Department of
Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

October 27, 2000

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Murray T. Brinson, Vice President
United States Sugar Corporation
111 Ponce DeLeon Avenue
Clewiston, FL 33440

Re: Draft Permit No. 0510003-010-AC
Permit No. PSD-FL-272A
U.S. Sugar Clewiston Mill
Expansion of Boiler No. 4 and Refinery Operations, Revision

Dear Mr. Brinson:

Enclosed is one copy of the Department's Intent to Issue Air Construction Permit and the proposed Draft Permit to modify the operations for the U.S. Sugar Clewiston Mill located at W.C. Owens Avenue and State Road 832 in Hendry County, Florida. The Technical Evaluation and Preliminary Determination and the Public Notice of Intent to Issue Air Construction Permit are also included.

The Public Notice must be published one time only, as soon as possible, in the legal advertisement section of a newspaper of general circulation in the area affected, pursuant to the requirements of Chapter 50, Florida Statutes. Proof of publication, i.e., newspaper affidavit, must be provided to the Department's Bureau of Air Regulation office within seven days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit.

Please submit any written comments you wish to have considered concerning the Department's proposed action to Jeff Koerner, P.E., New Source Review Section at the above letterhead address. If you have any other questions, please contact Jeff at 850/414-7268.

Sincerely,

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

CHF/jfk

Enclosures

In the Matter of an
Application for Permit by:

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

Authorized Representative:
Mr. Murray T. Brinson, Vice President

Project No. 0510003-010-AC
PSD Permit No. PSD-FL-272A

U.S. Sugar Corporation
Clewiston Sugar Mill and Refinery
Hendry County

Project: Expansion of Boiler No. 4 and
Refinery Operations, Revision

INTENT TO ISSUE AIR CONSTRUCTION PERMIT

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit (copy of Draft permit attached) for the proposed project, detailed in the application specified above and the enclosed Technical Evaluation and Preliminary Determination, for the reasons stated below.

The purpose of this modification is to regain authorization to fire fuel oil containing up to 2.50% sulfur by weight in Boiler Nos. 1- 3. This authorization was lost in original Permit No. PSD-FL-272 because the Air Quality Analysis that provided the basis for issuance reflected a lower sulfur content and increased stack heights. These constraints were necessary because of modeled potential adverse impacts related to building downwash. However, the PSD permit allowed future modification to regain the higher sulfur fuel based on a revised Air Quality Analysis. The applicant has provided an Air Quality Analysis that demonstrates compliance with the Ambient Air Quality Standards and PSD increments. The analysis was based on the ISC PRIME model, which was approved by EPA Region 4 for use with this project. This non-guideline dispersion model was selected to better evaluate the downwash contributions related to the project. Also, construction was completed that raised the stacks for Boiler Nos. 1 – 3 to 213 feet in height. The Air Quality Analysis did include several constraints on boiler operation, fuel oil consumption, fuel oil sulfur content, and steam production. These constraints are included in this modification as permit conditions. This project makes no new BACT determinations.

The Department has permitting jurisdiction under 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 above actions are not exempt from permitting procedures. The Department has determined that an air construction permit is required to modify the operations as requested in the application.

The Department intends to issue this air construction permit based on the belief that reasonable assurances have been provided to indicate that operation of these emission units will not adversely impact air quality, and the emission units will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C.

Pursuant to Section 403.815, F.S., and Rule 62-110.106(7)(a)1., F.A.C., you (the applicant) are required to publish at your own expense the enclosed Public Notice of Intent to Issue Air Construction Permit. The notice shall be published one time only in the legal advertisement section of a newspaper of general circulation in the area affected. Rule 62-110.106(7)(b), F.A.C., requires that the applicant cause the notice to be published as soon as possible after notification by the Department of its intended action. For the purpose of these rules, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting 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 Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400 (Telephone: 850/488-0114; Fax 850/ 922-6979). You must provide proof of publication within seven days of publication, pursuant to Rule 62-110.106(5), F.A.C. No permitting action for which published notice is required shall be granted until proof of publication of notice is made by furnishing a uniform affidavit in substantially the form prescribed in section 50.051, F.S. to the office of the Department issuing the permit. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rules 62-110.106(9) & (11), F.A.C.

The Department will issue the final permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments and requests for public meetings concerning the proposed permit issuance action for a period of 30 (thirty) days from the date of publication of Public Notice of Intent to Issue Air Permit. Written comments and requests for public meetings should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen 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 will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department'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 how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (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; and (g) A statement of the relief sought by the petitioner, stating precisely the action 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 Department'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.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation is not available in this proceeding.

In addition to the above, a person subject to regulation has a right to apply for a variance from or waiver of the requirements of particular rules, on certain conditions, under Section 120.542 F.S. The relief provided by this state statute applies only to state rules, not statutes, and not to any federal regulatory requirements. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a person may have in relation to the action proposed in this notice of intent.

The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. The petition must specify the following information: (a) The name, address, and telephone number of the petitioner; (b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any; (c) Each rule or portion of a rule from which a variance or waiver is requested; (d) The citation to the statute underlying (implemented by) the rule identified in (c) above; (e) The type of action requested; (f) The specific facts that would justify a variance or waiver for the petitioner; (g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and (h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in Section 120.542(2) F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.

Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of the EPA and by any person under the Clean Air Act unless and until the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

Executed in Tallahassee, Florida.

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

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Intent to Issue Air Construction Permit package (including the Public Notice of Intent to Issue Air Construction Permit, Technical Evaluation and Preliminary Determination, and the Draft Permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on _____ to the persons listed:

Mr. Murray T. Brinson, U.S. Sugar*
Mr. David Buff, Golder Associates
Mr. Ron Blackburn, SD
Mr. Gregg Worley, EPA Region 4 Office
Mr. John Bunyak, NPS

Clerk Stamp

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

Martha Jane Wise (Clerk) 10/27/00 (Date)

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

DEP File No. 051003-010-AC
Permit No. PSD-FL-272A

U.S. Sugar Corporation
Clewiston Sugar Mill and Refinery
Hendry County

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit to the U.S. Sugar Corporation for the Clewiston Sugar Mill and Refinery located at W.C. Owens Avenue and State Road 832 in Hendry County, Florida. The applicant's Authorized Representative is Murray T. Brinson, Vice President of U.S. Sugar Corporation. The mailing address is 111 Ponce DeLeon Avenue, Clewiston, FL 33440.

The proposed project restores authorization to fire fuel oil containing up to 2.5% sulfur by weight. This authorization was lost in original Permit No. PSD-FL-272 because the supporting Air Quality Analysis was based on increased stack heights and a lower fuel sulfur content for Boiler Nos. 1 – 3. During the summer, the stacks for Boiler Nos. 1 – 3 were raised to 213 feet in height. A revised Air Quality Analysis was performed based on the ISC PRIME dispersion model, taller stacks, and higher fuel sulfur content. The ISC PRIME model was used to better evaluate the contributions associated with stack downwash from the refinery building. Although the ISC PRIME model is a non-guideline model, it has been proposed by EPA as a replacement for ISCST3 and was approved by EPA Region 4 for use with this project. While the revised Air Quality Analysis demonstrates compliance with the Ambient Air Quality Standards and PSD increments, it included several constraints on boiler operation, fuel oil consumption, fuel oil sulfur content, and steam production. These constraints are included as conditions in the Draft Permit. Because the original PSD permit allowed the permittee to regain use of the higher sulfur fuel, a determination of Best Available Control Technology (BACT) was not required.

An air quality impact analysis was conducted for the project. Emissions from the modified facility will not significantly contribute to or cause a violation of any state or federal ambient air quality standards. The maximum predicted PSD Class II increments of NO_2, SO_2, and PM_{10} consumed by all sources in the area, including this project, will be as follows:

PSD Class II Increment Consumed ($\mu g/m^3$)		Allowable Increment ($\mu g/m^3$)	Percent Increment Consumed
PM_{10}			
24-hour	26	31	84%
Annual	1	17	6%
SO_2			
3-hour	357	512	70%
24-hour	75	91	82%
Annual	13	20	65%
NOx			
Annual	4	25	16%

NO_2 and PM_{10} emissions from the project have no significant impact on the PSD Class I Everglades National Park. The maximum predicted PSD Class I SO_2 increments consumed in the Everglades National Park by all sources in the area, including this project, will be as follows:

PSD Class I Increment Consumed ($\mu g/m^3$)		Allowable Increment ($\mu g/m^3$)	Percent Increment Consumed
SO_2			
3-hour	20	25	80%
24-hour	3	5	60%
Annual	0.33	2	7%

The Department will issue the Final Permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments and requests for public meetings concerning the proposed permit issuance action for a period of 30 (thirty) days from the date of publication of this Public Notice of Intent to Issue Air Construction

NOTICE TO BE PUBLISHED IN THE NEWSPAPER

Permit. Written comments and requests for public meetings should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen 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 will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department'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 how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (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; and (g) A statement of the relief sought by the petitioner, stating precisely the action 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 Department'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

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Protection
Bureau of Air Regulation
Suite 4, 111 S. Magnolia Drive
Tallahassee, Florida, 32301
Telephone: 850/488-0114

Department of Environmental Protection
South Florida District Office
Suite 364, 2295 Victoria Avenue
Fort Myers, Florida 33901-3381
Telephone: 941/332-6975

The complete project file includes the application, technical evaluations, Draft Permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact Department's reviewing engineer for this project, Jeff Koerner, New Source Review Section, at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/488-0114, for additional information.

NOTICE TO BE PUBLISHED IN THE NEWSPAPER

TECHNICAL EVALUATION
AND
PRELIMINARY DETERMINATION

U.S. Sugar Corporation
Clewiston Sugar Mill and Refinery
Hendry County

Facility I.D. No. 0510003
Emissions Units 001 through 026

Boiler No. 4 and Refinery Expansion
Revision Based on ISC PRIME Modeling Analysis

Project No. 0510003-010-AC
Permit No. PSD-FL-272A

Florida Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation
New Source Review Section

October 26, 2000

1.0 APPLICATION INFORMATION

1.1 Applicant Name and Address

United States Sugar Corporation
111 Ponce DeLeon Avenue
Clewiston, FL 33440
Authorized Representative:
Murray T. Brinson, Vice President

1.2 Reviewing and Processing Schedule

- Received the PSD air pollution construction permit application on 01/06/00.
- Requested additional information on 02/04/00, 05/26/00, 06/21/00, and 10/11/00.
- Received written comments from EPA Region 4 on 02/04/00.
- Held teleconference on 06/28/00 with applicant, Department, and EPA Region 4.
- Received additional information on 05/04/00, 05/23/00, 09/11/00, and 10/19/00 (complete).

2.0 EXISTING FACILITY INFORMATION

2.1 Existing Facility Description

This facility consists of an existing sugar mill and refinery. Sugarcane is harvested from nearby fields and transported to the mill by train or truck. In the mill, sugarcane is cut into small pieces and passed through a series of presses to squeeze the juice from the cane. The cane juice undergoes clarification, separation, evaporation, and crystallization to produce raw, unrefined sugar. In the refinery, raw sugar is decolorized, concentrated, crystallized, dried, conditioned, screened, packaged, stored, and distributed as refined sugar. The fibrous byproduct remaining from the sugarcane is called bagasse and is burned as boiler fuel to provide steam and heating requirements for the mill and refinery. The primary air pollution sources in the mill are the bagasse/oil-fired Boilers Nos. 1 through 6 with wet scrubbers for particulate matter control and the bagasse/oil-fired Boiler No. 7 with an electrostatic precipitator to control particulate matter. Air pollution sources in the refinery include a fluidized bed dryer/cooler, a granular carbon regeneration furnace, conditioning silos with duct collectors, vacuum systems, sugar/starch bins, conveyors, and a packaging system.

2.2 Facility Location

This facility is located at W.C. Owens Avenue and State Road 832 in Hendry County, Florida. The UTM coordinates are: Zone 17; 506.1 km E and 2956.9 km N.

2.3 Standard Industrial Classification Codes (SIC)

Industry No. 2061, Raw Cane Sugar Processing
Industry No. 2062, Sugar Refining

2.4 Regulatory Categories

Power Plant Siting: power plant siting is not applicable to this facility.

Title III – HAP: Based on the most recent test data available for the industry, this facility is believed to be an existing major source of hazardous air pollutants.

Title IV - Acid Rain: This facility is not subject to the federal Acid Rain program.

Title V – Major Source: The facility is classified as a "major" source of air pollution with respect to Title V of the Clean Air Act because emissions of at least one regulated air pollutant, such as carbon monoxide (CO), nitrogen oxides (NOx), particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), or volatile organic compounds (VOC) exceeds 100 tons per year (TPY).

PSD Major Source: The facility is a "major facility" with respect to the Prevention of Significant Deterioration (PSD) of Air Quality program because emissions of at least one regulated pollutant are greater than 250 tons per year. Pursuant to Rule 62-212.400, F.A.C., each modification to a PSD major source requires a PSD review and determination of the Best Available Control Technology (BACT) if the resulting emissions increases are greater than the Significant Emissions Rates specified in Table 62-212.400-2, F.A.C.

NSPS Sources: The facility includes two fuel storage tanks subject only to the record keeping requirements of the federal New Source Performance Standards in 40 CFR 60, Subpart Kb. Boiler No. 7 is also subject to NSPS Subpart Db.

3.0 PROPOSED PROJECT

3.1 Project Description

In the application for Permit No. PSD-FL-272, the applicant requested a 25% increase in heat input for Boiler No. 4, operation of Boiler No. 4 throughout the calendar year, an increase in all refinery operations to full capacity (8760 hours per year), the addition of powdered sugar and starch bins, and the addition of new sugar conditioning silos. However, the modeling analysis indicated potential adverse ambient impacts related to stack downwash caused by the refinery building. To resolve the issues, the applicant submitted an Air Quality Analysis based on ISC PRIME, a non-guideline model, which requires approval by EPA. Review of the non-guideline model proved time consuming. Because of the impending sugarcane season, the applicant later submitted an alternate Air Quality Analysis based on a guideline model with a reduced fuel sulfur content for Boiler Nos. 1 - 3 and increased stack heights. This was done with the understanding that the original fuel sulfur limit (2.50% sulfur by weight) could be regained once the Air Quality Analysis based on the ISC PRIME model was approved and demonstrated compliance with the Ambient Air Quality Standards and the PSD increments. Permit No. PSD-FL-272 was issued accordingly and established emissions standards based on the Best Available Control Technologies (BACT) for CO, NOx, PM, PM_{10}, SAM, SO_2, and VOC.

For the current project, the applicant submitted a request to regain the use of fuel oil for Boiler Nos. 1 - 3 that contains no more than 2.50% sulfur by weight. The supporting Air Quality Analysis was based on the ISC PRIME model, taller stacks for Boiler Nos. 1 - 3, and the higher sulfur fuel oil. EPA Region 4 approved the use of the ISC PRIME model for this project. Also, the stacks for Boiler Nos. 1 – 3 were raised during the summer to 213 feet in height. The Air Quality Analysis demonstrates compliance with the Ambient Air Quality Standards and the PSD increments. However, several constraints on boiler operation, fuel oil consumption, fuel oil sulfur content, and steam production were imposed for the modeling analysis.

3.2 Project Emissions

Provisions for making these modifications were provided for in Permit No. PSD-FL-272. Therefore, the project does not result in any net emissions increases.

4.0 RULE APPLICABILITY

4.1 PSD Review

The existing facility is considered a PSD major source and is located in Hendry County, an area that is currently in attainment, or designated as unclassifiable, for all air pollutants subject to a National Ambient Air Quality Standard (AAQS). The proposed project will emit pollutants exceeding the Significant Emission Rates defined in Table 212.400-1, F.A.C. Therefore, the project is subject to a review for the Prevention of Significant Deterioration of Air Quality in accordance with Rule 62-212.400, F.A.C.

The PSD review consists of two parts. The first part requires the Department to establish the Best Available Control Technology (BACT) for each significant pollutant. The second part requires an Air Quality Analysis consisting of the following: an air dispersion modeling analysis to estimate the resulting ambient air pollutant concentrations; a comparison of modeled concentrations from the project with National Ambient Air Quality Standards and PSD Increments; an analysis of the air quality impacts from proposed project upon soils, vegetation, wildlife, and visibility; and an evaluation of the air quality impacts resulting from associated commercial, residential, and industrial growth related to the proposed project.

Previously issued Permit No. PSD-FL-272 established emissions standards based on the Best Available Control Technologies (BACT) for CO, NOx, PM, PM_{10}, SAM, SO_2, and VOC. Because this permit contemplated the applicant regaining the authorization to fire the higher sulfur fuel, this new project does not result in a net increase in emissions. Therefore, no new BACT determinations were necessary. Only issues regarding the revised Air Quality Analysis and constraints used in the modeling were reviewed for this modification.

4.2 State Regulations

This project is subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The Florida Statutes authorize the Department of Environmental Protection to establish rules and regulations regarding air quality as part of the Florida Administrative Code (F.A.C.). This project is subject to the following state rules and regulations of the Florida Administrative Code.

Chapter 62-4	Permitting Requirements
Chapter 62-204	Ambient Air Quality Protection and Standards, PSD Increments, and Federal Regulations Adopted by Reference
Chapter 62-210	Required Permits, Public Notice and Comments, Reports, Stack Height Policy, Circumvention, Excess Emissions, Forms and Instructions,
Chapter 62-212	Preconstruction Review, PSD Requirements, and BACT Determinations
Chapter 62-213	Operation Permits for Major Sources of Air Pollution
Chapter 62-296	Emission Limiting Standards (including general emission limiting requirements as well as standards for carbonaceous fuel burning equipment.)
Chapter 62-297	Test Requirements, Test Methods, Supplementary Test Procedures, Capture Efficiency Test Procedures, Continuous Emissions Monitoring Specifications, and Alternate Sampling Procedures

4.3 Federal Regulations

This project is also subject to the applicable federal provisions regarding air quality as established by the EPA in the Code of Federal Regulations (CFR) and summarized below.

40 CFR 52.21	Prevention of Significant Deterioration
40 CFR 52.166	Prevention of Significant Deterioration
40 CFR 60	NSPS Subpart Kb – Volatile Organic Liquid Storage Vessels, Including Petroleum Liquid Storage Vessels, for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984 (Subject only to the minimal record keeping requirements regarding tank volume and fuel stored.)
40 CFR 60	Subpart A, General Provisions for NSPS Sources

5.0 AIR QUALITY IMPACT ANALYSIS

5.1 Introduction

The proposed project will increase PM_{10}, SO_2, NOx, CO, and VOC emissions at levels in excess of PSD significant amounts. PM_{10}, SO_2, and NOx are criteria pollutants and have national and state ambient air quality standards (AAQS), PSD increments, and significant impact levels defined for them. CO is a criteria pollutant and has only AAQS and significant impact levels defined for it. Potential emissions increases for VOC are above the 100 TPY ambient impact analysis threshold for the pollutant ozone. The applicant presented the potential VOC emissions increases to the Department, and discussed options available to predict potential impacts associated with the emissions and formation of ozone, since no stationary point source models are available and approved for use in predicting ozone impacts. Based on the available information, the Department has determined that the use of a regional model that incorporates the complex chemical mechanisms for predicting ozone formation is not applicable to this project.

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

- An analysis of existing air quality for SO_2, PM_{10}, CO, and VOC;
- A significant impact analysis for SO_2, PM_{10}, NO_2, CO, and VOC;
- A PSD increment analysis for SO_2, PM_{10}, and NO_2;
- An Ambient Air Quality Standards (AAQS) analysis for PM_{10}, SO_2, NO_2, and CO;
- An analysis of impacts on soils, vegetation, and visibility and of growth-related air quality modeling impacts.

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. Good Engineering Practice (GEP) stack height means the greater of: (1) 65 m (213 ft) or (2) the maximum nearby building height plus 1.5 times the building height or width, whichever is less. The stacks for Boiler Nos. 1 – 3 were raised to 65 m (213 ft). These stacks will not exceed the GEP stack height regulations. However, these stacks will still be less than the corresponding GEP stack heights; therefore, the potential for building downwash to occur was considered in the modeling analysis for these stacks.

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. However, the following EPA-directed stack height language is included: "In approving this permit, 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." A discussion of the required analyses follows.

5.2 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.

If preconstruction ambient monitoring is exempted, determination of background concentrations for PSD significant pollutants with established AAQS may still be necessary for use in any required AAQS analysis. These concentrations may be established from the required preconstruction ambient air quality monitoring analysis or from existing representative monitoring data. These background ambient air quality concentrations are added to pollutant impacts predicted by modeling and represent the air quality impacts of sources not included in the modeling. No de minimis ambient concentration is provided for ozone. Instead the net emissions increase of VOC is compared to a de minimis monitoring emission rate of 100 tons per year.

The table below shows maximum project air quality impacts for comparison to these de minimis levels.

MAXIMUM PROJECT AIR QUALITY IMPACTS FOR COMPARISON TO THE DE MINIMIS LEVELS

Pollutant	Averaging Time	Maximum Predicted Impact ($\mu g/m^3$)	Impact Greater Than De Minimis (Yes/No)	De Minimis Level ($\mu g/m^3$)
SO_2	24-hr	86	Yes	13
PM_{10}	24-hr	31	Yes	10
CO	8-hr	3,378	Yes	575
NO_2	Annual	2.1	No	14
VOC	Annual Emission Rate	700 TPY	Yes	100 TPY

As shown in the table, NO_2 emissions are predicted to be less than the de minimis levels; therefore, preconstruction monitoring is not required for NO_2. However, SO_2, PM_{10}, CO, and VOC impacts from the project are predicted to be greater than the de minimis levels; therefore, the applicant is not exempt from preconstruction monitoring for these pollutants. The applicant may instead satisfy the preconstruction monitoring requirement using previously existing representative data. Previously existing representative monitoring data does exist from PM_{10}, SO_2, CO and ozone monitors either in the local Clewiston area or the urbanized West Palm Beach area to the east of the project. These data are appropriate for fulfilling the monitoring requirement for these pollutants, and to establish background concentrations for use in the PM_{10}, SO_2 and CO AAQS analyses. The background concentrations for these pollutants are shown in the table below. In addition, even though preconstruction monitoring was not required for NO_2, a background concentration was required for use in the AAQS analysis for NO_2.

BACKGROUND CONCENTRATIONS FOR USE IN AAQS ANALYSES

Pollutant	Averaging Time	Background Concentration ($\mu g/m^3$)
PM10	Annual	23
	24-hour	39
SO2	Annual	5
	24-hour	13
	3-hour	47
CO	8-hour	3,450
	1-hour	5,780
NO2	Annual	23

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

The applicant performed the required air dispersion modeling for compliance with the ambient air quality standards and PSD increments. However, the initial modeling performed with the EPA-approved Industrial Source Complex Short Term (ISCST3) model showed potential problems for SO_2 and PM_{10}. The applicant indicated that this was a result of deficiencies in the building downwash algorithm in the currently EPA-approved ISCST3 model. Therefore, the applicant requested the use of the ISC-PRIME model for predicting the air quality impacts of this project. This model better characterizes and defines building downwash and incorporates into the ISCST3 model the efforts of a program called the Plume RIse Model Enhancements (PRIME). ISC-PRIME has recently been proposed by EPA in the April 21, 2000 Federal Register as a replacement for the ISCST3 model. ISC-PRIME has yet to be promulgated for use, but is scheduled to be promulgated sometime next year at the end of the required comment period. However, EPA can approve the model for use on a case-by-case basis, and has approved ISC-PRIME for use in evaluating the air quality impacts of this particular project.

The ISC-PRIME model determines ground-level concentrations of inert gases or small particles emitted into the atmosphere by point, area, and volume sources. The model incorporates elements for plume rise, transport by the mean wind, Gaussian dispersion, and pollutant removal mechanisms such as deposition. The ISC-PRIME model allows for the separation of sources, building wake downwash, and various other input and output features. 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. Direction-specific downwash parameters were used for all sources for which downwash was considered. The stacks associated with this project will not exceed the good engineering practice (GEP) stack height criteria.

Meteorological data used in the ISC-PRIME model consisted of a concurrent 5-year period of hourly surface weather observations and twice-daily upper air soundings from the National Weather Service (NWS) station at West Palm Beach, Florida. The 5-year period of meteorological data was from 1987 through 1991. This NWS station was selected for use in the study because it is the closest primary weather station to the study area and is most representative of the project site. The surface observations included wind direction, wind speed, temperature, cloud cover, and cloud ceiling.

Because five years of data are used in ISC-PRIME, 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.

ISC-PRIME was used to determine the predicted impacts of all area sources, including the project, in both the PSD Class II area in the vicinity of the facility and the PSD Class I Everglades National Park (ENP) 100 km to the south. In addition the California Puff (CALPUFF) long-range transport model was used to determine predicted maximum impacts from the project on the ENP. CALPUFF is a Lagrangian puff model that is recommended by EPA and the National Park Service for predicting the pollutant impacts at receptor distances beyond 50 km. For this project, CALPUFF was used with the South Florida CALMET wind field for the year 1990.

5.4 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 500 receptors were placed along the facility's restricted property line and out to 75 km from the facility, which is located in a PSD Class II area. Modeling refinements were done, as needed, by using a polar receptor grid with a maximum spacing of 100 m along each radial and an angular spacing between radials of one or two degrees. Fifty-one 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 the vicinity of the facility or in the Class I areas. 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. The radius of significant impact, if any, for each pollutant and applicable pollutant averaging time is also shown in the tables below.

MAXIMUM PROJECT AIR QUALITY IMPACTS FOR COMPARISON TO THE PSD CLASS II SIGNIFICANT IMPACT LEVELS IN THE VICINITY OF THE FACILITY

Pollutant	Averaging Time	Maximum Predicted Impact ($\mu g/m^3$)	Significant Impact Level ($\mu g/m^3$)	Significant Impact? (Yes/No)	Radius of Significant Impact (km)
SO_2	Annual	7	1	Yes	35
	24-hr	86	5	Yes	35
	3-hr	370	25	Yes	75
PM_{10}	Annual	3	1	Yes	12
	24-hr	31	5	Yes	12
CO	8-hr	3,378	500	Yes	20
	1-hr	7,545	2,000	Yes	20
NO_2	Annual	2	1	Yes	4

MAXIMUM PROJECT IMPACTS IN THE ENP FOR COMPARISON TO THE PSD CLASS I SIGNIFICANT IMPACT LEVELS

Pollutant	Averaging Time	Maximum Predicted Impact ($\mu g/m^3$)	Significant Impact Level ($\mu g/m^3$)	Significant Impact? (Yes/No)
SO_2	Annual	0.006	0.1	No
	24-hr	0.4	0.2	Yes
	3-hr	1.9	1.0	Yes
PM_{10}	Annual	0.003	0.2	No
	24-hr	0.2	0.3	No
NO_2	Annual	0.003	0.1	No

As shown in the tables the maximum predicted air quality impacts due to SO_2, PM_{10}, NO_2, and CO emissions from the proposed project are greater than the PSD significant impact levels in the vicinity of the facility. Only SO_2 emissions are greater than the PSD Class I impact levels for the ENP. Therefore, the applicant was required to do full impact SO_2, PM_{10}, NO_2, and CO modeling in the vicinity of the facility, within the applicable significant impact area, to determine the impacts of the project along with all other sources in the vicinity of the facility. The significant impact area is based upon the predicted radius of significant impact. The applicant was also required to do an SO_2 PSD Class I increment analysis in the ENP.

5.5 Procedure For Performing PSD Increments And AAQS Analyses

For the PSD Class II increment and AAQS analyses, receptor grids normally are based on the size of the significant impact area for each pollutant. As shown in the previous section, the sizes of the significant impact areas for the required SO_2, PM_{10}, NO_2, and CO analyses were: 35 km (annual and 24-hour) and 75 km (3-hour); 12 km (annual and 24-hour); 4 km (annual); and 20 km (8-hour and 1-hour), respectively.

5.6 PSD Increment Analysis

The PSD increment represents the amount that new sources in an area may increase ambient ground level concentrations of a pollutant. The results of the required PSD Class II and I increment analyses presented in the table below show that all of the maximum predicted impacts are less than the allowable Class II increments.

PSD CLASS II INCREMENT ANALYSIS

Pollutant	Averaging Time	Maximum Predicted Impact ($\mu g/m^3$)	Impact Greater Than Allowable Increment? (Yes/No)	Allowable Increment ($\mu g/m^3$)
PM_{10}	Annual	1	No	17
	24-hr	26	No	31
SO_2	Annual	13	No	20
	24-hr	75	No	91
	3-hr	357	No	512
NO_2	Annual	4	No	25

PSD CLASS I INCREMENT ANALYSIS - ENP

Pollutant	Averaging Time	Maximum Predicted Impact ($\mu g/m^3$)	Impact Greater Than Allowable Increment? (Yes/No)	Allowable Increment ($\mu g/m^3$)
SO2	Annual	0.33	No	2
	24-hr	3	No	5
	3-hr	20	No	25

5.7 AAQS Analysis

For pollutants subject to an AAQS review, the total impact on ambient air quality is obtained by adding a "background" concentration to the maximum-modeled concentration. This "background" concentration takes into account all sources of a particular pollutant that are not explicitly modeled. The results of the AAQS analysis are summarized in the table below. As shown in this table, emissions from the proposed facility are not expected to cause or significantly contribute to a violation of any AAQS.

AMBIENT AIR QUALITY IMPACTS

Pollutant	Averaging Time	Major Sources Impact ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Total Impact ($\mu g/m^3$)	Total Impact Greater Than AAQS	Florida AAQS ($\mu g/m^3$)
PM10	Annual	5	23	28	No	50
	24-hr	39	39	78	No	150
SO2	Annual	29	5	34	No	60
	24-hr	223	13	236	No	260
	3-hr	526	47	573	No	1,300
CO	8-hr	3,313	3,450	6,763	No	10,000
	1-hr	8,342	5,780	14,122	No	40,000
NO2	Annual	8	23	31	No	100

5.8 Additional Impacts Analysis

Impacts On Soils, Vegetation, Wildlife, and Visibility

The maximum ground-level concentrations predicted to occur due to PM10, SO2, NOx and CO emissions as a result of the proposed project, including all other nearby sources, will be below the associated AAQS. The AAQS are designed to protect both the public health and welfare. As such, this project is not expected to have a harmful impact on soils and vegetation in the PSD Class II area. An air quality related values (AQRV) analysis was done by the applicant for the Class I area. No significant impacts on this area are expected. A regional haze analysis using the long range transport model CALPUFF was done for the ENP Class I area. This analysis showed no significant impact on visibility in this area.

Growth-Related Air Quality Impacts

There will be no growth associated with this project because no new equipment is being installed.

6.0 CONCLUSION

Based on a review of the complete PSD application, reasonable assurances provided by the applicant, the previously issued BACT determinations, and the conditions specified in the Draft Permit, the Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations. Jeff Koerner is the project engineer responsible for reviewing the application and drafting the permit. Cleve Holladay is the project meteorologist responsible for reviewing and validating the Air Quality

(DRAFT)

PERMITTEE

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

Authorized Representative:
Murray T. Brinson, Vice President

Permit No.	0510003-010-AC
PSD No.	PSD-FL-272A
Project:	Boiler No 4 and Refinery Expansion, Revised
SIC No.	2061, 2062
Expires:	(DRAFT)

PROJECT AND LOCATION

This permit authorizes the United States Sugar Corporation to modify operations at its existing sugar mill and refinery. Specifically, the permit allows increased operation of Boiler No. 4 and the existing refinery operation, the installation of three new sugar conditioning silos, and the installation of additional powdered sugar/starch silos. The revised permit includes new conditions that reflect the air quality analysis based on the ISC PRIME model.

This facility is located at W.C. Owens Avenue and State Road 832 in Hendry County, Florida. The UTM coordinates are Zone 17, 506.1 km E, and 2956.9 km N.

STATEMENT OF BASIS

This air construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and the Florida Administrative Code (F.A.C.) Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297. The above named permittee is authorized to construct and modify the emissions units 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).

APPENDICES

The attached appendices are a part of this permit:

Appendix A	Terminology
Appendix BD	Summary of Previous BACT Determination
Appendix GC	General Permit Conditions
Appendix GCP	Good Combustion Practices Plan

(DRAFT)

Howard L. Rhodes, Director
Division of Air Resources Management

Date: _____

FACILITY DESCRIPTION

This facility consists of an existing sugar mill and refinery. Sugarcane is harvested from nearby fields and transported to the mill by train or truck. In the mill, sugarcane is cut into small pieces and passed through a series of presses to squeeze the juice from the cane. The cane juice undergoes clarification, separation, evaporation, and crystallization to produce raw, unrefined sugar. In the refinery, raw sugar is decolorized, concentrated, crystallized, dried, conditioned, screened, packaged, stored, and distributed as refined sugar. The fibrous byproduct remaining from the sugarcane is called bagasse and is burned as boiler fuel to provide steam and heating requirements for the mill and refinery. The primary air pollution sources in the mill are the bagasse/oil-fired Boilers Nos. 1 through 4 with wet scrubbers for particulate matter control and the bagasse/oil-fired Boiler No. 7 with an electrostatic precipitator to control particulate matter. Air pollution sources in the refinery include a fluidized bed dryer/cooler, a granular carbon regeneration furnace, conditioning silos with duct collectors, vacuum systems, sugar/starch bins, conveyors, and a packaging system.

PROJECT DETAILS

EMISSIONS UNIT NO.	EMISSIONS UNIT DESCRIPTION
001	Bagasse Boiler No. 1 with wet scrubber (255,000 pounds of steam per hour)
002	Bagasse Boiler No. 2 with wet scrubber (230,000 pounds of steam per hour)
003	Bagasse Boiler No. 3 with wet scrubber (130,000 pounds of steam per hour)
004	Bagasse Boiler No. 5 (inactive, permanently shut down)
005	Bagasse Boiler No. 6 (inactive, permanently shut down)
009	Bagasse Boiler No. 4 with wet scrubber (300,000 pounds of steam per hour)
014	Bagasse Boiler No. 7 with electrostatic precipitator (385,000 pounds of steam per hour)
015	VHP sugar dryer with baghouse
016	White sugar dryer with baghouse
017	Granular carbon regenerative furnace with afterburner and wet scrubber
018	Three vacuum pickup systems, each controlled with a baghouse
019	Six conditioning silos, each controlled with a baghouse
020	Screening/distribution and sugar/starch bins each controlled with baghouses
021	Alcohol emissions
022	Packaging dust collector
023	Two propane-fired sock dryers
024	NSPS fuel storage tank for Boiler No. 4
025	Common fuel storage tank for Boiler Nos. 1 - 3
026	NSPS fuel storage tank for Boiler No. 7

Project No. 0510003-009-AC (Permit No. PSD-FL-272): For the project, net emissions increases of CO, NOx, PM/PM_{10}, SAM, SO_2, and VOC were significant and the permit established emissions standards for these pollutants based on the Best Available Control Technology. Permit issuance was based on an Air Quality Analysis with ISCST3 modeling, increased stack heights for Boiler Nos. 1 – 3, and lower sulfur contents for Boiler Nos. 1 – 3. However, the permit allowed the facility to regain the higher sulfur content oil for use in Boiler Nos. 1 – 3 if a revised Air Quality Analysis demonstrated compliance with the AAQS and PSD increments.

Project No. 0510003-010-AC (Permit No. PSD-FL-272A): The permittee raised the stacks of Boiler Nos. 1-3 to 213 feet. A revised Air Quality Analysis based on the ISC PRIME model resolved the adverse ambient

impacts and demonstrated compliance with the AAQS and PSD increments. This model was able to evaluate ambient impact contributions resulting from downwash from each stack. EPA Region 4 approved the non-guideline model for use with this project. Although Boiler Nos. 1 - 3 regain the use of fuel oil containing no more than 2.5% sulfur by weight, additional constraints were used in the analysis, which are included as conditions in this permit.

REGULATORY CLASSIFICATION

HAPs: Based on the most recent information for bagasse-fired boilers, this facility is a major source of hazardous air pollutants (Title III).

Acid Rain: This facility is not subject to the acid rain provisions of the Clean Air Act (Title IV).

Title V Major Source: This facility is a Title V major source of air pollution because potential emissions of at least one regulated criteria air pollutant, such as carbon monoxide (CO), nitrogen oxides (NOx), particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), or volatile organic compounds (VOC) exceeds 100 tons per year.

PSD Major Source: This facility is a PSD major source of air pollution because potential emissions are greater than 250 tons per year for at least one criteria pollutant, in accordance with Rule 62-212.400, Prevention of Significant Deterioration (PSD) of Air Quality. Therefore, each modification to this facility resulting in emissions increases greater than the Significant Emissions Rates specified in Table 62-212.400-2 also requires a PSD review and Best Available Control Technology (BACT) determination.

NSPS Sources: Fuel oil storage tanks (Emissions Unit Nos. 024 and 026) are subject to regulation under the New Source Performance Standards of 40 CFR 60, Subpart Kb.

RELEVANT DOCUMENTS

The documents listed below are the basis of the permit and are on file with the Department. They are specifically related to this permitting action.

- EPA Region 4's approval on November 4, 1999 of the ISC Prime model for use with this project.
- Initial permit application received June 25, 1999, associated correspondence to make complete, and final permit issued on November 22, 1999.
- Permit application for revision received January 6, 2000 and associated correspondence to make complete.

1. Permitting Authorities: All documents related to applications for permits to construct or modify emissions units requiring a PSD applicability review and determination of BACT shall be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection at Mail Station #5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, phone number 850/488-0114. Minor modifications and Title V operating permit applications shall be submitted to the South District Office, Florida Department of Environmental Protection at 2295 Victoria Avenue, Suite 364 in Fort Myers, Florida 33902-2549 and phone number (941) 332-6975.

2. Compliance Authorities: All documents related to reports, tests, and notifications shall be submitted to the South District Office, Florida Department of Environmental Protection at 2295 Victoria Avenue, Suite 364 in Fort Myers, Florida 33902-2549 and phone number (941) 332-6975.

3. Terminology: The terms used in this permit have specific meanings as defined in the applicable chapters of the Florida Administrative Code. *Appendix A* lists frequently used abbreviations and explains the format used to cite rules and regulations referenced in this permit.

4. General Conditions: The permittee is subject to and shall operate under the attached General Conditions listed in *Appendix GC* of this permit. General conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]

5. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of Chapter 403, F.S. and Florida Administrative Code Chapters 62-4, 62-110, 62-204, 62-210, 62-212, 62-213, 62-296, 62-297 and the Code of Federal Regulations Title 40, Part 60, adopted by reference in the Florida Administrative Code (F.A.C.). The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]

6. New or Additional Conditions: Pursuant to Rule 62-4.080, F.A.C., for good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

7. Expiration: For good cause, the permittee may request that this construction permit be extended. Such a request shall be submitted at least 60 days before the expiration of the permit to the Department's Bureau of Air Regulation. [Rules 62-210.300(1), 62-4.080, and 62-4.210, F.A.C.]

8. Modifications: No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit must be obtained prior to the beginning of construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

9. Operation Permit Required: This permit authorizes modification of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V operation permit is required for regular operation of the permitted emissions unit. In accordance with Chapter 62-213, F.A.C. the permittee shall apply for a Title V operation permit on the appropriate application form with compliance test results and such additional information as the Department may by law require. The application shall be submitted to the appropriate Permitting and Compliance Authorities. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

This portion of the permit addresses the following emissions unit.

EU No.	Emissions Unit Description
009	Boiler No. 4: A traveling grate boiler manufactured by Foster Wheeler capable of producing a maximum of 300,000 pounds of steam per hour at 750° F and 600 psig. The unit has two burners with two oil guns each and the following restricted maximum heat inputs: *Bagasse Firing*: 633 mmBTU per hour (This is equivalent to producing 300,000 pounds of steam per hour when firing 88 tons of wet bagasse per hour, assuming a heat content of 3600 BTU per pound of wet bagasse. Typically wet bagasse contains 50-55% moisture and less than 0.1% sulfur by weight.) *Bagasse With Maximum Oil Firing*: 530 mmBTU per hour (This is 225 mmBTU per hour from firing a maximum of 1500 gallons of oil per hour and 305 mmBTU per hour from firing 42.4 tons of wet bagasse to produce 300,000 pounds of steam per hour.) Particulate matter emissions are controlled by a Type D, Size 200 Joy Turbulaire wet impingement scrubber. A nominal 250 to 500 gallons per minute of water is supplied to the spray nozzles at approximately 50 psig. The differential pressure drop across the wet scrubber is maintained between 8 and 11 inches of water column. Exhaust gases exit the wet scrubber at an average flow rate of 281,000 ACFM at 160° F. The stack is 150 feet high (GEP stack height is 225 feet high).

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

APPLICABLE STANDARDS AND REGULATIONS

1. BACT Determinations: Pursuant to Rule 62-212.400, F.A.C., this emissions unit is subject to Best Available Control Technology (BACT) determinations for carbon monoxide (CO), nitrogen oxides (NOx), particulate matter (PM/PM10), sulfuric acid mist (SAM), sulfur dioxide (SO_2), and volatile organic compounds (VOC). In addition, this emissions unit is subject to Rule 62-296.410, F.A.C. which regulates visible emissions and particulate matter emissions from carbonaceous fuel fired equipment.

PERFORMANCE RESTRICTIONS

2. Hours of Operation: The hours of operation for this unit are not restricted (8,760 hours per year). [Rule 62-210.200, F.A.C., Definitions - PTE]

3. Permitted Capacity: Steam production, heat input, and bagasse firing shall not exceed the following limits.

Averaging Period	Steam Pressure [a]	Steam Temperature [a]	Steam Production (lb / hour)	Heat Input [b] (mmBTU / hour)	Wet Bagasse Firing [b] (tons / hour)
1-hour	600 psig	750° F	300,000	633	88
24-hour	600 psig	750° F	285,000	600	83

[a] Steam temperature and pressure are design parameters. Changes to these parameters resulting from boiler aging or modification shall be reported to the Department and may require a permit modification.

[b] Based on: 55% thermal efficiency of the boiler when firing bagasse; wet bagasse containing 55% moisture and a heat content of 3600 BTU/lb; and 1160 BTU per pound of steam at 600 psig and 750° F with standard feed water conditions of 900 psig and 250° F.

No more than 400,000 tons of bagasse shall be fired during any consecutive 12 months. In addition, the total heat input to this boiler shall not exceed 2,880,000 mmBTU during any consecutive 12 months. Compliance with the steam limits shall be determined by continuous monitoring of the steam temperature, steam pressure, and steam production rate. The heat input and bagasse consumption limits shall be calculated and recorded in accordance with the record keeping requirements of this permit. [Rule 62-210.200, F.A.C., Definitions - PTE]

4. Operating Procedures: The Best Available Control Technology (BACT) determinations established by this permit rely on "good operating practices" to minimize emissions. Therefore, all boiler operators and supervisors shall be properly trained to operate and maintain the bagasse boiler and pollution control equipment in accordance with the guidelines and procedures established by each equipment manufacturer. The training shall include all "Good Combustion Practices" including those specified in *Appendix GCP* of this permit. [Applicant Request; Rule 62-4.070(3); Rule 62-212.400 (BACT), F.A.C.]

5. Startup/Shutdown: During startup and shutdown of this boiler, the operators shall take all reasonable precautions to prevent and minimize the magnitude and duration of any excess emissions. *Appendix GCP* identifies the Good Combustion Practices for this boiler including the permittee's current startup and shutdown procedure. [Rule 62-210.700(1), F.A.C.]

6. Fuel Oil: Any fuel oil fired in Boiler No. 4 shall be No. 6 fuel oil (or a superior grade) containing no more than 0.70% sulfur by weight from the dedicated storage tank. The sulfur content of the fuel shall be determined by ASTM Methods D-129, D-1552, D-2622, D-4294, or equivalent methods approved by the Department. Boiler No. 4 shall fire no more than 1500 gallons in any hour and no more than 500,000 gallons in any consecutive 12-month period. The permittee shall install, calibrate, operate, and maintain an individual fuel oil flow meter with integrator. Compliance with these limits shall be determined by the monitoring and record keeping requirements of this permit. [Applicant Request, Rule 62-210.200 (Definitions - PTE) and Rule 62-212.400 (BACT), F.A.C.]

7. Common Conditions: See Section III.B., "Common Conditions for Boiler Nos. 1 - 7" for other performance restrictions.

CONTROL EQUIPMENT AND TECHNIQUES

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

   a. A **manometer** (or equivalent) shall be installed to measure the scrubber pressure drop in inches of water column. The pressure drop across the scrubber shall be maintained between 8 and 11 inches of water column.

   b. A **pressure gage** shall be installed to monitor the water supply pressure to the scrubber nozzles. This pressure shall be maintained between 40 and 55 psi.

   c. A **flow meter** shall be installed to measure the water flow rate to the scrubber spray nozzles. This flow rate shall be maintained above 375 gallons per minute, based on a 3-hour block average.

   The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations. The permittee shall read and record each scrubber parameter once

normal operations have been established after startup and at least once every 3 hours. Should any monitored parameter fall outside the specified operating range, the permittee shall investigate the cause and take corrective action to regain operation within the specified range. In addition, the permittee shall begin reading and recording all monitored parameters at 30-minute intervals until successive readings indicate operation within the specified range. The permittee may elect to install an automated recorder to satisfy the recording requirements. The permittee shall record any problems with operation of the wet scrubber and corrective actions taken in the Daily Operational Records required by this permit. Operation outside of the specified operating range for any monitored parameter is not a violation of this permit, in and of itself. However, continued operation outside of the specified operating range for any monitored parameter without corrective action may be considered circumvention of the air pollution control equipment. [Applicant Request; Rule 62-4.070(3); Rule 62-212.400 (BACT), F.A.C.]

9. Good Combustion Practices: The boiler operators shall use the Good Combustion Practices (GCPs) defined in *Appendix GCP* to minimize emissions of CO, NOx, PM/PM10 and VOC from this boiler. As a critical part of the GCPs, the permittee shall install, calibrate, operate, and maintain process monitors to indicate the oxygen and carbon monoxide content of the exhaust flue gas in the boiler furnace within 120 days after issuance of this final permit. Readouts of these process monitors shall be provided in the boiler control room. It is noted that the monitored flue gas carbon monoxide content is for the purpose of determining efficient combustion and may not be representative of the actual CO emissions from the stack.

   In addition to the initial CO compliance testing required by this permit, the permittee shall conduct CO testing in accordance with EPA Method 10 for at least 12 additional 1-hour runs. This testing shall be conducted when the boiler is firing only bagasse and the boiler may be operated below 90% of permitted capacity. The permittee shall provide a 15-day advance notice of the proposed test schedule. During each run, the operators shall observe and record the CO and O_2 contents of the exhaust flue gas from the process monitors at 5-minute intervals. For each run, the operators shall monitor and record the hourly steam production rate, steam temperature, and steam pressure and calculate the bagasse consumption rate, and heat input. These additional tests shall be completed within 180 days after issuance of this final permit. A complete report summarizing the test methods, recorded parameters, boiler operation and adjustments, problems during testing, and final results shall be submitted to the Permitting and Compliance Authorities within 60 days of completing the required testing. The report shall discuss the relationship between flue gas oxygen content, flue gas carbon monoxide content, and combustion efficiency. The report shall also contain a recommendation by the permittee of an acceptable minimum flue gas oxygen content and a maximum carbon monoxide content that represents adherence to good combustion practices. Based on the test results and recommendation, the Department shall revise this condition and *Appendix GCP* to reflect additional good combustion practices and appropriate monitoring. The Department shall revise *Appendix GCP* as a minor permit amendment for this initial request. Subsequent changes to the good combustion practices shall be processed as minor permit modifications including a Public Notice. [Applicant Request; Rule 62-4.070(3); Rule 62-212.400 (BACT), F.A.C.]

EMISSION LIMITING STANDARDS

10. CO Standard: Carbon monoxide emissions shall not exceed 6.5 pounds per mmBTU of total heat input based on a 3-hour test average as determined by EPA Method 10. Emissions performance testing for CO and NOx shall be conducted concurrently. [Applicant Request; Rule 62-212.400 (BACT), F.A.C.; 40 CFR 60, Appendix A]

11. NOx Standard: Nitrogen oxide emissions shall not exceed 0.20 pounds per mmBTU of heat input from bagasse firing based on a 3-hour test average as determined by EPA Method 7 or 7E. Emissions performance testing for CO and NOx shall be conducted concurrently. [Rule 62-212.400 (BACT), F.A.C.; 40 CFR 60, Appendix A]

12. PM/PM_{10}: Particulate matter emissions shall not exceed 0.15 pounds per mmBTU of heat input from bagasse firing nor 0.10 pounds per mmBTU of heat input from oil firing based on a 3-run test average as determined by EPA Method 5. Compliance when firing both fuels shall be determined by prorating the emissions standards based on the heat input from each fuel. [Applicant Request; Rules 62-296.410(2)(b)2. and 62-212.400 (BACT), F.A.C.; 40 CFR 60, Appendix A]

13. Visible Emissions: Visible emissions from the boiler stack shall not exceed 20% opacity except for one, 2-minute period per hour of up to 40% opacity as determined by DEP Method 9. [Applicant Request; Rules 62-296.410(2)(b)1. and 62-212.400 (BACT), F.A.C.]

14. SO_2 Standard: Emissions of sulfur dioxide shall not exceed 0.06 pounds per mmBTU of heat input from bagasse firing based on a 3-run test average as determined by EPA Methods 6, 6C, or 8. This standard shall also serve as a surrogate for sulfuric acid mist (SAM) emissions, which are estimated to be 0.01 pounds per mmBTU of heat input from bagasse firing as determined by EPA Method 8. Emissions of SO_2 and SAM from fuel oil firing are limited by the sulfur content restrictions specified by this permit. [Applicant Request; Rule 62-212.400 (BACT), F.A.C.; 40 CFR 60, Appendix A]

15. VOC Standard: Emissions of regulated volatile organic compounds shall not exceed 0.50 pounds (as propane) per mmBTU of total heat input based on a 3-run test average as determined by EPA Method 18 and EPA Method 25A, modified to include a means of sample dilution. However, the sample shall not be diluted below the minimum detection limit for the flame ionization detector. Total VOC emissions shall be determined by EPA Method 25A and reported in terms of pounds per mmBTU as propane. EPA Method 18 shall be used to determine emissions of methane and reported in terms of pounds per mmBTU as propane. Emissions of regulated VOC shall be defined as the difference between the total VOC emissions and methane emissions reported in terms of pounds per mmBTU as propane. [Applicant Request; Rule 62-212.400 (BACT), F.A.C.; 40 CFR 60, Appendix A; and ASP No. 96-H-01]

PERFORMANCE TESTING REQUIREMENTS

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

    a. **EPA Method 5**, "Determination of Particulate Emissions from Stationary Sources".

    b. **EPA Method 6 or 6C**, "Determination of Sulfur Dioxide Emissions from Stationary Sources".

    c. **EPA Method 7 or 7E**, "Determination of Nitrogen Oxide Emissions from Stationary Sources".

    d. **EPA Method 8**, "Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions from Stationary Sources".

    e. **DEP Method 9**, "Visual Determination of the Opacity of Emissions from Stationary Sources".

    f. **EPA Method 10**, "Determination of Carbon Monoxide Emissions from Stationary Sources". All CO tests shall be conducted concurrently with NOx emissions tests.

g. **EPA Methods 18 and 25A**, "Determination of Volatile Organic Concentrations". This method may be modified to include a means of sample dilution. However, the sample shall not be diluted below the minimum detection limit for the flame ionization detector.

h. **ASME Boiler Efficiency Short Form Method**, "Boiler Thermal Efficiency Test Method". (This test shall demonstrate, in part, adherence to the maintenance provisions of the Good Combustion Practices Plan.)

During each SO_2 performance test, the permittee shall sample and analyze the bagasse fuel for sulfur content. The sulfur content shall be used to calculate the potential uncontrolled SO_2 emissions as well as the control efficiency during the test. This information shall be submitted in the test report.

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

17. Initial Tests Required: Initial compliance with the allowable emission standards specified in this permit shall be determined within 90 days after issuance of this final permit. Initial tests for each emission standard shall be conducted for CO, NOx, PM/PM10, SO_2, VOC, visible emissions, and the boiler thermal efficiency. In addition, an initial test shall be conducted for SAM to validate the emissions estimate. If initial SAM testing validates the estimated emissions, compliance for SAM shall be assumed as long as the boiler remains in compliance with the SO_2 standards. If initial SAM testing indicates higher emissions than estimated, the Department shall require additional testing. [Rule 62-297.310(7)(a)1., F.A.C.]

18. Annual Performance Tests: During each federal fiscal year (October 1st to September 30th), the permittee shall conduct annual performance tests for CO, NOx, PM, VOC, and visible emissions to demonstrate compliance with the emissions standards specified in this permit. If the initial SO_2 performance test indicates SO_2 emissions are greater than 0.03 lb/mmBTU of heat input, the permittee shall conduct an annual performance test to demonstrate compliance with the SO_2 emissions standard. If the initial boiler thermal efficiency test, indicates an efficiency of less than 50%, the permittee shall conduct an annual test. [Rules 62-212.400 (BACT), 62-4.070(3), and 62-297.310(7)(a)4., F.A.C.]

19. Tests Prior to Renewal: During the federal fiscal year (October 1st to September 30th) prior to renewal of the air operation permit, the permittee shall conduct emissions performance tests for CO, NOx, PM, SO_2, VOC, visible emissions and boiler thermal efficiency to demonstrate compliance with the emissions standards and conditions specified in this permit. If the boiler thermal efficiency test, indicates an efficiency of less than 50%, the permittee shall conduct annual tests. If maintenance and repair result in regaining a boiler thermal efficiency of 50% or more, testing may revert back to the federal fiscal year prior to renewal. [Rules 62-212.400 (BACT), 62-4.070(3), F.A.C.]

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

21. Monitoring of Test Parameters: During any required test, the permittee shall monitor and record the scrubber pressure drop, the scrubber water supply line pressure, the scrubber water flow rate, the flue gas oxygen content, and the flue gas carbon monoxide content at 15 minute intervals. The permittee shall monitor and record the steam production rate, steam temperature, steam pressure, feed water flow rate, feed

water temperature, feed water pressure, and oil flow rate and calculate and record the bagasse consumption rate and the heat input for each run. [Rule 62-297.310(5), F.A.C.]

REPORTING AND RECORD KEEPING REQUIREMENTS

22. Daily Operational Records: To demonstrate compliance with the performance requirements of this permit, the permittee shall record the following information in daily logs.

    a. **Startup and Shutdown**: The permittee shall record the time and date the boiler undergoes startup, shutdown, or malfunction. The permittee shall also log the time the boiler has achieved or regained normal operation.

    b. **Steam Parameters**: The steam temperature (psig), steam temperature (°F), and steam production rate (pounds per hour) shall be continuously recorded with a chart recorder.

    c. **Combustion Parameters**: The permittee shall record the oxygen and carbon monoxide contents of flue gas once normal operation is established after startup and at least once per hour of operation. Alternatively, the permittee may install an automated device to record these parameters.

    d. **Wet Scrubber Parameters**: The permittee shall record the following information once normal operation is established after startup and at least once every 3 hours: pressure drop across wet scrubber (inches of water column), scrubber spray nozzle pressure (psi), wet scrubber liquid flow rate (gpm). Alternatively, the permittee may install an automated device to record these parameters.

    e. **Oil Firing**: The permittee shall record the oil-firing rate (gallons) for each 3-hour block of operation. In addition, the permittee shall calculate and record the oil-firing rate (gallons) for each 24-hour block of operation. Oil firing rates may be observed and recorded by hand or automated monitoring equipment.

    f. **Oil Delivery**: For each fuel oil delivery, the permittee shall record and retain the following: the date, the gallons of fuel delivered, and a fuel oil analysis (including the heat content in mmBTU per gallon, the density in pounds per gallon, the sulfur content in percent by weight, and the name of the test method used). A certified analysis supplied by the fuel oil vendor is acceptable.

    g. **Monitoring Equipment**: In accordance with the manufacturer's recommendations, the permittee shall install, calibrate, operate, and maintain all monitoring equipment including steam flow meters, steam integrators, strip chart recorders, pressure gages, manometers, scrubber water flow meters, fuel oil flow meters, and all other monitoring devices used to demonstrate compliance with the conditions of this permit. Each device shall be calibrated at least annually. All calibrations and repairs shall be recorded as part of the Daily Operational Records.

    h. **Daily Summary**: For each day of operation, the permittee shall calculate and record the following by the end of the next workday.

    - Hours of operation for the day
    - Steam production rate: pounds per day and pounds per hour (daily average)
    - Heat input: mmBTU per day and mmBTU per hour (daily average)
    - Total oil fired for Boiler No. 4: gallons per day (as determined by data collected from the oil flow meter)

    All records shall indicate the date and time the information was recorded, and in the case of manual recordings, the name of the person who recorded the information. For data that indicates operation outside

of the specified permitted levels of the above parameters, the permittee shall record a summary of the incident and any corrective actions taken to regain proper operation, if any. [Rules 62-212.400 (BACT) and 62-4.070(3), F.A.C.]

23. Monthly Operations Summary: To demonstrate compliance with the performance requirements of this permit, the permittee shall calculate and record the following within 10 calendar days of the end of the month.

- Hours of operation for the month
- Steam production rate: pounds per month
- Heat input: mmBTU per month, mmBTU per consecutive 12 months
- Wet bagasse consumption rate: tons per month and tons per consecutive 12 months
- Total oil fired for Boiler No. 4: gallons per month and gallons per consecutive 12 months
- For any monitored parameters with missing records, the permittee shall calculate and record the data availability (in percent) for the month.

All records shall indicate the date and time the information was recorded, and in the case of manual recordings, the name of the person who recorded the information. If recorded data indicates operation outside of the specified permit limits for steam production, heat input, wet bagasse consumption, or the oil firing rates, then the permittee shall submit a written notification and summary to the Compliance Authorities within ten (10) calendar days of recording the data. [Rules 62-212.400 (BACT) and 62-4.070(3), F.A.C.]

B. EU 001, 002, 003, 004, 005, 009, and 014 - Common Conditions for Boiler Nos. 1 - 7

This portion of the permit addresses the following regulated emissions units.

EU No.	Emissions Unit Description
001	Bagasse Boiler No. 1 with wet scrubber (255,000 pounds of steam per hour)
002	Bagasse Boiler No. 2 with wet scrubber (230,000 pounds of steam per hour)
003	Bagasse Boiler No. 3 with wet scrubber (130,000 pounds of steam per hour)
004	Bagasse Boiler No. 5 (inactive, permanently shut down)
005	Bagasse Boiler No. 6 (inactive, permanently shut down)
009	Bagasse Boiler No. 4 with wet scrubber (300,000 pounds of steam per hour)
014	Bagasse Boiler No. 7 with electrostatic precipitator (385,000 pounds of steam per hour)

The PSD permit for Boiler No. 4 (PSD-FL-272A) was issued based on an Air Quality Analysis using the ISC PRIME model that contained several operational constraints on existing emissions units. These constraints are now enforceable conditions of the permit and are in addition to any limits imposed by other valid permits. Modification of these constraints would require modification of the PSD permit and a new Air Quality Analysis.

PERFORMANCE RESTRICTIONS

1. Permanent Shutdown: Boiler Nos. 5 and 6 shall remain permanently shut down and rendered incapable of operation. These units are no longer available as "standby" units. Any proposed future operation of either boiler would require a preconstruction review permit as a "new" unit. [Applicant Request, Supporting Air Quality Analysis for PSD-FL-272A]

2. Modified Stack Heights: The stacks for Boiler Nos. 1, 2, and 3 shall be maintained at a minimum of 213 feet in height. [Design, Applicant Request, Supporting Air Quality Analysis for PSD-FL-272A]

3. Crop Season: For this facility, the sugarcane crop season is defined as October through April and the off-season is defined as May through September. [Applicant Request, Supporting Air Quality Analysis for PSD-FL-272A]

4. Capacities: For each boiler, the maximum 1-hour operating capacities shall not exceed:

   a. **Boiler No. 1**: 255,000 pounds of steam per hour, 495 mmBTU per hour of total heat input, and 1500 gallons of oil per hour

   b. **Boiler No. 2**: 230,000 pounds of steam per hour, 447 mmBTU per hour of total heat input, and 1500 gallons of oil per hour

   c. **Boiler No. 3**: 130,000 pounds of steam per hour, 265 mmBTU per hour of total heat input, and 900 gallons of oil per hour

   d. **Boiler No. 4**: 300,000 pounds of steam per hour, 633 mmBTU per hour of total heat input, and 1500 gallons of oil per hour

   e. **Boiler No. 7**: 385,000 pounds of steam per hour, 812 mmBTU per hour of total heat input, and 1839 gallons of oil per hour

   {Permitting Note: No additional record keeping requirements are imposed by these conditions.}

   [Design, Supporting Air Quality Analysis for PSD-FL-272A]

5. Fuel Oil Sulfur Contents

   a. **Boiler Nos. 1 - 3, Crop Season**: From October through April of each year, any fuel oil fired in Boiler Nos. 1 - 3 shall contain no more than 2.50% sulfur by weight.

   b. **Boiler Nos. 1 - 3, Off-Season**: From May through September of each year, any fuel oil fired in Boiler Nos. 1 - 3 shall contain no more than 1.60% sulfur by weight. In April of each year, a composite sample from the common tank shall be taken and analyzed for the sulfur content. Within 5 days of obtaining the results, a report of the fuel sulfur content shall be submitted to the Compliance Authority. If the sulfur content is higher than 1.60% sulfur by weight, the permittee shall purchase additional oil to blend down to the permit limit before any fuel from the common tank is authorized for firing during the off-season. An additional composite sample shall be taken from the common tank after blending and analyzed for the fuel sulfur content. Within 5 days of obtaining the results, a report of the fuel sulfur content shall be submitted to the Compliance Authority. It is a violation of this permit to fire fuel from the common tank without filing a report with the Compliance Authority that demonstrates compliance with the lower fuel sulfur limit. Thereafter, only fuel oil containing no more than 1.60% sulfur by weight shall be purchased and added to the common tank during the off-season. It is the permittee's responsibility to appropriately plan for and stage fuel purchases to comply with this condition.

   c. **Boiler No. 4**: Any fuel oil fired in Boiler No. 4 shall contain no more than 0.70% sulfur by weight.

   d. **Boiler No. 7**: Any distillate oil fired in Boiler No. 7 shall contain no more than 0.05% sulfur by weight.

   The permittee shall maintain fuel records that indicate compliance with the above conditions for each fuel oil purchase at each tank. The sulfur content shall be determined by ASTM Methods D-129, D-1552, D-2622, D-4294, or equivalent methods approved by the Department. For each shipment, a certified analysis supplied by the fuel oil vendor is sufficient to demonstrate compliance.

   [Applicant Request, Supporting Air Quality Analysis for PSD-FL-272A]

6. Fuel Oil Consumption

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

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

   The permittee shall install, calibrate, operate, and maintain individual fuel oil flow meters with integrators.

   [Applicant Request, Supporting Air Quality Analysis for PSD-FL-272A]

7. Steam Production

   a. Crop Season and Off-Season

   (1) Boiler No. 4 shall not produce more than 6,840,000 pounds of steam during any 24-hour period.

   (2) Boiler No. 7 shall not produce more than 8,400,000 pounds of steam during any 24-hour period.

   b. Off-Season (May through September)

(1) Operation of Boiler No. 7 shall be maximized to the greatest extent possible before operating any of the other boilers during the off-season.

(2) For Boiler Nos. 1 - 4, no more than three of these boilers shall operate simultaneously.

(3) For Boiler Nos. 1 - 4, the total steam production shall not exceed 1,845,000 pounds of steam during any 3-hour period.

(4) For Boiler Nos. 1 - 4, the total steam production shall not exceed 10,800,000 pounds of steam during any 24-hour period.

The permittee shall install, calibrate, operate, and maintain equipment to continuously record the steam production rates. The permittee shall also install, calibrate, operate, and maintain a steam flow integrator to record the accumulated steam flow rate.

[Applicant Request, Supporting Air Quality Analysis for PSD-FL-272A]

8. Modifications: A request to modify any of these conditions shall be accompanied by a revised Air Quality Analysis that demonstrates compliance with the Ambient Air Quality Standards and PSD increments for the revised conditions.

[Rule 62-4.070(3), F.A.C.]

PERFORMANCE TESTING

9. SO_2 Tests: To validate the SO_2 emission factor for Boiler Nos. 1 - 3, the permittee shall conduct emissions performance tests in accordance with EPA Method 6 or 6C for at least one of these boilers when firing only bagasse. The initial test shall be conducted between October 1, 2000 and February 1, 2001. Thereafter, at least one of these boilers shall be tested within the 12-month period prior to renewal of the air operation permit. Tests need not be conducted on the same boiler. Based on the results of the performance tests, the Compliance Authority may require additional testing or an additional Air Quality Analysis.

{Permitting Note: The expected emission factor is 0.06 pounds of SO_2 per mmBTU when firing only bagasse. This is not a permit limit for Boiler Nos. 1 - 3. Performance tests, notifications, reports, etc., are subject to the requirements listed in Section III.G. of this permit.}

[Supporting Air Quality Analysis for PSD-FL-272A]

REPORTING AND RECORD KEEPING REQUIREMENTS

10. Steam Production

a. **Crop Season and Off-Season**: For each 24-hour block of operation, the permittee shall record the total steam production rates (pounds, each) for Boiler Nos. 4 and 7. The permittee shall calculate and record the 24-hour average steam production rate for these units based on the actual operating hours during the 24-hour period.

b. Off-Season

(1) From May through September, the permittee shall record the individual and total steam production rates (pounds) for Boiler Nos. 1 - 4 for each 3-hour block when three of the boilers are in operation.

(2) From May through September, the permittee shall record the individual and total steam production rates (pounds) for Boiler Nos. 1 - 4 for each 24-hour block of operation.

[Rule 62-4.070(3), F.A.C.]

11. Fuel Oil Consumption: For Boiler Nos. 1 - 4, the permittee shall record the oil-firing rates (gallons) for each 3-hour block of operation. From this data, the permittee shall calculate and record the oil firing rates (gallons) for each 3-hour and each 24-hour block of combined operation for Boiler Nos. 1 - 4.

    [Rule 62-4.070(3), F.A.C.]

12. Fuel Sulfur Content: For each fuel oil delivery, the permittee shall record and retain the following: the date, identification of the tank, the gallons of fuel delivered, the fuel oil analysis including the sulfur content in percent by weight, and the name of the test method used. A certified analysis supplied by the fuel oil vendor is acceptable. This condition applies to each tank supplying fuel to any boiler.

    [Rule 62-4.070(3), F.A.C.]

C. EU 024, 025, and 026 - Fuel Tanks for Boilers

This portion of the permit addresses the following regulated emissions unit.

EU No.	Emission Unit Description
024	NSPS fuel storage tank for Boiler No. 4: Tank with a storage capacity of 100,000 gallons of No. 6 fuel oil (or a superior grade) containing no more than 0.7% sulfur by weight. Constructed in 2000.
025	Common fuel storage tank for Boiler Nos. 1 – 3: Tank with a storage capacity of 600,000 gallons of No. 6 fuel oil (or a superior grade) containing no more than 2.50% sulfur by weight. Constructed prior to 1984.
026	NSPS fuel storage tank for Boiler No. 7: Tank with a storage capacity of 200,000 gallons of No. 2 distillate oil (or a superior grade) containing no more than 2.50% sulfur by weight. Constructed in 1996.

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

RULE APPLICABILITY

1. Applicability: NSPS Subpart Kb applies to each storage vessel with a capacity greater than or equal to 10,300 gallons (40 cubic meters) that is used to store volatile organic liquids for which construction, reconstruction, or modification is commenced after July 23, 1984. [Rule 62-204.800(7)(b)16., F.A.C. and 40 CFR 60.110b(a)]

2. Exemption from Portions of the NSPS: Vessels with a capacity greater than or equal to 40,000 gallons (151 cubic meters) storing a liquid with a maximum true vapor pressure less than 3.5 kPa are exempt from the General Provisions (40 CFR 60, Subpart A) and from the provisions of NSPS Subpart Kb, *except* for the record keeping requirements specified in permit conditions 4 and 5 below. [Rule 62-204.800(7)(b)16., F.A.C. and 40 CFR 60.110b(c)]

RECORD KEEPING REQUIREMENTS

3. Signs: The permittee shall clearly mark each tank with the following statements:
   a. "Tank for Boiler Nos. 1 -3: From October through April, only fuel oil containing 2.50% sulfur by weight or less may be added to and stored in this tank. From May through September, only fuel oil containing 1.60% sulfur by weight or less may be added to and stored in this tank."
   b. "Tank for Boiler No. 4: Only fuel oil containing 0.70% sulfur by weight or less may be added to and stored in this tank."
   c. "Tank for Boiler No. 7: Only distillate oil containing 0.05% sulfur by weight or less may be added to and stored in this tank."

4. Records: For EU 024 and 026, the permittee shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. [Rule 62-204.800(7)(b)16., F.A.C. and 40 CFR 60.116b(b)]

5. Record Retention: For EU 024 and 026, the permittee shall keep a copy of this record for the life of the facility. [Rule 62-204.800(7)(b)16., F.A.C. and 40 CFR 60.116b(a)]

D. EU 017 - Granular Carbon Regenerative Furnace

This portion of the permit addresses the following regulated emissions unit.

EU No.	Emission Unit Description
017	Granular carbon regenerative furnace (GRCF, S-12): Granular carbon is used to remove colorants and VOC emissions during the decolorization process. Heat from the furnace is used to drive off the colorants and VOC emissions and regenerate the carbon for reuse. VOC emissions are controlled by a direct flame afterburner and particulate matter emissions by a wet venturi/tray scrubber system: *Afterburner*: Zero Hearth Type (10'-9" OD x 8 HTH) furnace manufactured by BSP Thermal Systems, Inc. designed for the following specifications: 1200° F to 1400° F design temperature; 10,600 to 16,300 acfm flow rate; 0.5 to 0.75 seconds exhaust gas residence time; and a 92% destruction efficiency. The furnace and afterburner will fire approximately 90 gallons per hour and a maximum of 788,400 gallons per year. *Wet Scrubber System*: High energy venturi wet scrubber with tray type wet scrubber designed for the following specifications: 160° F and 4300 acfm outlet gas flow; 12 to 30 inches of water across venturi scrubber with a 36 gpm flow rate; 3 to 8 inches of water across the tray scrubber with 230 gpm flow rate; and a 97% particulate removal efficiency.

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

APPLICABLE STANDARDS AND REGULATIONS

1. BACT Determinations: Pursuant to Rule 62-212.400, F.A.C., this emissions unit is subject to Best Available Control Technology (BACT) determinations for carbon monoxide (CO), nitrogen oxides (NOx), particulate matter (PM/PM_{10}), sulfuric acid mist (SAM), sulfur dioxide (SO_2), and volatile organic compounds (VOC).

PERFORMANCE RESTRICTIONS

2. Hours of Operation: The hours of operation for this unit are not restricted (8,760 hours per year). [Rule 62-210.200, F.A.C., Definitions - PTE]

3. Allowable Fuel: Only No. 2 distillate oil (or a superior grade) containing no more than 0.05% sulfur by weight shall be fired in the granular carbon regenerative furnace and associated afterburner. The fuel sulfur content shall be determined by ASTM Methods D-129, D-1552, D-2622, D-4294, or equivalent methods approved by the Department. [Applicant Request; Rule 62-212.400(BACT), F.A.C.]

CONTROL EQUIPMENT

4. GCRF Afterburner: The permittee shall install, operate, and maintain an afterburner designed to destroy at least 92% of the VOC emissions during regeneration of the carbon bed as part of the decolorization process. The afterburner shall be designed with a control temperature of between 1200° F and 1400° F and an exhaust gas residence time of between 0.5 and 0.75 seconds. Excluding initial startup, shutdown, and malfunction, the afterburner temperature shall be maintained at 1200° F or higher except for up to 6 total minutes each hour during which the temperature shall not fall below 1000°F.[Rule 62-212.400 (BACT), F.A.C.]

5. GCRF Wet Scrubber: The permittee shall install, operate, and maintain a wet venturi / tray scrubber system designed to control at least 97% of the maximum particulate emissions during regeneration of the

carbon bed as part of the decolorization process. The venturi scrubber shall be designed for a pressure drop of between 12 to 30 inches of water column. The wet tray scrubber shall be designed for a pressure drop of between 3 to 8 inches of water column. Separate manometers (or equivalent devices) shall be installed, operated, and maintained to indicate the pressure drop across each control device. Operation outside of the specified operating range for any monitored parameter is not a violation of this permit, in and of itself. However, continued operation outside of the specified operating range for any monitored parameter without corrective action may be considered circumvention of the air pollution control equipment. [Rule 62-212.400 (BACT), F.A.C.]

EMISSION LIMITING STANDARDS

6. PM Standards: Emissions of particulate matter shall not exceed 0.7 pounds per hour (after control) from the granular carbon regenerative furnace as determined by EPA Method 5. In addition, visible emissions shall not exceed 10% opacity (excluding water vapor) as determined by EPA Method 9. [Rule 62-212.400 (BACT), F.A.C.]

7. VOC Standard: Emissions of volatile organic compounds shall not exceed 1.0 pound per hour (after control) from the granular carbon regenerative furnace as determined by EPA Method 25A reported in terms of propane. EPA Method 18 may be used to subtract methane from the total VOC measured by EPA Method 25A. [Rule 62-212.400 (BACT), F.A.C.]

PERFORMANCE TESTING REQUIREMENTS

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

   a. **EPA Method 5**, "Determination of Particulate Emissions from Stationary Sources".

   b. **DEP Method 9**, "Visual Determination of the Opacity of Emissions from Stationary Sources".

   c. **EPA Method 25A**, "Determination of Volatile Organic Concentrations."

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

9. Tests Required: Initial compliance with the allowable emission standards specified for this emissions unit shall be determined within 90 days after issuance of this final permit. Initial tests for shall be conducted for PM, VOC, and visible emissions to demonstrate compliance with the emissions standards. An annual test shall be conducted for visible emissions. After initial compliance is sufficiently demonstrated by initial PM and VOC performance testing, compliance may be assumed as long as the emissions unit remains in compliance with the visible emissions standard and monitoring requirements for the afterburner and wet scrubbing system. In addition, these tests shall be performed during the federal fiscal year (October 1st to September 30th) prior to renewing the air operation permit. [Rule 62-297.310(7)(a)1., F.A.C.]

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

11. Monitoring of Test Parameters: During any required test, the permittee shall monitor and record the afterburner temperature and wet scrubber pressure differentials at 15-minute intervals. The tests shall be conducted at 90% of production capacity. [Rule 62-297.310(5), F.A.C.]

REPORTING AND RECORD KEEPING REQUIREMENTS

12. Operations Log: At least once per shift, the permittee shall observe and record the afterburner temperature and the wet scrubber pressure differentials. The permittee may install automated equipment to continuously record these parameters. For any monitored parameters with missing records, the permittee shall calculate and record the data availability (in percent) for each month. [Rule 62-4.070(3), F.A.C.]

E. EU 021 - Alcohol Emissions and EU 023 - Propane-Fired Sock Heaters

This portion of the permit addresses the following regulated emissions units.

EU No.	Emissions Unit Description
021	Alcohol usage
023	Two propane-fired heaters are used to dry baghouse socks from the refinery and dryer baghouses. Each 0.165 mmBTU per hour heater fires approximately 1.75 gallons of propane per hour and a maximum of 15,295 gallons of propane per year.

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

APPLICABLE STANDARDS AND REGULATIONS

1. BACT Determinations: Pursuant to Rule 62-212.400, F.A.C., this emissions unit is subject to Best Available Control Technology (BACT) determinations for carbon monoxide (CO), nitrogen oxides (NOx), particulate matter (PM/PM_{10}), sulfuric acid mist (SAM), sulfur dioxide (SO_2), and volatile organic compounds (VOC).

PERFORMANCE RESTRICTIONS

2. Allowable Fuel: Only commercially available propane shall be fired in the sock heaters. [Applicant Request; Rule 62-212.400 (BACT), F.A.C.]

3. Visible Emissions: Visible emissions of 5% opacity or less from the sock heaters shall be an indicator of good combustion as determined by EPA Method 9. If visible emissions are above 5% opacity, the permittee shall investigate the cause and take the necessary corrective actions. There is no initial or periodic testing required for this condition. [Rule 62-4.070(3), F.A.C.]

4. Alcohol Emissions: Alcohol usage from the sugar refinery shall not exceed 30,000 pounds per consecutive 12 months. Compliance shall be determined by the purchase records and the Material Data Safety Sheets (MSDS) for these products. The permittee shall calculate and record the alcohol emissions for submittal of the Annual Operating Report and at the request of the Department. [Applicant Request; Rule 62-212.400 (BACT), F.A.C.]

REPORTING AND RECORD KEEPING REQUIREMENTS

5. Records: The permittee shall keep records sufficient to document the amount of propane fired in the heaters and alcohol used for reporting in the Annual Operations Report. [Rule 62-210.370(3), F.A.C.]

F. EU 015, 016, 018, 019, 020, AND 022 - MISCELLANEOUS PARTICULATE SOURCES

This portion of the permit addresses the following regulated emissions units.

EU No.	Emissions Unit Description
015	VHP sugar dryer with baghouse (S-11)
016	White sugar dryer with baghouse (S-10)
018	Vacuum Systems: Screening/distribution vacuum with baghouse (S-1); 100 lb bagging vacuum with baghouse (S-2); 5 lb bagging vacuum with baghouse (S-3)
019	Six conditioning silos with baghouses (S-7, S-8, S-9, S-13, S-14, and S-15)
020	Screening/distribution and powdered sugar/starch bins with baghouses (S-5, S-6, and S-16)
022	Packaging baghouse (S-4)

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

CONTROL EQUIPMENT AND TECHNIQUES

1. Baghouses: The permittee shall install, operate, and maintain high efficiency baghouses designed to control at least 99.9% of the particulate matter emitted from each emissions unit and point. There are no limits on the hours of operation (8760 hours per year). [Applicant Request; Rule 62-212.400, F.A.C.]

PERFORMANCE RESTRICTIONS

2. Production Restrictions: No more than 2000 tons of refined sugar per day nor 730,000 tons of refined sugar per consecutive 12 months shall be packaged at this facility. In addition, no more than 2200 tons of refined sugar per day nor 803,000 tons of refined sugar per consecutive 12 months shall be loaded out from this facility. [Applicant Request; Rule 62-210.200 (Definitions - PTE), F.A.C.]

EMISSION LIMITING STANDARDS

3. PM Limits: The following table identifies the limits on particulate matter emissions from these emissions units.

EU No.	POINT ID	DSCFM	lb/hour	Ton/Year
015	S-11	110,042	1.63	7.14
016	S-10	94,488	1.44	6.30
018	S-1	990	0.06	0.28
	S-2	872	0.06	0.28
	S-3	984	0.06	0.28
019	S-7	2641	0.06	0.25
	S-8	2641	0.06	0.25
	S-9	2641	0.06	0.25
	S-13	2641	0.06	0.25
	S-14	2641	0.06	0.25
	S-15	2641	0.06	0.25
020	S-5	2668	0.06	0.25
	S-6	8735	0.19	0.82
	S-16	6128	0.13	0.58
022	S-4	9589	0.21	0.90
Totals			4.20	18.33

4. Visible Emissions: As a surrogate for particulate matter, visible emissions shall not exceed 5% opacity from any of these emissions units or points. [Applicant Request; Rule 62-212.400, F.A.C.]

PERFORMANCE TESTING REQUIREMENTS

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

   a. **EPA Method 5**, "Determination of Particulate Emissions from Stationary Sources".

   b. **DEP Method 9**, "Visual Determination of the Opacity of Emissions from Stationary Sources".

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

6. Tests Required: Initial compliance with the visible emissions standard specified for these emissions units shall be determined within 90 days after issuance of this final permit. Compliance with the particulate matter emissions standard shall be assumed as long as the emission unit remains in compliance with the visible emissions standard. In addition, the visible emissions tests shall be performed during each federal fiscal year (October 1st to September 30th). [Rule 62-297.310(7)(a)1., F.A.C.]

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

EMISSION LIMITING AND PERFORMANCE STANDARDS

1. General Visible Emissions Standard: Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer, or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density if which is equal to or greater than 20% opacity. The test method for visible emissions shall be EPA Method 9, incorporated and adopted by reference in Chapter 62-297, F.A.C. Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C. [Rule 62-296.320(4)(b)1, F.A.C.]

2. Unconfined Particulate Emissions: During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

3. Objectionable Odor Prohibited: No person shall cause, suffer, allow or permit the discharge of air pollutants that cause or contribute to an objectionable odor. An objectionable odor is defined as any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rules 62-296.320(2) and 62-210.200(203), F.A.C.]

4. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by hazard of fire, wind or by other cause, the permittee shall immediately notify the Department's district office and, if applicable, appropriate local program. The notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its recurrence, and where applicable, the permittee's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with Department rules. [Rule 62-4.130, F.A.C.]

5. Circumvention: No person shall circumvent any air pollution control device or allow the emission of air pollutants without the applicable air pollution control device operating properly. [Rule 62-210.650, F.A.C.]

6. Excess Emissions:

   (a) Excess emissions resulting from start-up, shutdown or malfunction of any emissions units 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(1), F.A.C.]

   (b) Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]

   Excess emission provisions can not be used to vary any NSPS requirement from any subpart of 40 CFR 60.

COMPLIANCE MONITORING AND TESTING REQUIREMENTS

7. Test Methods: The appropriate test methods are specified in the permit, Chapter 62-297, F.A.C., and 40 CFR 60, Appendix A. The following test methods may also be required as part of these tests.

   a. **EPA Method 1**, "Sample and Velocity Traverses for Stationary Sources".

b. **EPA Method 2**, "Determination of Stack Gas Velocity and Volumetric Flow Rate".

c. **EPA Method 3**, "Gas Analysis for Carbon Dioxide, Oxygen, Excess Air, and Dry Molecular Weight".

d. **EPA Method 4**, "Determination of Moisture Content in Stack Gases".

8. Required Number of Test Runs: For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured; provided, however, that three complete and separate determinations shall not be required if the process 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 permittee, and a valid third run cannot be obtained within the five-day period allowed for the test, the Secretary or his or her designee may accept the results of two complete runs as proof of compliance, provided that the arithmetic mean of the two complete runs is at least 20% below the allowable emission limiting standard. [Rule 62-297.310(1), F.A.C.]

9. Operating Rate During Testing: Unless otherwise stated in the applicable emission limiting standard rule, testing of emissions shall be conducted with the emissions unit operation at permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load 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. [Rule 62-297.310(2), F.A.C.]

10. Calculation of Emission Rate: The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]

11. Test Procedures: Test procedures and methods shall meet all applicable requirements of Rule 62-297.310(4), F.A.C. [Rule 62-297.310(4), F.A.C.]

12. Determination of Process Variables: [Rule 62-297.310(5), F.A.C.]

(a) Required Equipment: The permittee 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.

13. Required Stack Sampling Facilities: Sampling facilities include sampling ports, work platforms, access to work platforms, electrical power, and sampling equipment support. All stack sampling facilities must meet any Occupational Safety and Health Administration (OSHA) Safety and Health Standards described in 29

CFR Part 1910, Subparts D and E. Sampling facilities shall also conform to the requirements of Rule 62-297.310(6), F.A.C. [Rule 62-297.310(6), F.A.C.]

14. Test Notification: The permittee shall notify the Compliance Authority in writing at least 30 days prior to initial performance tests for NSPS sources and at least 15 days prior to any other required tests. Notification shall include the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the permittee. [Rule 62-297.310(7)(a)9., F.A.C. and 40 CFR 60.7, 60.8]

15. 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 permittee of the facility to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions units and to provide a report on the results of said tests to the Department. [Rule 62-297.310(7)(b), F.A.C.]

REPORTING AND RECORD KEEPING REQUIREMENTS

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

17. Data Availability: The minimum data availability for recorded monitoring data shall be at least 90% on a monthly basis. [Applicant Request]

18 Test Reports: The permittee of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test. The required test report shall be filed with the Department as soon as practical but *no later than 45 days after the last sampling run of each test is completed.* The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the applicable information listed in Rule 62-297.310(8)(c), F.A.C. [Rule 62-297.310(8), F.A.C.]

19 Excess Emissions Report: If excess emissions occur, the permittee shall notify the Department within one working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident. [Rule 62-4.130, F.A.C.]

20. Excess Emissions Report - Malfunctions: In case of excess emissions resulting from malfunctions, each 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.]

21. Annual Operating Report for Air Pollutant Emitting Facility: The Annual Operating Report for Air Pollutant Emitting Facility shall be completed each year and shall be submitted to the Compliance Authority by March 1 of the following year. [Rule 62-210.370(3), F.A.C.]

ABBREVIATIONS AND ACRONYMS

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

RULE CITATIONS

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

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

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

Facility Identification (ID) Number:

Example: Facility ID No. 099-0001
Where: 099 - 3 digit number indicates that the facility is located in Palm Beach County
0221 - 4 digit number assigned by state database identifies specific facility

New Permit Numbers:

Example: Permit No. 099-2222-001-AC or 099-2222-001-AV
Where: AC - identifies permit as an Air Construction Permit
AV - identifies permit as a Title V Major Source Air Operation Permit
099 - 3 digit number indicates that the facility is located in Palm Beach County
2222 - 4 digit number identifies a specific facility
001 - 3 digit sequential number identifies a specific permit project

Old Permit Numbers:

Example: Permit No. AC50-123456 or AO50-123456
Where: AC - identifies permit as an Air Construction Permit
AO - identifies permit as an Air Operation Permit
123456 - 6 digit sequential number identifies a specific permit project

The following table summarizes the BACT emissions standards and control technology established in initial Permit No. PSD-FL-272.

Pollutant	Controls	Emission Standard
EU 009 – Bagasse Boiler No.4		
CO	Good Combustion Practices	6.5 lb/mmBTU
NOx	Bagasse Firing, Good Combustion Practices	0.20 lb/mmBTU
PM/PM10	Bagasse Firing, Good Combustion Practices	0.15 lb/mmBTU
	Oil Firing, Good Combustion Practices	0.10 lb/mmBTU
	Visible Emissions	VE < 20% opacity, except 40% for 2 min./hour
SO2 (SAM)	Fuel Oil Sulfur Limit	0.7% sulfur by weight
	Bagasse Firing	0.06 lb/mmBTU
VOC	Good Combustion Practices	0.50 lb/mmBTU, as propane
EU 024 - NSPS Fuel Storage Tank for Boiler No. 4 (Record Keeping Requirements Only)		
EU 017 - Granular Carbon Regenerative Furnace with Afterburner and Wet Scrubber		
PM/PM10	Controlled by Afterburner and Wet Scrubbing System	0.7 lb/hr
	Surrogate PM Standard	Visible emissions < 10% opacity
SO2	Fuel Oil Sulfur Limit	0.05% sulfur by weight
VOC	Controlled by Afterburner	1.0 lb/hr, as propane
EU 023 - Two propane-fired sock dryers		
All	Fuel Specification	Commercially Available Propane
	Work Practice Standard for Good Combustion	Visible Emissions < 5% opacity
EU 021 – Alcohol Usage		
VOC	Alcohol Usage Limit	< 30,000 pounds per 12 months
EUs 015,016, 018, 019, 020, and 022 – Miscellaneous Particulate Sources		
PM	Surrogate Standard	Visible Emissions < 5% opacity

G.1 The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

G.2 This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings or exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

G.3 As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

G.4 This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

G.5 This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

G.6 The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

G.7 The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

(a) Have access to and copy and records that must be kept under the conditions of the permit;
(b) Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
(c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

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

G.8 If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

(a) A description of and cause of non-compliance; and
(b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

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

G.9 In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extend it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

G.10 The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

G.11 This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

G.12 This permit or a copy thereof shall be kept at the work site of the permitted activity.

G.13 This permit incorporates the following previously issued determinations:

(a) Determination of Best Available Control Technology (X);

(b) Determination of Prevention of Significant Deterioration (X); and

(c) Compliance with New Source Performance Standards (X).

G.14 The permittee shall comply with the following:

(a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

(b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

(c) Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements;
2. The person responsible for performing the sampling or measurements;
3. The dates analyses were performed;
4. The person responsible for performing the analyses;
5. The analytical techniques or methods used; and
6. The results of such analyses.

G.15 When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

GOOD COMBUSTION PRACTICES

The following procedures were based upon the most recent update from Golder Associates of the Operation and Maintenance Plan for the Clewiston Boiler No. 4 dated January 9, 1997 and received by the Department January 13, 1997. A part of this plan is the attached Startup and Shutdown Procedures.

Purpose of GCP Plan

The determination of Best Available Control Technology for CO, NOx, and VOC emissions from Boiler No. 4 (EU-009) relied on "good combustion practices". The purpose of this document is to summarize the operational, maintenance, and monitoring procedures that will lead to the minimization of CO and VOC emissions and the optimization of NOx emissions, consistent with good combustion practices.

Preparation for Operations

1. Prior to each harvest season, the boiler proper, its air duct work, air heaters and scrubber are properly cleaned, inspected and repaired.
2. All refractory and boiler casing will be inspected and repaired where needed.
3. Outside of boiler tubes will have loose scale removed and boiler will be cleaned of loose scale, sand and other debris.
4. Boiler grates will be inspected and cleaned as well as being checked for mechanical operation.
5. All fans and fan drives will be inspected and repaired as needed.
6. All pumps and pump drives will be inspected and repaired as needed.
7. All oil burners will be cleaned and inspected as well as related oil piping, atomizing steam and air registers.
8. Prior to each harvest season, the skirt level of the scrubber is identified and marked on the outside so that a permanent reference is available.
9. Prior to each harvest season, all instruments for boiler operation and control are inspected, repaired and calibrated as required. This is recorded by the instrument shop in its repair log.

Boiler Operation and Controls

The senior most experienced boiler supervisor instructs other boiler room supervisors, boiler operators, and other appropriate personnel in proper boiler and scrubber operations so as to minimize stack emissions of CO and VOC, and so as to optimize stack emissions of NOx. This instructional program is presented prior to each harvest season and is included in the orientation and training provided to new boiler room employees. The training will impress upon supervisors and operators the importance of proper boiler operation in order to minimize emissions.

CO and VOC Controls

CO emissions are to be minimized by the proper application of Good Combustion Practices (GCP). To provide reasonable assurance that GCP are being employed:

1. The boiler operator will maintain steam rate at optimal or desired rate by controlling feed of bagasse fuel into the boiler. Combustion air to the boiler will be maintained at the highest possible level (resulting in sufficient excess air whenever feasible) in order to promote good combustion.
2. The boiler operator will periodically (at least once per hour) view the stack video monitor to visually confirm that good combustion is taking place. (Individual stack plumes are monitored continuously

through a closed circuit television system.) If an abnormal plume is observed, the operator will immediately take corrective action. The boiler operator will log the occurrence and duration of all such events in the boiler operation log, along with the corrective action taken. These records will be kept for a period of at least two years.

4. Process monitors shall be installed to monitor the oxygen (O_2)content and the carbon monoxide (CO) content of the boiler flue gas. The instrument readout will be located in the boiler control room to provide real time data to the boiler operator. The boiler operators will be instructed in the use of the O_2 and CO flue gas process monitors for combustion control and to ensure sufficient excess air levels. The boiler operators shall periodically observe each process monitor and adjust the boiler operation, consistent with good combustion practices. The specific conditions of this permit require additional CO testing after installation of the process monitors. This portion of the GCPs will be revised based on the test results.

NOx Controls

NOx emissions are to be optimized by the proper application of Good Combustion Practices (GCP). However, the application of GCP to minimize CO and VOC emissions may result in increased NOx emissions. This is because factors which promote good combustion and result in lower CO and VOC emissions, such as higher excess air and higher combustion temperatures, result in higher NOx emissions. This is the nature of the combustion process. Therefore, GCP to optimize NOx emissions is considered to be the same practices used to minimize CO and VOC emissions, as described above.

Miscellaneous

1. Several times per shift, the boiler grates and feeders are examined for proper distribution and any necessary operational changes are made. Any unusual observations are logged once per shift.
2. Once per day, on the day shift, the boiler will be given a walk-around inspection with the following items being checked and repaired as needed and in coordination with the production schedule: Fans, pumps, casing, ducting, and scrubber.
3. On every shift burners are inspected and cleaned if dirty.
4. On every shift, precautions will be taken as necessary to control visible emissions of fugitive matter (dust and bagasse, etc.)

STARTUP AND SHUTDOWN PROCEDURE

The following procedure was submitted by U.S. Sugar as a supplement to the PSD application received on June 25, 1999.

During startup and shutdown of the boilers, excess CO, PM, NOx, and VOC emissions for more than 2 hours in a 24-hour period are possible. Pursuant to Rule 62-210.700(1), F.A.C., the following procedures and precautions shall be taken to minimize the magnitude and duration of excess emissions during startup and shutdown of Boiler No. 4. The boiler room foreman and operating personnel shall receive proper training on emissions control procedures at least once per year.

Cold Startup (approximately 4 to 5 hours)

1. Feed solid fuel into boiler construction chamber.
2. Start fire in combustion chamber using a propane torch designed for that purpose.
3. As boiler heats up and starts to make steam, continuously observe the boiler and scrubber water levels, and stack plume.

4. Light a burner at the lowest rate, continue to observe the stck plume and adjust if necessary, by adjusting fuel, atomizing steam, and air to obtain proper combustion.
5. Feed carbonaceous fuel from the mill to the boiler slowly at first; as the furnace gets hotter and the carbonaceous fuel is burning better, decrease fuel oil flow until burners can be turned off.
6. Continue to observe the stack plume, the scrubber water level, and the carbonaceous fuel level, making adjustments to drafts, fuel, and scrubber to maintain the optimum operating conditions.

Hot Startup (approximately 1 hour)

1. This type of startup is applicable when the boiler has been shutdown for a short period of time and is still hot.
2. Check the boiler and scrubber water levels, circulating pump and spray nozzles, and make sure they are functioning properly.
3. Light a burner, continue to observe the stack plume, water levels, and burners.
4. As the carbonaceous fuel fire gets hot enough to meet demand, reduce the burner fuel until it can be turned off. Adjust the dampers to get optimum carbonaceous fuel firing.
5. Continue to observe the stack plume, scrubber water level, and carbonaceous fuel level, making adjustments to drafts, fuel, and scrubber to maintain the optimum operating conditions.

Shutdown

1. Stop fuel flow to the boiler, reduce the forced draft, distributor air, overfire air, and induced forced draft.
2. Continue to observe the stack plume and water levels and make adjustments to maintain safe and optimum operating conditions.

Memorandum

Florida Department of
Environmental Protection

TO: Clair Fancy, Bureau of Air Regulation

THRU: Al Linero, BAR - New Source Review Section — 10/27

FROM: Jeff Koerner, BAR - New Source Review Section

DATE: October 26, 2000

SUBJECT: Project No. 0510003-010-AC
Permit No. PSD-FL-272A
U.S. Sugar Clewiston Mill
Expansion of Boiler No. 4 and Refinery Operations, Revised

Attached for approval and signature is the Draft Permit package for the U.S. Sugar's Clewiston Mill and Refinery located in Hendry County that revises Permit No. PSD-FL-272 issued on November 19, 1999. The purpose of this modification is to regain authorization to fire fuel oil containing up to 2.50% sulfur by weight in Boiler Nos. 1- 3. This authorization was lost in original Permit No. PSD-FL-272 because the Air Quality Analysis that provided the basis for issuance reflected a lower sulfur content and increased stack heights. These constraints were necessary because of modeled potential adverse impacts related to building downwash. However, the PSD permit allowed future modification to regain the higher sulfur fuel based on a revised Air Quality Analysis.

The applicant provided an Air Quality Analysis based on the ISC PRIME model that demonstrates compliance with the Ambient Air Quality Standards and PSD increments. Although the ISC PRIME model is a non-guideline model, it has been proposed by EPA as a replacement for ISCST3 and was approved by EPA Region 4 for use with this project. This model was selected to better evaluate the stack downwash contributions related to the project. Also, construction was completed during the summer that raised the stacks for Boiler Nos. 1 – 3 to 213 feet in height. The Air Quality Analysis did include several constraints on boiler operation, fuel oil consumption, fuel oil sulfur content, and steam production. These constraints were included in this permit modification as specific conditions. The revised Air Quality Analysis was reviewed and approved by staff meteorologist, Cleve Holladay. No new BACT determinations were made as a result of this project.

I recommend your approval and signature. Day 74 of the permit time clock is December 31, 2000.

Attachments

AAL/jfk

Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

P.E. CERTIFICATION STATEMENT

PERMITTEE

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

Project No.	0510003-010-AC
Permit No.	PSD-FL-272A
ARMS ID No.	051-0003
SIC No.	2061, 2062

PROJECT DESCRIPTION

Original Permit No. PSD-FL-272 was issued on November 19, 1999 that allowed expansion of Boiler No. 4 and refinery operations for U.S. Sugar's Clewiston Mill and Refinery located in Hendry County. The purpose of this application to modify the PSD permit is to regain authorization to fire fuel oil containing up to 2.50% sulfur by weight in Boiler Nos. 1- 3. This authorization was lost in original Permit No. PSD-FL-272 because the Air Quality Analysis that provided the basis for issuance reflected a lower sulfur content and increased stack heights. These constraints were necessary because of modeled potential adverse impacts related to building downwash. However, the PSD permit allowed future modification to regain the higher sulfur fuel based on a revised Air Quality Analysis.

The applicant provided an Air Quality Analysis based on the ISC PRIME model that demonstrates compliance with the Ambient Air Quality Standards and PSD increments. Although the ISC PRIME model is a non-guideline model, it has been proposed by EPA as a replacement for ISCST3 and was approved by EPA Region 4 for use with this project. This dispersion model was selected to better evaluate the downwash contributions related to the project. Also, construction was completed during the summer that raised the stacks for Boiler Nos. 1 – 3 to 213 feet in height. The Air Quality Analysis did include several constraints on boiler operation, fuel oil consumption, fuel oil sulfur content, and steam production. These constraints were included in this permit modification as specific conditions. The revised Air Quality Analysis was reviewed and approved by staff meteorologist, Cleve Holladay. Because the original PSD permit contemplated the facility regaining the use of the higher sulfur fuel oil, no new BACT determinations were made.

I HEREBY CERTIFY *that the 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, and geological features).*

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

10-26-00
Date

Department of Environmental Protection
Bureau of Air Regulation, New Source Review Section