


# Florida Department of Environmental Protection

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## Memorandum

TO: Trina Vielhauer, Chief  
Bureau of Air Regulation

FROM: Jeff Koerner, New Source Review Section 

DATE: August 26, 2008

SUBJECT: Draft Air Permit No. 0990026-014-AC  
Sugar Cane Growers Cooperative of Florida  
Glades Sugar House  
BART Project

Attached for your review is a draft air construction permit package that makes a Best Available Retrofit Technology determination for Boilers 1, 2, 3, 4 and 5 in accordance with Rule 62-296.340, F.A.C. I recommend your approval of this project.

Attachments



# Florida Department of Environmental Protection

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

Charlie Crist  
Governor

Jeff Kottkamp  
Lt. Governor

Michael W. Sole  
Secretary

August 26, 2008

Sent by Electronic Mail

Mr. Jose F. Alvarez, Senior V.P. of Planning and Operations  
([jfalvarez@scgc.com](mailto:jfalvarez@scgc.com))  
Sugar Cane Growers Cooperative of Florida  
1500 West Sugar House Road / P.O. Box 666  
Belle Glade, Florida 33430-0666

Re: Draft Permit No. 0990026-014-AC  
Sugar Cane Growers Cooperative of Florida, Glades Sugar House  
BART Project

Dear Mr. Alvarez:

On January 31, 2008, you submitted an application to satisfy the requirements of Best Available Retrofit Technology (BART) in Rule 62-296.340, Florida Administrative Code for the eligible units at the facility identified above. Enclosed are the following documents: Technical Evaluation and Preliminary Determination, the proposed Draft Permit, the Written Notice of Intent to Issue Air Permit and the Public Notice of Intent to Issue Air Permit. The Public Notice is the actual notice that you must have published in the legal advertisement section of a newspaper of general circulation in the area affected by this project.

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

Sincerely,

A handwritten signature in black ink that reads "Trina Vielhauer".

Trina Vielhauer, Chief  
Bureau of Air Regulation

Enclosures

TLV/jfk

## WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT

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

Sugar Cane Growers Cooperative of Florida  
1500 West Sugar House Road / P.O. Box 666  
Belle Glade, Florida 33430-0666

Project No. 0990026-014-AC  
Sugar Cane Growers Cooperative of Florida  
Glades Sugar House  
Facility ID No. 0990026  
BART Project

*Authorized Representative:*

Mr. Jose F. Alvarez  
Senior V.P. of Planning and Operations

**Facility Location:** The applicant, the Sugar Cane Growers Cooperative of Florida, operates the existing Glades Sugar House, which is located in Palm Beach County at 1500 West Sugar House Road in Belle Glade, Florida. The facility consists of a sugar mill and boiling house where sugar cane is milled and pressed to extract the raw juice, which is then clarified, crystallized and centrifuged. Process steam for the mill and boiling house operations is furnished by six boilers fired with bagasse as the primary fuel. Bagasse is the residual vegetative matter remaining after sugar cane is processed. The boilers fire No. 6 residual fuel oil as a startup fuel and to supplement bagasse.

**Project:** On January 31, 2008, the Sugar Cane Growers Cooperative of Florida submitted an application to satisfy the requirements of Best Available Retrofit Technology (BART) in Rule 62-296.340, Florida Administrative Code (F.A.C.) for the existing Glades Sugar House. The purpose of the BART regulation is to improve visibility in the Class I areas, which includes six national parks and federal wildlife areas in Florida. The BART provisions apply to emissions units built between 1962 and 1977 that are located at one of the 26 specified industrial categories that have the potential to emit more than 250 tons a year of visibility-impairing pollutants, which are defined as nitrogen oxides, particulate matter and sulfur dioxide. Details of the project are provided in the application and the enclosed Technical Evaluation and Preliminary Determination and Draft Permit documents.

**Permitting Authority:** Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and F.A.C. Chapters 62-4, 62-210, 62-212 and 62-296. The proposed project is not exempt from air permitting requirements and an air permit is required to perform the proposed work. The Bureau of Air Regulation in the Florida Department of Environmental Protection's Division of Air Resource Management is the Permitting Authority responsible for making a permit determination for this project. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite #4, Tallahassee, Florida. The Permitting Authority's mailing address is: 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/488-0114.

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

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

## WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT

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accordance with this notice results in a different decision or a significant change of terms or conditions.

**Public Notice:** Pursuant to Section 403.815, F.S. and Rules 62-110.106 and 62-210.350, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Public Notice of Intent to Issue Air Permit (Public Notice). The Public Notice shall be published one time only as soon as possible in the legal advertisement section of a newspaper of general circulation in the area affected by this project. The newspaper used must meet the requirements of Sections 50.011 and 50.031, F.S. in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the Permitting Authority at above address or phone number. Pursuant to Rule 62-110.106(5) and (9), F.A.C., the applicant shall provide proof of publication to the Permitting Authority at the above address within 7 days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rule 62-110.106(11), F.A.C.

**Comments:** The Permitting Authority will accept written comments concerning the proposed Draft Permit for a period of 30 days from the date of publication of the Public Notice. Written comments must be postmarked by the Permitting Authority by close of business (5:00 p.m.) on or before the end of this 30-day period. If written comments received result in a significant change to the Draft Permit, the Permitting Authority shall revise the Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

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

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner; the name, address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of when and how each petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact. If there are none, the petition must so state; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action including an explanation of how the alleged facts relate to the specific rules or statutes; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth

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

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above, as required by Rule 28-106.301, F.A.C.

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

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

Executed in Tallahassee, Florida.



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Trina Vielhauer, Chief  
Bureau of Air Regulation

**CERTIFICATE OF SERVICE**

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Intent to Issue Air Permit package (including the Written Notice of Intent to Issue Air Permit, Public Notice of Intent to Issue Air Permit, the Technical Evaluation and Preliminary Determination, and the Draft Permit) was sent by electronic mail with received receipt requested before the close of business on 8/27/08 to the persons listed below.

- Mr. Jose F. Alvarez, SCGCF ([jfalvarez@scgc.com](mailto:jfalvarez@scgc.com))
- Ms. Kathy Lockhart, SCGCF ([kdlockhart@scgc.com](mailto:kdlockhart@scgc.com))
- Mr. David A. Buff, Golder Associates Inc. ([dbuff@golder.com](mailto:dbuff@golder.com))
- Mr. James Stormer, PBCHD ([James\\_Stormer@doh.state.fl.us](mailto:James_Stormer@doh.state.fl.us))
- Mr. Ajaya Satyal, SD Office ([ajaya.satyal@dep.state.fl.us](mailto:ajaya.satyal@dep.state.fl.us))
- Katy Forney, EPA Region 4 ([Forney.Kathleen@epa.gov](mailto:Forney.Kathleen@epa.gov))
- Dee Morse, NPS ([Dee\\_Morse@nps.gov](mailto:Dee_Morse@nps.gov))

Clerk Stamp

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



\_\_\_\_\_  
(Clerk)

8/27/08  
(Date)

## PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT

Florida Department of Environmental Protection  
Division of Air Resource Management, Bureau of Air Regulation  
Draft Air Construction Permit No. 0990026-014-AC  
Sugar Cane Growers Cooperative of Florida  
Glades Sugar House, BART Project  
Palm Beach County, Florida

**Applicant:** The applicant for this project is the Sugar Cane Growers Cooperative of Florida. The applicant's authorized representative and mailing address is: Mr. Jose F. Alvarez, Senior V.P. of Planning and Operations, Sugar Cane Growers Cooperative of Florida, 1500 West Sugar House Road / P.O. Box 666, Belle Glade, Florida 33430-0666.

**Facility and Location:** The applicant, the Sugar Cane Growers Cooperative of Florida, operates the existing Glades Sugar House, which is located in Palm Beach County at 1500 West Sugar House Road in Belle Glade, Florida. The facility consists of a sugar mill and boiling house where sugar cane is milled and pressed to extract the raw juice, which is then clarified, crystallized and centrifuged. Process steam for the mill and boiling house operations is furnished by six boilers fired with bagasse as the primary fuel. Bagasse is the residual vegetative matter remaining after sugar cane is milled and processed. The boilers fire No. 6 residual fuel oil as a startup fuel and to supplement bagasse.

**Project:** On January 31, 2008, the Sugar Cane Growers Cooperative of Florida submitted an application to satisfy the requirements of Best Available Retrofit Technology (BART) in Rule 62-296.340, Florida Administrative Code (F.A.C.) for the existing Glades Sugar House. The purpose of the BART regulation is to improve visibility in the Class I areas, which includes six national parks and federal wildlife areas in Florida. The BART provisions apply to emissions units built between 1962 and 1977 located at one of the 26 specified industrial categories that have the potential to emit more than 250 tons a year of visibility-impairing pollutants, which are defined as nitrogen oxides (NO<sub>x</sub>), particulate matter with an aerodynamic particle diameter of 10 microns or less (PM<sub>10</sub>) and sulfur dioxide (SO<sub>2</sub>).

The BART regulation requires a control technology review to establish a BART standard, which is an emission limitation based on the degree of reduction achievable through the application of the best system of continuous emission reduction for each pollutant which is emitted by a BART-eligible source. The emission limitation must be established, on a case-by case basis, taking into consideration the technology available, the costs of compliance, the energy and non-air quality environmental impacts of compliance, any pollution control equipment in use or in existence at the source, the remaining useful life of the source, and the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology. In addition, an air dispersion modeling analysis is conducted to evaluate the visibility improvement.

The existing facility operates boilers with a maximum heat input rate of more than 250 million British thermal units per hour, which is one of the 26 specified categories subject to regulation. The BART-eligible units at this facility include Boilers 1, 2, 3, 4 and 5. Currently, the maximum fuel sulfur content of oil fired in these boilers is 2.4% by weight. The maximum visibility impacts occur in Everglades National Park (the Class I Area nearest to the facility) when the boilers fire the maximum amount of fuel oil along with some bagasse. When operating under this scenario, SO<sub>2</sub> emissions contribute the most to visibility impacts. Based on a review of the application and available information, the Bureau of Air Regulation makes a preliminary determination that BART is reducing the maximum sulfur specification for fuel oil from 2.4% to 1.0% by weight. Fuel meeting this specification is currently purchased and fired at the mill.

**Permitting Authority:** Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and F.A.C. Chapters 62-4, 62-210, 62-212 and 62-296. The proposed project is not exempt from air permitting requirements and an air permit is required to perform the proposed work. The Bureau of Air Regulation in the Florida Department of Environmental Protection's Division of Air Resource Management is the Permitting Authority responsible for making a permit determination for this

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## PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT

project. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite #4, Tallahassee, Florida. The Permitting Authority's mailing address is: 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/488-0114.

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

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

**Comments:** The Permitting Authority will accept written comments concerning the proposed Draft Permit for a period of 30 days from the date of publication of the Public Notice. Written comments must be postmarked by the Permitting Authority by close of business (5:00 p.m.) on or before the end of this 30-day period. If written comments received result in a significant change to the Draft Permit, the Permitting Authority shall revise the Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

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A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address and telephone number of the petitioner; the name address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial rights will be affected by the agency determination; (c) A statement of when and how the petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact. If there are none, the petition must so state; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action including an explanation of how the alleged facts relate to the specific rules or statutes; and, (g) A statement of the relief sought by the

(Public Notice to be Published in the Newspaper)

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

petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

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

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



**TECHNICAL EVALUATION  
&  
PRELIMINARY DETERMINATION**

**PROJECT**

Draft Permit No. 0990026-014-AC  
Best Available Retrofit Technology (BART)  
Sugar Cane Growers Cooperative of Florida  
Glades Sugar House  
Palm Beach County, Florida

**APPLICANT**

Sugar Cane Growers Cooperative of Florida  
1500 West Sugar House Road  
Post Office Box 666  
Belle Glade, Florida 33430-0666

**PERMITTING AUTHORITY**

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



August 26, 2008

## **1. GENERAL PROJECT INFORMATION**

### **Facility Description and Location**

The Sugar Cane Growers Cooperative of Florida operates an existing sugar mill known as the Glades Sugar House, which consists of six carbonaceous fuel-fired boilers and one coating operation. The Standard Industrial Classification (SIC) code for this type of plant is SIC No. 2061. The facility is located at 1500 West Sugar House Road in Belle Glade, Palm Beach County. The UTM coordinates are Zone 17, 534.9 km East, and 2953.3 km North.

### **Regulatory Categories**

This project is subject to the applicable environmental laws in Section 403 of the Florida Statutes (F.S.). The Florida Statutes authorize the Department of Environmental Protection (Department) to establish rules regarding air quality in the Florida Administrative Code (F.A.C.). The facility is classified according to the following major regulatory categories.

- The facility is a major source of hazardous air pollutants (HAP).
- The facility does not operate units subject to the acid rain provisions of the Clean Air Act.
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source pursuant to Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.
- The facility operates BART-eligible units subject to Rule 62-296.340, F.A.C.

### **Project Description**

The applicant, Sugar Cane Growers Cooperative, submitted an application to satisfy the requirements of Rule 62-296.340 (BART), F.A.C., which addresses the following BART-eligible emissions units: Boiler 1 (EU-001), Boiler 2 (EU-002), Boiler 4 (EU-004) and Boiler 5 (EU-005). This Technical Evaluation and Preliminary Determination details the project, provides the top-down BART analysis, and identifies the preliminary BART determinations.

### **Processing Schedule**

- 01/30/07 Department received the BART exemption modeling analysis, which failed the exemption criteria.
- 01/31/08 Department received the BART application for an air pollution construction permit.
- 02/29/08 Department requested additional information.
- 06/02/08 Department received additional information; application complete.

## **2. APPLICABLE BART REGULATIONS**

### **Regulatory Authority**

This project is subject to the applicable regulatory requirements in the following Chapters of the F.A.C.: 62-4 (Permitting Requirements); 62-204 (Ambient Air Quality Requirements, PSD Increments, and Federal Regulations Adopted by Reference); 62-210 (Permits Required, Public Notice, Reports, Stack Height Policy, Circumvention, Excess Emissions, and Forms); 62-212 (General Preconstruction Review, PSD Preconstruction Review, and Non-attainment Area Preconstruction Review); 62-296 (Emission Limiting Standards); and 62-297 (Test Methods and Procedures, Continuous Monitoring Specifications, and Alternate Sampling Procedures). It is also subject to the applicable provisions in Title 40 of the Code of Federal Regulations (CFR) as adopted in Chapter 62-204, F.A.C.

Specifically, this project is subject to Rule 62-296.340 (BART), F.A.C. for determining and applying the best

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## TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

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available retrofit technology for each BART-eligible source as defined in 40 CFR 51.301. The state rule implements the federal provisions of Appendix Y in 40 CFR Part 51, "Guidelines for BART Determinations under the Regional Haze Rule".

### Affected Pollutants

In accordance with Appendix Y in 40 CFR 51, the affected visibility-impairing pollutants include the following: nitrogen oxides (NO<sub>x</sub>), particulate matter with an aerodynamic particle diameter of 10 microns or less (PM<sub>10</sub>), and sulfur dioxide (SO<sub>2</sub>).

### BART Definition

Pursuant to 40 CFR 51.301, *Best Available Retrofit Technology (BART)* means, "... an emission limitation based on the degree of reduction achievable through the application of the best system of continuous emission reduction for each pollutant which is emitted by ... [a BART-eligible source]. The emission limitation must be established, on a case-by case basis, taking into consideration the technology available, the costs of compliance, the energy and non-air quality environmental impacts of compliance, any pollution control equipment in use or in existence at the source, the remaining useful life of the source, and the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology." In accordance with Rule 62-296.340(3), F.A.C., the Department shall determine BART for each affected source in an air construction permit.

### BART Analysis Procedure

There are five basic steps in the case-by-case BART analysis:

- Step 1. Identify all available retrofit control technologies. A comprehensive list of available technologies for analysis must be identified that includes the most stringent option and a reasonable set of available options. It is not necessary to list all permutations of available control levels that exist for a given technology. The list is complete if it includes the maximum level of control each technology is capable of achieving.
- Step 2. Eliminate technically infeasible options. Control technologies are technically feasible if either (1) they have been installed and operated successfully for the type of source under review under similar conditions, or (2) the technology could be applied to the source under review. "Availability" and "applicability" are two key concepts in determining whether a technology could be applied. A technology is considered "available" if the source owner may obtain it through commercial channels, or it is otherwise available within the common sense meaning of the term. An available technology is "applicable" if it can reasonably be installed and operated on the source type under consideration. A technology that is available and applicable is technically feasible.
- Step 3. Evaluate control effectiveness of remaining control technologies. There are two key issues in this process, including (1) expressing the degree of control in consistent terms to ensure an "apples-to-apples" comparison of emissions performance levels among options, and (2) giving appropriate treatment and consideration of control techniques that can operate over a wide range of emission performance levels.
- Step 4. Evaluate the impacts and document the results. The evaluation will consider the costs of compliance, energy impacts, non-air quality environmental impacts, and remaining useful life.
- Step 5. Evaluate visibility impacts. Use CALPUFF (a Gaussian puff modeling system) or other appropriate dispersion model to determine the visibility improvement expected at a Class I area from the potential BART control technology applied to the source. Note that if the most stringent BART control option available is selected, it is not necessary to conduct an air quality modeling analysis for the purpose of determining its visibility impacts.

**BART Determination:** In making a final BART determination, the following will be considered: (1) technically feasible options; (2) the average and incremental costs of each option; (3) the energy and non-air quality environmental impacts of each option; (4) the remaining useful life; and (5) the modeled visibility impacts. A justification for selecting a technology as the “best” level of control must be provided and include an explanation of these factors that led to the BART determination. When a BART determination is made for two regulated pollutants on the same source, if the result is two different BART technologies that do not work well together, it may be reasonable to substitute a different technology or combination of technologies.

### **3. BART-ELIGIBLE UNITS**

The purpose of the BART regulation is to improve visibility in the Class I areas, which includes six national parks and federal wildlife areas in Florida. The BART provisions apply to emissions units built between 1962 and 1977 located at one of the 26 specified industrial categories that have the potential to emit more than 250 tons per year (TPY) of visibility-impairing pollutants, which are defined as NO<sub>x</sub>, PM<sub>10</sub>) and SO<sub>2</sub>. BART category #22 includes, “fossil-fuel boilers of more than 250 million British thermal units (MMBtu) per hour heat input”.

The Sugar Cane Growers Cooperative operates six existing boilers at the Glades Sugar House that fire bagasse and residual oil. Boilers 1, 2, 3, 4 and 5 were built between 1962 and 1977. Of these units, Boilers 1, 2, 4 and 5 each have a total heat input rate of more than 250 MMBtu per hour. Currently, the maximum fuel sulfur content of oil fired in these boilers is 2.4% by weight. When the boilers fire the maximum amount of fuel oil along with some bagasse, the maximum visibility impacts in the nearest Class I Area (105 km to the Everglades National Park) are above the regulatory threshold of 0.50 deciview (dv) of change. Therefore, the applicant identifies only Boilers 1, 2, 4 and 5 as BART-eligible units. However, the Department believes that Boiler 3 is also a BART-eligible unit as detailed in Section 4.

#### **Description of Existing Boilers and Controls**

Boiler 1 is a traveling grate boiler fired with bagasse as the primary fuel and fuel oil as a startup and supplemental fuel. It has a maximum design steam production rate of 175,000 lb/hour of steam (24-hour average). The permitted steam production rate has been down rated and is 139,700 lb/hour (24-hour average) at 400 psig and 585°F (or thermodynamically equivalent). The permitted heat input rate is 266.7 MMBtu per hour (24-hour average). The hours of operation are restricted to 7296 hours per year. Particulate emissions are controlled by a multiple cyclone dust collector followed by a Joy Turbulaire Type D wet impingement scrubber. Boiler 1 is subject to the following emissions standards.

- PM ≤ 0.25 lb/MMBtu of heat input from carbonaceous fuel plus 0.1 lb/MMBtu of heat input from fossil fuel
- NO<sub>x</sub> ≤ 0.45 lb/MMBtu heat input from bagasse and/or oil
- NO<sub>x</sub> ≤ 0.65 lb/MMBtu heat input from residue
- SO<sub>2</sub> emissions are limited by firing fuel oil with a maximum sulfur content of 2.4% by weight

Boiler 2 is a traveling grate boiler fired with bagasse as the primary fuel and fuel oil as a startup and supplemental fuel. It has a maximum design steam production rate of 175,000 lb/hour of steam (24-hour average). The permitted steam production rate has been down rated and is 138,154 lb/hour (24-hour average) at 400 psig and 585°F (or thermodynamically equivalent). The permitted heat input rate is 269 MMBtu per hour (24-hour average). The hours of operation are restricted to 7296 hours per year. Particulate emissions are controlled by a multiple cyclone dust collector followed by two Joy Turbulaire Type D wet impingement scrubbers in parallel. Boiler 2 is subject to the following emissions standards.

- PM ≤ 0.25 lb/MMBtu of heat input from carbonaceous fuel plus 0.1 lb/MMBtu of heat input from fossil fuel
- NO<sub>x</sub> ≤ 0.45 lb/MMBtu heat input from bagasse and/or oil

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- $\text{NO}_x \leq 0.65$  lb/MMBtu heat input from residue
- $\text{SO}_2$  emissions are limited by firing fuel oil with a maximum sulfur content of 2.4% by weight

Boiler 3 is a water-cooled, pinhole grate boiler fired with bagasse as the primary fuel and fuel oil as a startup and supplemental fuel. Fuel oil is limited to a maximum sulfur content of 2.4% by weight. The maximum steam production rate is 110,000 lb/hour of steam (8-hour average) at 400 psig and 585°F (or thermodynamically equivalent). The maximum heat input rate is 229 MMBtu per hour. The hours of operation are restricted to 7296 hours per year. Particulate emissions are controlled by a Joy Turbulaire Type D wet impingement scrubber. Boiler 3 is subject to the following emissions standards.

- $\text{PM} \leq 0.25$  lb/MMBtu of heat input from carbonaceous fuel plus 0.1 lb/MMBtu of heat input from fossil fuel
- $\text{NO}_x \leq 0.45$  lb/MMBtu heat input from bagasse and/or oil
- $\text{NO}_x \leq 0.65$  lb/MMBtu heat input from residue
- $\text{SO}_2$  emissions are limited by firing fuel oil with a maximum sulfur content of 2.4% by weight

Boiler 4 is a traveling grate boiler fired with bagasse as the primary fuel and fuel oil as a startup and supplemental fuel. The maximum design steam production rate is 300,000 lb/hour of steam (24-hour average) at 400 psig and 585°F (or thermodynamically equivalent). The maximum heat input rate is 572.7 MMBtu per hour (24-hour average). The hours of operation are restricted to 7296 hours per year. Particulate emissions are controlled by a low efficiency cyclone dust collector followed by two Joy Turbulaire Type D wet impingement scrubbers in parallel. Boiler 4 is subject to the following emissions standards.

- $\text{PM} \leq 0.20$  lb/MMBtu of heat input from carbonaceous fuel plus 0.1 lb/MMBtu of heat input from fossil fuel
- $\text{NO}_x \leq 0.45$  lb/MMBtu heat input from bagasse and/or oil
- $\text{NO}_x \leq 0.65$  lb/MMBtu heat input from residue
- $\text{SO}_2$  emissions are limited by firing fuel oil with a maximum sulfur content of 2.4% by weight

Boiler 5 is a traveling grate boiler fired with bagasse as the primary fuel and fuel oil as a startup and supplemental fuel. The maximum design steam production rate is 230,000 lb/hour of steam (24-hour average) at 400 psig and 585°F (or thermodynamically equivalent). The maximum heat input rate is 439.1 MMBtu per hour (24-hour average). The hours of operation are restricted to 7296 hours per year. Particulate emissions are controlled by a multiple cyclone dust collector followed by two Joy Turbulaire Type D wet impingement scrubbers in parallel. Boiler 5 is subject to the following emissions standards.

- $\text{PM} \leq 0.25$  lb/MMBtu of heat input from carbonaceous fuel plus 0.1 lb/MMBtu of heat input from fossil fuel
- $\text{NO}_x \leq 0.45$  lb/MMBtu heat input from bagasse and/or oil
- $\text{NO}_x \leq 0.65$  lb/MMBtu heat input from residue
- $\text{SO}_2$  emissions are limited by firing fuel oil with a maximum sulfur content of 2.4% by weight

Boiler 8 is a traveling grate boiler fired with bagasse as the primary fuel and fuel oil as a startup and supplemental fuel. Although Boiler 8 may fire fuel oil from the common tank, any fuel oil fired in Boiler 8 during a given day must be replaced in the common tank within 72 hours with fuel oil containing no more than 1.0% by weight. The maximum steam production rate is 264,000 lb/hour (24-hour average) of steam at 400 psig and 585°F (or thermodynamically equivalent). The maximum heat input rate is 564.0 MMBtu per hour. The hours of operation are restricted to 7296 hours per year. Particulate emissions are controlled by a multiple cyclone dust collector followed by two Joy Turbulaire Type D wet impingement scrubbers in parallel. Boiler 8 is subject to the following emissions standards.

- $\text{PM} \leq 0.15$  lb/MMBtu of heat input from carbonaceous fuel plus 0.1 lb/MMBtu of heat input from fossil fuel

- $\text{NO}_x \leq 123$  lb/hour
- $\text{SO}_2$  emissions are limited by a 1981 determination of the Best Available Control Technology (BACT) that requires any fuel oil fired in this unit during a given day to be replaced in the common tank within 72 hours with fuel oil containing no more than 1.0% by weight

#### **Other Common Boiler Restrictions**

The BART-eligible units are also subject to the following existing restrictions for combined operations.

- From April 16<sup>th</sup> through October 12<sup>th</sup>, boiler operations shall be restricted to no more than three boilers (Nos. 1, 2, 4, 5 or 8) at any given time and to no more than 120 days. During this period of restricted operation, steam production shall not exceed a maximum daily average of 450,000 lb/hour.
- The total  $\text{SO}_2$  emissions from all operating boilers shall not exceed 14 tons per day.

#### **Residue Firing – All Boilers**

According to the current Title V air operation permit, each of the BART-eligible boilers may fire “bagasse residue”, which was a byproduct from processing bagasse at another nearby facility, Q.O. Chemicals. However, Q.O. Chemicals permanently shut down operations several years ago and bagasse residue is no longer available. The Annual Operating Reports indicate that bagasse residue has not been fired since 1998. The Title V permit indicates an estimated sulfur content of 0.2% by weight for bagasse and 0.5% by weight for bagasse residue (150% higher). In addition, as shown in the previous emissions unit descriptions, the firing of bagasse residue was expected to result in  $\text{NO}_x$  emissions approximately 45% higher than bagasse alone or in combination with fuel oil. The application did not consider the firing of residue in any of the control technology reviews or in the modeling analyses. Therefore, the draft permit will not authorize the firing of bagasse residue.

#### **Summary of the Applicant’s Initial Visibility Modeling Analysis**

The CALPUFF model (Version 5.756) was used to predict the maximum visibility impairment at two PSD Class I areas located within 300 kilometers (km) of the Glades Sugar House. The nearest PSD Class I area is the Everglades National Park (ENP), which is located 105 km from the facility at the closest point. The other PSD Class I area is the Chassahowitzka National Wilderness Area (CNWA), which is located approximately 289 km from the facility. The CALPUFF modeling analysis followed the Visibility Improvement State and Tribal Association of the Southeast (VISTAS) common protocol (Version 3.2). The Department provided the applicant with “CALPUFF-ready” 4-km CALMET meteorological data for the period 2001-2003. Class I receptor locations were obtained from the National Park Service and a Lambert Conformal Conic coordinate system was used.

For the BART-eligible sources, the  $\text{PM}_{10}$ ,  $\text{SO}_2$ , sulfuric acid mist ( $\text{H}_2\text{SO}_4$ ) and  $\text{NO}_x$  emission rates were determined from either stack test data with maximum daily steam production rates or from permit limits to reflect the maximum 24-hour average normal operation for the most recent five years.  $\text{PM}_{10}$  emissions were speciated into six particulate species in specific size categories and modeled. These rates were based on two firing scenarios: 100% bagasse firing (normal operating scenario) and maximum fuel oil firing with the remainder of the heat input rate due to bagasse (infrequent operating scenario). There were also maximum emissions rates for the crop season (October 12<sup>th</sup> through April 16<sup>th</sup>) and the off-crop season. Emission rates of  $\text{PM}_{10}$ ,  $\text{SO}_2$ ,  $\text{H}_2\text{SO}_4$  and  $\text{NO}_x$  were input directly into the CALPUFF model.

In addition, the results presented with the BART review are based on a new visibility impairment algorithm developed by the Interagency Monitoring of Protected Visual Environments (IMPROVE) committee called the “new IMPROVE” algorithm. This algorithm includes light extinction due to sea salt, which is important near sea coasts. Since the new IMPROVE equation cannot be directly implemented using the existing version of the CALPUFF model without additional post-processing or model revision, VISTAS has developed a method for implementing the new IMPROVE equation using existing CALPUFF/CALPOST output in a spreadsheet. The spreadsheet was used to recalculate visibility impairment due to BART eligible units in addition to visibility

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impacts due to the old IMPROVE equation.

For the 2001 to 2003 time period, the model predicts the 24-hour visibility impairment values based on the 8<sup>th</sup> highest (98<sup>th</sup> percentile) for each year. These values are compared with the regulatory threshold of 0.50 dv change in visibility from the predicted natural conditions. In addition, the model output predicts the number of days each year that the visibility threshold will be exceeded.

Summary of Modeled Impacts at the ENP

The ENP is the Class I area nearest to the facility and has the highest predicted impacts. The following tables summarize the initial modeling effort for all BART-eligible emissions units. The first table is based on the scenario of firing only bagasse. The second table is based on the scenario of firing the maximum amount of fuel oil with the remainder being bagasse.

Table 3A. Visibility Impacts from the Glades Sugar House at ENP – Initial Analysis  
Contribution of Visibility Impairing Particle Species Types  
Scenario: Bagasse Firing Only

BART-Eligible Emission Unit	Percent Contribution to 8th Highest Visibility Impacts (dv)											
	2001				2002				2003			
	Visibility Impact (dv)	Contribution			Visibility Impact (dv)	Contribution			Visibility Impact (dv)	Contribution		
		SO <sub>4</sub> (%)	NO <sub>3</sub> (%)	PM <sub>10</sub> (%)		SO <sub>4</sub> (%)	NO <sub>3</sub> (%)	PM <sub>10</sub> (%)		SO <sub>4</sub> (%)	NO <sub>3</sub> (%)	PM <sub>10</sub> (%)
Boiler 1	0.044	20.1	27.5	46.9	0.049	22.1	5.8	64.5	0.059	19.5	35.7	39.3
Boiler 2	0.035	31.2	10.2	55.4	0.038	23.7	19.0	52.6	0.043	24.3	14.0	56.2
Boiler 4	0.200	11.9	36.9	39.3	0.199	14.5	22.1	49.0	0.233	13.6	27.1	45.6
Boiler 5	0.155	20.9	7.4	62.3	0.157	14.0	17.7	56.6	0.195	17.9	14.0	61.7
Total Impacts	0.434	15.9	32.8	44.9	0.434	16.3	32.7	45.0	0.520	14.1	35.4	44.1

As shown above, the cumulative visibility impacts (8<sup>th</sup> highest value) when firing only bagasse were below the exemption threshold of 0.50 dv in years 2001 and 2002 and just above in year 2003 (0.52 dv). In addition, the model predicted the following number of days over the exemption threshold for each of these years: 2001 (7 days), 2002 (2 days) and 2003 (1 day). The table also shows the contribution of each pollutant towards the visibility impairment. For the bagasse only scenario, PM<sub>10</sub> emissions contribute approximately 45% to the overall visibility impairment and are the dominating pollutant. Emissions of NO<sub>x</sub> are the second highest contributing pollutant.

Table 3B. Visibility Impacts from the Glades Sugar House at ENP – Initial Analysis  
Contribution of Visibility Impairing Particle Species Types  
Scenario: Maximum Fuel Oil Firing with Remainder Bagasse

BART-Eligible Emission Unit	Percent Contribution to 8th Highest Visibility Impacts (dv)											
	2001				2002				2003			
	Visibility Impact (dv)	Contribution			Visibility Impact (dv)	Contribution			Visibility Impact (dv)	Contribution		
		SO <sub>4</sub> (%)	NO <sub>3</sub> (%)	PM <sub>10</sub> (%)		SO <sub>4</sub> (%)	NO <sub>3</sub> (%)	PM <sub>10</sub> (%)		SO <sub>4</sub> (%)	NO <sub>3</sub> (%)	PM <sub>10</sub> (%)
Boiler 1	0.071	64.1	5.0	25.5	0.081	64.0	5.7	22.7	0.086	71.1	11.1	14.2
Boiler 2	0.065	72.0	2.70	21.8	0.074	70.7	3.9	20.1	0.081	78.3	1.70	15.5
Boiler 4	0.207	35.4	18.5	36.0	0.240	31.5	23.5	37.1	0.284	41.4	16.4	35.6
Boiler 5	0.169	35.2	26.5	32.1	0.187	39.1	32.7	24.1	0.216	40.2	13.1	40.7
Total Impacts	0.502	39.7	15.9	36.1	0.553	48.0	27.8	20.1	0.578	48.7	13.8	30.3

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As shown above for the maximum fuel oil firing scenario, the cumulative visibility impacts (8<sup>th</sup> highest value) were above the exemption threshold of 0.50 dv in year 2002 (0.55 dv) and year 2003 (0.58 dv). In addition, the model predicted the following number of days over the exemption threshold for each of these years: 2001 (12 days), 2002 (10 days) and 2003 (5 days). The table also shows the contribution of each pollutant towards the visibility impairment. For the maximum fuel oil firing scenario, SO<sub>2</sub> emissions contribute 40% to 49% to the overall visibility impairment and are the dominating pollutant. Emissions of PM<sub>10</sub> are the second highest contributor. Since the largest visibility impairment occurred during the maximum oil firing scenario, the applicant focused the BART analysis on this case.

Summary of Modeled Impacts at the CNWA

For the CNWA Class I area, the model predicted no 8<sup>th</sup> highest or 22nd highest visibility impairment values over the 0.5 dv change exemption criteria.

**4. BART CONTROL TECHNOLOGY REVIEW**

**Applicant's Control Technology Review and Proposal**

Emissions of NO<sub>x</sub>, PM<sub>10</sub> and SO<sub>2</sub> are emitted from the mill boilers, which combust bagasse and oil to produce steam for various processes at the mill. Bagasse is a byproduct of the sugarcane milling process and is essentially a free fuel. Ash from firing bagasse is typically returned to the sugarcane fields as a soil conditioner. Fuel oil must be purchased and represents an additional operating cost. Fuel oil is generally used for startup and to supplement bagasse (e.g., wet weather conditions, bagasse feed upsets, etc.). Since bagasse is the primary fuel and No. 6 oil is a startup and supplemental fuel, the following two cases were considered in developing the control technology review and corresponding visibility modeling: 100% bagasse firing (normal operating mode) and maximum fuel oil firing with the remainder of the heat input provided by bagasse (occasional operating mode).

As shown in the initial visibility analysis, the highest visibility impacts occurred when firing the maximum amount of fuel oil with the remainder of the heat input provided by bagasse. For this case, the dominant pollutant contribution was from SO<sub>2</sub> emissions. Boiler Nos. 4 and 5 are the largest of the BART-eligible units and represent more than 80% of the visibility impacts. For these reasons, the applicant focused on the control of emissions from Boilers 4 and 5 to reduce visibility impacts. Since some control options reduce more than one pollutant, all control options are presented together.

Step 1. Identify all available retrofit control technologies.

The applicant identified the following available retrofit control technologies.

Table 4A. Available Retrofit Control Options

Control Option	Pollutants Controlled		
	NO <sub>x</sub>	PM <sub>10</sub>	SO <sub>2</sub>
Fuel Switch: No. 6 fuel oil w/1% sulfur by weight	---	---	X
Fuel Switch: Distillate oil w/0.05% sulfur by weight	---	---	X
Fuel Switch: Distillate oil w/0.0015% sulfur by weight	---	---	X
Add caustic injection to existing wet impingement scrubber	---	---	X
Install new wet scrubber	X	---	X
Dry Scrubbing with Furnace Sorbent Injection (FSI)	---	---	X
Combustion Improvement: Rotating Opposed-Fire Air (ROFA)	X	X	---
ROFA+ROTAMIX (ammonia injection)	X	X	---
ROFA+Furnace+FSI	X	X	X



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Control Option	Pollutants Controlled		
	NO <sub>x</sub>	PM <sub>10</sub>	SO <sub>2</sub>
ROFA+ROTAMIX+FSI	X	X	X
Selective Non-Catalytic Reduction (SNCR)	X	---	---
Electrostatic Precipitator (ESP) with 98.6% overall control	---	X	---

The above technologies are commonly included in control technology reviews. The application includes detailed descriptions of each control option.

**Steps 2.** Eliminate technically infeasible options.

Initially, the applicant did not consider dry scrubbing processes feasible because they are typically used with medium sulfur coals due to limitations in reaction rates and sorbent handling. Subsequently, the applicant provided additional information for furnace sorbent injection.

**Step 3.** Evaluate control effectiveness of remaining control technologies.

The applicant identified the following control efficiencies for the remaining control options.

Table 4B. Estimated Control Efficiencies for Remaining Control Options

Control Option	Control Efficiencies <sup>a</sup>		
	NO <sub>x</sub> Reduction	PM <sub>10</sub> Reduction	SO <sub>2</sub> Reduction
Fuel Switch: No. 6 fuel oil w/1% sulfur by weight	b	b	58%
Fuel Switch: Distillate oil w/0.05% sulfur by weight	b	b	98%
Fuel Switch: Distillate oil w/0.0015% sulfur by weight	b	b	99.9%
Add caustic injection to existing wet impingement scrubber	---	---	50%
Install new wet scrubber	b	84%	98%
Dry Scrubbing with Furnace Sorbent Injection (FSI)	---	---	55%
Combustion Improvement: Rotating Opposed-Fire Air (ROFA)	45%	35%	b
ROFA+ROTAMIX (ammonia injection)	60%	35%	---
ROFA+Furnace+FSI	45%	35%	55%
ROFA+ROTAMIX+FSI	60%	35%	55%
Selective Non-Catalytic Reduction (SNCR)	30%	b	b
Electrostatic Precipitator (ESP) with 98.6% overall control	---	84%	---

Notes:

- a. All emissions reductions are from baseline emissions.
- b. Changes are considered negligible.

**Step 4.** Evaluate the impacts of the remaining technologies and document the results, including: costs of compliance, energy impacts, non-air quality environmental impacts, and remaining useful life.

The applicant did not indicate that the life of the mill boilers was an issue. Control options were evaluated based on a useful life of 20 years. Minor issues related to energy impacts (additional energy necessary for various control options) and non-air quality environmental impacts (e.g., waste disposal) were considered in terms of costs as part of the cost effectiveness analysis. The following table summarizes the applicant's

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estimated costs and overall cost effectiveness for the various control options.

Table 4C. Estimated Costs for Remaining Control Options

Control Option	Capital Costs	Annualized Costs	Cost Effectiveness
No. 6 fuel oil w/1% sulfur, existing common tank	0	\$51,753	\$1160/ton SO <sub>2</sub> removed
New high-energy + caustic wet scrubber	\$4,530,465	\$802,880	\$3774/ton PM and SO <sub>2</sub> removed
ROFA	\$4,889,009	\$978,205	\$4393/ton PM <sub>10</sub> and NO <sub>x</sub> removed
ROFA+FSI	\$6,887,599	\$1,359,951	\$5259/ton NO <sub>x</sub> , PM <sub>10</sub> and SO <sub>2</sub> removed
Add caustic injection to existing scrubbers	\$870,093	\$310,926	\$5493/ton SO <sub>2</sub> removed
ROFA+ROTAMIX	\$7,287,064	\$1,652,918	\$5742/ton PM <sub>10</sub> and NO <sub>x</sub> removed
FSI	\$1,998,590	\$381,746	\$6011/ton PM <sub>10</sub> removed
ROFA+ROTAMIX+FSI	\$9,285,654	\$2,034,664	\$6560/ton NO <sub>x</sub> , PM <sub>10</sub> and SO <sub>2</sub> removed
ESP	\$4,382,831	\$672,256	\$6735/ton SO <sub>2</sub> removed
No. 6 fuel oil w/1% sulfur, new tank	\$2,772,438	\$465,371	\$6848/ton SO <sub>2</sub> removed
New high-energy PM wet scrubber	\$3,660,372	\$724,716	\$7261/ton PM <sub>10</sub> removed
SNCR	\$2,866,288	\$837,692	\$8120/ton NO <sub>x</sub> removed
Distillate oil w/0.05% sulfur	\$2,536,875	\$1,236,532	\$10,926/ton SO <sub>2</sub> removed
Distillate oil w/0.0015% sulfur	\$2,536,875	\$1,346,292	\$11,666/ton SO <sub>2</sub> removed

The applicant provided cost estimates for Boiler Nos. 4 and 5. The above table summarizes the costs for Boiler 4, which is the largest boiler with the highest visibility impacts. Pollutant reductions were based on the assumed control efficiency for the given option and the baseline emissions estimated using the following information from annual operating reports (2001 to present): heat input based on maximum fuel oil usage, remainder of heat input from bagasse usage, and the actual sulfur content of each fuel.

**Step 5. Evaluate visibility impacts.**

The following table summarizes the changes in visibility impacts that would result in applying the control options to Boiler 4.

Table 4D. Summary of Visibility Impacts after Controlling Boiler 4, Maximum Fuel Oil Firing

Control Option	Pollutants Controlled	Visibility Impacts, dv			Annualized Costs	dv Change/Cost
		Baseline	Controlled	Change		
No. 6 fuel oil w/1% sulfur, existing tank	SO <sub>2</sub>	0.284	0.223	0.061	\$51,753	\$848,410/dv
No. 6 fuel oil w/1% sulfur, new tank	SO <sub>2</sub>	0.284	0.223	0.061	\$465,371	\$7,629,033/dv
Distillate oil w/0.05% sulfur	SO <sub>2</sub>	0.284	0.161	0.123	\$1,236,532	\$10,053,105/dv
Distillate oil w/0.0015% sulfur	SO <sub>2</sub>	0.284	0.160	0.124	\$1,346,292	\$10,857,193/dv
Add caustic injection to existing scrubber	SO <sub>2</sub>	0.284	0.184	0.100	\$310,926	\$3,109,260/dv
New high-energy wet scrubber	PM <sub>10</sub>	0.284	0.197	0.087	\$724,716	\$6,588,323/dv
New high-energy + caustic wet scrubber <sup>a</sup>	PM <sub>10</sub> /SO <sub>2</sub>	0.284	0.197 <sup>c</sup>	0.087 <sup>c</sup>	\$802,880	\$9,228,508/dv
FSI <sup>b</sup>	SO <sub>2</sub>	0.284	b	b	\$381,746	b
ROFA <sup>c</sup>	NO <sub>x</sub> /PM <sub>10</sub>	0.284	0.255	0.029	\$978,205	\$33,731,206/dv
ROFA+ROTAMIX <sup>c</sup>	NO <sub>x</sub> /PM <sub>10</sub>	0.284	0.246	0.038	\$1,652,918	\$43,497,842/dv
ROFA+FSI <sup>b,c</sup>	NO <sub>x</sub> /PM <sub>10</sub> /SO <sub>2</sub>	0.284	b	b	\$1,359,951	b

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Control Option	Pollutants Controlled	Visibility Impacts, dv			Annualized Costs	dv Change/Cost
		Baseline	Controlled	Change		
ROFA+ROTAMIX+FSI <sup>b, c</sup>	NO <sub>x</sub> /PM <sub>10</sub> /SO <sub>2</sub>	0.284	b	b	\$2,034,664	b
SNCR	NO <sub>x</sub>	0.284	0.265	0.019	\$837,692	\$44,089,052/dv
ESP	PM <sub>10</sub>	0.284	0.174	0.110	\$672,256	\$6,111,418/dv

Notes

- a. This estimate does not include visibility reductions due to the control of PM<sub>10</sub> in addition to SO<sub>2</sub> for the scrubber. It appears that revised Table 5-4 was not adjusted when PM<sub>10</sub> reductions were included. The applicant reported that controlling PM<sub>10</sub> (101.8 TPY reduction) in addition to SO<sub>2</sub> (110.9 TPY reduction) with a high-energy caustic wet scrubber would result in the same visibility reductions (0.087 dv) as just a caustic scrubber to reduce SO<sub>2</sub> (99.8 TPY reduction).
- b. The applicant did not predict the visibility reduction from reducing SO<sub>2</sub> emissions with FSI. Without the predicted visibility reduction, the “dv change/cost” could not be estimated for the addition of FSI. For options with FSI, the visibility reductions do not account for SO<sub>2</sub> reductions from FSI (revised Tables 4, 5-6 and 5-11).
- c. The applicant estimates that ROFA will also reduce PM<sub>10</sub> emissions by 35%; however, the visibility reductions attributed to ROFA result only from NO<sub>x</sub> reductions. None of the control options with ROFA account for PM<sub>10</sub> reductions.

Conclusion and Proposal

The applicant indicates that the capital and annual costs for the control options are prohibitively high. Based on the estimated control costs in terms of visibility improvement (\$/dv), the applicant believes that no additional control methods are cost effective and proposes no changes for the BART-eligible units or to the existing NO<sub>x</sub>, PM<sub>10</sub> and SO<sub>2</sub> standards.

**Department’s Review of Applicant’s Analysis**

Step 1. Identify all available retrofit control technologies.

The Department accepts the applicant’s list of retrofit control options identified in Table 4A as a reasonable summary of available technologies for boilers fired with biomass as the primary fuel. However, selective catalytic reduction (SCR) for NO<sub>x</sub> control should have been included as a technically feasible and available option.

Steps 2. Eliminate technically infeasible options.

With the additional information provided, no identified control options were considered technically infeasible.

Step 3. Evaluate control effectiveness of remaining control technologies.

The control efficiencies provided in Table 4B are reasonable estimates for the control technologies.

Step 4. Evaluate the impacts of the remaining technologies and document the results, including: costs of compliance, energy impacts, non-air quality environmental impacts, and remaining useful life.

The Department does not necessarily endorse the applicant’s cost estimates. In particular, several items included in the estimates for the lower sulfur fuel options did not appear appropriate considering the facility already utilizes tanks and piping to supply fuel oil to the boilers (e.g., operating labor, supervisor labor, maintenance materials, maintenance labor, overhead, etc.). In addition, the applicant did not provide details specific to the project to adequately justify a project contingency factor of 20% for fairly common control devices. Nevertheless, the cost estimates are useful for purposes of comparison.

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As previously discussed, the life of the mill boilers was not an issue and control options were evaluated for a 20-year life. Energy impacts for various control options and non-air quality environmental impacts (e.g., waste disposal) were evaluated in terms of costs. In addition to the applicant's cost effectiveness summarized in Table 4C, the following table summarizes the Department's estimated costs for SCR applied to Boiler 4.

Table 4E. Estimated Costs for SCR w/75% Control

Capital Costs		Annualized Costs		Cost Effectiveness
\$/MMBtu	Total, \$	\$/MMBtu	Total, \$	\$/ton NO <sub>x</sub> Removed
\$5000 to \$7500	\$2,865,000 - \$4,297,500	\$870	\$498,500	\$5730/ton

Notes:

- Costs are estimated based on EPA's 2003 Fact Sheet for SCR systems (EPA-CICA Fact Sheet No. EPA-452/F-03-034), which reflects 2001 dollars. The average of the estimated capital costs will be used.
- The 2001 dollars were adjusted for 2008 dollars based on the CPI Inflation Calculator on the Bureau of Labor Statistics' web site ([http://www.bls.gov/data/inflation\\_calculator.htm](http://www.bls.gov/data/inflation_calculator.htm)).

The following table ranks the control options by overall cost effectiveness and capital costs.

Table 4F. Control Options Ranked by Costs

Control Option	Cost Effectiveness		Capital Costs	
	\$/ton	Rank	\$	Rank
No. 6 fuel oil w/1% sulfur, existing common tank	1160	1	0	1
New high-energy + caustic wet scrubber	3774	2	\$4,530,465	10
ROFA	4393	3	\$4,889,009	11
ROFA+FSI	5259	4	\$6,887,599	12
Add caustic injection to existing scrubbers	5493	5	\$870,093	2
SCR	5730	6	\$3,581,250	7
ROFA+ROTAMIX	5742	7	\$7,287,064	13
FSI	6011	8	\$1,998,590	3
ROFA+ROTAMIX+FSI	6560	9	\$9,285,654	14
ESP	6735	10	\$4,382,831	9
No. 6 fuel oil w/1% sulfur, new tank	6848	11	\$2,772,438	5
New high-energy PM wet scrubber	7261	12	\$3,660,372	8
SNCR	8120	13	\$2,866,288	6
Distillate oil w/0.05% sulfur	10,926	14	\$2,536,875	4
Distillate oil w/0.0015% sulfur	11,666	15	\$2,536,875	4

As shown above, switching to No. 6 fuel oil with a sulfur content of 1.0% is the most cost-effective control option and incurs no capital costs. Replacing the existing wet impingement scrubbers is the next most cost-effective control option, but would incur substantial capital costs. The addition of a caustic injection system to the existing wet impingement scrubbers is the 5<sup>th</sup> most cost-effective control option and would incur only modest capital costs.

Step 5. Evaluate visibility impacts.

As discussed under the applicant's review, visibility reductions were not accounted for with regard to the following control options: PM<sub>10</sub> reductions (in addition to SO<sub>2</sub> reductions) from a new high-energy caustic wet

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scrubber; and SO<sub>2</sub> reductions from FSI. The following table provides estimates of the visibility reductions for control options with these systems.

Table 4G. Estimated Visibility Reductions for Miscellaneous Control Options for Boiler 4

Control Option	Visibility Impacts, dv					Resulting Impact
	Baseline Impact	Visibility Changes per Controlled Pollutant				
		NO <sub>x</sub>	PM <sub>10</sub>	SO <sub>2</sub>	Total	
New wet scrubber for PM <sub>10</sub> and SO <sub>2</sub> <sup>a</sup>	0.284	negligible	-0.110	-0.087	-0.197	0.087
FSI <sup>b</sup>	0.284	negligible	0	-0.055	-0.055	0.229
ROFA <sup>c</sup>	0.284	-0.029	-0.046	0	-0.075	0.209
ROFA+ROTAMIX <sup>c</sup>	0.284	-0.038	-0.046	0	-0.084	0.200
ROFA+FSI <sup>b,c</sup>	0.284	-0.029	-0.046	-0.055	-0.130	0.154
ROFA+ROTAMIX+FSI <sup>b,c</sup>	0.284	-0.038	-0.046	-0.055	-0.139	0.145
SCR <sup>d</sup>	0.284	-0.048	0	0	-0.048	0.236

- a. For the new high-energy caustic scrubber, the estimate assumes 84% control of PM<sub>10</sub> and 98% control of SO<sub>2</sub>. The change in visibility impacts are based on: the applicant's estimate for SO<sub>2</sub> reductions by wet scrubber in Table 5-4; and the applicant's estimate for PM<sub>10</sub> reductions by wet scrubber in Table 3.
- b. As previously mentioned, the applicant did not provide modeled impacts for FSI. It is noted that FSI has an estimated SO<sub>2</sub> control efficiency of 55%, which is similar to the 50% SO<sub>2</sub> reduction estimated for adding caustic injection to the existing scrubbers. Therefore, the change in visibility impacts for FSI will be assumed to be equal to the change in visibility impacts predicted for adding caustic injection to the existing scrubbers (Table 5-5).
- c. For the options with ROFA, the estimate assumes 45% control of NO<sub>x</sub> and 35% control of PM<sub>10</sub>. The change in visibility impacts are based on: the applicant's estimate due to NO<sub>x</sub> reductions in Table 5-6; and an estimate of 0.0013 dv reduction per percent PM<sub>10</sub> reduction (based on a 0.11 dv reduction from an 84% reduction in PM<sub>10</sub> with an ESP).
- d. Estimates of percent control efficiencies are from baseline emissions estimates.

The impacts estimated above in Table 4G are used in the following table to summarize the overall impacts from all control options under review.

Table 4H. Summary of Visibility Impacts after Control of Boiler 4, Maximum Fuel Oil Firing

Control Option	Summary of Visibility Impacts				Cost Effectiveness (\$/ton) Rank	Capital Costs Rank
	Change	Annualized Costs	dv Change/Cost	Rank		
No. 6 fuel oil w/1% sulfur, existing tank	-0.061	\$51,753	\$848,410/dv	1	1	1
Add caustic injection	-0.100	\$310,926	\$3,109,260/dv	2	5	2
Install new wet scrubber for PM <sub>10</sub> and SO <sub>2</sub>	-0.197	\$802,880	\$4,075,532/dv	3	2	10
ESP	-0.110	\$672,256	\$6,111,418/dv	4	10	9
New high-energy PM (only) wet scrubber	-0.087	\$724,716	\$6,588,323/dv	5	12	8
FSI	-0.055	\$381,746	\$6,940,836/dv	6	8	3
No. 6 fuel oil w/1% sulfur, new tank	-0.061	\$465,371	\$7,629,033/dv	7	11	5
Distillate oil w/0.05% sulfur	-0.123	\$1,236,532	\$10,053,105/dv	8	14	4

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Control Option	Summary of Visibility Impacts				Cost Effectiveness (\$/ton) Rank	Capital Costs Rank
	Change	Annualized Costs	dv Change/Cost	Rank		
SCR	-0.048	\$498,500	\$10,385,416/dv	9	6	7
ROFA+FSI	-0.130	\$1,359,951	\$10,461,161/dv	10	4	12
Distillate oil w/0.0015% sulfur	-0.124	\$1,346,292	\$10,857,193/dv	11	15	4
ROFA	-0.075	\$978,205	\$13,042,733/dv	12	3	11
ROFA+ROTAMIX+FSI	-0.139	\$2,034,664	\$14,637,870/dv	13	9	14
ROFA+ROTAMIX	-0.084	\$1,652,918	\$19,677,595/dv	14	7	13
SNCR	-0.019	\$837,692	\$44,089,052/dv	15	13	6

Switching to No. 6 fuel oil with a maximum sulfur content of 1.0% in the existing common tank is ranked #1 in terms of cost per visibility reduction, cost effectiveness and capital costs. The addition of a caustic injection system to the existing wet impingement scrubbers is ranked #2 in terms of cost per visibility reduction, #5 in terms of cost-effectiveness and #2 in terms of capital costs. Note that the two top-ranked options control only SO<sub>2</sub> emissions and that the top 8-ranked options only reduce SO<sub>2</sub> and PM<sub>10</sub> emissions. Control options that focus on NO<sub>x</sub> reductions rank low in terms of cost per visibility reduction. This reinforces the applicant's original claim.

**Other Considerations**

Boiler 3, a BART-eligible Unit

In Table 2-1 in Appendix A of the application, the applicant indicates that Boiler 3 is not a BART-eligible unit because the maximum heat input rate of Boiler 3 is 229 MMBtu per hour, which is less than 250 MMBtu per hour. EPA Region 4 guidance<sup>1</sup> on this issue states:

“A fossil-fuel boiler having less than or equal to 250 MMBTU/hr heat input i.e., falls below the Category 22 thresholds) that serves a process only by contributing energy (e.g., steam or heat) is not considered to be BART-eligible. However, if the boiler is determined to be integral to the process (i.e., the boiler uses any by-products of the process, and/or the boiler serves the process in any way beyond simply contributing steam or heat), then the boiler should be included as BART eligible, and its category would be that of the process which it serves (e.g., Category 21 - chemical process plant).”

Boiler 3 serves the same function as Boilers 1, 2, 4 and 5. It fires bagasse as the primary fuel, which is a by-product of the sugar mill process. The boiler not only contributes steam and heat, it also serves as the disposal method for this residual material. Consistent with the EPA guidance, the Department considers Boiler 3 to be a BART-eligible unit.

Use of Residual Oil

Residual oil is the fuel oil that remains after the removal of valuable distillates from petroleum, such as gasoline and the lighter oils. No. 6 residual oil is very viscous and contains many contaminants such as sulfur. It is so viscous that oil firing systems must be properly engineered with heating systems, pumping systems, insulation and atomizing burners just to store, transfer and burn the oil. It must be stored near 100° F and heated to 150° F to 250° F before it can be easily pumped. In cooler temperatures, it can congeal into a tarry semisolid. The sulfur content can be as high as 3% resulting in high levels of SO<sub>2</sub> emissions when combusted. In addition,

<sup>1</sup> E-mail titled, “Draft Clarifying Email on Small <= 250) Boilers for BART Eligibility”; June 5, 2006; from Michele Notarianni (U.S. EPA Region 4) to Todd Hawes (U.S. EPA RTP), Kathy Kaufman (U.S. EPA RTP) and Joe Kordzi (U.S. EPA Region 6)

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internal condensation can produce sulfuric acid causing corrosion and maintenance problems. However, these undesirable characteristics tend to make it the least expensive liquid fuel available for purchase.

As shown in Tables 3A and 3B, the visibility impacts from firing No. 6 residual fuel oil can be 30% higher than firing bagasse alone. It is one of the primary reasons the applicant was unable to satisfactorily demonstrate that visibility impacts from the BART-eligible units would be below the regulatory threshold of 0.5 dv. In addition, the model predicted the following number of days over the exemption threshold, which is based on the 8<sup>th</sup> highest value, for each of these years: 12 days in 2001, 10 days in 2002 and 5 days in 2003. Lowering the maximum fuel sulfur specification is a simple, but effective way to reduce these impacts.

Applicant's Cost Estimates for Fuel Switching Options

Aside from the issue of installing a new tank, the Department believes that the applicant's cost estimates for switching to distillate oil were exaggerated. The applicant not only considered additional capital costs for all new equipment (new piping, pumps, burners, contingencies, startup costs, performance testing, etc.), but also annual operating costs (operator and supervisor labor, labor and materials for maintenance, overhead, property taxes, insurance and administration). This analysis fails to consider that some of the existing fuel oil delivery system could be utilized or that the existing No. 6 fuel oil system incurs much higher operating costs than a distillate oil system due to the heating of stored oil, oil pumping, fuel oil additives, fuel oil atomization, corrosion to boiler tubes, and additional maintenance<sup>2</sup>. It also fails to consider that the existing oil system also has overhead, property taxes, insurance and administration and that these are not *additional* costs for the proposed new piping and equipment.

New Tank for Fuel Switch Options

The following table summarizes the annual oil firing rates for each boiler over the last five years.

Table 4I. Summary of Fuel Oil Usage

Year	Operational History for Sugar Mill Boilers						Total	% of 2003
	1	2	3	4	5	8		
MMBtu/hour	267	269	229	573	439	564		
2003	239,600	200,790	163,720	528,130	348,550	295,750	1,776,540	Baseline
2004	213,860	187,220	113,880	448,610	262,510	220,450	1,446,530	81.42%
2005	119,810	124,900	97,390	293,280	201,180	130,150	966,710	54.42%
2006	31,540	34,020	26,360	81,620	56,030	48,650	278,220	15.66%
2007	31,580	31,670	24,990	76,730	52,410	55,820	273,200	15.38%
Total	636,390	578,600	426,340	1,428,370	920,680	750,820	4,741,200	---

As shown, fuel oil usage has steadily decreased from 2003. In 2006 and 2007, the boilers used only about 15% of that used in 2003. Boiler 8 consumed nearly 16% of the mill's total oil fired over the last five years, which had to be replaced in the common tank with the lower sulfur fuel specification (1.0% by weight). Boiler 3 consumed only 9% of the mill's total oil fired over the last five years. Therefore, if the applicant chose to install a new tank because of a switch to 1.0% sulfur fuel oil, it appears more practical and economical to construct a new small tank for Boiler 3 instead of a new 500,000 gallon tank as proposed in the application. Note that a 500,000 gallon tank would hold 80% more than the fuel oil combusted by all boilers in each of the last two years.

The applicant contends that a new oil storage tank would be required to implement a fuel switch option (even a

<sup>2</sup> "The True Cost of No. 6 Oil" from the web site of *TechLine, A Publication of National Fuel*; <http://www.pseg.com/customer/business/industrial/convert/cost.jsp>.

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switch to lower sulfur No. 6 residual oil) since other non-BART-eligible units would use the existing common oil storage tank. Although the Department considers Boiler 3 to be a BART-eligible unit, it is still highly unlikely that the applicant would choose to install a new fuel storage tank to meet the new sulfur specification. First of all, Boiler 8 is second largest boiler at the mill and is subject to a 1981 determination of the Best Available Control Technology (BACT) for SO<sub>2</sub> that requires any fuel oil fired in this unit during a given day to be replaced in the common tank within 72 hours with fuel oil containing no more than 1.0% by weight. This leaves only the smallest boiler, Boiler 3, to fire oil with a sulfur content of more than 1.0%. Instead of adding a new tank, the additional cost incurred by firing 1.0% sulfur fuel oil in Boiler 3 can be considered. The following table summarizes this analysis.

Table 4J. 2003 Fuel Oil Costs and Visibility Estimates Including Boiler 3

Boiler	2003 <sup>a</sup> gallons/year	Fuel Oil Cost Differential Between 2.4% and 1% <sup>b</sup>	SO <sub>2</sub> Emissions <sup>c</sup> Reductions, TPY	Visibility <sup>d</sup> Reductions, dv
1	239,600	\$31,795	26.5 TPY	-0.017
2	200,790	\$26,665	22.2 TPY	-0.018
3	163,720	\$21,725	0	0
4	528,130	\$70,083	58.4 TPY	-0.052
5	348,550	\$46,252	38.5 TPY	-0.028
Totals	1,480,790	\$196,520	145.6 TPY	-0.115

Notes:

- a. Fuel usage is based on 2003 Annual Operating Reports, which is the year with highest oil firing rate.
- b. Fuel cost differential is based on the following costs from revised Table 5-3: \$2.6973/gallon of No. 6 fuel oil with 2.4% sulfur and \$2.83/gallon of No. 6 fuel oil with 1.0% sulfur (\$0.1327/gallon cost difference).
- c. SO<sub>2</sub> emissions decreases are based on the differences in fuel sulfur and stoichiometric calculations.
- d. Visibility reductions are based on the predictions in Tables 1 and revised Table 5-3 and prorated for SO<sub>2</sub> reductions.

The above table includes the additional cost for firing 1.0% sulfur oil in Boiler 3, but gives no credit for SO<sub>2</sub> or visibility reductions. The cost per visibility reduction for this option would be \$1,708,870/dv, which would still be the #1 rank in terms of cost per visibility reduction when compared with the other control options. Based on an average for the last two years of operation, the total cost differential for switching to 1.0% sulfur fuel oil would be only \$36,587, which is minimal.

Actual Fuel Sulfur Content in Previous Years

It must also be noted that a review of Annual Operating Reports shows that the actual fuel sulfur content averaged 1.0% sulfur by weight in five out of the last ten years. Clearly, it is not cost prohibitive to fire 1.0% sulfur fuel oil in the mill boilers since this has been done in the past.

Conclusion

Of the applicant's proposed options, the switch to No. 6 fuel oil with a maximum sulfur content of 1.0% by weight is clearly the most cost-effective option in terms of emissions reductions as well as visibility impacts. This option incurs no capital costs. The applicant simply begins purchasing fuel oil that meets the specification. In fact, the applicant already purchases No. 6 fuel oil meeting this specification for Boiler 8. Given the fuel oil consumption for the last two years, a switch to oil with a maximum sulfur content of 1.0% by weight would result in minimal additional costs. As shown for the various modeling scenarios, a reduction in fuel sulfur results in a reduction of visibility impacts as well as SO<sub>2</sub> emissions. All of the mill boilers would continue to fire fuel oil from the common storage tank with the same 1.0% sulfur specification.



## TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

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### Department's Preliminary BART Determination

Based on all available information, the Department establishes the following preliminary BART standards and corresponding permit conditions for reducing SO<sub>2</sub> emissions and visibility impacts.

**Authorized Fuels:** All BART-eligible boilers are authorized to fire bagasse, residual oil, distillate oil and on-specification used oil. Upon issuance of this permit, "bagasse residue" is no longer authorized as a fuel. [Rule 62-296.340(BART), F.A.C.]

**Fuel Oil Sulfur Specification:** The maximum sulfur content of any fuel oil fired in any BART-eligible boiler shall not exceed 1.0% by weight. "Fuel oil" includes residual oil, distillate oil and on-specification used oil.

#### Compliance Deadlines:

- a. *Fuel Oil Purchases:* Beginning no later than June 1, 2012, any fuel oil purchased for a BART-eligible boiler shall comply with the fuel sulfur limit specified by this permit.
- b. *Tank Fuel Sulfur Levels:* Beginning on January 1, 2014, the actual tested fuel sulfur level of any tank supplying a BART-eligible boiler shall also comply with this fuel sulfur specification. It may take several tank turnovers or even cleanings to purge higher sulfur oil from an existing tank. The permittee is responsible for planning, scheduling, monitoring and implementing procedures to ensure that the fuel sulfur levels in the tanks comply with the fuel sulfur specification by this deadline.

[Rule 62-296.340(BART), F.A.C.]

**Fuel Sulfur Monitoring:** The actual sulfur content of all fuel oils shall be determined by either ASTM Method D 129-91, or D1552, or D 2622-94, or D 4294-90, the most recent versions of these ASTM methods, or methods with prior approval of the Department. At least once each federal fiscal year after issuance of this permit, the permittee shall take a representative sample of oil from each tank supplying a BART-eligible boiler and have it analyzed for the sulfur content with an approved method. In addition, for each delivery of oil supplying a BART-eligible boiler, the permittee shall maintain records of the fuel supplier certification, which shall include: the name of the oil supplier, the date of delivery, the quantity of oil delivered, the actual fuel sulfur level and the methods used to determine the sulfur content. As an alternative to the fuel supplier certification, the permittee may take a representative sample of oil for each delivery of oil and have it analyzed for the sulfur content with an approved method. [Rules 62-296.340(BART) and 62-4-070(3), F.A.C.]

**Notification:** Beginning on January 1, 2014, the permittee shall notify the Compliance Authority within one working day of discovering that a tank supplying a BART-eligible boiler may contain oil with a sulfur content greater than the BART specification. Notification may be made by e-mail, phone or facsimile. The Compliance Authority may request a full written report on the incident. [Rules 62-296.340(BART) and 62-4-070(3), F.A.C.]

**Fuel Oil Records:** The permittee shall maintain a written record of the fuel oil deliveries, supplier certifications and fuel oil sulfur analyses. Records shall be made available to the Department and Compliance Authority upon request. Records shall be kept for a minimum of five years. [Rules 62-296.340(BART) and 62-4-070(3), F.A.C.]

This case-by-case determination considers the following:

- Available control technologies (see Table 4A plus SCR);
- The costs of compliance (no capital costs and minimal annual operating costs);
- Energy or non-air quality environmental impacts of compliance (none);
- Current air pollution control equipment in use or in existence at the source (wet scrubbers);

## TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

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- The remaining useful life of the source (more than 20 years); and
- The degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology (more than a 20% reduction in visibility impacts for maximum fuel oil firing scenario).

### 5. PRELIMINARY DETERMINATION

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations regarding BART as conditioned by the draft permit. This determination is based on a technical review of the complete application, all available information, reasonable assurances provided by the applicant, and the conditions specified in the draft permit. Jeff Koerner is the project engineer responsible for reviewing the application and drafting the permit. Cleve Holladay is the project meteorologist responsible for reviewing the modeling analysis for visibility.

# DRAFT PERMIT

## PERMITTEE

Sugar Cane Growers Cooperative of Florida  
1500 West Sugar House Road / P.O. Box 666  
Belle Glade, Florida 33430-0666

### *Authorized Representative:*

Mr. Jose F. Alvarez  
Senior V.P. of Planning and Operations

Air Permit No. 0990026-014-AC Expiration Date: November 1, 2009 Sugar Cane Growers Cooperative of Florida Glades Sugar House BART Project
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## PLANT AND LOCATION

The Sugar Cane Growers Cooperative of Florida operates the Glades Sugar House, which is located in Palm Beach County at 1500 West Sugar House Road in Belle Glade, Florida. The facility is an existing sugar mill, which is identified by Standard Industrial Classification code No. 2061.

## STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). Pursuant to Rule 62-296.340, F.A.C., the permittee shall implement the air pollution control measures specified in this permit as the Best Available Retrofit Technology (BART).

## EFFECTIVE DATE

Unless otherwise specified by this permit, the BART-eligible sources shall comply with the conditions of this permit as expeditiously as practicable, but not later than December 31, 2013. [Rule 62-296.340(3)(b)2, F.A.C.]

Executed in Tallahassee, Florida

(DRAFT)

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Joseph Kahn, Director  
Division of Air Resource Management

(Date)

## SECTION 1. GENERAL INFORMATION

### FACILITY DESCRIPTION

The facility consists of a sugar mill and boiling house where sugar cane is milled and pressed to extract the raw juice, which is then clarified, crystallized and centrifuged. Process steam for the mill and boiling house operations is furnished by six boilers fired with bagasse as the primary fuel. Bagasse is the residual vegetative matter remaining after sugar cane is milled and processed. The boilers fire No. 6 residual fuel oil as a startup fuel and to supplement bagasse. The facility also includes a spray booth to apply petroleum-based protective coatings to sugar cane trailers and to sugar cane wagons.

### FACILITY REGULATORY CLASSIFICATIONS

- The facility is a major source of hazardous air pollutants (HAP).
- The facility does not operate units subject to the acid rain provisions of the Clean Air Act.
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source pursuant to Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

### BART-ELIGIBLE EMISSIONS UNITS

This permitting action affects the following BART-eligible emissions units at the plant.

EU No.	Emission Unit Description
1	Boiler 1
2	Boiler 1
3	Boiler 3
4	Boiler 4
5	Boiler 5

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Section 1. General Information

Section 2. Administrative Requirements

Section 3. Emissions Units Specific Conditions

Section 4. Appendices

Appendix A. Citation Formats

Appendix B. General Conditions

## SECTION 2. ADMINISTRATIVE REQUIREMENTS

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1. **Permitting Authority:** The Permitting Authority for this project is the Bureau of Air Regulation in the Division of Air Resource Management of the Florida Department of Environmental Protection. The mailing address for the Bureau of Air Regulation is 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400.
2. **Compliance Authority:** All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Palm Beach County Health Department's Air Pollution Control Section in the Division of Environmental Health and Engineering at P.O. Box 29, West Palm Beach, Florida 33402. Copies of these documents shall also be submitted to the Air Resource Section of the Department's South District Office at 2295 Victoria Avenue, Suite 364, Fort Myers, Florida 33901-3381.
3. **Appendices:** The following Appendices are attached as part of this permit: Appendix A (Citation Formats) and Appendix B (General Conditions).
4. **Applicable Regulations, Forms and Application Procedures:** Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to the applicable provisions of: Chapter 403, F.S.; Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C.; and the applicable parts and subparts of Title 40, Code of Federal Regulations (CFR). Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.
5. **Title V Permit:** This permit authorizes specific modifications and/or new construction on the affected emissions units as well as initial operation to determine compliance with conditions of this permit. A Title V operation permit is required for regular operation of the permitted emissions unit. ***The permittee shall apply for a revised Title V operation permit at least 90 days prior to expiration of this permit.*** To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the Air Resource Section of the Department's South District Office with copies to the Palm Beach County Health Department's Air Pollution Control Section. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]
6. **Records Retention:** All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least 5 years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. [Rule 62-213.440(1)(b)2, F.A.C.]
7. **Annual Operating Report:** The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year. [Rule 62-210.370(3), F.A.C.]

## SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

### A. Boilers 1, 2, 3, 4 and 5

This subsection addresses the following affected emissions units.

EU No.	Emission Unit Description
1	Boiler 1 is a traveling grate boiler fired with a permitted heat input rate of 266.7 MMBtu per hour. Particulate emissions are controlled by a multiple cyclone dust collector followed by a Joy Turbulaire Type D wet impingement scrubber.
2	Boiler 2 is a traveling grate boiler fired with a permitted heat input rate of 269 MMBtu per hour. Particulate emissions are controlled by a multiple cyclone dust collector followed by two Joy Turbulaire Type D wet impingement scrubbers in parallel.
3	Boiler 3 is a water-cooled, pinhole grate boiler fired with a maximum heat input rate of 229 MMBtu per hour. Particulate emissions are controlled by a Joy Turbulaire Type D wet impingement scrubber.
4	Boiler 4 is a traveling grate boiler fired with a maximum heat input rate of 572.7 MMBtu per hour. Particulate emissions are controlled by a low efficiency cyclone dust collector followed by two Joy Turbulaire Type D wet impingement scrubbers in parallel.
5	Boiler 5 is a traveling grate boiler fired with a maximum heat input rate of 439.1 MMBtu per hour. Particulate emissions are controlled by a multiple cyclone dust collector followed by two Joy Turbulaire Type D wet impingement scrubbers in parallel.

All boilers fire bagasse as the primary fuel and fuel oil as a startup and supplemental fuel. This permit does not change any of the capacities specified for these units in the current Title V air operation permit.

#### PERFORMANCE RESTRICTIONS

1. **Authorized Fuels:** All BART-eligible boilers are authorized to fire bagasse, residual oil, distillate oil and on-specification used oil. Upon issuance of this permit, "bagasse residue" is no longer authorized as a fuel. [Rule 62-296.340(BART), F.A.C.]

#### BART STANDARDS

*{Permitting Note: Pursuant to Rule 62-296.340 (BART), F.A.C., the following standards represent the Best Available Retrofit Technology. These standards apply to each BART-eligible unit and are in addition to any other applicable standards.}*

2. **Fuel Oil Sulfur Specification:** The maximum sulfur content of any fuel oil fired in any BART-eligible boiler shall not exceed 1.0% by weight. "Fuel oil" includes residual oil, distillate oil and on-specification used oil.
3. **Compliance Deadlines:**
  - a. **Fuel Oil Purchases:** Beginning no later than June 1, 2012, any fuel oil purchased for a BART-eligible boiler shall comply with the fuel sulfur limit specified by this permit.
  - b. **Tank Fuel Sulfur Levels:** Beginning on January 1, 2014, the actual tested fuel sulfur level of any tank supplying a BART-eligible boiler shall also comply with the fuel sulfur limit specified by this permit. It may take several tank turnovers or even cleanings to purge higher sulfur oil from an existing tank. The permittee is responsible for planning, scheduling, monitoring and implementing procedures to ensure that the fuel sulfur levels in the tanks comply with the fuel sulfur specification by this deadline.

[Rule 62-296.340(BART), F.A.C.]

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## SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

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### A. Boilers 1, 2, 3, 4 and 5

#### MONITORING REQUIREMENTS

4. Fuel Sulfur Monitoring: The actual sulfur content of all fuel oils shall be determined by either ASTM Method D 129-91, or D1552, or D 2622-94, or D 4294-90, the most recent versions of these ASTM methods, or methods with prior approval of the Department. At least once each federal fiscal year, the permittee shall take a representative sample of oil from each tank supplying a BART-eligible boiler and have it analyzed for the sulfur content with an approved method. In addition, for each delivery of oil supplying a BART-eligible boiler, the permittee shall maintain records of the fuel supplier certification, which shall include: the name of the oil supplier, the date of delivery, the quantity of oil delivered, the actual fuel sulfur level and the methods used to determine the sulfur content. As an alternative to the fuel supplier certification, the permittee may take a representative sample of oil for each delivery of oil and have it analyzed for the sulfur content with an approved method. [Rules 62-296.340(BART) and 62-4-070(3), F.A.C.]

#### NOTIFICATIONS, RECORDS AND REPORTS

5. Notification: Beginning on January 1, 2014, the permittee shall notify the Compliance Authority within one working day of discovering that a tank supplying a BART-eligible boiler may contain oil with a sulfur content greater than the BART specification. Notification may be made by e-mail, phone or facsimile. The Compliance Authority may request a full written report on the incident. [Rules 62-296.340(BART) and 62-4-070(3), F.A.C.]
6. Fuel Oil Records: The permittee shall maintain a written record of the fuel oil deliveries, supplier certifications and fuel oil sulfur analyses. Records shall be made available to the Department and Compliance Authority upon request. Records shall be kept for a minimum of five years. [Rules 62-296.340(BART) and 62-4-070(3), F.A.C.]

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

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Appendix A. Citation Formats

Appendix B. General Conditions



**SECTION 4. APPENDIX A**  
**CITATION FORMATS**

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The following examples illustrate the format used in the permit to identify applicable permitting actions and regulations.

**REFERENCES TO PREVIOUS PERMITTING ACTIONS**

**Old Permit Numbers**

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

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

**New Permit Numbers**

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

*Where:* "099" represents the specific county ID number in which the project is located  
"2222" represents the specific facility ID number  
"001" identifies the specific permit project  
"AC" identifies the permit as an air construction permit  
"AO" identifies the permit as a minor source air operation permit  
"AV" identifies the permit as a Title V Major Source Air Operation Permit

**PSD Permit Numbers**

*Example:* Permit No. PSD-FL-317

*Where:* "PSD" means issued pursuant to the Prevention of Significant Deterioration of Air Quality  
"FL" means that the permit was issued by the State of Florida  
"317" identifies the specific permit project

**RULE CITATION FORMATS**

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

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

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

**Code of Federal Regulations (CFR)**

*Example:* [40 CFR 60.7]

*Means:* Title 40, Part 60, Section 7

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

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

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

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

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

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

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

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

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

10. The permittee agrees to comply with changes in Department rules and 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.
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.
12. This permit or a copy thereof shall be kept at the work site of the permitted activity.
13. This permit also constitutes:
  - a. Determination of Best Available Control Technology (Not Applicable);
  - b. Determination of Prevention of Significant Deterioration (Not Applicable); and
  - c. Compliance with New Source Performance Standards (Not Applicable).
14. The permittee shall comply with the following:
  - a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
  - b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
  - c. Records of monitoring information shall include:
    - 1) The date, exact place, and time of sampling or measurements;
    - 2) The person responsible for performing the sampling or measurements;
    - 3) The dates analyses were performed;
    - 4) The person responsible for performing the analyses;
    - 5) The analytical techniques or methods used; and
    - 6) The results of such analyses.
15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

## Livingston, Sylvia

---

**From:** Satyal, Ajaya  
**Sent:** Thursday, August 28, 2008 8:04 AM  
**To:** Livingston, Sylvia  
**Subject:** RE: Sugar Cane Growers CO-OP BART Project; 0990026-014-AC

Received, Thanks.

AJ

---

**From:** Livingston, Sylvia  
**Sent:** Wednesday, August 27, 2008 4:50 PM  
**To:** 'jfalvarez@scgc.com'; 'kdlockhart@scgc.com'; dbuff@golder.com  
**Cc:** 'James\_Stormer@doh.state.fl.us'; Satyal, Ajaya; 'forney.kathleen@epa.gov'; dee\_morse@nps.gov  
**Subject:** Sugar Cane Growers CO-OP BART Project; 0990026-014-AC

Dear Sir/Madam:

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

This is the official notification of the **Draft Permit** and its associated documents for the following project:

Owner/Company Name: SUGAR CANE GROWERS CO-OP  
Facility Name: SUGAR CANE GROWERS CO-OP  
Project Number: 0990026-014-AC  
Permit Status: DRAFT  
Permit Activity: CONSTRUCTION/ GLADES SUGAR HOUSE BART PROJECT  
Facility County: PALM BEACH  
Processor: Jeff Koerner

Click on the following link to access the permit project documents:

[http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf\\_permit\\_zip\\_files/0990026.014.AC.D\\_pdf.zip](http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/0990026.014.AC.D_pdf.zip)

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The document(s) may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record. If you have any problems opening the documents or would like further information, please contact the Florida Department of Environmental Protection, Bureau of Air Regulation at (850)488-0114.

Sylvia Livingston

**Livingston, Sylvia**

---

**From:** Buff, Dave [DBuff@GOLDER.com]  
**Sent:** Tuesday, September 09, 2008 11:27 AM  
**To:** Livingston, Sylvia  
**Cc:** Kathy Durrell Lockhart; Jose Alvarez  
**Subject:** RE: Sugar Cane Growers CO-OP BART Project; 0990026-014-AC

Sylvia, the emails to Mr. Alvarez and Ms. Lockhart did not reach them due to an incorrect email address, which is likely Golder's error since we had them wrong in the application. The correct address has ".org" at the end rather than ".com". I apologize for this oversight. I have forwarded your email to them so they now have it. Thank you.

David A. Buff, P.E., Q. E. P.  
Golder Associates Inc.  
Phone: (352)336-5600 x 545  
Fax: (352)336-6603 Mobile: (352)514-5600  
E-Mail: [dbuff@golder.com](mailto:dbuff@golder.com)

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---

**From:** Livingston, Sylvia [mailto:Sylvia.Livingston@dep.state.fl.us]  
**Sent:** Wednesday, August 27, 2008 4:50 PM  
**To:** [jfalvarez@scgc.com](mailto:jfalvarez@scgc.com); [kdlockhart@scgc.com](mailto:kdlockhart@scgc.com); Buff, Dave  
**Cc:** [James\\_Stormer@doh.state.fl.us](mailto:James_Stormer@doh.state.fl.us); Satyal, Ajaya; [forney.kathleen@epa.gov](mailto:forney.kathleen@epa.gov); [dee\\_morse@nps.gov](mailto:dee_morse@nps.gov)  
**Subject:** Sugar Cane Growers CO-OP BART Project; 0990026-014-AC

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Facility County: PALM BEACH  
Processor: Jeff Koerner

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[http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf\\_permit\\_zip\\_files/0990026.014.AC.D\\_pdf.zip](http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/0990026.014.AC.D_pdf.zip)

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Sylvia Livingston  
Bureau of Air Regulation  
Division of Air Resource Management (DARM)  
850/921-9506

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

**Livingston, Sylvia**

---

**From:** Kathy Durrell Lockhart [kdlockhart@scgc.org]  
**Sent:** Tuesday, September 09, 2008 5:15 PM  
**To:** Livingston, Sylvia  
**Subject:** RE: Sugar Cane Growers CO-OP BART Project; 0990026-014-AC

Kathleen Lockhart  
Manager Environmental Affairs  
Sugar Cane Growers Cooperative of Florida  
www.scgc.org

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**From:** Livingston, Sylvia [mailto:Sylvia.Livingston@dep.state.fl.us]  
**Sent:** Tuesday, September 09, 2008 2:49 PM  
**To:** Kathy Durrell Lockhart; Jose Alvarez  
**Subject:** Sugar Cane Growers CO-OP BART Project; 0990026-014-AC

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**Subject:** RE: Sugar Cane Growers CO-OP BART Project; 0990026-014-AC

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**Sent:** Wednesday, August 27, 2008 4:50 PM  
**To:** 'jfalvarez@scgc.com'; 'kdlockhart@scgc.com'; dbuff@golder.com  
**Cc:** 'James\_Stormer@doh.state.fl.us'; Satyal, Ajaya; 'forney.kathleen@epa.gov'; dee\_morse@nps.gov  
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Sylvia Livingston



Bureau of Air Regulation  
Division of Air Resource Management (DARM)  
850/921-9506

## Livingston, Sylvia

---

**From:** James\_Stormer@doh.state.fl.us  
**To:** Livingston, Sylvia  
**Sent:** Wednesday, August 27, 2008 5:23 PM  
**Subject:** Read: Sugar Cane Growers CO-OP BART Project; 0990026-014-AC

Your message

**To:** James\_Stormer@doh.state.fl.us  
**Subject:**

was read on 8/27/2008 5:23 PM.

## Livingston, Sylvia

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**From:** Mail Delivery System [MAILER-DAEMON@mseive01.rtp.epa.gov]  
**Sent:** Wednesday, August 27, 2008 4:50 PM  
**To:** Livingston, Sylvia  
**Subject:** Successful Mail Delivery Report

**Attachments:** Delivery report; Message Headers



Delivery report.txt  
(488 B)



Message  
Headers.txt (2 KB)

This is the mail system at host mseive01.rtp.epa.gov.

Your message was successfully delivered to the destination(s) listed below. If the message was delivered to mailbox you will receive no further notifications. Otherwise you may still receive notifications of mail delivery errors from other systems.

The mail system

<forney.kathleen@epa.gov>: delivery via 127.0.0.1 [127.0.0.1]:10025: 250 OK,  
sent 48B5BE01\_31687\_323743\_2 7D780442D3

## Livingston, Sylvia

---

**From:** Dee\_Morse@nps.gov  
**Sent:** Wednesday, August 27, 2008 4:53 PM  
**To:** Livingston, Sylvia  
**Subject:** Sugar Cane Growers CO-OP BART Project; 0990026-014-AC

### Return Receipt

Your document: Sugar Cane Growers CO-OP BART Project; 0990026-014-AC

was received by: Dee Morse/DENVER/NPS

at: 08/27/2008 02:52:59 PM MDT