.43b(g) and (h)(1)]
  - c. **Visible Emissions:** As determined by EPA Method 9, visible emissions shall not exceed 20% opacity (6-minute average), except for one 6-minute period per hour of not more than 27% opacity. In lieu of a continuous opacity monitoring system, this permit establishes an alternate monitoring procedure in Condition 8 of this subsection. The standard applies at all times, except during periods of startup, shutdown or malfunction. [40 CFR 60.43b(f) and (g)]
  - d. **Dust:** To minimize fugitive particulate matter, biomass conveyors shall be completely covered or enclosed except for the transfer points to/from the bagasse stockpile and the point associated with conveying bagasse from conveyor C9A to C9B in the drying mill. [Rules 62-4.070(3) and 62-296.310(4)(c), F.A.C.]

#### TESTING REQUIREMENTS

4. **Initial Compliance Tests:** When firing wood chips, Boiler 7 shall be tested to demonstrate initial



### SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

#### A. Boiler 7 (EU-014)

compliance with the emissions standards for nitrogen oxides, particulate matter and visible emissions. All initial tests shall be conducted when firing wood chips at a heat input rate of at least 332 MMBtu per hour. The initial tests shall be conducted within 30 operational days on wood chips after first fire on wood chips, but not later than August 30, 2007. The initial compliance tests for particulate matter and opacity while firing wood shall be conducted in accordance with the provisions of 40 CFR 60.46b(d). The initial test requirements for firing wood are in addition to any pre-existing test requirements for firing bagasse. [40 CFR 60.46b(d); and Rules 62-4.070(3), 62-297.310(7)(a)1, and 62-212.400(BACT), F.A.C.]

5. **Annual Compliance Tests:** During each federal fiscal year (October 1<sup>st</sup> to September 30<sup>th</sup>), Boiler 7 shall be tested to demonstrate compliance with the emissions standards for nitrogen oxides, particulate matter and visible emissions. Since bagasse is the worst-case fuel with regard to particulate matter, annual tests for particulate matter and visible emissions when firing bagasse may also be used to demonstrate compliance with the standards for firing wood chips. [Rules 62-4.070(3), 62-297.310(7)(a)1, and 62-212.400(BACT), F.A.C.]
6. **Test Requirements:** The permittee shall notify the Compliance Authority in writing at least 15 days prior to any required tests. Tests shall be conducted in accordance with the applicable requirements specified in Appendix D (Common Testing Requirements) of this permit. [Rule 62-297.310(7)(a)9, F.A.C.]
7. **Test Methods:** Required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
5 or 5B	Method for Determining Particulate Matter Emissions
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
17	Alternate Method for Determining Particulate Matter Emissions

The above methods are described in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Rules 62-204.800 and 62-297.100, F.A.C.; 40 CFR 60, Appendix A]

#### MONITORING, RECORDS AND REPORTS

8. **Fuel Monitoring:** The permittee shall maintain the following records for wood chips.
  - a. Representative samples of wood chips shall be taken each calendar quarter and analyzed for the heating value (modified ASTM D3286 in Btu/lb as fired) and moisture content (ASTM D3173 in percent by weight). Analytical results shall be determined and available for review within 30 days of the end of each calendar quarter. Such analysis is not required if no wood chips are stored on site during the calendar quarter.
  - b. For each 24-hour block of operation (midnight to midnight), the permittee shall maintain records of the amount of wood chips fired to demonstrate compliance with the heat input restrictions of this permit.
  - c. For each 24-hour block of operation (midnight to midnight), the permittee shall calculate and record the heat input rate from wood chips.

All records shall be maintained on site and made available upon request. [Rules 62-4.070(3) and 62-212.400(PSD), F.A.C.]

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### SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

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#### A. Boiler 7 (EU-014)

9. Alternate Opacity Monitoring Procedure: The permittee shall comply with the alternate opacity monitoring procedure specified in Appendix F in lieu of installing a continuous opacity monitoring system. [40 CFR 60.13(i), 40 CFR 60.43b(f) and 40 CFR 60.48b(a); and Rules 62-4.070(3) and 62-212.400(PSD), F.A.C.]
10. Monthly Operations Summary: Within 7 calendar days following each month, the permittee shall calculate and record the amount of wood chips fired (tons) and the corresponding heat input rate (MMBtu) from firing wood chips for the previous month and the previous consecutive 12 months. Records shall be maintained on site and made available upon request. [Rule 62-4.070(3), F.A.C.]
11. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix D of this permit. For each test run, the report shall also indicate the total heat input rate, the heat input rate from firing wood chips, the steam production rate, and the secondary power input to the electrostatic precipitator. [Rule 62-297.310(8), F.A.C.]

**SECTION 4. APPENDICES**

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**CONTENTS**

- Appendix A. Citation Formats and Glossary of Common Terms
- Appendix B. General Conditions
- Appendix C. Common Conditions
- Appendix D. Common Testing Requirements
- Appendix E. Summary of Best Available Control Technology Determinations
- Appendix F. Alternative Opacity Monitoring Procedure

**SECTION 4. APPENDIX A**  
**CITATION FORMATS AND GLOSSARY OF COMMON TERMS**

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**CITATION FORMATS**

The following illustrate the formats used in the permit to identify applicable requirements from permits and regulations.

**Old Permit Numbers**

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

Where: “AC” identifies the permit as an Air Construction Permit  
“AO” identifies the permit as an Air Operation Permit  
“123456” identifies the specific permit project number

**New Permit Numbers**

Example: Permit Nos. 099-2222-001-AC, 099-2222-001-AF, 099-2222-001-AO, or 099-2222-001-AV

Where: “099” represents the specific county ID number in which the project is located  
“2222” represents the specific facility ID number for that county  
“001” identifies the specific permit project number  
“AC” identifies the permit as an air construction permit  
“AF” identifies the permit as a minor source federally enforceable state operation permit  
“AO” identifies the permit as a minor source air operation permit  
“AV” identifies the permit as a major Title V air operation permit

**PSD Permit Numbers**

Example: Permit No. PSD-FL-317

Where: “PSD” means issued pursuant to the preconstruction review requirements of the Prevention of Significant Deterioration of Air Quality  
“FL” means that the permit was issued by the State of Florida  
“317” identifies the specific permit project number

**Florida Administrative Code (F.A.C.)**

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

Means: Title 62, Chapter 213, Rule 205 of the Florida Administrative Code

**Code of Federal Regulations (CFR)**

Example: [40 CFR 60.7]

Means: Title 40, Part 60, Section 7

**SECTION 4. APPENDIX A**  
**CITATION FORMATS AND GLOSSARY OF COMMON TERMS**

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**GLOSSARY OF COMMON TERMS**

° F: degrees Fahrenheit

**acfm**: actual cubic feet per minute

**ARMS**: Air Resource Management System  
(Department's database)

**BACT**: best available control technology

**Btu**: British thermal units

**CAM**: compliance assurance monitoring

**CEMS**: continuous emissions monitoring system

**cfm**: cubic feet per minute

**CFR**: Code of Federal Regulations

**CO**: carbon monoxide

**COMS**: continuous opacity monitoring system

**DEP**: Department of Environmental Protection

**Department**: Department of Environmental Protection

**dscfm**: dry standard cubic feet per minute

**EPA**: Environmental Protection Agency

**ESP**: electrostatic precipitator (control system for reducing particulate matter)

**EU**: emissions unit

**F.A.C.**: Florida Administrative Code

**F.D.**: forced draft

**F.S.**: Florida Statutes

**FGR**: flue gas recirculation

**Fl**: fluoride

**ft<sup>2</sup>**: square feet

**ft<sup>3</sup>**: cubic feet

**gpm**: gallons per minute

**gr**: grains

**HAP**: hazardous air pollutant

**Hg**: mercury

**I.D.**: induced draft

**ID**: identification

**kPa**: kilopascals

**lb**: pound

**MACT**: maximum achievable technology

**MMBtu**: million British thermal units

**MSDS**: material safety data sheets

**MW**: megawatt

**NESHAP**: National Emissions Standards for Hazardous Air Pollutants

**NO<sub>x</sub>**: nitrogen oxides

**NSPS**: New Source Performance Standards

**O&M**: operation and maintenance

**O<sub>2</sub>**: oxygen

**Pb**: lead

**PM**: particulate matter

**PM<sub>10</sub>**: particulate matter with a mean aerodynamic diameter of 10 microns or less

**PSD**: prevention of significant deterioration

**psi**: pounds per square inch

**PTE**: potential to emit

**RACT**: reasonably available control technology

**RATA**: relative accuracy test audit

**SAM**: sulfuric acid mist

**scf**: standard cubic feet

**scfm**: standard cubic feet per minute

**SIC**: standard industrial classification code

**SNCR**: selective non-catalytic reduction (control system used for reducing emissions of nitrogen oxides)

**SO<sub>2</sub>**: sulfur dioxide

**TPH**: tons per hour

**TPY**: tons per year

**UTM**: Universal Transverse Mercator coordinate system

**VE**: visible emissions

**VOC**: volatile organic compounds

**SECTION 4. APPENDIX B**  
**GENERAL CONDITIONS**

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The permittee shall comply with the following general conditions from Rule 62-4.160, F.A.C.

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, F.S. 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.
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, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in Subsections 403.087(6) and 403.722(5), F.S., 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.
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.
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 F.S. and Department rules, unless specifically authorized by an order from the Department.
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.
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.

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.

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.

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 F.S. or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, F.S.. Such evidence

**SECTION 4. APPENDIX B**  
**GENERAL CONDITIONS**

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shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and F.S. after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by F.S. or Department rules.
11. This permit is transferable only upon Department approval in accordance with 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.
12. This permit or a copy thereof shall be kept at the work site of the permitted activity.
13. This permit also constitutes:
  - a. Determination of Best Available Control Technology (NO<sub>x</sub>);
  - b. Determination of Prevention of Significant Deterioration (NO<sub>x</sub>); and
  - c. Compliance with New Source Performance Standards (Subpart Db in 40 CFR 60).
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.
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 4. APPENDIX C**  
**COMMON CONDITIONS**

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Unless otherwise specified in the permit, the following conditions apply to all emissions units and activities at the facility.

**EMISSIONS AND CONTROLS**

1. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the permittee shall notify each Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; steps being taken to correct the problem and prevent future 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 the conditions of this permit or the regulations. [Rule 62-4.130, F.A.C.]
2. Circumvention: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]
3. Excess Emissions Allowed: Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. Rule 62-210.700, F.A.C., cannot vary any NSPS or NESHAP provision. [Rule 62-210.700(1), F.A.C.]
4. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]
5. Excess Emissions - Notification: In case of excess emissions resulting from malfunctions, the permittee 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.]
6. VOC or OS Emissions: No person shall store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds (VOC) or organic solvents (OS) without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. [Rule 62-296.320(1), F.A.C.]
7. Objectionable Odor Prohibited: No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means 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(Definitions), F.A.C.]
8. General Visible Emissions: No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20% opacity. This regulation does not impose a specific testing requirement. [Rule 62-296.320(4)(b)1, F.A.C.]
9. 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.]

**RECORDS AND REPORTS**

10. Records Retention: All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least 5 years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. [Rule 62-213.440(1)(b)2, F.A.C.]
11. Annual Operating Report: The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year. [Rule 62-210.370(3), F.A.C.]



**SECTION 4. APPENDIX D**  
**COMMON TESTING REQUIREMENTS**

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Unless otherwise specified in the permit, the following testing requirements apply to all emissions units at the facility.

**COMPLIANCE TESTING REQUIREMENTS**

1. **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 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.]
2. **Operating Rate During Testing:** Testing of emissions shall be conducted with the emissions unit operating at permitted capacity. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the maximum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test 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. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. [Rule 62-297.310(2), F.A.C.]
3. **Calculation of Emission Rate:** For each emissions performance test, 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.]
4. **Applicable Test Procedures**
  - a. **Required Sampling Time.**
    - (1) Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes.
    - (2) **Opacity Compliance Tests.** When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:
      - (a) For batch, cyclical processes, or other operations which are normally completed within less than the minimum observation period and do not recur within that time, the period of observation shall be equal to the duration of the batch cycle or operation completion time.
      - (b) The observation period for special opacity tests that are conducted to provide data to establish a surrogate standard pursuant to Rule 62-297.310(5)(k), F.A.C., Waiver of Compliance Test Requirements, shall be established as necessary to properly establish the relationship between a proposed surrogate standard and an existing mass emission limiting standard.
      - (c) The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.
  - b. **Minimum Sample Volume.** Unless otherwise specified in the applicable rule or test method, the minimum sample volume per run shall be 25 dry standard cubic feet.

**SECTION 4. APPENDIX D**  
**COMMON TESTING REQUIREMENTS**

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- c. *Calibration of Sampling Equipment.* Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1, F.A.C.
- d. *Allowed Modification to EPA Method 5.* When EPA Method 5 is required, the following modification is allowed: the heated filter may be separated from the impingers by a flexible tube.

[Rule 62-297.310(4), F.A.C.]

5. Determination of Process Variables

- 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.

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

6. Sampling Facilities: The permittee shall install permanent stack sampling ports and provide sampling facilities that meet the requirements of Rule 62-297.310(6), F.A.C. Sampling facilities include sampling ports, work platforms, access to work platforms, electrical power, and sampling equipment support. All stack sampling facilities must also comply with all applicable Occupational Safety and Health Administration (OSHA) Safety and Health Standards described in 29 CFR Part 1910, Subparts D and E.

- a. *Permanent Test Facilities.* The owner or operator of an emissions unit for which a compliance test, other than a visible emissions test, is required on at least an annual basis, shall install and maintain permanent stack sampling facilities.
- b. *Temporary Test Facilities.* The owner or operator of an emissions unit that is not required to conduct a compliance test on at least an annual basis may use permanent or temporary stack sampling facilities. If the owner chooses to use temporary sampling facilities on an emissions unit, and the Department elects to test the unit, such temporary facilities shall be installed on the emissions unit within 5 days of a request by the Department and remain on the emissions unit until the test is completed.
- c. *Sampling Ports.*
  - (1) All sampling ports shall have a minimum inside diameter of 3 inches.
  - (2) The ports shall be capable of being sealed when not in use.
  - (3) The sampling ports shall be located in the stack at least 2 stack diameters or equivalent diameters downstream and at least 0.5 stack diameter or equivalent diameter upstream from any fan, bend, constriction or other flow disturbance.
  - (4) For emissions units for which a complete application to construct has been filed prior to December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 15 feet or less. For stacks with a larger diameter, four sampling ports, each 90 degrees apart, shall be installed. For emissions units for which a complete application to construct is filed on or after December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 10 feet or less. For stacks with larger diameters, four sampling ports, each 90 degrees apart, shall be installed. On horizontal circular ducts, the ports shall be located so that the probe can enter the stack vertically, horizontally or at a 45 degree angle.
  - (5) On rectangular ducts, the cross sectional area shall be divided into the number of equal areas in accordance with EPA Method 1. Sampling ports shall be provided which allow access to each sampling point. The ports shall be located so that the probe can be inserted perpendicular to the gas flow.

**SECTION 4. APPENDIX D**  
**COMMON TESTING REQUIREMENTS**

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d. *Work Platforms.*

- (1) Minimum size of the working platform shall be 24 square feet in area. Platforms shall be at least 3 feet wide.
- (2) On circular stacks with 2 sampling ports, the platform shall extend at least 110 degrees around the stack.
- (3) On circular stacks with more than two sampling ports, the work platform shall extend 360 degrees around the stack.
- (4) All platforms shall be equipped with an adequate safety rail (ropes are not acceptable), toe board, and hinged floor-opening cover if ladder access is used to reach the platform. The safety rail directly in line with the sampling ports shall be removable so that no obstruction exists in an area 14 inches below each sample port and 6 inches on either side of the sampling port.

e. *Access to Work Platform.*

- (1) Ladders to the work platform exceeding 15 feet in length shall have safety cages or fall arresters with a minimum of 3 compatible safety belts available for use by sampling personnel.
- (2) Walkways over free-fall areas shall be equipped with safety rails and toe boards.

f. *Electrical Power.*

- (1) A minimum of two 120-volt AC, 20-amp outlets shall be provided at the sampling platform within 20 feet of each sampling port.
- (2) If extension cords are used to provide the electrical power, they shall be kept on the plant's property and be available immediately upon request by sampling personnel.

g. *Sampling Equipment Support.*

- (1) A three-quarter inch eyebolt and an angle bracket shall be attached directly above each port on vertical stacks and above each row of sampling ports on the sides of horizontal ducts.
  - (a) The bracket shall be a standard 3 inch × 3 inch × one-quarter inch equal-legs bracket which is 1 and one-half inches wide. A hole that is one-half inch in diameter shall be drilled through the exact center of the horizontal portion of the bracket. The horizontal portion of the bracket shall be located 14 inches above the centerline of the sampling port.
  - (b) A three-eighth inch bolt which protrudes 2 inches from the stack may be substituted for the required bracket. The bolt shall be located 15 and one-half inches above the centerline of the sampling port.
  - (c) The three-quarter inch eyebolt shall be capable of supporting a 500 pound working load. For stacks that are less than 12 feet in diameter, the eyebolt shall be located 48 inches above the horizontal portion of the angle bracket. For stacks that are greater than or equal to 12 feet in diameter, the eyebolt shall be located 60 inches above the horizontal portion of the angle bracket. If the eyebolt is more than 120 inches above the platform, a length of chain shall be attached to it to bring the free end of the chain to within safe reach from the platform.
- (2) A complete monorail or dual rail arrangement may be substituted for the eyebolt and bracket.
- (3) When the sample ports are located in the top of a horizontal duct, a frame shall be provided above the port to allow the sample probe to be secured during the test.

[Rule 62-297.310(6), F.A.C.]

7. Frequency of Compliance Tests: The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

a. *General Compliance Testing.*

1. The owner or operator of a new or modified emissions unit that is subject to an emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining an operation permit for such emissions unit.

**SECTION 4. APPENDIX D**  
**COMMON TESTING REQUIREMENTS**

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2. For excess emission limitations for particulate matter specified in Rule 62-210.700, F.A.C., a compliance test shall be conducted annually while the emissions unit is operating under soot blowing conditions in each federal fiscal year during which soot blowing is part of normal emissions unit operation, except that such test shall not be required in any federal fiscal year in which a fossil fuel steam generator does not burn liquid and/or solid fuel for more than 400 hours other than during startup.
  3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to sub-subparagraph 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:
    - (a) Did not operate; or
    - (b) In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours,
  4. During each federal fiscal year (October 1 – September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:
    - (a) Visible emissions, if there is an applicable standard;
    - (b) Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and
    - (c) c. Each NESHAP pollutant, if there is an applicable emission standard.
  5. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid and/or solid fuel, other than during startup, for a total of more than 400 hours.
  6. For fossil fuel steam generators on a semi-annual particulate matter emission compliance testing schedule, a compliance test shall not be required for any six-month period in which liquid and/or solid fuel is not burned for more than 200 hours other than during startup.
  7. For emissions units electing to conduct particulate matter emission compliance testing quarterly pursuant to paragraph 62-296.405(2)(a), F.A.C., a compliance test shall not be required for any quarter in which liquid and/or solid fuel is not burned for more than 100 hours other than during startup.
  8. Any combustion turbine that does not operate for more than 400 hours per year shall conduct a visible emissions compliance test once per each five-year period, coinciding with the term of its air operation permit.
  9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of 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.
  10. An annual compliance test conducted for visible emissions shall not be required for units exempted from air permitting pursuant to subsection 62-210.300(3), F.A.C.; units determined to be insignificant pursuant to subparagraph 62-213.300(2)(a)1., F.A.C., or paragraph 62-213.430(6)(b), F.A.C.; or units permitted under the General Permit provisions in paragraph 62-210.300(4)(a) or Rule 62-213.300, F.A.C., unless the general permit specifically requires such testing.
- b. *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 emissions unit to conduct compliance tests which identify the nature and

**SECTION 4. APPENDIX D**  
**COMMON TESTING REQUIREMENTS**

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quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.

- c. *Waiver of Compliance Test Requirements.* If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of paragraph 62-297.310(7)(b), F.A.C., shall apply.

[Rule 62-297.310(7), F.A.C.]

**RECORDS AND REPORTS**

**8. Test Reports:**

- a. 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.
- b. 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.
- c. 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 following information.
  1. The type, location, and designation of the emissions unit tested.
  2. The facility at which the emissions unit is located.
  3. The owner or operator of the emissions unit.
  4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
  5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
  6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
  7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
  8. The date, starting time and duration of each sampling run.
  9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
  10. The number of points sampled and configuration and location of the sampling plane.
  11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
  12. The type, manufacturer and configuration of the sampling equipment used.
  13. Data related to the required calibration of the test equipment.
  14. Data on the identification, processing and weights of all filters used.
  15. Data on the types and amounts of any chemical solutions used.

**SECTION 4. APPENDIX D**  
**COMMON TESTING REQUIREMENTS**

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16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
17. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
18. All measured and calculated data required to be determined by each applicable test procedure for each run.
19. The detailed calculations for one run that relate the collected data to the calculated emission rate.
20. The applicable emission standard and the resulting maximum allowable emission rate for the emissions unit plus the test result in the same form and unit of measure.
21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

[Rule 62-297.310(8), F.A.C.]

SECTION 4. APPENDIX E

SUMMARY OF BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATIONS

**Unit Description**

U.S. Sugar Corporation operates existing Boiler 7, which is a spreader-stoker, vibrating-grate boiler with a maximum 1-hour steam production rate of 385,000 pounds per hour at 750° F and 600 psig. The maximum heat input rate is 812 MMBtu/hour (1-hour average) and 738 MMBtu/hour (24-hour average). The primary fuel is bagasse with distillate oil fired as a supplemental and alternate fuel.

**Air Pollution Control Equipment**

Particulate matter emissions are controlled by wet sand separators followed by an electrostatic precipitator. In accordance with original Permit No. PSD-FL-208, this equipment was specified as the Best Available Control Technology (BACT) for particulate matter emissions.

**New Project Description**

U.S. Sugar Corporation proposes to fire limited amounts of wood chips. Primarily, wood chips will be fired during the off season (May through September) to support the refinery operations and as an initial startup fuel to begin the crop season when bagasse may not be readily available. In general, wood chips will displace distillate oil as the fuel fired during these limited periods. With regard to emissions of nitrogen oxides (NO<sub>x</sub>), the project is subject to preconstruction review for the prevention of Significant Deterioration (PSD) of Air Quality pursuant to Rule 62-212.400, F.A.C., which requires a BACT determination.

**Final BACT Determination**

Pursuant to Rule 62-212.400, F.A.C., the Department establishes the following NO<sub>x</sub> BACT standards for Boiler 7. As determined by EPA Method 7E, NO<sub>x</sub> emissions shall not exceed 0.31 lb/MMBtu of heat input and 228.8 lb/hour. Compliance shall be demonstrated by conducting tests in accordance with EPA Method 7E.

**SECTION 4. APPENDIX E**  
**Alternate Opacity Monitoring Procedure**

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**Background**

Boiler 7 is subject to the applicable requirements of NSPS Subpart Db in 40 CFR 60. The firing of wood chips imposes emissions standards for particulate matter and opacity. A continuous opacity monitoring system must be installed and operated to demonstrate compliance with the opacity standards. However, there is concern that moisture in the flue gas will interfere with reliable opacity measurements. Moisture would come from bagasse which contains approximately 50% moisture, wood chips which may contain more than 20% moisture, and the wet sand separator which injects approximately 7800 gph of water. In addition, the firing of wood chips is limited to an annual capacity factor of less than 25%. Because of moisture interference and restricted operation, U.S. Sugar shall comply with the following alternate opacity monitoring procedure in lieu of the NSPS Subpart Db requirement to install and operate a continuous opacity monitoring system.

**Requirements**

1. For each field of the electrostatic precipitator, continuously monitor and record the secondary voltage and amperage.
2. For each 8-hour block of operation, calculate and record the total secondary power input to the electrostatic precipitator.
3. Maintain the total secondary power input to the electrostatic precipitator at a minimum of 44kW based on an 8-hour block average.
4. If the total secondary power input to the electrostatic precipitator falls below the minimum of 44kW based on an 8-hour block average (excursion), investigate to determine the cause of the excursion and take the corrective action if necessary to regain the minimum total secondary power input.
5. For each excursion, record the following information in a log: date and time of excursion; cause of excursion (if determined); corrective action taken (if any); and date and time of regaining the minimum total secondary power input.
6. Within 30 days following each semiannual period (January through June and July through December), the permittee shall submit a report to the Compliance Authority summarizing the following information: each 8-hour block average of the total secondary power input to the electrostatic precipitator; each excursion of the minimum total secondary power input to the electrostatic precipitator and corrective actions; percentage of monitoring data not available; and maintenance of the electrostatic precipitator and monitoring system.
7. All records shall be maintained on site and made available upon request.

**Rationale**

Moisture interference from the fuels and pre-control system will prevent the reliable measurement of opacity. In addition, wood firing is restricted to an annual capacity factor of 25% or less. Maintaining a minimum total secondary power input to the electrostatic precipitator of 44 kW provides a reliable indicator of effective operation of the particulate matter control device. This monitoring approach is nearly identical to that specified in NESHAP Subpart DDDDD as the Maximum Achievable Control Technology for solid fuel fired industrial boilers, which states, "This option is only for boilers and process heaters that operate *additional wet control systems*. Maintain the minimum voltage and secondary current or total power input of the electrostatic precipitator at or above the operating limits established during the performance test according to § 63.7530(c) and Table 7 to this subpart that demonstrated compliance with the applicable emission limit for particulate matter." The minimum value specified is conservative and based on testing conducted while firing bagasse, which has a much higher uncontrolled dust loading rate than wood chips (2.2 lb/MMBtu vs. 0.56 lb/MMBtu). The emissions standard when firing bagasse is identical to that of NSPS Subpart Db for firing wood. EPA Region 4 has previously approved alternate opacity monitoring procedures based on parametric monitoring.





**TECHNICAL EVALUATION  
&  
PRELIMINARY DETERMINATION**

**APPLICANT**

U. S. Sugar Corporation

Clewiston Sugar Mill and Refinery  
ARMS Facility ID No. 0510003

**PROJECT**

Draft Permit No. 0510003-044-AC  
Off-Season Wood Chip Firing for Boiler 7

**COUNTY**

Hendry County, Florida

**PERMITTING AUTHORITY**

Florida Department of Environmental Protection  
Division of Air Resource Management  
Bureau of Air Regulation  
Air Permitting North Section  
2600 Blair Stone Road, MS#5505  
Tallahassee, Florida 32399-2400

September 12, 2007

## 1. GENERAL PROJECT INFORMATION

### Facility Description and Location

The existing facility includes a sugar mill and sugar refinery for which the Standard Industrial Classification Codes are SIC Nos. 2061 and 2062, respectively. The facility is located in Hendry County at the intersection of W.C. Owens and S.R. 832 in Clewiston, Florida. The UTM coordinates are Zone 17, 506.1 km East, and 2956.9 km North.

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.

### Primary Regulatory Categories

Section 403 of the Florida Statutes (F.S.) authorizes the Department of Environmental Protection to establish rules and regulations regarding air quality as part of the Florida Administrative Code (F.A.C.). The existing facility is subject to the primary regulatory categories.

- The facility is a major source of hazardous air pollutants (HAP).
- The facility has no units subject to the acid rain provisions of the Clean Air Act.
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400 (PSD), F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

### Project Description

Boiler 7 (EU-014) has a peak steam production of 385,000 lb/hour with a maximum continuous steam production rate of approximately 350,000 lb/hour. Boiler 7 currently fires bagasse as the primary fuel with distillate oil fired as a startup and restricted alternate fuel. Bagasse is the preferred fuel because it is a byproduct of the milling process and the lowest cost boiler fuel. The applicant proposes to add wood chips as a startup fuel and restricted alternate fuel for the following reasons.

**Startup Fuel:** The crop milling season begins in October and can run through April. All five existing boilers operate to support the sugar mill and refinery with a peak steam production of 1,778,000 lb/hour and an average steam production of approximately 1,333,500. At the beginning of the crop season, bagasse is often in short supply because it is also used during the off season to support refinery operations. Initial startup for the crop season requires approximately a million pounds per hour of steam to bring operations to steady state conditions and begin support of the mills. Once the milling operations are underway, bagasse is available as a byproduct from the process and the boilers are switched to bagasse. Boiler 8 is currently authorized to fire wood and has a peak steam production of 633,000 lb/hour. If Boiler 7 was also authorized to fire wood, Boilers 7 and 8 could supply more than 900,000 lb/hour of steam to meet the majority of the demand by firing wood with Boiler 4 firing distillate oil to make up the remainder. Otherwise, both Boilers 4 and 7 would need to fire distillate oil.

**Off Season:** During the milling off season (May through September), the refinery operation has peak steam demands of approximately 300,000 lb/hour with an average of 250,000 lb/hour. Although bagasse is fired to the maximum extent possible, it is necessary to fire distillate oil as the supply of bagasse diminishes. Currently, Boiler 8 is capable of firing wood to support the refinery, but this requires operation at less than 50% load, which is inefficient. Boiler 7 could support the refinery by firing wood chips at approximately 80% capacity, which is a more typical firing rate for sugar mill boilers.

The purpose of the project is to displace distillate oil with wood chips, which is a renewable and carbon dioxide

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## TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

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neutral fuel. The applicant would restrict wood firing to no more than 1,616,220 MMBtu/year, which is equivalent to an annual capacity factor of 25%. Based on the predicted emissions increases, U.S. Sugar Corporation, submitted an application for an air construction permit subject to the PSD preconstruction review requirements of Rule 62-212.400, F.A.C.

### Processing Schedule

- 05/24/07 Department received the application for a PSD air pollution construction permit.  
06/22/07 Department requested additional information.  
08/08/07 Department received additional information; application complete.

## 2. APPLICABLE REGULATIONS

### State Regulations

This project is subject to the applicable rules and regulations defined in the following F.A.C. Chapters: 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, PSD Review and BACT, and Non-attainment Area Review 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 applicability of PSD preconstruction review in Rule 62-212.400, F.A.C. is discussed in Section 3. Additional details of the other state regulations are provided in Section 4.

### Federal Regulations

The Environmental Protection Agency establishes air quality regulations in Title 40 of the Code of Federal Regulations (CFR). Part 60 identifies New Source Performance Standards (NSPS) for a variety of industrial activities. Part 61 specifies National Emissions Standards for Hazardous Air Pollutant (NESHAP) based on specific pollutants. Part 63 specifies NESHAP provisions based on the Maximum Achievable Control Technology (MACT) for given source categories. Federal regulations are adopted in Rule 62-204.800, F.A.C. Additional details of the applicable federal regulations are provided in Section 3 of this report.

## 3. PSD APPLICABILITY REVIEW

### General PSD Applicability

The Department regulates major stationary sources in accordance with Florida's PSD program pursuant to Rule 62-212.400, F.A.C. PSD preconstruction review is required in areas that are currently in attainment with the state and federal Ambient Air Quality Standards (AAQS) or areas designated as "unclassifiable" for these regulated pollutants. As defined in Rule 62-210.200, F.A.C., a facility is considered a "major stationary source" if it emits or has the potential to emit 5 tons per year of lead, 250 tons per year or more of any PSD pollutant, or 100 tons per year or more of any PSD pollutant and the facility belongs to one of the 28 listed PSD major facility categories.

For major stationary sources, PSD applicability is based on emissions thresholds known as the "significant emission rates" as defined in Rule 62-210.200, F.A.C. Emissions of PSD pollutants from the project exceeding these rates are considered "significant". Although a facility may be "major" for only one PSD pollutant, a project is subject to PSD review for any PSD pollutant that exceeds the corresponding significant emission rate. For each significant pollutant, the applicant must provide an Air Quality Analysis that evaluates the predicted air quality impacts of the project and the Department must establish the Best Available Control Technology (BACT) to minimize emissions. Rule 62-210.200, F.A.C. defines "BACT" as:

*An emission limitation, including a visible emissions standard, based on the maximum degree of reduction*

**TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION**

*of each pollutant emitted which the Department, on a case by case basis, taking into account*

1. *Energy, environmental and economic impacts, and other costs;*
2. *All scientific, engineering, and technical material and other information available to the Department; and*
3. *The emission limiting standards or BACT determinations of Florida and any other state;*

*determines is achievable through application of production processes and available methods, systems and techniques (including fuel cleaning or treatment or innovative fuel combustion techniques) for control of each such pollutant.*

A BACT determination must be at least as stringent as any applicable NSPS or NESHAP standard and must specify the method for determining compliance.

**PSD Applicability for the Project**

The project is located in Hendry County, which is in an area that is currently in attainment with the state and federal AAQS or otherwise designated as unclassifiable. The facility emits or has the potential to emit 250 tons per year or more of at least one PSD pollutant. Therefore, the facility is a major stationary source and the project is subject to a PSD applicability review. The following table identifies the estimated emissions increases based on the initial application comparing projected actual emissions from Boiler 7 firing wood chips during the off season to baseline emissions from Boiler 7.

Table 2A. Summary of the Applicant's PSD Applicability

Pollutant	Net Emissions Increase	PSD Significant Emissions Rate	Subject to PSD Review?
Carbon Monoxide (CO)	98 tons/year	100 tons/year	No
Nitrogen Oxides (NO <sub>x</sub> )	122 tons/year	40 tons/year	Yes
Particulate Matter (PM)	8 tons/year	25 tons/year	No
Particulate Matter ≤ 10 microns (PM <sub>10</sub> )	8 tons/year	15 tons/year	No
Sulfuric Acid Mist (SAM)	1 tons/year	7 tons/year	No
Sulfur Dioxide (SO <sub>2</sub> )	5 tons/year	40 tons/year	No
Volatile Organic Compounds (VOC)	9 tons/year	40 tons/year	No
Mercury (Hg)	<< 1 pounds/year	200 pounds/year	No
Lead (Pb)	<< 1 pounds/year	1200 pounds/year	No
Fluorides (Fl)	<< 1 tons/year	3 tons/year	No
Total Reduced Sulfur (TRS)	<< 1 tons/year	10 tons/year	No

As shown in the table, the project is subject to PSD preconstruction review for NO<sub>x</sub> emissions.

**4. PROJECT REVIEW**

Boiler 7 is a spreader-stoker, vibrating-grate boiler with a maximum 1-hour steam production rate of 385,000 pounds per hour at 750° F and 600 psig. The maximum heat input rate is 812 MMBtu/hour (1-hour average) and 738 MMBtu/hour (24-hour average). It is permitted to fire bagasse as the primary fuel with distillate oil (≤ 0.05% sulfur by weight) as a startup fuel and restricted alternate fuel. The firing of distillate oil is limited to an annual capacity factor of less than 10%. Particulate matter emissions are controlled by a wet sand separator followed by an electrostatic precipitator. Exhaust gases exit a 225 feet tall stack at 335° F with an average flow rate of 355,000 acfm.

### Applicable Regulations

Boiler 7 is currently regulated in accordance with the following specific regulations.

#### Rule 62-212.400 (PSD), F.A.C.

Boiler 7 was originally constructed in accordance with air construction Permit No. PSD-FL-208, which satisfied the PSD preconstruction review requirements. The proposed project will add a new carbonaceous fuel, wood chips, restricted to no more than 1,616,220 MMBtu/year, which is equivalent to an annual capacity factor of 25%. No physical changes are required to handle wood chips. Based on the projected emissions, PSD preconstruction review is required only for NO<sub>x</sub> emissions. This is discussed in detail following this section.

#### Rule 62-296.410, F.A.C.

Pursuant to this rule, Boiler 7 was constructed as a new emissions unit subject to the emissions standards for visible emissions (30% opacity except for up to 40% for up to two minutes per hour) and PM (0.2 lb/MMBtu heat input of carbonaceous fuel plus 0.1 lb/MMBtu heat input of fossil fuel). The existing BACT standards are much more stringent than these standards. The project will not result in additional requirements from this rule.

#### NSPS Subpart Db in 40 CFR 60

##### *Originally Applicable NSPS Subpart Db Provisions*

As adopted by Rule 62-204.800, F.A.C., Boiler 7 was originally subject to the applicable requirements of NSPS Subpart Db for industrial-commercial-institutional steam generating units. This rule regulates emissions of NO<sub>x</sub>, PM and SO<sub>2</sub> when firing coal, oil, natural gas, wood or combinations of these fuels with other fuels. At that time, distillate oil was the only regulated fuel Boiler 7 was permitted to fire. The originally applicable NSPS Subpart Db provisions are:

- The applicable SO<sub>2</sub> standard for oil firing is 0.50 lb/MMBtu with compliance demonstrated by fuel oil analysis and receipts. The original BACT determination limited distillate oil to no more than 0.05% sulfur by weight, which is equivalent to 0.05 lb/MMBtu of heat input and one-tenth of the NSPS standard.
- The NO<sub>x</sub> standard for oil firing did not apply because oil firing was limited to an annual capacity factor of less than 10%.
- The PM standard for oil firing did not apply because conventional or emerging technologies were not used to control SO<sub>2</sub> emissions. The applicable visible emissions standard is 20% opacity (6-minute average) except for one 6-minute period per hour not to exceed 27% opacity with compliance demonstrated by a continuous opacity monitoring system (COMS). However, the Department approved an alternate opacity monitoring procedure because oil firing was limited to an annual capacity factor of no more than 10%. See ASP No. 95-B-01 issued on April 9, 1996.

In addition, the latest revisions (07/01/06) to NSPS Subpart Db include the following change in §60.43b(5), *“On or after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.3 weight percent sulfur or other liquid or gaseous fuels with potential sulfur dioxide emission rates of 140 ng/J (0.32 lb/ MMBtu) heat input or less is not subject to the PM or opacity limits in this section.”* Since Boiler 7 is limited to firing only distillate oil containing 0.05% sulfur by weight, the opacity standard no longer applies when firing oil. This is reasonable because EPA’s AP-42 uncontrolled PM emissions factor (Table 1.3-1) for distillate oil firing is 0.014 lb/MMBtu, which means that the boiler can readily comply with the PM standards without any control devices. It is also noted that the AP-42 emissions factor includes sulfur contents of 0.5% sulfur by weight as “distillate oil”. Therefore, the alternate opacity monitoring procedure for oil firing is no longer necessary and will be removed.

## TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

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### *Newly Applicable NSPS Subpart Db Provisions*

This project will add wood as an authorized fuel, which is also regulated by NSPS Subpart Db. There are no SO<sub>2</sub> or NO<sub>x</sub> standards for wood firing. Pursuant to 40 CFR 60.43b(h)(1), the PM standard is 0.03 lb/MMBtu of heat input with compliance demonstrated by EPA Method 5 testing. The original BACT standard was established as 0.03 lb/MMBtu for firing bagasse. Based on EPA's AP-42 document, the uncontrolled PM emissions factor (Table 1.8-1) for bagasse is 2.2 lb/MMBtu and the uncontrolled PM emissions factor (Table 1.6-1) for wood is 0.56 lb/MMBtu. So, the dust loading rate from firing bagasse is nearly 4 times that for firing wood. Boiler 7 has successfully demonstrated compliance with the PM standard since startup for ten consecutive years.

The visible emissions standard for wood firing is also 20% opacity (6-minute average) except for one 6-minute period per hour not to exceed 27% opacity with compliance demonstrated by a COMS. The applicant requests an alternate monitoring procedure for opacity due to concerns of moisture interference resulting from the firing high-moisture fuels (bagasse and wood chips) and adding up to 7800 gph of water from the wet sand separator pre-control system. In addition, wood chips will generally be fired when the supply of bagasse is low and will be limited to an annual capacity factor of 25% or less. As an alternate opacity monitoring procedure for wood firing, the applicant proposes to maintain the total secondary power input to the electrostatic precipitator at a minimum of 44kW based on an 8-hour block average. This level is based on continuous monitoring and recording of the voltage and amperage during successful compliance tests conducted while firing bagasse at more than 90% of maximum permitted capacity. It is also identical to the parametric monitoring specified in the proposed Compliance Assurance Monitoring (CAM) plan in the pending Title V application and consistent with the monitoring approach identified in the NESHAP Subpart DDDDD provisions for industrial boilers.

The Department agrees that moisture interference is a valid concern given the high-moisture fuels and the wet pre-control system. The provisions of 40 CFR 60.13(i) allow approval of alternatives to any Part 60 monitoring procedures including:

- Alternative monitoring requirements when installation of a continuous monitoring system or monitoring device specified by this part would not provide accurate measurements due to liquid water or other interferences caused by substances in the effluent gases.
- Alternative monitoring requirements when the affected facility is infrequently operated.

EPA Region 4 has previously approved alternate opacity monitoring procedures based on parametric monitoring. As examples, see Control Numbers 0500093 and 09700041 in EPA's Applicability Determination Index. Therefore, the Department accepts the applicant's proposal to monitor and maintain the total secondary power input to the electrostatic precipitator at a minimum of 44kW based on an 8-hour block average in lieu of continuous opacity monitoring. The draft permit specifies the details of the alternate opacity monitoring procedure that will be sent to EPA Region 4 for approval.

### NESHAP Subpart DDDDD in 40 CFR 63

Boiler 7 would be subject to the applicable provisions of NESHAP DDDDD in 40 CFR 63; however, this rule has been vacated by EPA.

## 5. NO<sub>x</sub> BACT REVIEW

### **Discussion**

Boilers primarily emit NO<sub>x</sub> as a result of fuel NO<sub>x</sub> and thermal NO<sub>x</sub>. Fuel NO<sub>x</sub> is formed during the combustion process and is dependent on the amount of fuel-bound nitrogen. Distillate oil contains a negligible amount of fuel-bound nitrogen, but bagasse and wood chips both contain measurable amounts of nitrogen. Thermal NO<sub>x</sub> is formed from nitrogen in the combustion air and increases with increasing combustion temperatures. In general, wood chips have less moisture than bagasse and generate higher combustion temperatures, which results in more thermal NO<sub>x</sub> than bagasse.

## Applicant's Proposal

### Available Control Options

The applicant identified the following available NO<sub>x</sub> control technologies.

*Low Nitrogen Fuels (Variable Control Efficiency):* Distillate oil typically contains less than 0.02% nitrogen by weight. Wood chips and bagasse typically have a nitrogen content of 0.2% by weight or less. All of these fuels would be considered "low nitrogen" fuels. In comparison, bituminous and sub-bituminous coals may contain 0.5% to 2% nitrogen by weight. Boiler 7 currently employs relatively low nitrogen fuels.

*Fuel Staging (50% - 65% Control Efficiency):* Limited fuel is provided for primary combustion to create a reducing atmosphere. The excess fuel dilutes heat and reduces the combustion temperature, which generates less NO<sub>x</sub>. Fuel is added downstream to cause a slightly oxidizing zone and complete combustion while reducing NO<sub>x</sub> to nitrogen. In the spreader-stoker boiler, bagasse and wood are fed through the top of the furnace. Small particles are burned in suspension and the rest is burned on the grate. Options for staging fuel in this type of boiler are limited.

*Combustion Air Staging (50% - 65% Control Efficiency):* Limited combustion air is provided with the fuel to produce a reducing flame. Additional air is provided downstream to provide an oxygen rich zone and complete combustion. Boiler 7 uses over-fire air to stage the combustion for the spreader-stoker boiler.

*Less Excess Air (15% - 25% Control Efficiency):* Limiting the net excess air provided for combustion can lower the overall NO<sub>x</sub> generated. Boiler 7 utilizes a combustion system designed to minimize the amount of excess air in the furnace.

*Reduce Air Preheat (15% - 25% Control Efficiency):* Reducing the temperature of the combustion air will reduce the peak flame temperature and thermal NO<sub>x</sub> emissions. Boiler 7 employs this control strategy by using ambient air in the over-fire air system.

*Steam Injection (50% - 65% Control Efficiency):* Steam is injected to lower the combustion temperature and reduce thermal NO<sub>x</sub>. However, this may also reduce the overall combustion efficiency of the boiler and would add even more moisture to the system.

*Low-NO<sub>x</sub> Burners (LNB, 15% - 25% Control Efficiency):* Properly designed LNB provide a stable flame while staging the air and fuel to reduce NO<sub>x</sub> emissions. The oil firing system on Boiler 7 employs LNB. Bagasse and wood are fed through the top of the furnace and burned in suspension or on the grate. LNB are not an option for bagasse and wood.

*Flue Gas Recirculation (FGR, 15% - 25% Control Efficiency):* A heat exchanger is used to reduce the flue gas temperature and a portion of the flue gas is recirculated to the furnace. This dilutes the available oxygen and lowers the combustion temperature, which reduces thermal NO<sub>x</sub>. Although this technology is technically feasible, the applicant believes that FGR would have little effect on NO<sub>x</sub> emissions, but could increase CO and VOC emissions. There is no known information on FGR for boilers firing bagasse as the primary fuel. The applicant does not believe this technology is appropriate for a spreader-stoker boiler firing bagasse. The use of FGR to further lower the combustion temperature is unlikely to produce significant NO<sub>x</sub> reductions since Boiler 7 currently utilizes over-fire air, less excess air, and reduced air preheat to lower the combustion temperature.

*Selective Non-Catalytic Reduction (SNCR, 35% - 50% Control Efficiency):* Ammonia or urea is injected within the boiler flue gas path at the proper operating temperature (~ 1600 to 2000 F). With sufficient residence time at this temperature, NO<sub>x</sub> is chemically reduced to nitrogen and water. This control option is feasible and successfully employed on Boiler 8 at the mill.

*Selective Catalytic Reduction (SCR, 35% - 80% Control Efficiency):* Ammonia is injected prior to a specially formulated catalyst within the proper operating temperature range (~ 600 to 1000 F). At the appropriate temperature, NO<sub>x</sub> is chemically reduced to nitrogen and water in the presence of the catalyst. There is no available information on the use of SCR for boilers firing bagasse as the primary fuel. The catalyst can be

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**TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION**

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quickly deactivated due to alkali poisoning, fouling, or plugging. Ash from firing bagasse and wood contain the following known catalyst poisons: 0.3% sodium, 15% potassium, 6% phosphorous, 9% sulfur, and over 5% chlorides. To achieve the proper temperature window, the SCR reactor would have to be placed prior to the air preheater, which is also prior to the wet sand separator. The high particulate loading and high moisture content of bagasse (~50%) would likely cause premature plugging and fouling of the catalyst. For these reasons, the applicant rejects SCR as a control option.

*Hybrid SNCR/SCR System (60% - 90% Control Efficiency):* With the SNCR system, ammonia is injected at rates much higher than the stoichiometric requirements, which creates ammonia slip. The SCR reactor uses the ammonia slip to further reduce NO<sub>x</sub> emissions. Advantages and disadvantages are the same as SNCR and SCR.

Applicable Control Options

Of the available technologies, Boiler 7 currently uses the following to control NO<sub>x</sub> emissions: low nitrogen fuels, combustion air staging (over-fire air), less excess air, reduce air preheat, and LNB (oil). The applicant maintains that the only remaining control option that is applicable and demonstrated for this project is SNCR, which is currently employed on Boiler 8 at this mill. Based on a cost estimate provided by SNCR vendor FuelTech, the total purchased equipment costs would be \$1,210,000 and the total capital investment would be \$2,490,785. Therefore, the applicant provided the following cost analysis for SNCR.

Capital Recovery Cost (20 years @ 7%).....	\$235,130
Direct Annual Operating Costs .....	\$153,676
Indirect Annual Operating Costs.....	\$118,977
Total Annualized Costs .....	\$507,783
Baseline NO <sub>x</sub> Emissions.....	122.1 tons/year
SNCR Control Efficiency .....	50%
NO <sub>x</sub> Reduction.....	61.1 tons/year
Cost Effectiveness.....	<b>\$8311/ton NO<sub>x</sub> removed</b>

In addition to costs, the applicant noted that SNCR would require additional energy and water as well as a loss in boiler efficiency. Primarily, the applicant rejects SNCR as not being cost effective. The applicant proposes a NO<sub>x</sub> emissions standard of 0.31 lb/MMBtu based on the following combinations of controls: low nitrogen fuels, combustion air staging (over-fire air), less excess air, reduce air preheat, LNB (oil) and good combustion practices. Compliance will be demonstrated by EPA Method 7E testing. The proposed limit is based on recent testing conducted on a blend of approximately 50% wood chips with 50% bagasse.

**Department's Review**

The applicant provided a summary of NO<sub>x</sub> BACT determinations for bagasse and wood fired boilers compiled over the least ten years from EPA's RACT/BACT/LAER Clearinghouse (RBLC). Of the 45 projects, the most common control technique appears to be good combustion practices and staged combustion air. The only add-on control technology identified is SNCR, which was established as BACT for 13 projects including Boiler 8 at the Clewiston mill. Although the majority of projects requiring SNCR are for constructing new units, two SNCR applications are for modifications to existing units. However, one of these projects results in a NO<sub>x</sub> limit of 0.5 lb/MMBtu, which is higher than the uncontrolled NO<sub>x</sub> level from Boiler 7. Nevertheless, the conclusion is that SNCR is the most common add-on NO<sub>x</sub> control technology for these types of boilers and primarily required for new units.

In general, the applicant intends to fire wood chips as the initial startup fuel for the crop season and during the 5-month off season to support refinery operations as the supply of bagasse begins to diminish. Wood will displace distillate oil firing and reduce operating costs. There is no incentive to fire wood chips in lieu of bagasse



## TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

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because bagasse is a byproduct of the sugarcane milling process. In addition, wood chips represent a renewable fuel as well as a carbon dioxide neutral fuel.

Although the Department does not endorse the applicant's cost analysis, it does believe that SNCR for the limited scope of this project is not cost effective due to the high capital costs and limited operating period for firing wood chips. Annualized costs are higher for SCR or hybrid SNCR/SCR systems and would also be cost prohibitive. Therefore, the Department's preliminary NO<sub>x</sub> BACT determination for firing wood is 0.31 lb/MMBtu as determined by EPA Method 7E stack test. The determination is based on the following combinations of controls: low nitrogen fuels, combustion air staging (over-fire air), less excess air, reduce air preheat, LNB (oil) and good combustion practices.

### 6. PRIMARY PERMIT CONDITIONS

The draft permit establishes the following primary conditions.

- Boiler 7 is authorized to fire wood chips as a startup and restricted alternate fuel. Wood chips shall consist of clean dry wood and vegetative materials. Wood chips shall be substantially free of plastics, rubber, glass, painted wood, chemically treated wood, and non-combustible materials. The firing of any household garbage, hazardous wastes, or toxic materials is prohibited. [Application]
- Wood chips shall be fired at a heat input rate of more than 369 MMBtu per hour based on a 24-hour average. The heat input rate from firing wood chips shall not exceed 1,616,220 MMBtu during any consecutive 12 months. [Application]
- As determined by EPA Method 7E, nitrogen oxide emissions shall not exceed 0.31 lb/MMBtu of heat input and 228.8 lb/hour. [BACT]
- As determined by EPA Method 5, particulate matter emissions shall not exceed 0.03 lb/MMBtu of heat input and 22 lb/hour. [NSPS Subpart Db]
- As determined by EPA Method 9, visible emissions shall not exceed 20% opacity (6-minute average), except for one 6-minute period per hour of not more than 27% opacity. [NSPS Subpart Db]
- The permittee shall comply with an alternate opacity monitoring procedure in lieu of installing a COMS. In general, the permittee shall continuously monitor and record the voltage and amperage and calculate the total secondary power input to the electrostatic precipitator, which shall be maintained at a minimum of 44kW based on an 8-hour block average. [NSPS Subpart Db]
- To minimize fugitive particulate matter, biomass conveyors shall be completely covered or enclosed except for the transfer points to/from the bagasse stockpile and the point associated with conveying bagasse from conveyor C9A to C9B in the drying mill. [Rules 62-4.070(3) and 62-296.310(4)(c), F.A.C.]
- Boiler 7 shall be tested to demonstrate initial and annual compliance with the emissions standards for nitrogen oxides, particulate matter and visible emissions. [Rules 62-4.070(3), 62-297.310(7)(a)], and 62-212.400(BACT), F.A.C.]
- Representative samples of wood chips shall be taken each calendar quarter and analyzed for the heating value and moisture content. Analytical results shall be determined and available for review within 30 days of the end of each calendar quarter. Such analysis is not required if no wood chips are stored on site during the calendar quarter. [Rules 62-4.070(3) and 62-212.400(PSD), F.A.C.]
- The permittee shall maintain wood chips firing records sufficient to demonstrate compliance with the heat input restrictions to Boiler 7. [Rules 62-4.070(3) and 62-212.400(PSD), F.A.C.]

**7. AIR QUALITY IMPACT ANALYSIS**

**Introduction**

The proposed project to fire wood chips will increase NO<sub>x</sub> emissions at levels in excess of PSD significant amounts. NO<sub>x</sub> is a criteria pollutant and has national and state ambient air quality standards (AAQS), PSD increments, significant impact levels, and significant monitoring concentrations (de minimis concentrations) defined for it.

The air quality impact analyses required by the Department regulations for this project include:

- An analysis of existing air quality for NO<sub>x</sub>;
- A significant impact analysis for NO<sub>x</sub>;
- A PSD increment analysis for NO<sub>x</sub>, if necessary;
- An Ambient Air Quality Standards (AAQS) analysis for NO<sub>x</sub>, if necessary;
- An analysis of impacts on soils, vegetation, and visibility and growth-related impacts to air quality.

The analysis of existing air quality generally relies on preconstruction monitoring data collected with EPA-approved methods. The significant impact, PSD increment, and AAQS analyses depend on air quality dispersion modeling carried out in accordance with EPA and department guidelines. Based on the required analyses, the Department has reasonable assurance that the proposed project, as described in this report and subject to the conditions of approval proposed herein, will not cause or significantly contribute to a violation of any AAQS or PSD increment.

**Analysis of Existing Air Quality**

Preconstruction ambient air quality monitoring is required for all pollutants subject to PSD review unless otherwise exempted or satisfied. This monitoring requirement may be satisfied by using previously existing representative monitoring data, if available. An exemption to the monitoring requirement shall be granted by rule if either of the following conditions is met: the maximum predicted air quality impact resulting from the projected emissions increase, as determined by air quality modeling, is less than a pollutant-specific de minimis ambient concentration; or the existing ambient concentrations are less than a pollutant-specific de minimis ambient concentration.

The table below shows the maximum predicted project air quality NO<sub>x</sub> impact for comparison to its de minimis level. As shown in the table, the predicted maximum NO<sub>x</sub> impact from the project is less than the applicable de minimis concentration; therefore, no further monitoring was required for this pollutant. However, since the NO<sub>x</sub> emissions from the project are predicted to be greater than 100 tons per year, a preconstruction air monitoring analysis is required for ozone. The PSD ambient monitoring guidelines allow the use of existing data in the vicinity of the project to satisfy this analysis requirement. These data show that ambient ozone concentrations are well below the ozone ambient air quality standards.

<b>Maximum Predicted Project Air Quality Impacts Comparison to the De Minimis Concentrations</b>				
<b>Pollutant</b>	<b>Averaging Time</b>	<b>Maximum Predicted Impact (µg/m<sup>3</sup>)</b>	<b>Impact Greater than De Minimis? (Yes/No)</b>	<b>De Minimis Concentration (µg/m<sup>3</sup>)</b>
NO <sub>x</sub>	Annual	0.5	No	14

## **Models and Meteorological Data Used in Significant Impact, PSD Increment and AAQS Analyses**

### PSD Class II Area Model

The EPA-approved American Meteorological Society and EPA Regulatory Model (AERMOD) dispersion model was used to evaluate the pollutant emissions from the proposed project and other existing major facilities. In November, 2005, the EPA promulgated AERMOD as the preferred regulatory model for predicting pollutant concentrations within 50 km from a source. AERMOD is a replacement for the Industrial Source Complex Short-Term Model (ISCST3).

The AERMOD model calculates hourly concentrations based on hourly meteorological data. For evaluating plume behavior within the building wake of structures, the AERMOD model incorporates the Plume Rise Enhancement (PRIME) downwash algorithm developed by the Electric Power Research Institute (EPRI). AERMOD can predict pollutant concentrations for annual, 24-hour, 8-hour, 3-hour and 1-hour averages. A series of specific model features, recommended by the EPA, are referred to as the regulatory options. The applicant used the EPA recommended regulatory options in each modeling scenario, and building downwash effects were evaluated for stacks below the good engineering practice (GEP) stack heights. The stack associated with this project satisfied the good engineering practice (GEP) stack height criteria.

Meteorological data used in the AERMOD model consisted of a concurrent 5-year period of hourly surface weather observations and twice-daily upper air soundings from the Palm Beach International Airport and Florida International University at Miami, respectively. The 5-year period of meteorological data was from 2001 through 2005. These stations were selected for use in the evaluation because they are the closest primary weather stations to the project area and are most representative of the project site.

Because five years of data are used in AERMOD, the highest-second-high (HSH) short-term predicted concentrations were compared with the appropriate AAQS or PSD increments. For the annual averages, the highest predicted yearly average was compared with the standards. For determining the project's significant impact area in the vicinity of the facility, and for determining if there are significant impacts occur from the project on any PSD Class I area, both the highest short-term predicted concentrations and the highest predicted yearly averages were compared to their respective significant impact levels.

In reviewing this permit application, the Department has determined that the application complies with the applicable provisions of the stack height regulations as revised by EPA on July 8, 1985 (50 FR 27892). Portions of the regulations have been remanded by a panel of the U.S. Court of Appeals for the D.C. Circuit in *NRDC v. Thomas*, 838 F. 2d 1224 (D.C. Cir. 1988). Consequently, this permit may be subject to modification if and when EPA revises the regulation in response to the court decision. This may result in revised emission limitations or may affect other actions taken by the source owners or operators.

### PSD Class I Area Model

Since the closest PSD Class I area, the Everglades National Park (ENP) is greater than 50 km from the proposed facility, long-range transport modeling was required for the Class I impact assessment. The California Puff (CALPUFF) dispersion model was used to evaluate the potential impact of the proposed pollutant emissions on the PSD Class I increments and on the Air Quality Related Values (AQRV): regional haze and nitrogen and sulfur deposition. CALPUFF is a non-steady state, Lagrangian, long-range transport model that incorporates Gaussian puff dispersion algorithms. This model determines ground-level concentrations of inert gases or small particles emitted into the atmosphere by point, line, area, and volume sources. The CALPUFF model has the capability to treat time-varying sources. It is also suitable for modeling domains from tens of meters to hundreds of kilometers, and has mechanisms to handle rough or complex terrain situations. Finally, the CALPUFF model is applicable for inert pollutants as well as pollutants that are subject to linear removal and chemical conversion mechanisms.

The meteorological data used in the CALPUFF model was processed by the California Meteorological

**TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION**

(CALMET) model. The CALMET model utilizes data from multiple meteorological stations and produces a three-dimensional modeling grid domain of hourly temperature and wind fields. The wind field is enhanced by the use of terrain data, which is also input into the model. Two-dimensional fields such as mixing heights, dispersion properties, and surface characteristics are produced by the CALMET model as well. 2001 through 2003, 4-km Florida domain, meteorological data were obtained and processed for use in the Class I analyses. The CALMET wind field and the CALPUFF model options used were consistent with the suggestions of the federal land managers. The most recent reprocessed meteorological data (CALMET Version 5.8) were used to determine impacts.

**Significant Impact Analysis**

Preliminary modeling is conducted using only the proposed project’s worst-case emission scenario for each pollutant and applicable averaging time. Over 1800 receptors were placed along the facility’s restricted property line and out to 4 km from the facility, which is located in a PSD Class II area.

One PSD Class I area is located within 250 km of the vicinity of the project: the ENP, 102 km to the south of the project. A total of 126 receptors were placed in the ENP PSD Class I area. For each pollutant subject to PSD and also subject to PSD increment and/or AAQS analyses, this modeling compares maximum predicted impacts due to the project with PSD significant impact levels to determine whether significant impacts due to the project were predicted in a PSD Class II area in the vicinity of the facility or in any PSD Class I area. In the event that the maximum predicted impact of a proposed project is less than the appropriate significant impact level, a full impact analysis for that pollutant is not required.

Full impact modeling is modeling that considers not only the impact of the project but also other major sources, including background concentrations, located within the vicinity of the project to determine whether all applicable AAQS or PSD increments are predicted to be met for that pollutant. Consequently, a preliminary modeling analysis, which shows an insignificant impact, is accepted as the required air quality analysis (AAQS and PSD increments) for that pollutant and no further modeling for comparison to the AAQS and PSD increments is required for that pollutant. The tables below show the results of this modeling.

<b>Maximum Predicted Project Air Quality Impacts Comparison to the PSD Class II Significant Impact Levels in the Vicinity of the Facility</b>				
<b>Pollutant</b>	<b>Averaging Time</b>	<b>Maximum Predicted Impact (µg/m<sup>3</sup>)</b>	<b>Significant Impact Level (µg/m<sup>3</sup>)</b>	<b>Significant Impact?</b>
NO <sub>x</sub>	Annual	0.5	1	No

<b>Maximum Predicted Project Impacts in the PSD CLASS I Areas Comparison to the PSD Class I Significant Impact Levels</b>				
<b>Pollutant</b>	<b>Averaging Time</b>	<b>Maximum Predicted Impact (µg/m<sup>3</sup>)</b>	<b>Significant Impact Level (µg/m<sup>3</sup>)</b>	<b>Significant Impact? (ug/m<sup>3</sup>)</b>
NO <sub>x</sub>	Annual	0.00007	0.2	NO

No significant impacts were predicted in the Class I and Class II areas for NO<sub>x</sub>. Therefore, further NO<sub>x</sub> AAQS and PSD increment analyses in either the Class I or Class II areas were not required for this project.

**Additional Impacts Analysis**

Impacts on Soils, Vegetation, Wildlife, and Visibility

According to the modeling results, the maximum air quality impacts due to the project emitting at its maximum rate are predicted to be below Class II significant impact levels and in turn the applicable Class II PSD

## TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

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increments and AAQS. AAQS are designed to protect both the public health and welfare. As such, it is reasonable to assume the impacts on soils, vegetation, and wildlife will be minimal or insignificant.

An air quality related values (AQRV) analysis was done by the applicant for the Class I and Class II areas. No significant impacts on these areas are expected. A regional haze analysis using the long-range transport model CALPUFF was done for the PSD Class I areas. This analysis showed no significant impact on visibility in this area. Nitrogen deposition rates are predicted to be less than the deposition analysis threshold (DAT).

### Growth-Related Air Quality Impacts

The proposed modification will not significantly change employment, population, housing or commercial/industrial development in the area to the extent that a significant air quality impact will result.

## **8. 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. Jeff Koerner is the project engineer responsible for reviewing the application and drafting the permit changes. Cleve Holladay is the meteorologist responsible for reviewing and approving the ambient air quality analyses. Additional details of this analysis may be obtained by contacting the project engineer at the Department's Bureau of Air Regulation at Mail Station #5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

**Harvey, Mary**

**From:** Harvey, Mary  
**Sent:** Thursday, September 13, 2007 12:23 PM  
**To:** 'Mr. Neil Smith, U.S. Sugar'; 'Mr. Peter Briggs, U.S. Sugar'; 'Mr. David Buff, Golder Associates'; Satyal, Ajaya; 'Ms. Kathleen Forney'; 'Mr. Jim Little, EPA Region 4'; 'Mr. Dee Morse, National Park Service'  
**Cc:** Koerner, Jeff; Adams, Patty; Gibson, Victoria  
**Subject:** US SUGAR CORPORTION- PROJECT #0510003-044-AC-DRAFT - PSD-FL-389  
**Attachments:** PSD-FL-389 - Appendix-0510003-044-AC-DRAFT.PDF; PSD-FL-389 - Draft Permit-0510003-044-AC-DRAFT.PDF; PSD-FL-389 - Public Notice of Intent to Issue Permit-0510003-044-AC-DRAFT.PDF; PSD-FL-389 - TEPD-0510003-044-AC-DRAFT.PDF; PSD-FL-389 - Written Notice of Intent to Issue Permit-0510003-044-AC-DRAFT.PDF; Signed Documents - 0510003-044AC-DRAFT.pdf

Tracking:	Recipient	Delivery	Read
<input checked="" type="checkbox"/>	'Mr. Neil Smith, U.S. Sugar'		
<input checked="" type="checkbox"/>	'Mr. Peter Briggs, U.S. Sugar'		
<input checked="" type="checkbox"/>	'Mr. David Buff, Golder Associates'		
<input checked="" type="checkbox"/>	Satyal, Ajaya	Delivered: 9/13/2007 12:23 PM	Read: 9/13/2007 2:48 PM
<input checked="" type="checkbox"/>	'Ms. Kathleen Forney'		
<input checked="" type="checkbox"/>	'Mr. Jim Little, EPA Region 4'		
<input checked="" type="checkbox"/>	'Mr. Dee Morse, National Park Service'		
	Koerner, Jeff		Read: 9/13/2007 12:33 PM
<input checked="" type="checkbox"/>	Adams, Patty		Read: 9/13/2007 12:58 PM
<input checked="" type="checkbox"/>	Gibson, Victoria		Read: 9/13/2007 12:24 PM

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Thank you,

9/17/2007

## Harvey, Mary

---

**From:** Neil Smith [nsmith@ussugar.com]  
**Sent:** Thursday, September 13, 2007 2:54 PM  
**To:** Harvey, Mary  
**Subject:** RE: US SUGAR CORPORTION- PROJECT #0510003-044-AC-DRAFT - PSD-FL-389

---

**From:** Harvey, Mary [mailto:Mary.Harvey@dep.state.fl.us]  
**Sent:** Thursday, September 13, 2007 12:23 PM  
**To:** Neil Smith; Peter Briggs; Mr. David Buff, Golder Associates; Satyal, Ajaya; Ms. Kathleen Forney; Mr. Jim Little, EPA Region 4; Mr. Dee Morse, National Park Service  
**Cc:** Koerner, Jeff; Adams, Patty; Gibson, Victoria  
**Subject:** US SUGAR CORPORTION- PROJECT #0510003-044-AC-DRAFT - PSD-FL-389

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Thank you,

DEP, Bureau of Air Regulation

## Harvey, Mary

---

**From:** Peter Briggs [pbriggs@ussugar.com]  
**Sent:** Friday, September 14, 2007 9:00 AM  
**To:** Harvey, Mary  
**Subject:** RE: US SUGAR CORPORTION- PROJECT #0510003-044-AC-DRAFT - PSD-FL-389

---

**From:** Harvey, Mary [mailto:Mary.Harvey@dep.state.fl.us]  
**Sent:** Thursday, September 13, 2007 12:23 PM  
**To:** Neil Smith; Peter Briggs; Mr. David Buff, Golder Associates; Satyal, Ajaya; Ms. Kathleen Forney; Mr. Jim Little, EPA Region 4; Mr. Dee Morse, National Park Service  
**Cc:** Koerner, Jeff; Adams, Patty; Gibson, Victoria  
**Subject:** US SUGAR CORPORTION- PROJECT #0510003-044-AC-DRAFT - PSD-FL-389

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<http://www.adobe.com/products/acrobat/readstep.html>.

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Thank you,

DEP, Bureau of Air Regulation



## Harvey, Mary

---

**From:** Satyal, Ajaya  
**To:** Harvey, Mary  
**Sent:** Thursday, September 13, 2007 2:48 PM  
**Subject:** Read: US SUGAR CORPORTION- PROJECT #0510003-044-AC-DRAFT - PSD-FL-389

Your message

**To:** 'Mr. Neil Smith, U.S. Sugar'; 'Mr. Peter Briggs, U.S. Sugar'; 'Mr. David Buff, Golder Associates'; Satyal, Ajaya; 'Ms. Kathleen Forney'; 'Mr. Jim Little, EPA Region 4'; 'Mr. Dee Morse, National Park Service'  
**Cc:** Koerner, Jeff; Adams, Patty; Gibson, Victoria  
**Subject:** US SUGAR CORPORTION- PROJECT #0510003-044-AC-DRAFT - PSD-FL-389  
**Sent:** 9/13/2007 12:23 PM

was read on 9/13/2007 2:48 PM.

## Harvey, Mary

---

**From:** Lisa Pickron [lpickron@ussugar.com]  
**To:** Harvey, Mary  
**Sent:** Thursday, September 13, 2007 1:55 PM  
**Subject:** Read: US SUGAR CORPORTION- PROJECT #0510003-044-AC-DRAFT - PSD-FL-389

Your message

To: lpickron@ussugar.com  
Subject:

was read on 9/13/2007 1:55 PM.

## Harvey, Mary

---

**From:** Forney.Kathleen@epamail.epa.gov  
**Sent:** Thursday, September 13, 2007 1:03 PM  
**To:** Harvey, Mary  
**Cc:** Little.James@epamail.epa.gov  
**Subject:** Re: US SUGAR CORPORTION- PROJECT #0510003-044-AC-DRAFT - PSD-FL-389

Thanks  
katy

-----  
Katy R. Forney  
Air Permits Section  
EPA - Region 4  
61 Forsyth St., SW  
Atlanta, GA 30024

Phone: 404-562-9130  
Fax: 404-562-9019

"Harvey, Mary"  
<Mary.Harvey@dep  
.state.fl.us>

09/13/2007 12:23  
PM

To  
"Mr. Neil Smith, U.S. Sugar"  
<nsmith@ussugar.com>, "Mr. Peter  
Briggs, U.S. Sugar"  
<pbriggs@ussugar.com>, "Mr. David  
Buff, Golder Associates"  
<dbuff@golder.com>, "Satyal,  
Ajaya"  
<Ajaya.Satyal@dep.state.fl.us>,  
Kathleen Forney/R4/USEPA/US@EPA,  
James Little/R4/USEPA/US@EPA,  
"Mr. Dee Morse, National Park  
Service" <Dee\_Morse@nps.gov>

cc

"Koerner, Jeff"  
<Jeff.Koerner@dep.state.fl.us>,  
"Adams, Patty"  
<Patty.Adams@dep.state.fl.us>,  
"Gibson, Victoria"  
<Victoria.Gibson@dep.state.fl.us>

Subject

US SUGAR CORPORTION- PROJECT  
#0510003-044-AC-DRAFT -  
PSD-FL-389

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## Harvey, Mary

---

**From:** Adams, Patty  
**To:** Harvey, Mary  
**Sent:** Thursday, September 13, 2007 12:58 PM  
**Subject:** Read: US SUGAR CORPORTION- PROJECT #0510003-044-AC-DRAFT - PSD-FL-389

### Your message

**To:** 'Mr. Neil Smith, U.S. Sugar'; 'Mr. Peter Briggs, U.S. Sugar'; 'Mr. David Buff, Golder Associates'; Satyal, Ajaya; 'Ms. Kathleen Forney'; 'Mr. Jim Little, EPA Region 4'; 'Mr. Dee Morse, National Park Service'  
**Cc:** Koerner, Jeff; Adams, Patty; Gibson, Victoria  
**Subject:** US SUGAR CORPORTION- PROJECT #0510003-044-AC-DRAFT - PSD-FL-389  
**Sent:** 9/13/2007 12:23 PM

was read on 9/13/2007 12:58 PM.

## Harvey, Mary

---

**From:** Gibson, Victoria  
**To:** Harvey, Mary  
**Sent:** Thursday, September 13, 2007 12:24 PM  
**Subject:** Read: US SUGAR CORPORTION- PROJECT #0510003-044-AC-DRAFT - PSD-FL-389

Your message

**To:** 'Mr. Neil Smith, U.S. Sugar'; 'Mr. Peter Briggs, U.S. Sugar'; 'Mr. David Buff, Golder Associates'; Satyal, Ajaya; 'Ms. Kathleen Forney'; 'Mr. Jim Little, EPA Region 4'; 'Mr. Dee Morse, National Park Service'  
**Cc:** Koerner, Jeff; Adams, Patty; Gibson, Victoria  
**Subject:** US SUGAR CORPORTION- PROJECT #0510003-044-AC-DRAFT - PSD-FL-389  
**Sent:** 9/13/2007 12:23 PM

was read on 9/13/2007 12:24 PM.

## Harvey, Mary

---

**From:** Satyal, Ajaya  
**Sent:** Thursday, September 13, 2007 2:49 PM  
**To:** Harvey, Mary  
**Subject:** RE: US SUGAR CORPORTION- PROJECT #0510003-044-AC-DRAFT - PSD-FL-389

Above referenced documents were received.

AJ Satyal

-----Original Message-----

**From:** Harvey, Mary  
**Sent:** Thursday, September 13, 2007 12:23 PM  
**To:** 'Mr. Neil Smith, U.S. Sugar'; 'Mr. Peter Briggs, U.S. Sugar'; 'Mr. David Buff, Golder Associates'; Satyal, Ajaya; 'Ms. Kathleen Forney'; 'Mr. Jim Little, EPA Region 4'; 'Mr. Dee Morse, National Park Service'  
**Cc:** Koerner, Jeff; Adams, Patty; Gibson, Victoria  
**Subject:** US SUGAR CORPORTION- PROJECT #0510003-044-AC-DRAFT - PSD-FL-389

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Thank you,

DEP, Bureau of Air Regulation

088 Four

## Harvey, Mary

---

**From:** Buff, Dave [DBuff@GOLDER.com]  
**To:** undisclosed-recipients  
**Sent:** Thursday, September 13, 2007 10:01 PM  
**Subject:** Read: US SUGAR CORPORTION- PROJECT #0510003-044-AC-DRAFT - PSD-FL-389

Your message

To: DBuff@GOLDER.com  
Subject:

was read on 9/13/2007 10:01 PM.

## Harvey, Mary

---

**From:** Dee\_Morse@nps.gov  
**Sent:** Monday, September 17, 2007 11:55 AM  
**To:** Harvey, Mary  
**Subject:** US SUGAR CORPORTION- PROJECT #0510003-044-AC-DRAFT - PSD-FL-389

### Return Receipt

Your document: US SUGAR CORPORTION- PROJECT #0510003-044-AC-DRAFT - PSD-FL-389

was received by: Dee Morse/DENVER/NPS

at: 09/17/2007 09:54:35 AM





# Florida Department of Environmental Protection

Bob Martinez Center  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Charlie Crist  
Governor

Jeff Kottkamp  
Lt. Governor

Michael W. Sole  
Secretary

May 31, 2007

Mr. John Bunyak, Chief  
Policy, Planning & Permit Review Branch  
NPS – Air Quality Division  
P. O. Box 25287  
Denver, Colorado 80225

RE: United States Sugar Corporation  
0050009-044-AC, PSD-FL-389

Dear Mr. Bunyak:

Enclosed for your review and comment is a PSD permit application from U.S. Sugar Corporation to fire wood chips in boiler No. 7 at their facility in Clewiston, Hendry County, Florida.

Your comments may be forwarded to my attention at the letterhead address or faxed to the Bureau of Air Regulation at 850/921-9533. If you have any questions, please contact me at 850/921-9236.

Sincerely,

for

Jeffrey F. Koerner, Program Administrator  
Permitting North Section

JFK/pa

Enclosure



# Florida Department of Environmental Protection

Bob Martinez Center  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Charlie Crist  
Governor

Jeff Kottkamp  
Lt. Governor

Michael W. Sole  
Secretary

May 31, 2007

Mr. Gregg M. Worley, Chief  
Air Permits Section  
U.S. EPA, Region 4  
61 Forsyth Street  
Atlanta, Georgia 30303-8960


RE: United States Sugar Corporation  
0050009-044-AC, PSD-FL-389

Dear Mr. Worley:

Enclosed for your review and comment is a PSD permit application from U.S. Sugar Corporation to fire wood chips in boiler No. 7 at their facility in Clewiston, Hendry County, Florida.

Your comments may be forwarded to my attention at the letterhead address or faxed to the Bureau of Air Regulation at 850/921-9533. If you have any questions, please contact me at 850/921-9236.




Sincerely,

*for* 

Jeffrey F. Koerner, Program Administrator  
Permitting North Section

JFK/pa

Enclosure

		<b>GND</b>		Pieces: <b>1/1</b>
<b>FM: DEP AIR RESOURCE MGMT</b> P. Adams DIRECTOR OFFICE STE 23 111 S MAGNOLIA DR TALLAHASSEE, FL 32301 UNITED STATES Phone: 850-921-9505		<b>ORIGIN:</b> TLH Sender's ref: 37550201000 A7 AP255		POSTCODE: <b>30303</b>
<b>To: U.S. EPA REGION 4</b> MR. GREGG M. WORLEY 61 FORSYTH STREET AIR PERMITS SECTION ATLANTA, GA 30303 UNITED STATES		TEL: 404-562-9141		Day <b>01FR</b>
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Weight: 2 lbs for 1 pgs Date: 2007-05-31				
		<b>HARB 6V</b> <b>ATT</b>		
(ZL)US30303				
WAYBILL: 21814975556		(Non-Negotiable)		



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To(Company):  
 U.S. EPA Region 4  
 Air Permits Section  
 61 Forsyth Street

Atlanta, GA 30303  
 UNITED STATES

Attention To: Mr. Gregg M. Worley  
 Phone#: 404-562-9141

Sent By: P. Adams  
 Phone#: 850-921-9505

Rate Estimate: 3.08  
 Protection: Not Required  
 Description: Applications PSD-FL-390 and 89

Weight (lbs.): 2  
 Dimensions: 0 x 0 x 0

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<b>FM: DEP AIR RESOURCE MGMT</b> P. Adams DIRECTOR OFFICE STE 23 111 S MAGNOLIA DR TALLAHASSEE, FL 32301 UNITED STATES Phone: 850-921-9505		<b>ORIGIN:</b> TLH Sender's ref: 37550201000 A7 AP255		<b>30303</b> POST CODE:
<b>To: U.S. EPA REGION 4</b> MR. GREGG M. WORLEY 61 FORSYTH STREET AIR PERMITS SECTION ATLANTA, GA 30303 UNITED STATES		<b>30303</b> POST CODE:		TEL: 404-562-9141
Description: Applications PSD-FL-390 and 89		Weight: 2 lbs for 1 pcs Date: 2007-05-31		<b>01FR</b> Day
DHL standard terms and conditions apply.				
		<b>HARB 6V</b> <b>ATT</b>		
(2L)US930303				
<b>WAYBILL: 21814975556</b>		(Non-Negotiable)		



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 Waybill #: 21814975556

To(Company):  
 U.S. EPA Region 4  
 Air Permits Section  
 61 Forsyth Street  
  
 Atlanta, GA 30303  
 UNITED STATES

Attention To: Mr. Gregg M. Worley  
 Phone#: 404-562-9141

Sent By: P. Adams  
 Phone#: 850-921-9505

Rate Estimate: 3.08  
 Protection: Not Required  
 Description: Applications PSD-FL-390 and 89

Weight (lbs.): 2  
 Dimensions: 0 x 0 x 0

Ship Ref: 37550201000 A7 AP255  
 Service Level: Ground (Est.  
 delivery in 1 business day(s))

Special Svc:  
  
 Date Printed: 5/31/2007  
 Bill Shipment To: Sender  
 Bill To Acct: 778941286

DHL Signature (optional) \_\_\_\_\_ Route \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

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**Golder Associates Inc.**

6241 NW 23rd Street, Suite 500  
Gainesville, FL 32653-1500  
Telephone (352) 336-5600  
Fax (352) 336-6603



TRANSMITTAL LETTER

**To: Jeff Koerner**  
**FDEP**

**Date: May 23, 2007**  
**Project No.: 0637637-0100**

RECEIVED

MAY 24 2007

**Sent by: alane**

- Mail
- Air Freight
- Hand Carried

- UPS BUREAU OF AIR REGULATION
- Federal Express

**Per: D. Buff/P. Cobb**

Quantity	Item	Description
4	Bound Copies	Application for Air Construction Permit Boiler No. 7 Wood Chip Test Burn

**Remarks:**

**Submittal includes Application fee of \$7,500.**

**Cc.: Peter Briggs, U.S. Sugar**  
**Keith Tingberg, U.S. Sugar**