
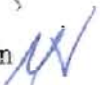


## Memorandum

## Florida Department of Environmental Protection

---

TO: Howard L. Rhodes  
THRU: Trina Vielhauer   
FROM: Michael P. Halpin   
DATE: June 3, 2003  
SUBJECT: U.S. Sugar Corporation – Bryant Mill Boilers No. 1,2 and 3

Attached for approval and signature is a PSD permit modification for the subject (existing) facility. The modification reduces the allowable consumption as well as sulfur content of the residual fuel which may be fired at the Bryant Mill.

The request was filed in conjunction with the PSD permit application for two new cogeneration boilers at the nearby Osceola Cogeneration Facility (Palm Beach Power Corporation). Approval of this modification at U.S. Sugar should allow for the referenced (new) cogeneration boilers to be permitted while maintaining acceptable ambient levels of SO<sub>2</sub> (based upon modeling protocols).

There being no increases in emission levels of any pollutants as a result of this modification, I recommend your approval and signature.

Attachments

/mph



Jeb Bush  
Governor

# Department of Environmental Protection

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

David B. Struhs  
Secretary

June 4, 2003

## CERTIFIED MAIL - RETURN RECEIPT REQUESTED

William R. Raiola, Vice President  
U.S. Sugar Corporation  
1731 South W.C. Owen Avenue  
Clewiston, FL 33440

Permit No.: 0990061-007-AC  
PSD-FL-009  
Facility ID No.: 0990061  
SIC Nos.: 20, 2061, 4911

RE: U.S. Sugar Corporation - Bryant Mill Boilers No. 1, 2 and 3  
Permit Modification of PSD-FL-009

Dear Mr. Raiola:

This is in response to the letter received by the Department in September 2002 from Golder Associates on behalf of U.S. Sugar Corporation. The request was for a reduction in the permitted (maximum) sulfur content of the residual fuel oil fired in Boilers 1, 2 and 3 from 2.5% to 0.7% sulfur by weight; and to allow a maximum of 80,000 gallons of residual fuel oil firing between the three units on a calendar-day basis. This request was filed in conjunction with a PSD permit application for the construction and start-up of two new cogeneration boilers at the nearby Osceola Cogeneration Facility. The Department has reviewed this request and grants this modification based on the information provided by Golder Associates. The permit modifications are for the operation of Boilers No. 1, 2 and 3 at the U.S. Sugar Corporation's Bryant Mill located at Bryant Mill Road off U.S. Highway 98 in Palm Beach County, Florida. The UTM Coordinates are Zone 17, 537.8 km East, 2969.1 km North and the map coordinates are Latitude: 26° 50' 41" North and Longitude: 80° 37' 09" West. The permit is modified as specified below.

### MODIFICATION OF PERMIT NO. PSD-FL-009

#### *Add the following new specific condition:*

Effective 3/1/2003, the maximum allowable quantity of fuel oil fired on each calendar day shall be less than 80,000 gallons combined, for Boilers 1, 2 and 3.

Effective 3/1/2003, all residual fuel oil purchased and placed in the common fuel oil storage tank for firing in Boiler Nos. 1, 2 and 3 shall contain a maximum sulfur content of no greater than 0.7% by weight. Compliance with the fuel oil sulfur limit may be determined based on a certification from the fuel supplier. The fuel supplier certification shall include the following information:

- (i) The name of the oil supplier; and
- (ii) A statement from the oil supplier listing the actual sulfur content of the oil and the place where the sample was collected.

[Rule 62-297.310(7)(c), F.A.C. and 40 CFR 60.42c(h)]

This permit modification is issued pursuant to Chapter 403, Florida Statutes. A copy of this letter shall be filed with the referenced permit and shall become part of each permit. Any party to this order has the right to seek judicial review of it under section 120.68 of the Florida Statutes, by filing a notice of appeal under rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within thirty (30) days after this order is filed with the clerk of the Department.

Sincerely,



Howard L. Rhodes, Director  
Division of Air Resources  
Management

**CERTIFICATE OF SERVICE**


The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Final Permit was sent by certified mail (\*) and copies were mailed by U.S. Mail before the close of business on 6/6/03 to the person(s) listed:

Mr. William R. Raiola, U.S. Sugar\*  
Mr. James Stormer, Palm Beach County Health Department  
Mr. Ron Blackburn, SD – DEP  
Mr. Gregg Worley, EPA

Clerk Stamp

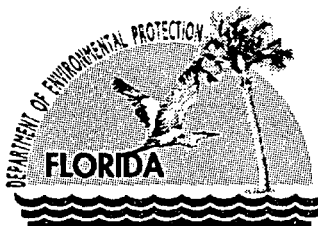
**FILING AND ACKNOWLEDGMENT**

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

 June 6, 2003  
(Clerk) Date

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<ul style="list-style-type: none"> <li>Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</li> <li>Print your name and address on the reverse so that we can return the card to you.</li> <li>Attach this card to the back of the mailpiece, or on the front if space permits.</li> </ul>		A. Received by (Please Print Clearly) <b>A. SOLIS</b> B. Date of Delivery <b>6-9-03</b>	
1. Article Addressed to:  Mr. William A. Raiola V.P. of Sugar Processing Operations United States Sugar Corporation 111 Ponce DeLeon Avenue Clewiston, FL 33440		C. Signature <b>x Andrew Solis</b> <input type="checkbox"/> Agent <input type="checkbox"/> Addressee	
		D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No	
		3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.	
		4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes	
7001 0320 0001 3692 5849			
PS Form 3811, July 1999		Domestic Return Receipt 102595-00-M-0952	

U.S. Postal Service	
CERTIFIED MAIL RECEIPT	
(Domestic Mail Only; No Insurance Coverage Provided)	
OFFICIAL USE	
Postage \$	Postmark Here
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees \$	
Sent To William A. Raiola Street, Apt. No. or PO Box No. 111 Ponce DeLeon Ave. City, State, ZIP+4 Clewiston, FL 33440	
PS Form 3800, January 2001 See Reverse for Instructions	



Jeb Bush  
Governor

# Department of Environmental Protection

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

David B. Struhs  
Secretary

January 15, 2003

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

William R. Raiola, Vice President  
U.S. Sugar Corporation  
1731 South W.C. Owen Avenue  
Clewiston, FL 33440

Re: Draft Permit Modification 0990061-007-AC, PSD-FL-009  
U.S. Sugar Corporation – Bryant Sugar Mill, Palm Beach County  
Reduction of Maximum Allowable Sulfur Content in Fuel Oil for Boilers No. 1, 2 and 3

Dear Mr. Raiola:

Enclosed is one copy of the draft permit modification for Boilers No.1, 2 and 3 at U.S. Sugar Corporation's Bryant Sugar Mill located off U.S. Route 98 in northwest Palm Beach County, Bryant, Florida. The Department's Intent to Issue Air Construction/Modification Permit and the Public Notice of Intent to Issue Air Construction/Modification Permit are also included.

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

Please submit any written comments you wish to have considered concerning the Department's proposed action to A. A. Linero, P.E., Administrator, New Source Review Section at the above letterhead address. If you have any other questions, please contact Cleve Holladay at 850/921-8986.

Sincerely,

Trina L. Vielhauer, Chief,  
Bureau of Air Regulation

TV/mph

Enclosures

In the Matter of an  
Application for Permit by:

U.S. Sugar Corporation  
1731 South W.C. Owen Avenue  
Clewiston, FL 33440

*Authorized Representative:*

William R. Raiola, Vice President

DEP File No. 0990061-007-AC

PSD-FL-009

Reduction of Maximum Sulfur Content in Fuel Oil

Palm Beach County

### **INTENT TO ISSUE AIR CONSTRUCTION PERMIT**

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction/modification permit (copy of Draft Permit attached) for the proposed project, detailed in the application specified above, for the reasons stated below.

U.S. Sugar Corporation operates a sugar mill located on Bryant Mill Road off of U.S. Route 98 in northwest Palm Beach County, Bryant, Florida. In September 2002, U.S. Sugar Corporation applied to the Department for a modification of their existing permit. After review of the supporting documentation for the requested changes, the Department agrees to a modification of the permit in accordance with the Draft Permit. Specifically, the Department grants the request to reduce the maximum allowable sulfur content of the residual fuel oil fired in Boilers 1, 2 and 3 to 0.7% S by weight, and to require a maximum of 80,000 gallons (total) of residual fuel oil firing between the combined units, both effective 3/1/2003.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, and 62-212. The above actions are not exempt from permitting procedures. The Department has determined that a modification of the existing air construction permit is required to make the necessary change.

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

Pursuant to Section 403.815, F.S., and Rule 62-110.106(7)(a)1., F.A.C., you (the applicant) are required to publish at your own expense the enclosed Public Notice of Intent to Issue Air Construction Permit. The notice shall be published one time only in the legal advertisement section of a newspaper of general circulation in the area affected. Rule 62-110.106(7)(b), F.A.C., requires that the applicant cause the notice to be published as soon as possible after notification by the Department of its intended action. For the purpose of these rules, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400 (Telephone: 850/488-0114; Fax 850/922-6979). You must provide proof of publication within seven days of publication, pursuant to Rule 62-110.106(5), F.A.C. No permitting action for which published notice is required shall be granted until proof of publication of notice is made by furnishing a uniform affidavit in substantially the form prescribed in section 50.051, F.S. to the office of the Department issuing the permit. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rules 62-110.106(9) & (11), F.A.C.

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

The Department will accept written comments concerning the proposed permit issuance action for a period of thirty (30) days from the date of publication of Public Notice of Intent to Issue Air Permit.

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

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

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen (14) days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen (14) days of publication of the public notice or within fourteen (14) days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen (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 will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

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

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301.

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

Mediation is not available in this proceeding.

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

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

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

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

Executed in Tallahassee, Florida.



Trina L. Vielhauer, Chief  
Bureau of Air Regulation



**CERTIFICATE OF SERVICE**

The undersigned duly designated deputy agency clerk hereby certifies that the Intent to Issue Air Construction/Modification Permit, the Public Notice of Intent to Issue Air Construction/Modification Permit, and the Draft permit were sent by certified mail (\*) and copies were mailed by U.S. Mail before the close of business on 1/16/03 to the person(s) listed:

Mr. William R. Raiola, U.S. Sugar Corporation\*  
Mr. James Stormer, Palm Beach County Health Department  
Mr. Phil Barbaccia, SD – DEP  
Mr. Gregg Worley, EPA  
Mr. John Bunyak, NPS

Clerk Stamp

**FILING AND ACKNOWLEDGMENT**

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

Victoria Gibson / January 16, 2003  
(Clerk) (Date)

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

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
Draft Permit Modification 0990061-007-AC, PSD-FL-009  
U.S. Sugar Corporation – Bryant Sugar Mill  
Palm Beach County

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit modification to U.S. Sugar Corporation for the Bryant Sugar Mill located on Bryant Mill Road off of U.S. Route 98 in northwest Palm Beach County, Bryant, Florida. A Best Available Control Technology (BACT) determination was not required for this modification pursuant to Rule 62-212.400, F.A.C. and 40 CFR 52.21, Prevention of Significant Deterioration (PSD). The modification will not result in an increase in allowable emissions from the existing facility. The applicant's name and address are: William R. Raiola, Vice President and Authorized Representative, U.S. Sugar Corporation, 1731 South W.C. Owens Avenue, Clewiston, FL 33440.

The modification will reduce the maximum allowable sulfur content of the residual oil fired in Boilers 1, 2 and 3 from 2.5% sulfur to 0.7% sulfur by weight, effective 3/1/2003. Additionally, the total residual fuel oil burning rate of Boilers 1, 2 and 3 combined will not exceed 80,000 gallons per calendar day. This permitting action is required in conjunction with a separate Department action, relative to the construction and start-up of two new cogeneration boilers at the nearby Osceola Cogeneration Facility. No other changes are included herein and the modification will not result in any increase in emissions.

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

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

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

Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated

above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

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

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by rule 28-106.301

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

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

Dept. of Environmental  
Protection  
Bureau of Air Regulation  
Suite 4, 111 S. Magnolia Drive  
Tallahassee, Florida, 32301  
Telephone: 850/488-0114  
Fax: 850/922-6979

Division of Environmental Health  
and Engineering  
Palm Beach County Health  
Department  
901 Evernia Street  
West Palm Beach, Florida 33401  
Telephone: 561/355-3070

Dept. of Environmental  
Protection  
South District Office  
Suite 364, 2295 Victoria Avenue  
Fort Myers, Florida 33901-3381  
Telephone: 239/332-6975  
Fax: 239/332-6969

The complete project file includes the application, draft permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Administrator, New Source Review Section at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/488-0114, for additional information.

## DRAFT MODIFICATION

(Date)

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

William R. Raiola, Vice President  
U.S. Sugar Corporation  
1731 South W.C. Owen Avenue  
Clewiston, FL 33440

Draft Permit No.: 0990061-007-AC  
PSD-FL-009  
Facility ID No.: 0990061  
SIC Nos.: 20, 2061, 4911

RE: U.S. Sugar Corporation - Bryant Mill Boilers No. 1, 2 and 3  
Permit Modification of PSD-FL-009

Dear Mr. Raiola:

This is in response to the letter received by the Department in September 2002 from Golder Associates on behalf of U.S. Sugar Corporation. The request was for a reduction in the permitted (maximum) sulfur content of the residual fuel oil fired in Boilers 1, 2 and 3 from 2.5% to 0.7% sulfur by weight; and to allow a maximum of 80,000 gallons of residual fuel oil firing between the three units on a calendar-day basis. This request was filed in conjunction with a PSD permit application for the construction and start-up of two new cogeneration boilers at the nearby Osceola Cogeneration Facility. The Department has reviewed this request and grants this modification based on the information provided Golder Associates. The permit modifications are for the operation of Boilers No. 1, 2 and 3 at the U.S. Sugar Corporation's Bryant Mill located at Bryant Mill Road off U.S. Highway 98 in Palm Beach County, Florida. The UTM Coordinates are Zone 17, 537.8 km East, 2969.1 km North and the map coordinates are Latitude: 26° 50' 41" North and Longitude: 80° 37' 09" West. The permit is modified as specified below.

### MODIFICATION OF PERMIT NO. PSD-FL-009

*Add the following new specific condition:*

Effective 3/1/2003, the maximum allowable quantity of fuel oil fired on each calendar day shall be less than 80,000 gallons combined, for Boilers 1, 2 and 3.

Effective 3/1/2003, the maximum sulfur content of residual fuel oil fired in Boilers No. 1, 2 and 3 shall be 0.7% by weight. Compliance with the fuel oil sulfur limit may be determined based on a certification from the fuel supplier. The fuel supplier certification shall include the following information:

- (i) The name of the oil supplier; and
- (ii) A statement from the oil supplier listing the actual sulfur content of the oil and the place where the sample was collected.

[Rule 62-297.310(7)(c), F.A.C. and 40 CFR 60.42c(h)]

This permit modification is issued pursuant to Chapter 403, Florida Statutes. A copy of this letter shall be filed with the referenced permit and shall become part of each permit. Any party to this order has the right to seek judicial review of it under section 120.68 of the Florida Statutes, by filing a notice of appeal under rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900

Commonwealth Boulevard, Tallahassee, Florida, 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within thirty (30) days after this order is filed with the clerk of the Department.

Sincerely,

(DRAFT)

---

Howard L. Rhodes, Director  
Division of Air Resources  
Management

**CERTIFICATE OF SERVICE**

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

Mr. William R. Raiola, U.S. Sugar\*  
Mr. James Stormer, Palm Beach County Health Department  
Mr. Ron Blackburn, SD – DEP  
Mr. Gregg Worley, EPA

Clerk Stamp

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

(Draft)

---

(Clerk)

---

Date)



Lawton Chiles  
Governor

# Florida Department of Environmental Protection

South District  
2295 Victoria Avenue  
Fort Myers, Florida 33901

0990061-NA-AC

Virginia B. Wetherell  
Secretary

## NOTICE OF PERMIT RE-ISSUANCE

March 28, 1994

**CERTIFIED MAIL #Z 128 058 970**  
**RETURN RECEIPT REQUESTED**

In the Matter of an  
Application for Permit by:

DEP File No. AO50-234931  
OGC Case No. 93-4191  
Palm Beach County

Mr. Murray T. Brinson  
Vice President Sugar Processing  
United States Sugar Corporation  
Post Office Drawer 1207  
Clewiston, FL 33440

---

Enclosed is air pollution operation permit number AO50-234931 to operate Bryant Boiler No. 5 located off of U.S. Route 98 in Palm Beach County, FL; re-issued pursuant to Section 403.087, Florida Statutes.

Any party to this order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this Notice is filed with the Clerk of the Department.

Mr. Murray T. Brinson  
DEP File No. AO50-234931  
Page 2

Executed in Fort Myers, Florida

STATE OF FLORIDA  
DEPARTMENT OF  
ENVIRONMENTAL PROTECTION




Ronald D. Blackburn  
Acting Director of  
District Management  
South District Office  
2295 Victoria Avenue, Suite 364  
Fort Myers, FL 33901  
(813) 332-6975

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT RE-ISSUANCE and all copies were mailed by certified mail before the close of business on March 28, 1994 to the listed persons.

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(11), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

  
Clerk                      Date

copies furnished to:

Mr. Jeffery F. Koerner, PBCPHU  
Mr. David A. Buff, P.E., KBN  
Mr. Robert F. Van Voorhees, BRYAN CAVE  
Mr. William H. Congdon, DEP OGC  
Mr. R. Bruce Mitchell, DEP BAR

Enclosures

RDB/GM/gm



Lawton Chiles  
Governor

# Florida Department of Environmental Protection

South District  
2295 Victoria Avenue  
Fort Myers, Florida 33901

Virginia B. Wetherell  
Secretary

**PERMITTEE:**

United States Sugar Corporation  
P.O. Drawer 1207  
Clewiston, FL 33440

I.D. No. 52FTM50006105  
Permit/Certification  
Number: A050-234931  
Date of Issue: March 28, 1994  
Expiration Date: March 28, 1999  
County: Palm Beach  
Latitude: 26° 50' 08" N  
Longitude: 80° 36' 36" W  
Section/Town/Range: 03/42S/37E  
Project: Carbonaceous Fuel  
Fired Boiler, No. 5  
Bryant Mill

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rules 17-296, 17-297 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans and other documents, attached hereto or on file with the department and made a part hereof and specifically described as follows:

For operation of boiler No. 5 at U.S. Sugar Corporation's Bryant mill. This boiler is a bagasse/oil fired boiler that was originally permitted in 1978 and began operating in the 1979-1980 crop season. U.S. Sugar Corporation (U.S. Sugar) is authorized to burn bagasse, new/virgin No. 6 fuel oil, or on-specification used oil. The maximum heat input rate of bagasse is 671 million Btu per hour (93 tons per hour on a wet basis). The maximum heat input rate of new/virgin No. 6 fuel oil is 215.6 million Btu per hour (1,467.0 gallons per hour).

Particulate matter emissions are controlled with two Model 100 Joy type turbulaire water impingement scrubbers with water spray nozzles operating in an internal atmosphere of negative draft gas flow.

The facility is located off of U.S. Route 98, Bryant, Palm Beach County, Florida.



PERMITTEE:

United States Sugar Corporation  
(U.S. Sugar)

I.D. No. 52FTM50006105

Permit/Cert. No. AO50-234931

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Expiration Date: March 28, 1999

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this 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 and 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

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United States Sugar Corporation  
(U.S. Sugar)

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GENERAL CONDITIONS:

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 reasonable times, access to the premises where the permitted activity is located or conducted to:

- (a) Have access to and copy any records that must be kept under 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 noncompliance; and
- (b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. 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 Section 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

PERMITTEE:

United States Sugar Corporation  
(U.S. Sugar)

I.D. No. 52FTM50006105  
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GENERAL CONDITIONS:

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 Rule 17-4.120 and 17-730.300 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:
  - (X) Determination of Best Available Control Technology (BACT)
  - (X) Determination of Prevention of Significant Deterioration (PSD)
  - ( ) Certification of compliance with state Water Quality Standards (Section 401, PL 92-500)
  - ( ) Compliance with New Source Performance Standards
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 for 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.

PERMITTEE:

United States Sugar Corporation  
(U.S. Sugar)

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GENERAL CONDITIONS:

- (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;
  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.

PERMITTEE:

United States Sugar Corporation  
(U.S. Sugar)

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SPECIFIC CONDITIONS:

1. Particulate matter (PM)/PM10 emissions shall not exceed any of the following limits [Rule 17-212.400(6)(b), F.A.C.]:

(A) 87.5 pounds per hour (24 hour average - compliance with the 24 hour average will be determined based upon the normal testing time period for EPA Method 5, 40 CFR 60, Appendix A).

(B) 0.15 pound per million Btu of heat input of carbonaceous fuel (bagasse) plus 0.10 pound per million Btu heat input of fossil fuel, assuming 55% thermal efficiency for the carbonaceous fuel part of the calculation.

(C) 154.26 tons in any 12 consecutive month period.

2. Nitrogen oxides (NOx) emissions shall not exceed 161.7 pounds per hour (24 hour average). [Rule 17-272.300(3)(e), F.A.C.].

3. Visible emissions shall not exceed 20 percent opacity except that 40 percent opacity is permissible for not more than two minutes in any one hour. [Permit AC50-137573].

4. U.S. Sugar shall not discharge air pollutants which cause or contribute to an objectionable odor.[Rule 17-296.320(2), F.A.C.].

5. The hours of operation shall not exceed 4,752 hours in any 12 consecutive month period. U.S. Sugar shall not operate this boiler during the period of May 1 through October 15. [Requested by Permittee].

6. Steam production, heat input, and bagasse consumption shall not exceed the quantities listed below:

Steam PSIG	°F	Averaging Time	Steam Prod. lbs/hour	Heat Input* MMBtu/hour	Bagasse Consumption (TPH-Wet)
850	900	1-hr. max.	323,189	671	93
850	900	24-hr. avg.	280,804	583	81
400	750	1-hr. max.	342,384	671	93
400	750	24-hr. avg.	297,482	583	81

\* based upon 55% thermal efficiency while burning bagasse.

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SPECIFIC CONDITIONS:

6. (continued)

Steam production shall not exceed 990,676,512 pounds per year of 850 psig, 900 °F steam, nor 1,049,514,873 pounds per year of 400 psig, 750 °F steam. If steam in both pressure/temperature classes is produced during a year, then the allowable steam production in pounds per year is the weighted average of the limits for each class of steam production. U.S. Sugar shall maintain records (steam production, pressure, and temperature) to determine compliance with this condition. [PSD-FL-009].

7. U.S. Sugar is permitted to burn only the following fuels. The heat input rate of each fuel shall not exceed the following limits [Requested by the Permittee]:

- (A) Bagasse. The maximum heat input rate of bagasse shall not exceed 671 million Btu per hour (93 tons per hour on a wet basis).
- (B) New/virgin No. 6 fuel oil with a maximum sulfur content of 0.7 percent by weight.\* The maximum heat input rate of new/virgin No. 6 fuel oil shall not exceed 215.6 million Btu per hour (1,467.0 gallons per hour).

\* U.S. Sugar may burn blended new/virgin No. 6 fuel oil from a common fuel oil system. U.S. Sugar shall replace all fuel oil burned in this boiler with new/virgin No. 6 fuel oil having a maximum sulfur content of 0.7 percent by weight. Such replacement shall occur during the season that the fuel oil is burned.

- (C) On specification used oil with a maximum sulfur content of 0.7 percent by weight.

8. Burning of fuel oil shall not exceed 400,000. gallons per crop season. [Permit A050-162367].

9. U.S. Sugar shall install, operate, and maintain an integrating fuel oil flow meter. [Permit A050-162367].

10. U.S. Sugar shall maintain a log of the fuel oil consumption and invoices of the fuel oil purchased for this boiler that shows the sulfur content and heating value of the oil (determined by appropriate ASTM methods). U.S. Sugar shall keep hourly records documenting the quantities of steam produced and daily records documenting the quantity of fuel oil consumed. All records shall be available for regulatory agency inspection for at least five years. [Rule 17-4.070(3), F.A.C.].

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SPECIFIC CONDITIONS:

11. Used Oil Combustion:

- (A) U.S. Sugar shall not burn off-specification used oil. Used oil which fails to comply with any of the following specification levels is off-specification used oil [Requested by applicant; 40 CFR 279 Subpart B and Rule 17-4.070(3), F.A.C.]:

1. Arsenic shall not exceed 5.0 ppm.
2. Cadmium shall not exceed 2.0 ppm.
3. Chromium shall not exceed 10.0 ppm.
4. Lead shall not exceed 100.0 ppm.
5. Total halogens shall not exceed 4,000.0 ppm. \* See note.
6. Flash point shall not be less than 100.0 °F.

\*Note: Used oil containing more than 1,000.0 ppm total halogens is presumed to be a hazardous waste under the rebuttable presumption provided under 40 CFR 279.10(b)(1)(ii). Such oil shall not be burned unless U.S. Sugar demonstrates through the use of DEP approved analytical methods that the used oil does not constitute hazardous waste.

- (B) At least one representative sample of used oil per crop season shall be analyzed for: heating value as generated (Btu/lb), sulfur, arsenic, cadmium, chromium, lead, total halogens, and flash point using EPA/DEP or ASTM approved methods.
- (C) Results of used oil sampling and analysis shall be retained for at least three (3) years and shall be available for inspection by the Department or the Palm Beach County Public Health Unit.
- (D) On an annual basis, with the Annual Operation Report, U.S. Sugar shall submit reports of the monthly quantities of used oil burned and the results from sample analyses performed to the Department's South District Office and to the Palm Beach County Public Health Unit.

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SPECIFIC CONDITIONS:

12. U.S. Sugar shall test this boiler for the following pollutants on an annual basis within 60 days of the date January 1. Each compliance test shall be conducted in accordance with 40 CFR 60, Appendix A, using the method indicated [Rule 17-297.340(1)(d), F.A.C.]:

- (A) PM/PM10 - EPA Method 5. The compliance test results shall be calculated by assuming that the thermal efficiency of boiler No. 5 is equal to 55% while burning bagasse, or by any new method subsequently adopted by Department rule.
- (B) Visible emissions - EPA Method 9; while conducting the EPA Method 5 test. Under circumstances when simultaneous Method 9 and Method 5 tests are not feasible, U.S. Sugar shall provide written notification of the reasons why simultaneous testing was not feasible to the Department and the Palm Beach County Public Health Unit within two business days of the scheduled testing date. In such circumstances, the tests shall be conducted as close to each other as is feasible.

13. U.S. Sugar shall test this boiler to determine its actual thermal efficiency in accordance with the ASME short-form procedure during the 1993/1994 crop season, and during the crop season just prior to applying for permit renewal. [Permit AO50-162367].

14. U.S. Sugar should conduct emissions testing while operating this boiler within 90% - 100% of the maximum heat input rate of 671 million Btu per hour. Testing may be conducted while operating at less than 90% of the maximum heat input rate; however, if so, subsequent operation is limited up to 110% of the average heat input rate during the test. Operation at higher heat input rates is allowed for no more than 25 calendar days for the purpose of conducting additional compliance tests to regain the higher heat input rate, not to exceed 671 million Btu per hour. The actual heat input rate shall be specified in each test report. [Rule 17-4.070(3), F.A.C.].



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SPECIFIC CONDITIONS:

15. The following scrubber operating parameters, for each scrubber, shall be recorded at least every 15 minutes during each compliance test. This data must be included in each test report [Rule 17-4.070(3), F.A.C.]:

- (A) Gas pressure drop.
- (B) Scrubber water supply pressure.
- (C) Scrubber water supply flow rate.

16. U.S. Sugar shall file all test reports with the South District Office of the Department and the Palm Beach County Public Health Unit as soon as practical, but no later than 45 days after the test is complete. [Rule 17-297.570(2), F.A.C.].

17. U.S. Sugar shall notify the South District Office of the Department and the Palm Beach County Public Health Unit at least 15 days prior to the date on which each formal compliance test is to begin of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted. [Rule 17-297.340(1)(i), F.A.C.].

18. Each scrubber shall be equipped with a manometer or equivalent instrument to measure the gas pressure drop, with pressure gauges to measure the scrubber water supply pressure, and with a flow meter or equivalent device (weir) to measure the scrubber water supply flow rate. Data from these instruments shall be recorded at least once per shift (every 8 hours). The recorded data shall be used to determine 8 hour averages. The pH of the scrubber water shall be measured and recorded at least once per day. These records shall be available for regulatory agency inspection for at least five years. U.S. Sugar shall notify the Department and the Palm Beach County Public Health Unit if chemicals are used to adjust pH. [Permit AO50-162367 and Rule 17-4.070(3), F.A.C.].

19. While boiler number 5 is operating, the 8 hour average gas pressure drop shall not fall below 90 percent of the average value reported during the most recent satisfactory compliance test. The gas pressure drop shall not fall below 75 percent of the average value reported during the most recent satisfactory compliance test at any time except during startup or shutdown. [Rule 17-4.070(3), F.A.C.].

PERMITTEE:

United States Sugar Corporation  
(U.S. Sugar)

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SPECIFIC CONDITIONS:

20. While boiler number 5 is operating, the 8 hour average scrubber water supply pressure shall not fall below 90 percent of the average value reported during the most recent satisfactory compliance test. The scrubber water supply pressure shall not fall below 75 percent of the average value reported during the most recent satisfactory compliance test at any time except during startup or shutdown. [Rule 17-4.070(3), F.A.C.].

21. While boiler number 5 is operating, the 8 hour average scrubber water supply flow rate shall not fall below 90 percent of the average value reported during the most recent satisfactory compliance test. The scrubber water supply flow rate shall not fall below 75 percent of the average value reported during the most recent satisfactory compliance test at any time except during startup or shutdown. [Rule 17-4.070(3), F.A.C.].

22. U.S. Sugar shall take reasonable precautions to prevent emissions of unconfined particulate matter.  
[Rule 17-296.310(3), F.A.C.].

23. If visible emissions from the bagasse handling system exceed 20% opacity, then U.S. Sugar shall take additional reasonable precautions, as approved by the Department, to minimize unconfined emissions. These precautions shall include covered conveyors, minimizing the distance that the bagasse is dropped during handling, and windbreaks around the material handling equipment. [Permit AO50-162367 and Rule 17-296.310(3), F.A.C.].

24. Emissions of carbon monoxide and volatile organic compounds shall be maintained at the lowest possible level by following the operating procedures described in the operation and maintenance plan dated June 29, 1993. [Permit AO50-162367].

25. U.S. Sugar shall submit an annual operation report (DEP Form 17-210.900(4)) to the South District Office of the Department and the Palm Beach County Public Health Unit by March 1st each year. The form should be reproduced and used for the annual submittals. The report shall also include the amount of fuel oil burned, the amount of used oil burned, and the sulfur content of the oil purchased for the season. [Rule 17-4.070(3), F.A.C.].

26. If the Department has reason to believe that any applicable emission standard is being violated, then the Department may require U.S. Sugar to conduct compliance tests which identify the nature and quantity of pollutant emissions and to provide a report on the results of said tests. [Rule 17-297.340(2), F.A.C.].

PERMITTEE:

United States Sugar Corporation  
(U.S. Sugar)

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SPECIFIC CONDITIONS:

27. U.S. Sugar shall send all notifications and reports required by this permit to (a) the South District Office of the Department in Fort Myers, and (b) the Palm Beach County Public Health Unit in West Palm Beach, FL.

28. U.S. Sugar shall provide stack sampling facilities that comply with Rule 17-297.345, F.A.C.

29. There shall be no discharges of liquid effluents or contaminated runoff from the plant site.  
[Rule 17-4.070(3), F.A.C.].

30. Issuance of this permit does not relieve U.S. Sugar from complying with applicable emission limiting standards or other requirements of Rules 17-210, 17-212, 17-252, 17-272, 17-273, 17-275, 17-296, and 17-297, F.A.C., or any other requirements under federal, state, or local law. [Rule 17-210.300, F.A.C.].

31. In order to renew this operation permit, U.S. Sugar must submit an application for renewal at least 60 days prior to the expiration date of the permit. [Rule 17-4.090(1), F.A.C.].

Note: In the event of an emergency, the permittee shall contact the Department by calling (904) 488-1320. During normal business hours, the permittee shall call (813) 332-6975.

Issued this 28th day of March, 1994.

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Ronald D. Blackburn  
Acting Director of  
District Management

RDB/GM/gm

14 Pages Attached

Table A-1. Summary of SO<sub>2</sub> Sources Included in the Air Modeling Analysis

AIRS Number	Facility	Units	Modeling ID Name	Relative Location		Stack and Operating Parameters				Emission		PSD Source? (EXP/CON)	Modeled in		
				X (m)	Y (m)	Height (m)	Diameter (m)	Temper. (K)	Velocity (m/s)	Rate(g/s)			AAQS	Class II	Class I
										3-Hour	24-Hour				
0990019	Osceola Farms PSD Baseline <sup>a</sup>														
		Unit 1 PSD Baseline	OSBLR1B	6,400	-1,160	22.0	1.52	342.0	8.18	-5.07	-5.07	EXP	No	Yes	Yes
		Unit 2 PSD Baseline	OSBLR2B	6,400	-1,160	22.0	1.52	341.0	18.10	-16.32	-16.32	EXP	No	Yes	Yes
		Unit 3 PSD Baseline	OSBLR3B	6,400	-1,160	22.0	1.93	341.0	14.50	-7.26	-7.26	EXP	No	Yes	Yes
		Unit 4 PSD Baseline	OSBLR4B	6,400	-1,160	22.0	1.83	341.0	18.80	-13.61	-13.61	EXP	No	Yes	Yes
		Palm Beach Power Corp. (Osceola Cogen)													
		2 Cogeneration Boilers	PBCOGEN	6,600	-1,760	60.7	2.44	419.3	24.87	57.46	38.30	CON	Yes	Yes	Yes
		Package Boiler	PBPACKB	6,600	-1,760	22.9	1.52	483.2	22.86	1.47	1.47	CON	Yes	Yes	Yes
0990026	Sugar Cane Growers <sup>a</sup>														
		Unit 1&2	SUGCN12	-2,900	-15,860	45.7	1.87	339.0	21.75	41.20	41.20	CON	Yes	Yes	Yes
		Unit 3	SUGCN3	-2,900	-15,860	27.4	1.52	339.0	22.25	16.20	16.20	CON	Yes	Yes	Yes
		Unit 4 PSD	SUGCN4	-2,900	-15,860	54.9	2.44	339.0	21.73	38.20	38.20	CON	Yes	Yes	Yes
		Unit 5	SUGCN5	-2,900	-15,860	45.7	2.30	339.0	15.94	27.90	27.90	CON	Yes	Yes	Yes
		Unit 8 PSD	SUGCN8	-2,900	-15,860	47.2	2.90	339.0	13.62	23.50	23.50	CON	Yes	Yes	Yes
		Unit 1&2 PSD Baseline	SUGCN12B	-2,900	-15,860	24.4	1.40	344.0	11.40	-24.20	-24.20	EXP	No	Yes	Yes
		Unit 3 PSD Baseline	SUGCN3B	-2,900	-15,860	24.4	1.60	344.0	15.60	-4.40	-4.40	EXP	No	Yes	Yes
		Unit 4 PSD Baseline	SUGCN4B	-2,900	-15,860	25.9	1.63	344.0	11.20	-24.20	-24.20	EXP	No	Yes	Yes
		Unit 5 PSD Baseline	SUGCN5B	-2,900	-15,860	24.4	1.40	344.0	15.20	-16.20	-16.20	EXP	No	Yes	Yes
	Unit 6&7 PSD Baseline	SUGCN67B	-2,900	-15,860	12.2	1.52	606.0	11.20	-51.00	-51.00	EXP	No	Yes	Yes	
0850102	Bechtel Indiantown PSD		BECHTIND	7,800	22,340	150.9	4.88	333.2	30.50	75.64	75.64	CON	Yes	Yes	Yes
0850001	FPL Martin														
		Units 1&2	MART12	5,300	23,740	152.1	7.99	420.9	21.03	1743.79	1743.79	NO	Yes	No	No
		Aux Blr PSD	MARTAUX	5,300	23,740	18.3	1.10	535.4	15.24	12.90	12.90	CON	Yes	Yes	Yes
		Diesel Gens PSD	MARTGEN	5,300	23,740	7.6	0.30	785.9	39.62	0.51	0.51	CON	Yes	Yes	Yes
		Units 3&4 PSD	MART34	5,300	23,740	64.9	6.10	410.9	18.90	470.40	470.40	CON	Yes	Yes	Yes
		Unit 8	MART8	5,300	23,740	36.6	5.79	397.6	13.59	12.99	12.99	CON	Yes	Yes	Yes
0990016	Atlantic Sugar <sup>a</sup>														
		Unit 1	ATLSUG1	15,100	-23,960	27.4	1.83	346.0	17.97	16.28	16.28	CON	Yes	Yes	Yes
		Unit 2	ATLSUG2	15,100	-23,960	27.4	1.83	350.0	23.36	16.28	16.28	CON	Yes	Yes	Yes
		Unit 3	ATLSUG3	15,100	-23,960	27.4	1.83	350.0	21.56	16.02	16.02	CON	Yes	Yes	Yes
		Unit 4	ATLSUG4	15,100	-23,960	27.4	1.83	344.0	25.16	16.21	16.21	CON	Yes	Yes	Yes
		Unit 5 PSD <sup>b</sup>	ATLSUG5	15,100	-23,960	27.4	1.68	339.0	19.24	8.41	8.04	CON	Yes	Yes	Yes
		Unit 1 PSD Baseline	ATLSUG1B	15,100	-23,960	18.9	1.92	506.0	12.70	-17.24	-17.24	EXP	No	Yes	Yes
		Unit 2 PSD Baseline	ATLSUG2B	15,100	-23,960	18.9	1.92	511.0	10.90	-22.50	-22.50	EXP	No	Yes	Yes
		Unit 3 PSD Baseline	ATLSUG3B	15,100	-23,960	21.9	1.83	522.0	17.50	-16.88	-16.88	EXP	No	Yes	Yes
	Unit 4 PSD Baseline	ATLSUG4B	15,100	-23,960	18.3	1.83	344.0	15.00	-10.76	-10.76	EXP	No	Yes	Yes	
0510001	Everglades Sugar <sup>b</sup> Main Boiler		EVERGLAD	-28,200	-14,960	21.9	1.10	477.0	10.10	34.90	34.90	NO	Yes	No	No
0510003	US Sugar - Clewiston <sup>d</sup>														
	PSD Baseline (On-crop season only)														

AIRS Number	Facility	Units	Modeling ID Name	Relative Location		Stack and Operating Parameters				Emission Rate(g/s)		PSD Source? (EXP/CON)	Modeled in		
				X (m)	Y (m)	Height (m)	Diameter (m)	Temper. (K)	Velocity (m/s)	3-Hour	24-Hour		AAQS	Class II	Class I
		Unit 1 PSD Baseline	USSBRL1B	-31,700	-12,260	23.1	1.86	344.0	30.20	-79.86	-58.21	EXP	No	Yes	Yes
		Unit 2 PSD Baseline	USSBLR2B	-31,700	-12,260	23.1	1.86	343.0	35.70	-79.86	-58.21	EXP	No	Yes	Yes
		Unit 3 PSD Baseline	USSBLR3B	-31,700	-12,260	27.4	2.29	342.0	14.70	-48.30	-33.20	EXP	No	Yes	Yes
		East Pellet Plant PSD Baseline	EPELLET	-31,700	-12,260	12.2	1.52	347.0	8.54	-10.30	-10.30	EXP	No	Yes	Yes
		West Pellet Plant PSD Baseline	WPELLET	-31,700	-12,260	15.7	1.52	347.0	8.54	-10.30	-10.30	EXP	No	Yes	Yes
		<u>On-crop season future</u>													
		Unit 1	USSBRL1N	-31,700	-12,260	65.0	2.44	347.0	15.36	78.79	73.73	CON	Yes	Yes	Yes
		Unit 2	USSBLR2N	-31,700	-12,260	65.0	2.44	338.0	13.86	78.49	73.44	CON	Yes	Yes	Yes
		Unit 3	USSBLR3N	-31,700	-12,260	65.0	2.44	333.2	6.78	47.08	47.08	CON	Yes	Yes	Yes
		Unit 4	USSBLR4N	-31,700	-12,260	45.7	2.51	344.3	20.28	21.53	3.68	CON	Yes	Yes	Yes
		Unit 7	USSBLR7N	-31,700	-12,260	68.6	2.59	405.4	20.77	13.91	12.65	CON	Yes	Yes	Yes
		<u>Off-crop season future</u>													
		Unit 1	USSBRL1F	-31,700	-12,260	65.0	2.44	347.0	14.05	51.64	24.29	CON	Yes	Yes	Yes
		Unit 2	USSBLR2F	-31,700	-12,260	65.0	2.44	338.0	12.68	51.27	24.02	CON	Yes	Yes	Yes
		Unit 3	USSBLR3F	-31,700	-12,260	65.0	2.44	333.2	6.20	30.74	30.20	CON	Yes	Yes	Yes
		Unit 4	USSBLR4F	-31,700	-12,260	45.7	2.51	344.3	0.00	0.00	0.00	CON	Yes	Yes	Yes
		Unit 7	USSBLR7F	-31,700	-12,260	68.6	2.59	405.4	23.60	17.39	15.81	CON	Yes	Yes	Yes
0990234	Palm Beach Co. Resource Recovery 1&2 PSD		PBCRRF	48,000	-8,960	76.2	2.04	505.2	24.90	85.05	85.05	CON	Yes	Yes	Yes
0990042	FPL Riviera <sup>c</sup>	Units 3&4 at 2.5% fuel oil	RIVU34	56,400	-8,560	90.8	4.88	401.5	18.90	2113.65	2113.65	NO	Yes	No	No
0990568	Lake Worth Utilities <sup>c</sup>	Unit 3	LAKWTHU3	55,000	-25,460	38.1	2.13	408.2	7.71	103.95	103.95	NO	Yes	No	No
		Unit 4	LAKWTHU4	55,000	-25,460	35.1	2.29	418.2	17.00	129.85	129.85	NO	Yes	No	No
		Unit 5	LAKWTHU5	55,000	-25,460	22.9	0.94	450.4	18.29	11.59	11.59	NO	Yes	No	No
		HRSO	LAKWTHHR	55,000	-25,460	45.7	5.49	377.6	13.74	12.79	12.79	CON	Yes	Yes	Yes
1110003	Fort Pierce Utilities <sup>c</sup>	Units 6&7	FTPIER67	29,000	67,140	45.7	2.19	408.2	12.50	77.87	77.87	NO	Yes	No	No
0610029	Vero Beach Power <sup>c</sup>	Unit 1	VERBU1	29,300	87,340	60.96	1.07	437.0	32.42	28.77	28.77	NO	Yes	No	No
		Unit 2	VERBU2	29,300	87,340	60.96	1.07	434.3	37.57	84.21	84.21	NO	Yes	No	No
		Unit 3	VERBU3	29,300	87,340	60.96	1.83	440.4	19.93	142.07	142.07	NO	Yes	No	No
		Unit 4	VERBU4	29,300	87,340	60.96	2.13	425.4	24.36	69.05	69.05	NO	Yes	No	No
		Unit 5 Simple Cycle CT	VERBU5	29,300	87,340	38.10	3.35	416.5	19.56	15.50	15.50	CON	Yes	Yes	No
0112119	South Broward RRF PSD <sup>c</sup>		SBCRRF	41,800	-85,860	59.4	3.96	381.0	18.01	37.91	37.91	CON	Yes	Yes	Yes
0110037	FPL - Lauderdale <sup>c</sup>	CTs 1-4 PSD	LAUDU45	42,300	-85,860	45.7	5.49	438.7	14.60	271.15	271.15	CON	Yes	Yes	Yes
		GT 1-12 (0.5% fuel oil)	LDGT1_12	42,300	-85,860	13.7	2.37	733.2	114.31	552.80	552.80	NO	Yes	No	No

AIRS Number	Facility	Units	Modeling ID Name	Relative Location		Stack and Operating Parameters				Emission Rate(g/s)		PSD Source? (EXP/CON)	Modeled in		
				X	Y	Height	Diameter	Temper.	Velocity				AAQS	Class II	Class I
				(m)	(m)	(m)	(m)	(K)	(m/s)	3-Hour	24-Hour				
0110036	FPL Port Everglades <sup>c</sup>	GT 13-24 (0.5% fuel oil)	LDGT1324	42,300	-85,860	13.4	4.75	733.2	28.43	552.80	552.80	NO	Yes	No	No
		4&5 PSD Baseline	FTLAU45B	42,300	-85,860	46.0	4.27	422.0	14.63	-457.00	-457.00	EXP	No	Yes	Yes
		Units 1&2 at 2.5% fuel oil	PTEVU12	49,600	-83,860	104.5	4.27	415.9	26.72	1593.90	1593.90	NO	Yes	No	No
		Units 3&4 at 2.5% fuel oil	PTEVU34	49,600	-83,860	104.5	5.52	414.8	23.88	2772.00	2772.00	NO	Yes	No	No
		GT 1-12 (0.5% fuel oil)	PTEVGTS	49,600	-83,860	13.4	4.75	733.2	28.43	530.70	530.70	NO	Yes	No	No
0550018	TECO-Phillips <sup>c</sup>	Steam Boiler	TECOSB	-73,500	66,240	18.90	0.67	ND	ND	0.7	0.7	NO	No	No	No
		Diesel Generator Unit 1	TECO1	-73,500	66,240	45.72	1.83	441.0	24.1	58.0	29.0	NO	Yes	No	No
		Diesel Generator Unit 2	TECO2	-73,500	66,240	45.72	1.83	450.0	24.1	58.0	29.0	NO	Yes	No	No
0250020	Tarmac <sup>c</sup>	Kiln 1 PSD Baseline	TARMC1	25,100	-107,460	61.0	2.44	465.0	12.84	-5.71	-5.71	EXP	No	Yes	Yes
		Kiln 2 PSD Baseline	TARMC2B	25,100	-107,460	61.0	2.44	465.0	12.84	-5.71	-5.71	EXP	No	Yes	Yes
		Kiln 3 PSD Baseline	TARMC3B	25,100	-107,460	61.0	4.57	472.0	10.78	-2.76	-2.76	EXP	No	Yes	Yes
		Kiln 2 PSD	TABMC2P	25,100	-107,460	61.0	2.44	422.0	9.10	24.57	24.57	CON	Yes	Yes	Yes
		Kiln 3 PSD	TARMC3P	25,100	-107,460	61.0	4.57	450.0	11.04	51.43	51.43	CON	Yes	Yes	Yes
0550004	TECO-Sebring/Dinner Lake <sup>c</sup>	Steam Boiler	DINNSB	-81,000	73,340	22.9	1.83	394.3	5.79	37.78	37.78	CON	Yes	Yes	No
0710000	FPL Fort Myers <sup>c</sup>	Unit 1 PSD	FMU1	-115,700	-16,260	91.8	2.90	422.0	29.90	-585.50	-585.50	EXP	No	Yes	Yes
		Unit 2 PSD	FMU2	-115,700	-16,260	121.2	5.52	408.0	19.20	-1334	-1334.0	EXP	No	Yes	Yes
		HRSBs 1 - 6	FMYHR1_6	-115,700	-16,260	38.1	5.79	377.6	14.2	3.86	3.86	CON	Yes	Yes	Yes
		Gas Turbines 1 -12	FMYGT112	-115,700	-16,260	9.75	4.42	797.0	35.7	649.2	649.2	NO	Yes	No	No
0250348	Dade County RRF PSD	Units 1&2	DCRRF12	26,500	-111,760	76.2	3.66	405.4	15.86	26.41	12.32	CON	No <sup>c</sup>	No <sup>c</sup>	Yes
		Units 3&4	DCRRF34	26,500	-111,760	76.2	3.66	405.4	15.86	26.41	12.32	CON	No <sup>c</sup>	No <sup>c</sup>	Yes
0112515	Enron Pompano Beach Energy Center	3-170 MW CTs	ENPMPCT	45,900	-63,660	24.4	5.49	847.0	47.06	39.16	39.16	CON	No <sup>c</sup>	No <sup>c</sup>	Yes
0110120	North Broward RRF PSD		NBCRRF	45,800	-61,560	58.5	3.96	381.0	18.01	35.40	35.40	CON	No <sup>c</sup>	No <sup>c</sup>	Yes
0112534	Enron Deerfield Beach Energy Center	3-170 MW CTs	ENDFCT	45,300	-61,260	24.4	5.49	847.0	47.06	39.16	39.16	CON	No <sup>c</sup>	No <sup>c</sup>	Yes
0112545	El Paso Broward	Combined Cycle CT CC-1	EPBRCT1	45,500	-61,160	41.1	5.79	359.3	61.13	0.46	0.46	CON	No <sup>c</sup>	No <sup>c</sup>	Yes
		Simple Cycle SC-1	EPBRSC1	45,500	-61,160	41.1	5.79	862.0	146.96	0.46	0.46	CON	No <sup>c</sup>	No <sup>c</sup>	Yes
		Simple Cycle SC-2	EPBRSC2	45,500	-61,160	41.1	5.79	862.0	146.96	0.46	0.46	CON	No <sup>c</sup>	No <sup>c</sup>	Yes
		Simple Cycle SC-3	EPBRSC3	45,500	-61,160	41.1	5.79	862.0	146.96	0.46	0.46	CON	No <sup>c</sup>	No <sup>c</sup>	Yes

AIRS Number	Facility	Units	Modeling ID Name	Relative Location		Stack and Operating Parameters				Emission Rate(g/s)		PSD Source? (EXP/CON)	Modeled in		
				X (m)	Y (m)	Height (m)	Diameter (m)	Temper. (K)	Velocity (m/s)	3-Hour	24-Hour		AAQS	Class II	Class I
0710019	Lee County RRF PSD		LEECORRF	-113,600	-23,460	83.8	1.88	388.5	19.81	14.00	14.00	CON	No <sup>c</sup>	No <sup>c</sup>	Yes
0990332	New Hope Power Partnership (Okeelanta)	Okeelanta Power Blrs 1,2,3 <sup>b</sup>	OKCOGENF	-13,700	-29,160	60.7	3.05	450.9	19.39	54.1	54.1	CON	No <sup>c</sup>	No <sup>c</sup>	Yes
0990005	Okeelanta <sup>a</sup>														
		Boiler 4 PSD Baseline	OKBLR4B	-12,800	-31,760	22.9	2.29	333.0	7.36	-10.95	-10.95	EXP	No <sup>c</sup>	No <sup>c</sup>	Yes
		Boiler 5 PSD Baseline	OKBLR5B	-12,800	-31,760	22.9	2.29	333.0	12.07	-15.64	-15.64	EXP	No <sup>c</sup>	No <sup>c</sup>	Yes
		Boiler 6 PSD Baseline	OKBLR6B	-12,800	-31,760	22.9	2.29	334.0	8.74	-15.64	-15.64	EXP	No <sup>c</sup>	No <sup>c</sup>	Yes
		Boiler 10 PSD Baseline	OKBLR10B	-12,800	-31,760	22.9	2.29	334.0	10.35	-17.15	-17.15	EXP	No <sup>c</sup>	No <sup>c</sup>	Yes
		Boiler 11 PSD Baseline	OKBLR11B	-12,800	-31,760	22.9	2.29	342.0	9.89	-16.79	-16.79	EXP	No <sup>c</sup>	No <sup>c</sup>	Yes
		Boiler 16 PSD	OKBLR16	-12,800	-31,760	22.9	1.52	483.0	22.86	1.47	1.47	CON	No <sup>c</sup>	No <sup>c</sup>	Yes
0990568	Lake Worth Generating														
		4-GE Frame 7FA CTs & HRSG	LWGENCT	55,000	-25,460	45.7	5.49	377.6	24.29	51.16	51.16	CON	No <sup>c</sup>	No <sup>c</sup>	Yes
0990594	El Paso Belle Glade														
		Combined Cycle CT CC-1	EPBGLCT	-4,300	-15,060	41.1	5.79	359.3	61.13	0.46	0.46	CON	No <sup>c</sup>	No <sup>c</sup>	Yes
		Simple Cycle SC-1	EPBGSC1	-4,300	-15,060	41.1	5.79	862.0	146.96	0.46	0.46	CON	No <sup>c</sup>	No <sup>c</sup>	Yes
		Simple Cycle SC-2	EPBGSC2	-4,300	-15,060	41.1	5.79	862.0	146.96	0.46	0.46	CON	No <sup>c</sup>	No <sup>c</sup>	Yes
		Simple Cycle SC-3	EPBGSC3	-4,300	-15,060	41.1	5.79	862.0	146.96	0.46	0.46	CON	No <sup>c</sup>	No <sup>c</sup>	Yes
0510015	Southern Gardens Citrus - PSD														
		Peel Dryer	SGARDDRY	-50,200	-11,560	38.1	1.73	316.0	7.45	5.29	5.29	CON	No <sup>c</sup>	No <sup>c</sup>	Yes
		Boilers 1-3	SGARDBLR	-50,200	-11,560	16.8	1.22	478.0	14.22	6.88	6.88	CON	No <sup>c</sup>	No <sup>c</sup>	Yes

Note: EXP = PSD expanding source
CON = PSD consuming source
NO = Source does not affect PSD increment
ND = No data available

a Facilities or sources within facilities that operate only during the October 1 through April 31 crop season.
b Sugar mill sources that operate all year.
c Large source with emissions greater than 1,000 TPY included in the AAQS or PSD Class II modeling even though the source is located outside of the screening area.
d Represents worst case emissions for May 1 through September 31 off-crop season operation, and October 1-April 30 for on-crop season.
Updated from PSD modeling information, Golder Associates (7/18/00). Baseline data represents November 1 though April 30.
e Not included in AAQS or Class II modeling analyses because they screened out.

**SENDER: COMPLETE THIS SECTION**

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

## 1. Article Addressed to:

Mr. William R. Raiola  
Vice President, Sugar Processing  
United States Sugar Corporation  
1731 South W.C. Owen Avenue  
Clewiston, FL 33440

## 2. Article Number (Copy from service label)

**COMPLETE THIS SECTION ON DELIVERY**

A. Received by (Please Print Clearly)

B. Date of Delivery

10/15/02

C. Signature

x *William R. Raiola*☐ Agent☐ Addressee

D. Is delivery address different from item 1?

☐ Yes

If YES, enter delivery address below:

☐ No

3. Service Type

☒ Certified Mail☐ Express Mail☐ Registered☐ Return Receipt for Merchandise☐ Insured Mail☐ C.O.D.

4. Restricted Delivery? (Extra Fee)

☐ Yes

PS Form 3811, July 1999

Domestic Return Receipt

102595-00-M-0952

U.S. Postal Service	
CERTIFIED MAIL RECEIPT	
(Domestic Mail Only; No Insurance Coverage Provided)	
OFFICIAL USE	
Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$
Sent To: William R. Raiola	
Street, Apt. No., or P.O. Box No.: S. W.C. Owen Ave.	
City, State, ZIP+4: Clewiston, FL 33440	
PS Form 3800, January 2001	
See Reverse for Instructions	

10/15/02



**SENDER: COMPLETE THIS SECTION**

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

**1. Article Addressed to:**

Mr. William A. Raiola  
V.P. of Sugar Processing Operations  
United States Sugar Corporation  
111 Ponce DeLeon Avenue  
Clewiston, FL 33440

**COMPLETE THIS SECTION ON DELIVERY**
**A. Received by (Please Print Clearly)**

A. SOLIS

**B. Date of Delivery**

6-9-03

**C. Signature**

x *Anders Solis*

☐ Agent

☐ Addressee

**D. Is delivery address different from item 1?**
☐ Yes

If YES, enter delivery address below:

☐ No

**3. Service Type**
☒ Certified Mail

☐ Express Mail

☐ Registered

☐ Return Receipt for Merchandise

☐ Insured Mail

☐ C.O.D.

**4. Restricted Delivery? (Extra Fee)**
☐ Yes

7001 0320 0001 3692 5849

PS Form 3811, July 1999

Domestic Return Receipt

102595-00-M-0952

**U.S. Postal Service**
**CERTIFIED MAIL RECEIPT**

(Domestic Mail Only; No Insurance Coverage Provided)

**OFFICIAL USE**

Postage \$

Certified Fee

 Return Receipt Fee  
(Endorsement Required)

 Restricted Delivery Fee  
(Endorsement Required)

Total Postage &amp; Fees \$

 Postmark  
Here

Sent To

William A. Raiola

 Street, Apt. No.  
or P.O. Box No.

111 Ponce DeLeon Ave.

City, State, ZIP+4

Clewiston, FL 33440

PS Form 3800, January 2001

See Reverse for Instructions

**SENDER: COMPLETE THIS SECTION**

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

## 1. Article Addressed to:

Mr. William R. Raiola  
Vice President  
United States Sugar Corporation  
1731 South W.C. Owen Avenue  
Clewiston, FL 33440

**COMPLETE THIS SECTION ON DELIVERY**

A. Received by (Please Print Clearly)

*Shirley Taylor*

B. Date of Delivery

*1-21-03*

C. Signature

*Shirley Taylor*☐ Agent☐ Addressee

D. Is delivery address different from item 1?

☐ Yes

If YES, enter delivery address below:

☐ No

## 3. Service Type

☒ Certified Mail☐ Express Mail☐ Registered☐ Return Receipt for Merchandise☐ Insured Mail☐ C.O.D.

## 4. Restricted Delivery? (Extra Fee)

☐ Yes

7001 0320 0001 3692 7171

PS Form 3811, July 1999

Domestic Return Receipt

102595-00-M-0952

**U.S. Postal Service****CERTIFIED MAIL RECEIPT**

(Domestic Mail Only; No Insurance Coverage Provided)

**OFFICIAL USE**

Postage \$

Certified Fee

Return Receipt Fee  
(Endorsement Required)Restricted Delivery Fee  
(Endorsement Required)

Total Postage &amp; Fees \$

Postmark  
Here

Sent To

William R. Raiola

Street, Apt. No.,  
or P.O. Box No.

South W.C. Owen Ave.

City, State, ZIP+4

Clewiston, FL 33440

PS Form 3800, January 2001

See Reverse for Instructions

**SENDER: COMPLETE THIS SECTION**

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

## 1. Article Addressed to:

Mr. William R. Raiola  
Vice President  
United States Sugar Corporation  
1731 South W.C. Owen Avenue  
Clewiston, FL 33440

**COMPLETE THIS SECTION ON DELIVERY**

A. Received by (Please Print Clearly) B. Date of Delivery

Jerrica Taylor

1-21-03

C. Signature

Jerrica Taylor

☐ Agent☐ Addressee

D. Is delivery address different from item 1?

If YES, enter delivery address below:

☐ Yes☐ No

## 3. Service Type

☒ Certified Mail☐ Express Mail☐ Registered☐ Return Receipt for Merchandise☐ Insured Mail☐ C.O.D.

## 4. Restricted Delivery? (Extra Fee)

☐ Yes

7001 0320 0001 3692 7171

PS Form 3811, July 1999

Domestic Return Receipt

102595-00-M-0952

**U.S. Postal Service****CERTIFIED MAIL RECEIPT**

(Domestic Mail Only; No Insurance Coverage Provided)

OFFICIAL USE

Postage

\$

Certified Fee

Return Receipt Fee  
(Endorsement Required)Restricted Delivery Fee  
(Endorsement Required)

Total Postage &amp; Fees

\$

Postmark  
Here

Sent To

William R. Raiola

Street, Apt. No.,

or P.O. Box No. South W.C. Owen Ave.

City, State, ZIP+4

Clewiston, FL 33440

PS Form 3800, January 2001

See Reverse for Instructions

**Golder Associates Inc.**

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

**RECEIVED**

**DEC 20 2002**



December 19, 2002

BUREAU OF AIR REGULATION

0137629

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

Attention: Mr. A. A. Linero, P. E., Administrator

RE: APPLICATION TO REVISE FUEL OIL SULFUR CONTENT IN BOILERS 1, 2 AND 3  
AT THE BRYANT SUGAR MILL - REVISED MODELING ANALYSIS  
FDEP PROJECT NO. 0990061-007-AC

Dear Mr. Linero:

An Application to Revise Fuel Oil Sulfur Content for the United States Sugar Corporation (USSC) Bryant Mill was submitted to the Department in September 2002. This letter is in response to the Department's subsequent request for additional information (RAI) addressed to Mr. William R. Raiola, dated October 11, 2002. Responses to each of the Department's questions are provided below.

1. On October 22, 2002, USSC added approximately 25,000 gallons of No. 6 fuel oil to the common tank at Bryant. Prior to this, the last time fuel oil was added to the tank was May 2, 2002. As of October 16, 2002, the amount of inventory in the tank was approximately 118,000 gallons (does not include the fuel added on Oct. 22).

The sulfur content in the common tank were as follows:

March 9, 2001:	1.6 percent
April 2, 2001:	1.3 percent
Oct. 28, 2002:	0.9 percent

2. Boiler No. 4 at Clewiston was recently issued a PSD permit for a maximum SO<sub>2</sub> emission rate from bagasse of 0.06 pounds per million British thermal units (lb/MMBtu). This value has been demonstrated through industry testing to represent a nominal worst-case emission rate. No SO<sub>2</sub> testing has been conducted at Bryant, but testing at Clewiston show SO<sub>2</sub> emission rates less than 0.02 lb/MMBtu for boilers that have wet scrubbers for particulate control. We believe it is an appropriate short-term factor.
3. Upon reviewing the stack and building locations for the Bryant Mill used in the September modeling analysis versus the latest aerial photo, several building coordinates were refined and building heights were confirmed. Most of the changes were minor. However, one significant change was that the No 5 Boiler Building was determined to be only 67 feet above grade, instead of 82 feet as previously modeled. The previous height was actually the elevation above mean sea level. As a result of these changes, the following information is being provided.

- 1) Aerial photo of the Bryant Mill.

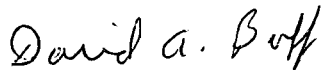
- 2) Transparency and hard copy of the revised building and stack locations over a 50-meter grid. The origin of the analysis is the No 5 Boiler stack location. Both the aerial photo and transparency have been sent to you under a separate cover.
- 3) Revised tables and text from the September 2002 document (attached).
- 4) Revised air modeling files - to be electronically transferred.

As shown in the revised modeling results, compliance with the ambient air quality standards and PSD increments for SO<sub>2</sub> has been demonstrated, based on the operating and fuel restrictions presented in the application.

Please contact me at 352-336-5600, ext 545, or Steve Marks, at ext 539, if you have any questions about this information.

Sincerely,

GOLDER ASSOCIATES INC.



David A. Buff, P. E., Q. E. P.  
Principal Engineer  
Florida P. E. #19011



Steven R. Marks, C.C.M.  
Associate

Enclosures:

cc: Don Griffin, USSC  
Peter Briggs, USSC  
*R. Blackburn, SD*  
*Q. Stinner, PBE*  
*M. Walpin*

121902/L121902

### **3.0 SO<sub>2</sub> IMPACT ANALYSIS RESULTS**

#### **3.1 AAQS ANALYSIS**

The maximum predicted annual, HSH 24-hour, and HSH 3-hour average SO<sub>2</sub> concentrations predicted for all sources is presented in Table 3-1. Because the maximum predicted concentrations occurred at the U.S. Sugar Bryant mill property boundary, additional modeling refinements were not necessary.

The air modeling results are added to a background concentration and compared with the AAQS in Table 3-2. The maximum predicted annual and HSH 24- and 3-hour SO<sub>2</sub> concentrations are 32.3, 234.4, and 960.1 µg/m<sup>3</sup>, respectively. These concentrations are all below the Florida AAQS of 60, 260, and 1,300 µg/m<sup>3</sup>, respectively.

#### **3.2 PSD CLASS II ANALYSIS**

A summary of the maximum SO<sub>2</sub> PSD Class II increment consumption predicted for all sources from the screening analysis is presented in Table 3-3. Because the maximum predicted concentrations occurred at the Bryant mill property boundary, additional modeling refinements were not necessary.

The air modeling results are compared with the allowable PSD Class II increments in Table 3-4. The maximum predicted annual and HSH 24- and 3-hour SO<sub>2</sub> increment consumption concentrations are 0.8, 35.7, and 300.2 µg/m<sup>3</sup>, respectively. These concentrations are well below the allowable PSD Class II increments of 20, 91, and 512 µ /m<sup>3</sup>, respectively.

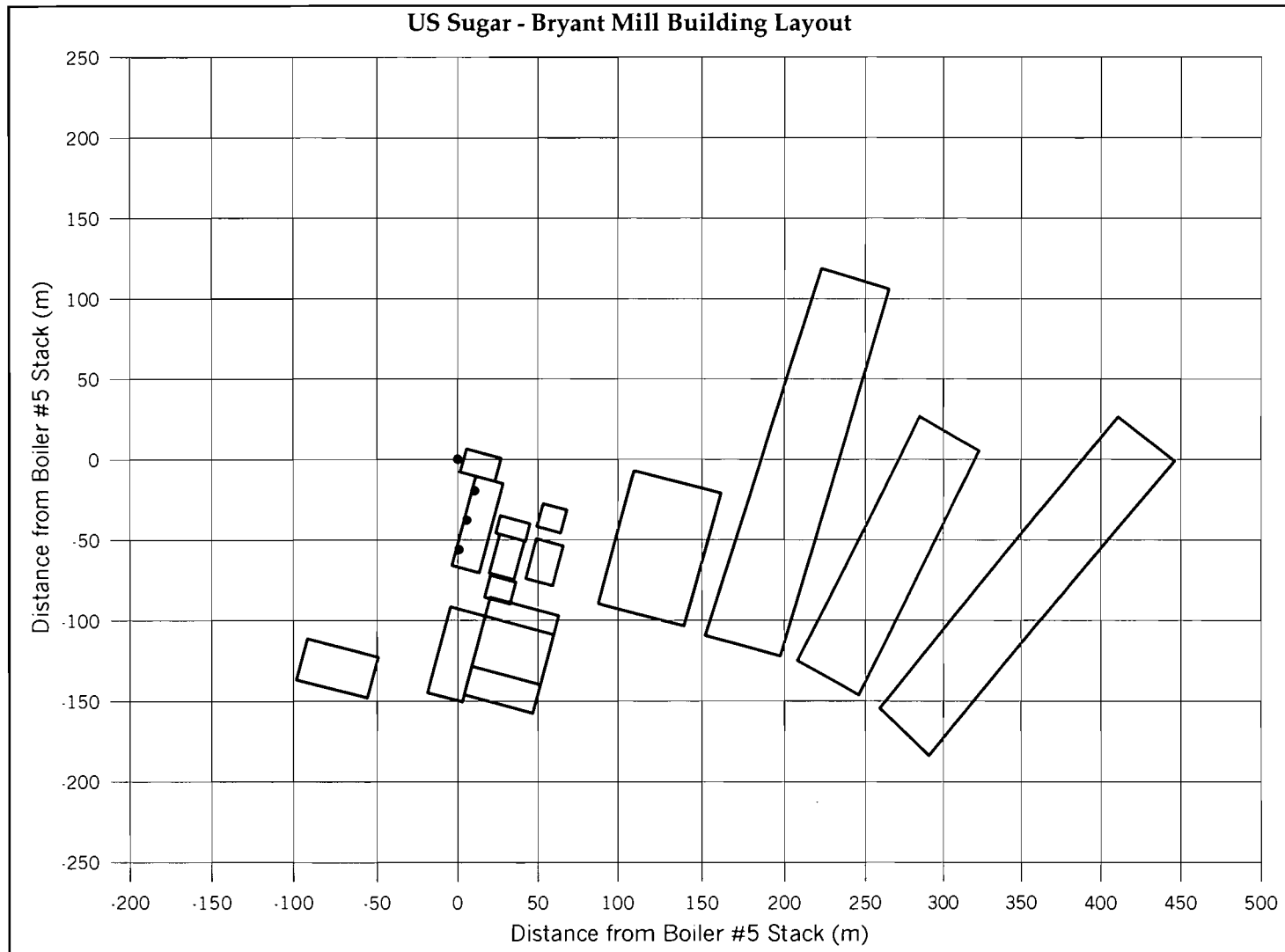


Figure B-1  
U.S. Sugar – Bryant Mill Building Layout

Source: Golder, 2002.



Table 2-3. Summary of Stack Parameters for Sources Used in Modeling of U.S. Sugar Bryant Mill

Emission Unit	Modeling ID	Stack Height		Stack Diameter		Temperature		Flow Rate	Velocity		Relative Location (a)			
		(ft)	(m)	(ft)	(m)	(F)	(K)		(ft/s)	(m/s)	X		Y	
											(ft)	(m)	(ft)	(m)
Boiler 1	USSBRY1	65	19.8	5.40	1.65	160	344.3	156,000	113.5	34.6	2.5	0.76	-183.9	-56.06
Boiler 2	USSBRY2	65	19.8	5.40	1.65	160	344.3	156,000	113.5	34.6	18.5	5.65	-124.0	-37.80
Boiler 3	USSBRY3	65	19.8	5.40	1.65	160	344.3	156,000	113.5	34.6	34.6	10.54	-64.1	-19.55
Boiler 5	USSBRY5	150	45.7	9.50	2.90	142	334.3	206,000	48.4	14.8	0	0	0	0

(a) Relative to Boiler No. 5 stack location.

Note: Stack parameters based on last four years compliance testing, prorated to the maximum steam rate.



Table 2-6. U.S. Sugar Bryant Mill Building Dimensions Used in the Air Modeling Analysis  
(Revised 12/15/02)

Structure	Height		Length (N-S)		Width (E-W)	
	(ft)	(m)	(ft)	(m)	(ft)	(m)
Boiler 5 Building	67.0	20.4	49	14.9	73	22.3
Boilers 1, 2 & 3 Building	61.0	18.6	188	57.3	58	17.7
Power House, North Tier	60.3	18.4	37	11.3	64	19.5
Power House, South Tier	42.0	12.8	82	25.0	53	16.2
Mill Bldg	57.0	17.4	181	55.2	73	22.3
Boiling House Upper Tier	102.0	31.1	106	32.3	146	44.5
Boiling House Lower Tier	64.0	19.5	206	62.8	146	44.5
NW Tier of Boiling House	66.8	20.3	46	14.0	46	14.0
Warehouse #2	55.0	16.8	780	237.7	156	47.5
Chemical Storage (#4)	31.0	9.4	84	25.6	57	17.4
Warehouse #3	55.0	16.8	556	169.5	140	42.7
Warehouse #4	55.0	16.8	780	237.7	144	43.9
Warehouse #1	78.6	24.0	280	85.3	175	53.3
Shop	51.3	15.6	86	26.2	144	43.9
Water Treatment Plant	42.8	13.0	49	14.9	50	15.2

Table 3-1. Maximum Predicted SO<sub>2</sub> Impacts Predicted for All Future Sources,  
AAQS Screening Analysis In the Vicinity of the U.S. Sugar Bryant Mill  
(revised 12/15/02)

Averaging Time	Concentration <sup>a</sup> (µg/m <sup>3</sup> )	Receptor Location <sup>b</sup>		Time Period (YYMMDDHH)
		X (m)	Y (m)	
Annual	16.3	-900.0	-350.0	87123124
	19.2	-900.0	-350.0	88123124
	19.9	-1000.0	1060.0	89123124
	27.3	-900.0	-350.0	90123124
	20.7	-900.0	-350.0	91123124
HSH 24-Hour	213.6	-900.0	-350.0	87110824
	201.9	262.0	270.0	88041924
	178.4	-900.0	-350.0	89021624
	221.4	-900.0	-350.0	90111424
	187.2	-993.8	-350.0	91102624
HSH 3-Hour	913.1	176.0	270.0	87011018
	796.5	262.0	270.0	88112312
	734.3	-50.0	1040.0	89022724
	659.9	170.7	369.3	90022312
	840.3	25.0	990.0	91042324

<sup>a</sup> Based on 5-year meteorological record, West Palm Beach, 1987 to 1991.

<sup>b</sup> Relative to Boiler No. 5 Stack Location.

Note: YYMMDDHH = Year, Month, Day, Hour Ending

HSH = Highest, 2nd-Highest Concentration in 5 years.

Table 3-2. Maximum SO<sub>2</sub> Impacts for All Future Sources as Compared with the Florida AAQS, Refined Analysis  
In the Vicinity of the U.S. Sugar Bryant Mill  
(revised 12/15/02)

Pollutant/ Averaging Time	Concentration <sup>a</sup> (µg/m <sup>3</sup> )			Receptor Location <sup>b</sup>		Time Period (YYMMDDHH)	Florida AAQS (µg/m <sup>3</sup> )
	Total	Modeled	Background	X (m)	Y (m)		
Annual	32.3	27.3	5	-900.0	-350.0	90123124	60
HSH 24-Hour	234.4	221.4	13	-900.0	-350.0	90111424	260
HSH 3-Hour	960.1	913.1	47	176.0	270	87011018	1,300

<sup>a</sup> Based on 5-year meteorological record, West Palm Beach, 1987 to 1991.

<sup>b</sup> Relative to Boiler No. 5 Stack Location.

Note: YYMMDDHH = Year, Month, Day, Hour Ending  
HSH = Highest, 2nd-Highest Concentration in 5 years.

Table 3-3. Maximum Predicted SO<sub>2</sub> PSD Class II Increment Consumption for All PSD-Affecting Sources  
Screening Analysis In the Vicinity of the U.S. Sugar Bryant Mill  
(revised 12/15/02)

Averaging Time	Concentration <sup>a</sup> (µg/m <sup>3</sup> )	Receptor Location <sup>b</sup>		Time Period (YYMMDDHH)
		X (m)	Y (m)	
Annual	0.6	348.0	270.0	87123124
	0.6	262.0	370.0	88123124
	0.8	176.0	270.0	89123124
	0.8	90.0	270.0	90123124
	0.5	348.0	270.0	91123124
HSH 24-Hour	29.8	262.0	270.0	87022324
	27.1	262.0	270.0	88100324
	24.2	90.0	270.0	89121924
	35.7	90.0	270.0	90062424
	31.8	90.0	270.0	91030824
HSH 3-Hour	256.3	170.7	369.3	87032815
	300.2	90.0	270.0	88022012
	192.6	262.0	270.0	89040524
	220.9	170.7	369.3	90020412
	281.9	90.0	270.0	91033009

<sup>a</sup> Based on 5-year meteorological record, West Palm Beach, 1987 to 1991.

<sup>b</sup> Relative to Boiler No. 5 Stack Location.

Note: YYMMDDHH = Year, Month, Day, Hour Ending

HSH = Highest, 2nd-Highest Concentration in 5 years.

Table 3-4. Maximum Predicted SO<sub>2</sub> PSD Class II Increment Consumption for All PSD-Affecting Sources  
Refined Analysis In the Vicinity of the U.S. Sugar Bryant Mill  
(revised 12/15/02)

Averaging Time	Concentration <sup>a</sup> (µg/m <sup>3</sup> )	Receptor Location <sup>b</sup>		Time Period (YYMMDDHH)	Allowable PSD Class II Increments (µg/m <sup>3</sup> )
		X (m)	Y (m)		
Annual	0.8	176.0	270.0	89123124	20
HSH 24-Hour	35.7	90.0	270.0	90062424	91
HSH 3-Hour	300.2	90.0	270.0	88022012	512

<sup>a</sup> Based on 5-year meteorological record, West Palm Beach, 1987 to 1991.

<sup>b</sup> Relative to Boiler No. 5 Stack Location.

Note: YYMMDDHH = Year, Month, Day, Hour Ending

HSH = Highest, 2nd-Highest Concentration in 5 years.



Jeb Bush  
Governor

# Department of Environmental Protection

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

David B. Struhs  
Secretary

October 11, 2002

## CERTIFIED MAIL - RETURN RECEIPT REQUESTED

William R. Raiola, Vice President, Sugar Processing  
United States Sugar Corporation  
1731 South W.C. Owen Avenue  
Clewiston, Florida 33440

Re: **Request for Additional Information**  
Project No. 0990061-007-AC  
Application to Revise Fuel Oil Sulfur Content in Boilers 1, 2 and 3 at the Bryant Sugar Mill

Dear Mr. Raiola:

On September 12, 2002, the Department received your application to revise the fuel oil sulfur content for Boilers 1, 2 and 3 at the Bryant Sugar Mill. The application is incomplete. In order to continue processing your application, the Department will need the additional information requested below. Should your response to any of the below items require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

1. When did U.S. Sugar last add fuel oil to the common tank? How much fuel oil is now in the common tank? What is the current fuel oil sulfur level?
2. Table 2-2 of the application shows the maximum SO<sub>2</sub> emissions from the maximum fuel oil firing scenarios. Note "c" indicates an SO<sub>2</sub> emission factor of 0.06 lb/MMBTU. Where did this factor come from and is it an appropriate short-term factor?
3. The building information contained in Attachment UB-FI-C2 and Figure B-1 is inadequate. Please provide the detailed building structure information used in the modeling to determine downwash impacts. This information should include building dimensions for all buildings used in the modeling analyses. In addition, please provide a detailed plot plan to scale of the facility showing the exact location in meters from the modeling origin of each building and stack. All stacks and buildings should be labeled. In addition, a grid with 50 meter spacing should be overlaid over this plot plan so that the information on the plot plan can be easily correlated with the information in the BPIP files.

The Department will resume processing your application after receipt of the requested information. Rule 62-4.050(3), F.A.C. requires that all applications for a Department construction permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. For any material changes to the application, please include a new certification statement by the authorized representative or responsible official. You are reminded that Rule 62-4.055(1), F.A.C. now requires applicants to respond to requests for information within 90 days or provide a written request for an additional period of time to submit the information.

*"More Protection, Less Process"*

*Printed on recycled paper.*

If you have any questions, please call me at 850/921-9523 or Cleve Holladay at 850/921-8986.

Sincerely,

A handwritten signature in black ink, appearing to read "A. A. Linero". The signature is fluid and cursive, with the first name "A. A." and the last name "Linero" clearly distinguishable.

A. A. Linero, P.E. Administrator  
New Source Review Section

AAL/ch

cc: David A. Buff, P.E. Golder  
James Stormer, Palm Beach County Health Department  
Ron Blackburn, DEP-SDO  
Ms. Jeaneanne Gettle, EPA Region 4  
Mr. John Bunyak, NPS

**SENDER: COMPLETE THIS SECTION**

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

1. Article Addressed to:

Mr. William R. Raiola  
Vice President, Sugar Processing  
United States Sugar Corporation  
1731 South W.C. Owen Avenue  
Clewiston, FL 33440

**COMPLETE THIS SECTION ON DELIVERY**

A. Received by (Please Print Clearly)

B. Date of Delivery

10/15/02

C. Signature

x *Andrew Solis*☐ Agent☐ Addressee

D. Is delivery address different from item 1?

☐ Yes

If YES, enter delivery address below:

☐ No

3. Service Type

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4. Restricted Delivery? (Extra Fee)

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PS Form 3811, July 1999

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William R. Raiola  
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or P.O. Box No. S. W.C. Owen Ave.  
City, State, ZIP+4  
Clewiston, FL 33440

PS Form 3800, January 2001

See Reverse for Instructions



# United States Sugar Corporation

Post Office Box 1207 • Clewiston, Florida 33440-1207

Telephone 863/902-2703

Fax 863/902-2729

## RECEIVED

SEP 12 2002

September 9, 2002

### BUREAU OF AIR REGULATION

Florida Department of Environmental Protection  
2600 Blair Stone Road, MS #5500  
Tallahassee, FL 32399-2400

Attention : Mr. A. A. Linero, Chief, New Source Review

RE: United States Sugar Corporation (U.S. Sugar) – Bryant Mill  
Reduction in Fuel Oil Sulfur Content

Dear Mr. Linero:

Please find enclosed four (3) copies of an air construction permit to obtain federally enforceable limitations on the fuel sulfur content and fuel oil burning rate for Boiler Nos. 1 through 5 at U. S. Sugar's Bryant Mill. U. S. Sugar is proposing these restrictions to eliminate predicted exceedances of ambient air standards for sulfur dioxide near the Bryant mill. These predicted exceedances were the result of dispersion modeling performed recently, which included the Bryant mill.

One (1) copy of the application is also being sent to the Fort Myers district office. Please call if you have any questions concerning this application.

Sincerely,

UNITED STATES SUGAR CORPORATION



William A. Raiola  
Vice President, Sugar Processing

WAR:jt  
Enclosures

cc: Ron Blackburn, DEP Ft. Myers  
David Buff, P. E. (w/o enclosures)

*C. Halladay*  
*Mr. Worley, EPA*  
*J. Deming, NPS*  
*J. Stinner, AD County*

**RECEIVED**

**SEP 12 2002**

**BUREAU OF AIR REGULATION**

**APPLICATION TO REVISE FUEL OIL  
SULFUR CONTENT**

***UNITED STATES SUGAR CORPORATION  
BRYANT MILL***

**Prepared For:**

**United States Sugar Corporation  
Off U.S. 98 on Bryant Mill Road  
Bryant, Florida 33439**

**Prepared By:**

**Golder Associates Inc.  
6241 NW 23rd Street, Suite 500  
Gainesville, Florida 32653-1500**

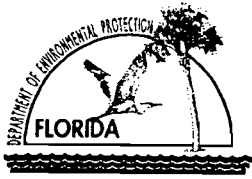
**September 2002  
0137629**

**DISTRIBUTION:**

**6 Copies – U.S. Sugar**

**2 Copies – Golder Associates Inc.**

**PERMIT APPLICATION FORM**



# Department of Environmental Protection

## Division of Air Resources Management

### APPLICATION FOR AIR PERMIT - TITLE V SOURCE

See Instructions for Form No. 62-210.900(1)

#### I. APPLICATION INFORMATION

##### Identification of Facility

1. Facility Owner/Company Name: <b>United States Sugar Corporation</b>	
2. Site Name: <b>Bryant Mill</b>	
3. Facility Identification Number: <b>0990061</b> [ ] Unknown	
4. Facility Location: Street Address or Other Locator: <b>Off U.S. 98 on Bryant Mill Road</b> City: <b>Bryant</b> County: <b>Palm Beach</b> Zip Code: <b>33439</b>	
5. Relocatable Facility? [ ] Yes [ <b>X</b> ] No	6. Existing Permitted Facility? [ <b>X</b> ] Yes [ ] No

##### Application Contact

1. Name and Title of Application Contact: <b>William R. Raiola Vice – President, Sugar Processing</b>	
2. Application Contact Mailing Address: Organization/Firm: <b>United States Sugar Corporation</b> Street Address: <b>1731 South W.C. Owen Avenue</b> City: <b>Clewiston</b> State: <b>FL</b> Zip Code: <b>33440</b>	
3. Application Contact Telephone Numbers: Telephone: ( <b>863</b> ) <b>902 - 2703</b> Fax: ( <b>863</b> ) <b>902 - 2729</b>	

##### Application Processing Information (DEP Use)

1. Date of Receipt of Application:	<b>9-12-02</b>
2. Permit Number:	<b>0990061-007-AC</b>
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

RECEIVED  
SEP 12 2002  
BUREAU OF AIR REGULATION

## **Purpose of Application**

### **Air Operation Permit Application**

This Application for Air Permit is submitted to obtain: (Check one)

- ☐ Initial Title V air operation permit for an existing facility which is classified as a Title V source.
- ☐ Initial Title V air operation permit for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.
- Current construction permit number: \_\_\_\_\_
- ☐ Title V air operation permit revision to address one or more newly constructed or modified emissions units addressed in this application.
- Current construction permit number: \_\_\_\_\_
- Operation permit number to be revised: \_\_\_\_\_
- ☐ Title V air operation permit revision or administrative correction to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. (Also check Air Construction Permit Application below.)
- Operation permit number to be revised/corrected: \_\_\_\_\_
- ☐ Title V air operation permit revision for reasons other than construction or modification of an emissions unit. Give reason for the revision; e.g., to comply with a new applicable requirement or to request approval of an "Early Reductions" proposal.
- Operation permit number to be revised: \_\_\_\_\_
- Reason for revision: \_\_\_\_\_

### **Air Construction Permit Application**

This Application for Air Permit is submitted to obtain: (Check one)

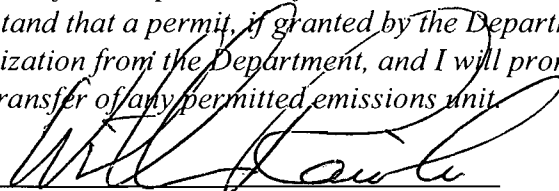
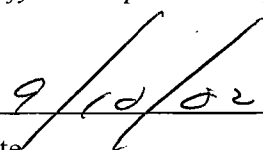
- ☒ Air construction permit to construct or modify one or more emissions units.
- ☐ Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.
- ☐ Air construction permit for one or more existing, but unpermitted, emissions units.

RECEIVED

SEP 12 2002

BUREAU OF AIR REGULATION

**Owner/Authorized Representative or Responsible Official**

1. Name and Title of Owner/Authorized Representative or Responsible Official: <b>William R. Raiola – Vice President, Sugar Processing</b>
2. Owner/Authorized Representative or Responsible Official Mailing Address: Organization/Firm: <b>United States Sugar Corporation</b> Street Address: <b>1731 South W.C. Owen Avenue</b> City: <b>Clewiston</b> State: <b>FL</b> Zip Code: <b>33440</b>
3. Owner/Authorized Representative or Responsible Official Telephone Numbers: Telephone: <b>( 863 ) 902 - 2703</b> Fax: <b>( 863 ) 902 - 2729</b>
4. Owner/Authorized Representative or Responsible Official Statement: <i>I, the undersigned, am the owner or authorized representative*(check here [ ], if so) or the responsible official (check here [ ], if so) of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.</i>  Signature  Date

\* Attach letter of authorization if not currently on file.

**Professional Engineer Certification**

1. Professional Engineer Name: <b>David A. Buff</b> Registration Number: <b>19011</b>
2. Professional Engineer Mailing Address: Organization/Firm: <b>Golder Associates Inc.</b> Street Address: <b>6241 NW 23rd Street, Suite 500</b> City: <b>Gainesville</b> State: <b>FL</b> Zip Code: <b>32653-1500</b>
3. Professional Engineer Telephone Numbers: Telephone: <b>( 352 ) 336 - 5600</b> Fax: <b>( 352 ) 336 - 6603</b>

4. Professional Engineer Statement:

*I, the undersigned, hereby certify, except as particularly noted herein\*, that:*

*(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and*

*(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.*

*If the purpose of this application is to obtain a Title V source air operation permit (check here [ ], if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.*

*If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [X], if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.*

*If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [ ], if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.*

Signature

Date

(seal)

\* Attach any exception to certification statement.

**Scope of Application**

<b>Emissions Unit ID</b>	<b>Description of Emissions Unit</b>	<b>Permit Type</b>	<b>Processing Fee</b>
001	Boiler No. 1	AC1F	
002	Boiler No. 2	AC1F	
003	Boiler No. 3	AC1F	
005	Boiler No. 5	AC1F	

**Application Processing Fee**

Check one: ☐ Attached - Amount: \$: \_\_\_\_\_ ☒ Not Applicable



### Construction/Modification Information

1. Description of Proposed Project or Alterations:

This construction application is to implement the following: 1) Maximum sulfur content of fuel oil placed in the common fuel tank for Boiler Nos. 1, 2, 3 and 5 will not exceed 0.7% sulfur, and 2) Limit combined 24-hour fuel oil consumption in Boiler Nos. 1, 2, and 3 to 80,000 gal/day.

2. Projected or Actual Date of Commencement of Construction: **15 SEP 2002**

3. Projected Date of Completion of Construction: **15 DEC 2003**

### Application Comment

## II. FACILITY INFORMATION

### A. GENERAL FACILITY INFORMATION

#### Facility Location and Type

1. Facility UTM Coordinates: Zone: <b>17</b> East (km): <b>537.8</b> North (km): <b>2969.1</b>			
2. Facility Latitude/Longitude: Latitude (DD/MM/SS): <b>26 / 50 / 41</b> Longitude (DD/MM/SS): <b>80 / 37 / 09</b>			
3. Governmental Facility Code: <b>0</b>	4. Facility Status Code: <b>A</b>	5. Facility Major Group SIC Code: <b>20</b>	6. Facility SIC(s): <b>2061</b>
7. Facility Comment (limit to 500 characters):  <b>See Attachment UB-FA-7</b>			

#### Facility Contact

1. Name and Title of Facility Contact: <b>William R. Raiola – Vice President, Sugar Processing</b>			
2. Facility Contact Mailing Address: Organization/Firm: <b>United States Sugar Corporation</b> Street Address: <b>1731 South W.C. Owen Avenue</b> City: <b>Clewiston</b> State: <b>FL</b> Zip Code: <b>33440</b>			
3. Facility Contact Telephone Numbers: Telephone: <b>( 863 ) 902 - 2703</b> Fax: <b>( 863 ) 902 – 2729</b>			

### Facility Regulatory Classifications

Check all that apply:

1. <input type="checkbox"/> Small Business Stationary Source?	<input type="checkbox"/> Unknown
2. <input checked="" type="checkbox"/> Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?	
3. <input type="checkbox"/> Synthetic Minor Source of Pollutants Other than HAPs?	
4. <input checked="" type="checkbox"/> Major Source of Hazardous Air Pollutants (HAPs)?	
5. <input type="checkbox"/> Synthetic Minor Source of HAPs?	
6. <input checked="" type="checkbox"/> One or More Emissions Units Subject to NSPS?	
7. <input type="checkbox"/> One or More Emission Units Subject to NESHAP?	
8. <input type="checkbox"/> Title V Source by EPA Designation?	
9. Facility Regulatory Classifications Comment (limit to 200 characters):  <b>One or more emission units potentially subject to NESHAP for asbestos removal in the event that the facility may wish to perform asbestos removal in the future.</b>	

### List of Applicable Regulations


## B. FACILITY POLLUTANTS

### List of Pollutants Emitted

1. Pollutant Emitted	2. Pollutant Classif.	3. Requested Emissions Cap		4. Basis for Emissions Cap	5. Pollutant Comment
		lb/hour	tons/year		
PM	A				Particulate Matter – Total
SO <sub>2</sub>	A				Sulfur Dioxide
NO <sub>x</sub>	A				Nitrogen Oxides
VOC	A				Volatile Organic Compounds
CO	A				Carbon Monoxide
PM <sub>10</sub>	A				Particulate Matter – PM <sub>10</sub>
HAPs	A				Total Hazardous Air Pollutants
H001					Acetaldehyde
H017					Benzene
H052					p-Cresol
H095					Formaldehyde
H132					Napthalene
H144					Phenols
H151					POM
H163					Styrene
H169					Toluene
H058					Dibenzofuran

### C. FACILITY SUPPLEMENTAL INFORMATION

### Supplemental Requirements

1. Area Map Showing Facility Location: [ <b>X</b> ] Attached, Document ID: <u><b>UB-FI-C1</b></u> [ ] Not Applicable [ ] Waiver Requested
2. Facility Plot Plan: [ <b>X</b> ] Attached, Document ID: <u><b>UB-FI-C2</b></u> [ ] Not Applicable [ ] Waiver Requested
3. Process Flow Diagram(s): [ <b>X</b> ] Attached, Document ID: <u><b>UB-FI-C3</b></u> [ ] Not Applicable [ ] Waiver Requested
4. Precautions to Prevent Emissions of Unconfined Particulate Matter: [ ] Attached, Document ID: _____ [ <b>X</b> ] Not Applicable [ ] Waiver Requested
5. Fugitive Emissions Identification: [ ] Attached, Document ID: _____ [ <b>X</b> ] Not Applicable [ ] Waiver Requested
6. Supplemental Information for Construction Permit Application: [ <b>X</b> ] Attached, Document ID: <u><b>Attachment A</b></u> [ ] Not Applicable
7. Supplemental Requirements Comment:

**Additional Supplemental Requirements for Title V Air Operation Permit Applications**

8. List of Proposed Insignificant Activities: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
9. List of Equipment/Activities Regulated under Title VI: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Equipment/Activities On site but Not Required to be Individually Listed <input type="checkbox"/> Not Applicable
10. Alternative Methods of Operation: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
11. Alternative Modes of Operation (Emissions Trading): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
12. Identification of Additional Applicable Requirements: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
13. Risk Management Plan Verification: <input type="checkbox"/> Plan previously submitted to Chemical Emergency Preparedness and Prevention Office (CEPPO). Verification of submittal attached (Document ID: _____) or previously submitted to DEP (Date and DEP Office: _____) <input type="checkbox"/> Plan to be submitted to CEPPO (Date required: _____) <input type="checkbox"/> Not Applicable
14. Compliance Report and Plan: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
15. Compliance Certification (Hard-copy Required): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

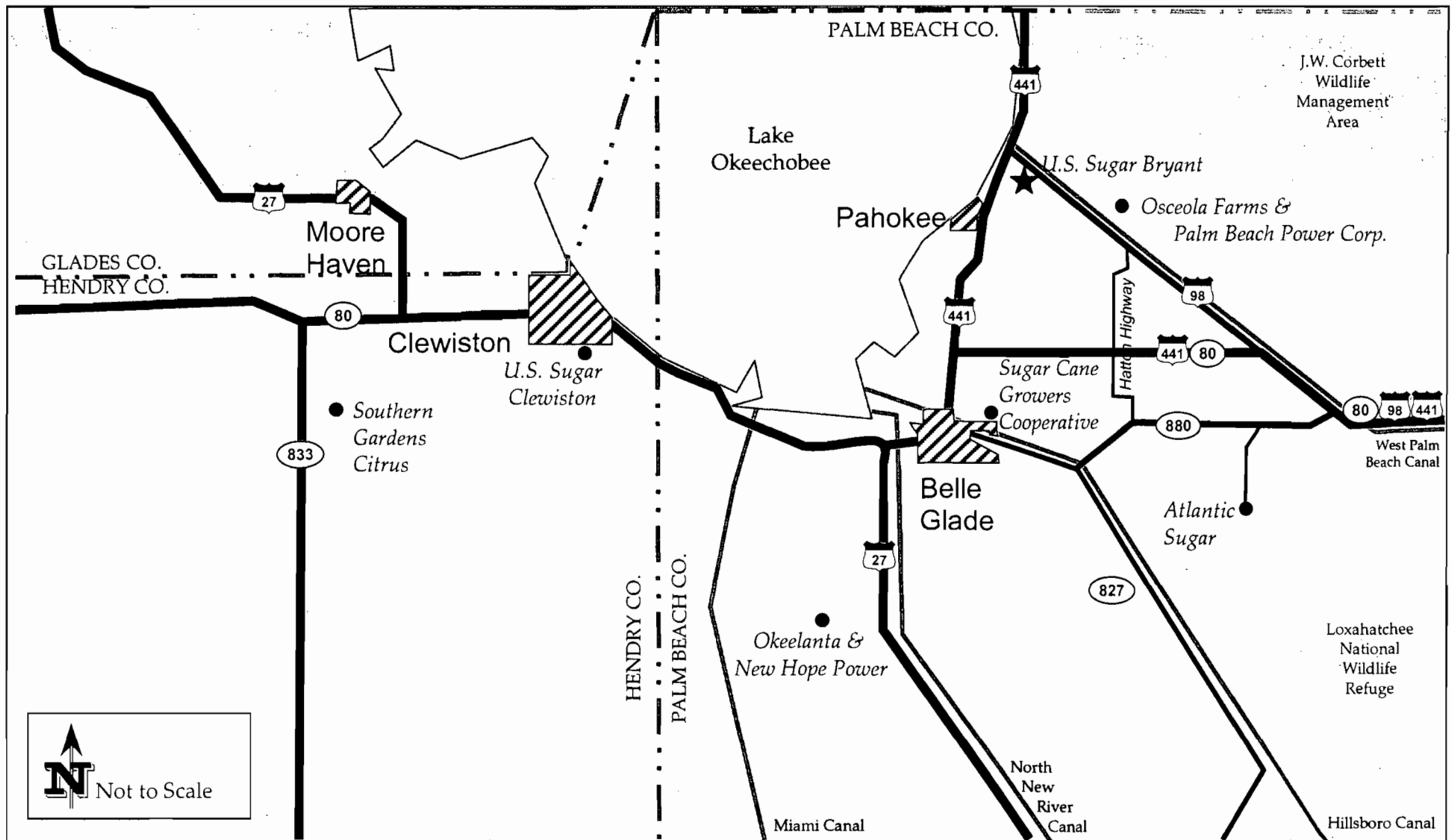
**ATTACHMENT UB-FA-7**  
**FACILITY COMMENT**

**ATTACHMENT UB-FA-7**  
**FACILITY COMMENT**

Operations at U.S. Sugar Corporation's Bryant Sugar Mill involve raw sugar manufacturing from sugar cane. In reference to the facility flow diagram (Attachment UB-FI-C3), based on historical agricultural crop seasons, up to 20,000 tons of cane can be processed per day. U.S. Sugar has the ability to transfer sugar cane and other products between the Bryant and Clewiston Mills based on agricultural, processing, and logistical considerations. For purposes of this application, carbonaceous fuel means bagasse.



**ATTACHMENT UB-FI-C1**  
**AREA MAP**



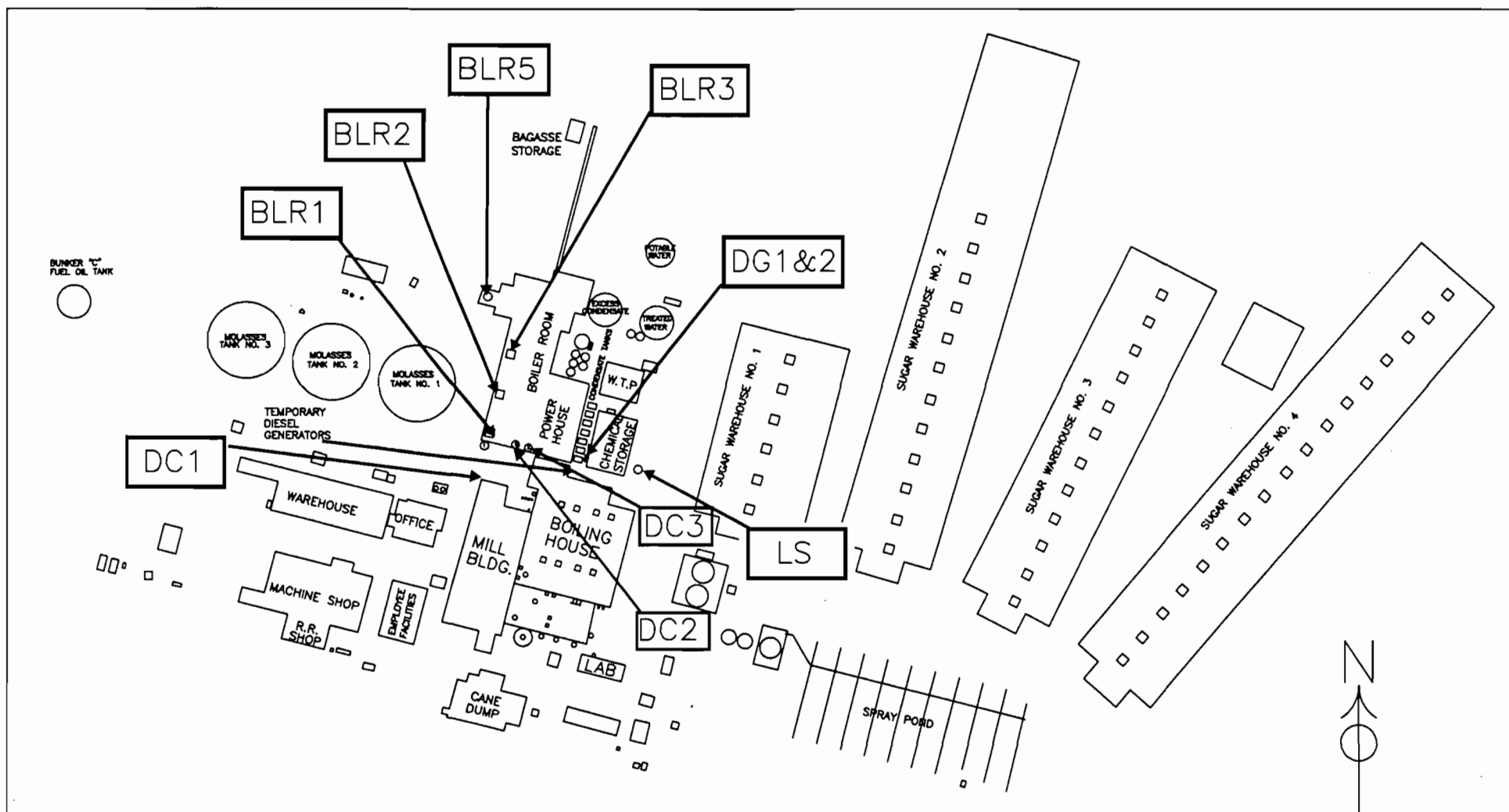
# Attachment UB-FI-C1

Location of U.S. Sugar Corp. - Bryant Mill

Source: Golder Associates Inc., 2002.



**ATTACHMENT UB-FI-C2**  
**FACILITY PLOT PLAN**



Note: Drawing not to scale

## Attachment UB-FI-C2: Facility Plot Plan

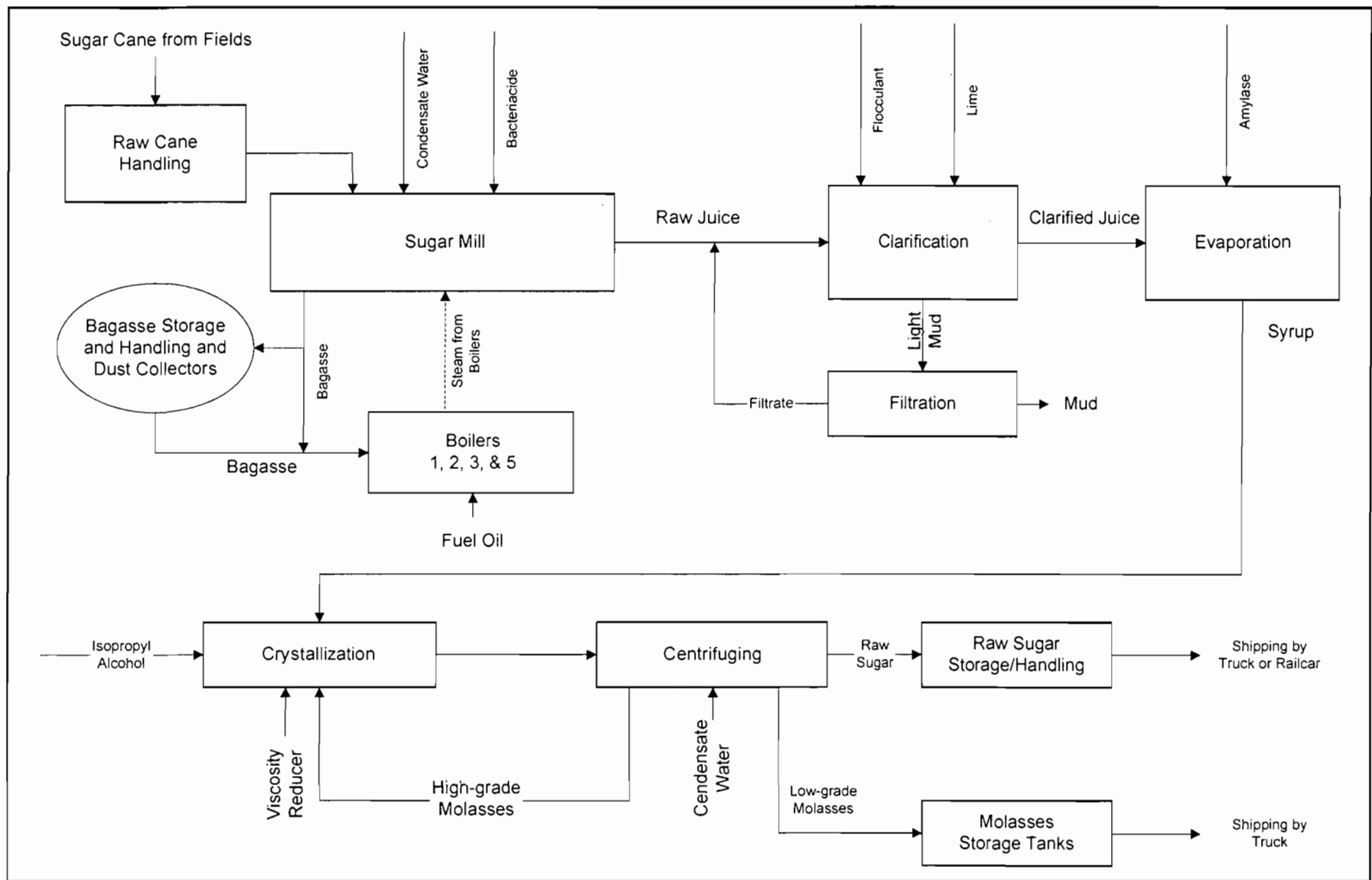
United States Sugar Corporation  
Bryant, Florida

Emission Unit Identification

0137629/4/4.4/4.4.1 Bryant





**ATTACHMENT UB-FI-C3**  
**PROCESS FLOW DIAGRAM**



Attachment UB-FI-C3  
Process Flow Diagram  
U.S. Sugar Corporation  
Bryant Mill, Florida

**Process Flow Legend**

Solid/Liquid   
Steam 

Bryant Sugar Mill Facility

0137629/4/4.4/4.4.1 Bryant/UB-FI-C3.VSD

Date: 08/30/02



**III. EMISSIONS UNIT INFORMATION**

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

**A. GENERAL EMISSIONS UNIT INFORMATION**  
(All Emissions Units)

**Emissions Unit Description and Status**

1. Type of Emissions Unit Addressed in This Section: (Check one)			
<input checked="" type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).			
<input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.			
<input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.			
2. Regulated or Unregulated Emissions Unit? (Check one)			
<input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.			
<input type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.			
3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):			
Boiler No. 1			
4. Emissions Unit Identification Number:			
ID: 001		<input type="checkbox"/> No ID <input type="checkbox"/> ID Unknown	
5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A		20	<input type="checkbox"/>
9. Emissions Unit Comment: (Limit to 500 Characters)			
Vibrating grate boiler fired by carbonaceous fuel (bagasse) and both new/virgin No. 6 residual fuel oil and on-spec used oil.			

**Emissions Unit Control Equipment**

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

Joy Turbulaire Impingement Scrubber, Size 125, Type D

2. Control Device or Method Code(s): 002

**Emissions Unit Details**

1. Package Unit:

Manufacturer:

Model Number:

2. Generator Nameplate Rating:

MW

3. Incinerator Information:

Dwell Temperature:

°F

Dwell Time:

seconds

Incinerator Afterburner Temperature:

°F



**B. EMISSIONS UNIT CAPACITY INFORMATION**  
(Regulated Emissions Units Only)**Emissions Unit Operating Capacity and Schedule**

1. Maximum Heat Input Rate:	385	mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:	194,600	lb/hr of steam
5. Requested Maximum Operating Schedule:		
	24	hours/day
	7	days/week
	52	weeks/year
	8,760	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):		
Max heat input and steam rate is based on 24-hr avg firing carbonaceous fuel. Max fuel oil firing is 189 MMBtu/hr.		

**C. EMISSIONS UNIT REGULATIONS  
(Regulated Emissions Units Only)**

**List of Applicable Regulations**

62-296.410(1)(b), F.A.C: Carbonaceous Fuel Burning Equipment
62-296.410(3), F.A.C: Carbonaceous Fuel Burning Equipment
62-296.500(1)(b), F.A.C: RACT for VOC and NO <sub>x</sub>
62-296.500(2)(a), F.A.C: RACT for VOC and NO <sub>x</sub>
62-296.500(2)(c), F.A.C: RACT for VOC and NO <sub>x</sub>
62-296.500(6), F.A.C: RACT for VOC and NO <sub>x</sub>
62-296.570(1), F.A.C: RACT for VOC and NO <sub>x</sub>
62-296.570(2), F.A.C: RACT for VOC and NO <sub>x</sub>
62-296.570(3), F.A.C: RACT for VOC and NO <sub>x</sub>
62-296.570(4)(a), F.A.C: RACT for VOC and NO <sub>x</sub>
62-296.570(4)(b)6., F.A.C: RACT for VOC and NO <sub>x</sub>
62-297.310(1), F.A.C: General Compliance Test Requirements
62-297.310(2)(b), F.A.C: General Compliance Test Requirements
62-297.310(3), F.A.C: General Compliance Test Requirements
62-297.310(4), F.A.C: General Compliance Test Requirements
62-297.310(5), F.A.C: General Compliance Test Requirements
62-297.310(6), F.A.C: General Compliance Test Requirements
62-297.310(7)(a)3., F.A.C: General Compliance Test Requirements
62-297.310(7)(a)4., F.A.C: General Compliance Test Requirements
62-297.310(7)(a)5., F.A.C: General Compliance Test Requirements
62-297.310(7)(a)9., F.A.C: General Compliance Test Requirements
62-297.310(8), F.A.C: General Compliance Test Requirements
62-297.401(5), F.A.C: EPA Test Method 5
62-297.401(7)(e), F.A.C: EPA Test Method 7E
62-297.401(9), F.A.C: EPA Test Method 9
62-297.401(18), F.A.C: EPA Test Method 18
62-297.401(25)(a), F.A.C: EPA Test Method 25A
62-297.440(1)(b), F.A.C: Supplemental Test Procedures

**D. EMISSION POINT (STACK/VENT) INFORMATION**  
**(Regulated Emissions Units Only)****Emission Point Description and Type**

1. Identification of Point on Plot Plan or Flow Diagram? <b>BLR 1</b>		2. Emission Point Type Code: <b>1</b>	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: <b>V</b>	6. Stack Height: <b>65</b> feet	7. Exit Diameter: <b>5.40</b> feet	
8. Exit Temperature: <b>160</b> °F	9. Actual Volumetric Flow Rate: <b>156,000</b> acfm	10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone: East (km): North (km):			
14. Emission Point Comment (limit to 200 characters):  <b>Stack parameters based on stack test data.</b>			

**E. SEGMENT (PROCESS/FUEL) INFORMATION**  
**(All Emissions Units)**

**Segment Description and Rate:** Segment 1 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters):  <b>External Combustion Boilers – Industrial, Bagasse, All Boiler Sizes</b>		
2. Source Classification Code (SCC): <b>1-02-011-01</b>		3. SCC Units: <b>Tons Burned</b>
4. Maximum Hourly Rate: <b>53.47</b>	5. Maximum Annual Rate: <b>468,417</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>7.2</b>
10. Segment Comment (limit to 200 characters):  <b>Max hr rate based on max heat input rate of 385 MMBtu/hr (24-hr avg) and wet bagasse heating value of 3,600 Btu/lb.</b>		

**Segment Description and Rate:** Segment 2 of 2

1. Segment Description (Process/Fuel Type ) (limit to 500 characters):  <b>External Combustion Boilers – Industrial, Residual Oil, Grade 6 Oil</b>		
2. Source Classification Code (SCC): <b>1-02-004-01</b>		3. SCC Units: <b>Thousand Gallons Burned</b>
4. Maximum Hourly Rate: <b>1.295</b>	5. Maximum Annual Rate: <b>11,340</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: <b>0.7</b>	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>146</b>
10. Segment Comment (limit to 200 characters):  <b>Max hourly rate based on max heat input of 189.0 MMBtu/hr. No. 6 fuel oil includes both virgin and on-spec used oil.</b>		

**F. EMISSIONS UNIT POLLUTANTS**  
**(All Emissions Units)**

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	002		EL
PM <sub>10</sub>	002		NS
SO <sub>2</sub>			EL
NO <sub>x</sub>			EL
CO			NS
VOC			EL
HAPs			Total Hazardous Air Pollutants
H001			Acetaldehyde
H017			Benzene
H052			p-Cresol
H095			Formaldehyde
H132			Napthalene
H144			Phenols
H151			POM
H169			Toluene
H058			Dibenzofurans

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units -**  
**Emissions-Limited and Preconstruction Review Pollutants Only)**

**Potential/Fugitive Emissions**

1. Pollutant Emitted: <b>SO<sub>2</sub></b>	2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>151.3</b> lb/hour <b>662.7</b> tons/year		4. Synthetically Limited? [ <b>X</b> ]
5. Range of Estimated Fugitive Emissions: [ ] 1      [ ] 2      [ ] 3      _____ to _____ tons/year		
6. Emission Factor: <b>0.7</b> % S oil Reference: <b>See Comment</b>		7. Emissions Method Code: <b>5</b>
8. Calculation of Emissions (limit to 600 characters):  $(196 \text{ MMBtu/hr} \times 0.06 \text{ lb/MMBtu}) + (189 \text{ MMBtu/hr} \times 0.738 \text{ lb/MMBtu}) =$ $11.8 \text{ lb/hr} + 139.5 = 151.3$  $151.3 \text{ lb/hr} \times 8,760 \text{ hr/yr} \times \text{ton}/2,000 \text{ lb} = 662.7 \text{ TPY}$		
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):  <b>Max emissions based on combined carbonaceous fuel and oil firing. Factors for bagasse and oil are 0.06 lb/MMBtu and 0.738 lb/MMBtu (0.7% S), respectively.</b>		

**Allowable Emissions** Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: <b>0.7% S fuel oil</b>	4. Equivalent Allowable Emissions: <b>139.5</b> lb/hour <b>611.0</b> tons/year
5. Method of Compliance (limit to 60 characters):  <b>Fuel Analysis</b>	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):  <b>Applies to combustion of No. 6 residual fuel oil. Based on a maximum heat input of 189 MMBtu/hr and 0.7% S.</b>	

**H. VISIBLE EMISSIONS INFORMATION**  
(Only Regulated Emissions Units Subject to a VE Limitation)

**Visible Emissions Limitation:** Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: <b>VE30</b>	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Requested Allowable Opacity: Normal Conditions: <b>30</b> %      Exceptional Conditions: <b>40</b> % Maximum Period of Excess Opacity Allowed: <b>2</b> min/hour	
4. Method of Compliance: <b>EPA Method 9</b>	
5. Visible Emissions Comment (limit to 200 characters):  <b>Existing permit condition. 62-296.410(1)(b)1., F.A.C.</b>	

**I. CONTINUOUS MONITOR INFORMATION**  
(Only Regulated Emissions Units Subject to Continuous Monitoring)

**Continuous Monitoring System:** Continuous Monitor 1 of 4

1. Parameter Code: <b>PRS</b>	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information: Manufacturer: <b>Custom Design</b> Model Number:      Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):  <b>Existing permit condition requires monitoring of scrubber pressure drop. Parameter monitored to insure proper operation of the scrubbers.</b>	

**H. VISIBLE EMISSIONS INFORMATION**  
**(Only Regulated Emissions Units Subject to a VE Limitation)**

**Visible Emissions Limitation:** Visible Emissions Limitation \_\_\_\_\_ of \_\_\_\_\_

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: _____ % Exceptional Conditions: _____ % Maximum Period of Excess Opacity Allowed: _____ min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

**I. CONTINUOUS MONITOR INFORMATION**  
**(Only Regulated Emissions Units Subject to Continuous Monitoring)**

**Continuous Monitoring System:** Continuous Monitor 2 of 4

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ X ] Other
4. Monitor Information: Manufacturer: <b>Custom Design</b> Model Number: _____ Serial Number: _____	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):  <b>Existing permit condition requires monitoring scrubber inlet water pressure. Parameter monitored to insure proper operation of the scrubbers.</b>	



**H. VISIBLE EMISSIONS INFORMATION**  
**(Only Regulated Emissions Units Subject to a VE Limitation)**

**Visible Emissions Limitation:** Visible Emissions Limitation \_\_\_\_\_ of \_\_\_\_\_

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: _____ %      Exceptional Conditions: _____ % Maximum Period of Excess Opacity Allowed: _____ min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

**I. CONTINUOUS MONITOR INFORMATION**  
**(Only Regulated Emissions Units Subject to Continuous Monitoring)**

**Continuous Monitoring System:** Continuous Monitor 3 of 4

1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ <b>X</b> ] Other
4. Monitor Information: Manufacturer: <b>Bailey or equivalent</b> Model Number: <b>B-1</b> Serial Number: <b>See Comment</b>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):  <b>Existing permit condition requires monitoring of oil flow. No serial no. or installation date provided because meters are routinely replaced to ensure optimum performance.</b>	

**H. VISIBLE EMISSIONS INFORMATION**  
**(Only Regulated Emissions Units Subject to a VE Limitation)**

**Visible Emissions Limitation:** Visible Emissions Limitation \_\_\_\_\_ of \_\_\_\_\_

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: _____ %      Exceptional Conditions: _____ % Maximum Period of Excess Opacity Allowed: _____ min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

**I. CONTINUOUS MONITOR INFORMATION**  
**(Only Regulated Emissions Units Subject to Continuous Monitoring)**

**Continuous Monitoring System:** Continuous Monitor 4 of 4

1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ <b>X</b> ] Other
4. Monitor Information: Manufacturer: <b>Custom Design</b> Model Number: _____ Serial Number: _____	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):  <b>Existing permit condition requires monitoring of boiler steam flow rate. No serial no. or installation date provided because meters are routinely replaced to ensure optimum performance.</b>	

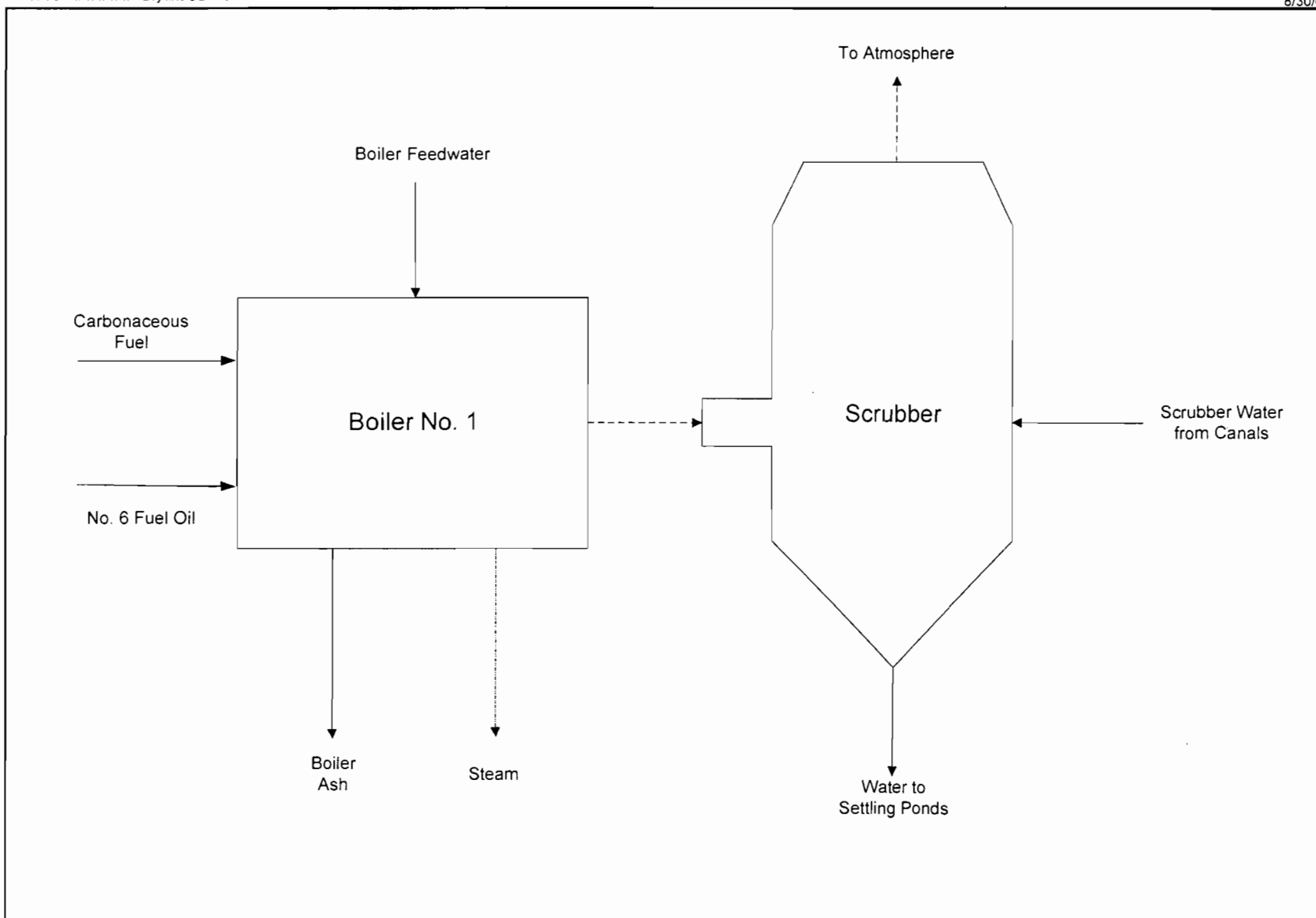
**J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION  
(Regulated Emissions Units Only)****Supplemental Requirements**

1. Process Flow Diagram [ <b>X</b> ] Attached, Document ID: <u>UB-EU1-J1</u> [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ <b>X</b> ] Attached, Document ID: <u>UB-EU1-J2</u> [ ] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID: _____ [ ] Not Applicable [ <b>X</b> ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID: _____ [ <b>X</b> ] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID: _____ [ ] Previously submitted, Date: _____ [ <b>X</b> ] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID: _____ [ <b>X</b> ] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID: _____ [ <b>X</b> ] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ <b>X</b> ] Attached, Document ID: <u>Attachment A</u> [ ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID: _____ [ <b>X</b> ] Not Applicable
10. Supplemental Requirements Comment:          

**Additional Supplemental Requirements for Title V Air Operation Permit Applications**

11. Alternative Methods of Operation [ ] Attached, Document ID: _____ [ ] Not Applicable
12. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID: _____ [ ] Not Applicable
13. Identification of Additional Applicable Requirements [ ] Attached, Document ID: _____ [ ] Not Applicable
14. Compliance Assurance Monitoring Plan [ ] Attached, Document ID: _____ [ ] Not Applicable
15. Acid Rain Part Application (Hard-copy Required) [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____ [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID: _____ [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID: _____ [ ] Not Applicable

**ATTACHMENT UB-EU1-J1**  
**PROCESS FLOW DIAGRAM**



Attachment UB-EU1-J1  
Process Flow Diagram

U.S. Sugar Corporation - Bryant, Florida

Process Area: Boiler No. 1

Latest Revision Date: 8/30/02

Process Flow Legend:	
Solid / Liquid	→
Gas	- - - - -
Steam	- · - · -



**ATTACHMENT UB-EU1-J2**  
**FUEL ANALYSIS**

**ATTACHMENT UB-EU1-J2  
Boiler Nos. 1-5 Fuel Analysis**

Parameter	Fuel	
	Carbonaceous Fuel (a)	No. 6 Fuel Oil (b) (0.7% maximum S)
Density (lb/gal)	--	7.7
Approximate Heating Value (Btu/lb)	3,600 (c)	18,961
Approximate Heating Value (Btu/gal)	--	146,000
<u>Ultimate Analysis (dry basis):</u>		
Carbon	48.48%	87.3%
Hydrogen	6.01%	10.5%
Nitrogen	0.33%	0.28%
Oxygen	43.65%	0.64%
Sulfur	0.01% - 0.40%	0.7%
Ash/Inorganic	0.2% - 8.6%	0.04%
Moisture	50% - 55%	--

Note: All values represent average fuel characteristics. No. 6 fuel oil can include on-spec used oil.

Footnotes:

(a) Source: sugar industry fuel analysis averages.

(b) Source: Perry's Chemical Engineers' Handbook. Sixth Edition, 1984.

(c) Wet basis for bagasse.



**III. EMISSIONS UNIT INFORMATION**

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

**A. GENERAL EMISSIONS UNIT INFORMATION  
(All Emissions Units)****Emissions Unit Description and Status**

1. Type of Emissions Unit Addressed in This Section: (Check one)			
<input checked="" type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).			
<input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.			
<input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.			
2. Regulated or Unregulated Emissions Unit? (Check one)			
<input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.			
<input type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.			
3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):			
<b>Boiler No. 2</b>			
4. Emissions Unit Identification Number:		<input type="checkbox"/> No ID	
ID: <b>002</b>		<input type="checkbox"/> ID Unknown	
5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
<b>A</b>		<b>20</b>	<input type="checkbox"/>
9. Emissions Unit Comment: (Limit to 500 Characters)			
<b>Vibrating grate boiler fired by carbonaceous fuel (bagasse) and both new/virgin No. 6 residual fuel oil and on-spec used oil.</b>			

**Emissions Unit Control Equipment**

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

Joy Turbulaire Impingement Scrubber, Size 40, Type D

2. Control Device or Method Code(s): **002****Emissions Unit Details**

1. Package Unit:	
Manufacturer:	Model Number:
2. Generator Nameplate Rating: MW	
3. Incinerator Information:	
Dwell Temperature:	°F
Dwell Time:	seconds
Incinerator Afterburner Temperature:	°F

**B. EMISSIONS UNIT CAPACITY INFORMATION  
(Regulated Emissions Units Only)****Emissions Unit Operating Capacity and Schedule**

1. Maximum Heat Input Rate:	385	mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:	194,600	lb/hr of steam
5. Requested Maximum Operating Schedule:		
	24	hours/day
	7	days/week
	52	weeks/year
	8,760	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):  Max heat input and steam rate is based on 24-hr avg firing carbonaceous fuel. Max fuel oil firing is 189 MMBtu/hr.		

**C. EMISSIONS UNIT REGULATIONS**  
**(Regulated Emissions Units Only)**

**List of Applicable Regulations**

62-296.410(1)(b), F.A.C: Carbonaceous Fuel Burning Equipment
62-296.410(3), F.A.C: Carbonaceous Fuel Burning Equipment
62-296.500(1)(b), F.A.C: RACT for VOC and NO <sub>x</sub>
62-296.500(2)(a), F.A.C: RACT for VOC and NO <sub>x</sub>
62-296.500(2)(c), F.A.C: RACT for VOC and NO <sub>x</sub>
62-296.500(6), F.A.C: RACT for VOC and NO <sub>x</sub>
62-296.570(1), F.A.C: RACT for VOC and NO <sub>x</sub>
62-296.570(2), F.A.C: RACT for VOC and NO <sub>x</sub>
62-296.570(3), F.A.C: RACT for VOC and NO <sub>x</sub>
62-296.570(4)(a), F.A.C: RACT for VOC and NO <sub>x</sub>
62-296.570(4)(b)6., F.A.C: RACT for VOC and NO <sub>x</sub>
62-297.310(1), F.A.C: General Compliance Test Requirements
62-297.310(2)(b), F.A.C: General Compliance Test Requirements
62-297.310(3), F.A.C: General Compliance Test Requirements
62-297.310(4), F.A.C: General Compliance Test Requirements
62-297.310(5), F.A.C: General Compliance Test Requirements
62-297.310(6), F.A.C: General Compliance Test Requirements
62-297.310(7)(a)3., F.A.C: General Compliance Test Requirements
62-297.310(7)(a)4., F.A.C: General Compliance Test Requirements
62-297.310(7)(a)5., F.A.C: General Compliance Test Requirements
62-297.310(7)(a)9., F.A.C: General Compliance Test Requirements
62-297.310(8), F.A.C: General Compliance Test Requirements
62-297.401(5), F.A.C: EPA Test Method 5
62-297.401(7)(e), F.A.C: EPA Test Method 7E
62-297.401(9), F.A.C: EPA Test Method 9
62-297.401(18), F.A.C: EPA Test Method 18
62-297.401(25)(a), F.A.C: EPA Test Method 25A
62-297.440(1)(b), F.A.C: Supplemental Test Procedures

**D. EMISSION POINT (STACK/VENT) INFORMATION**  
(Regulated Emissions Units Only)**Emission Point Description and Type**

1. Identification of Point on Plot Plan or Flow Diagram? <b>BLR 2</b>		2. Emission Point Type Code: <b>1</b>	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: <b>V</b>	6. Stack Height: <b>65</b> feet	7. Exit Diameter: <b>5.40</b> feet	
8. Exit Temperature: <b>160</b> °F	9. Actual Volumetric Flow Rate: <b>156,000</b> acfm	10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone: East (km): North (km):			
14. Emission Point Comment (limit to 200 characters):  <b>Stack parameters based on stack test data.</b>			

**E. SEGMENT (PROCESS/FUEL) INFORMATION**  
**(All Emissions Units)**

**Segment Description and Rate:** Segment 1 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters):  <b>External Combustion Boilers – Industrial, Bagasse, All Boiler Sizes</b>		
2. Source Classification Code (SCC): <b>1-02-011-01</b>		3. SCC Units: <b>Tons Burned</b>
4. Maximum Hourly Rate: <b>53.47</b>	5. Maximum Annual Rate: <b>468,417</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>7.2</b>
10. Segment Comment (limit to 200 characters):  <b>Max hr rate based on max heat input rate of 385 MMBtu/hr (24-hr avg) and wet bagasse heating value of 3,600 Btu/lb.</b>		

**Segment Description and Rate:** Segment 2 of 2

1. Segment Description (Process/Fuel Type ) (limit to 500 characters):  <b>External Combustion Boilers – Industrial, Residual Oil, Grade 6 Oil</b>		
2. Source Classification Code (SCC): <b>1-02-004-01</b>		3. SCC Units: <b>Thousand Gallons Burned</b>
4. Maximum Hourly Rate: <b>1.295</b>	5. Maximum Annual Rate: <b>11,340</b>	6. Estimated Annual Activity Factor:
8. Maximum % Sulfur: <b>0.7</b>	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>146</b>
10. Segment Comment (limit to 200 characters):  <b>Max hourly rate based on max heat input of 189.0 MMBtu/hr. No. 6 fuel oil includes both virgin and on-spec used oil.</b>		

**F. EMISSIONS UNIT POLLUTANTS  
(All Emissions Units)**

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	002		EL
PM <sub>10</sub>	002		NS
SO <sub>2</sub>			EL
NO <sub>x</sub>			EL
CO			NS
VOC			EL
HAPs			Total Hazardous Air Pollutants
H001			Acetaldehyde
H017			Benzene
H052			p-Cresol
H095			Formaldehyde
H132			Napthalene
H144			Phenols
H151			POM
H169			Toluene
H058			Dibenzofurans

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units -**  
**Emissions-Limited and Preconstruction Review Pollutants Only)**

**Potential/Fugitive Emissions**

1. Pollutant Emitted: <b>SO<sub>2</sub></b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>151.3</b> lb/hour <b>662.7</b> tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> [ X ]	
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year			
6. Emission Factor: <b>0.7 % S oil</b> Reference: <b>See Comment</b>		7. Emissions Method Code: <b>5</b>	
8. Calculation of Emissions (limit to 600 characters):  $(196 \text{ MMBtu/hr} \times 0.06 \text{ lb/MMBtu}) + (189 \text{ MMBtu/hr} \times 0.738 \text{ lb/MMBtu}) =$ $11.8 \text{ lb/hr} + 139.5 = 151.3$ $151.3 \text{ lb/hr} \times 8,760 \text{ hr/yr} \times \text{ton}/2,000 \text{ lb} = 662.7 \text{ TPY}$			
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):  <b>Max emissions based on combined carbonaceous fuel and oil firing. Factors for bagasse and oil are 0.06 lb/MMBtu and 0.738 lb/MMBtu (0.7% S), respectively.</b>			

**Allowable Emissions** Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>OTHER</b>		2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: <b>0.7% S fuel oil</b>		4. Equivalent Allowable Emissions: <b>139.5</b> lb/hour <b>611.0</b> tons/year	
5. Method of Compliance (limit to 60 characters):  <b>Fuel Analysis</b>			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):  <b>Applies to combustion of No. 6 residual fuel oil. Based on a maximum heat input of 189 MMBtu/hr and 0.7% S.</b>			



**H. VISIBLE EMISSIONS INFORMATION**  
**(Only Regulated Emissions Units Subject to a VE Limitation)**

**Visible Emissions Limitation:** Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: <b>VE30</b>	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Requested Allowable Opacity: Normal Conditions: <b>30</b> %      Exceptional Conditions: <b>40</b> % Maximum Period of Excess Opacity Allowed: <b>2</b> min/hour	
4. Method of Compliance: <b>EPA Method 9</b>	
5. Visible Emissions Comment (limit to 200 characters):  <b>Existing permit condition. 62-296.410(1)(b)1., F.A.C.</b>	

**I. CONTINUOUS MONITOR INFORMATION**  
**(Only Regulated Emissions Units Subject to Continuous Monitoring)**

**Continuous Monitoring System:** Continuous Monitor 1 of 4

1. Parameter Code: <b>PRS</b>	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information: Manufacturer: <b>Custom Design</b> Model Number:      Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):  <b>Existing permit condition requires monitoring of scrubber pressure drop. Parameter monitored to insure proper operation of the scrubbers.</b>	

**H. VISIBLE EMISSIONS INFORMATION**  
**(Only Regulated Emissions Units Subject to a VE Limitation)**

**Visible Emissions Limitation:** Visible Emissions Limitation \_\_\_\_\_ of \_\_\_\_\_

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions:                      %      Exceptional Conditions:                      % Maximum Period of Excess Opacity Allowed:                      min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

**I. CONTINUOUS MONITOR INFORMATION**  
**(Only Regulated Emissions Units Subject to Continuous Monitoring)**

**Continuous Monitoring System:** Continuous Monitor 2 of 4

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ X ] Other
4. Monitor Information: Manufacturer: <b>Custom Design</b> Model Number:                      Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):  <b>Existing permit condition requires monitoring scrubber inlet water pressure. Parameter monitored to insure proper operation of the scrubbers.</b>	

**H. VISIBLE EMISSIONS INFORMATION**  
**(Only Regulated Emissions Units Subject to a VE Limitation)**

**Visible Emissions Limitation:** Visible Emissions Limitation \_\_\_\_\_ of \_\_\_\_\_

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: _____ %      Exceptional Conditions: _____ % Maximum Period of Excess Opacity Allowed: _____ min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

**I. CONTINUOUS MONITOR INFORMATION**  
**(Only Regulated Emissions Units Subject to Continuous Monitoring)**

**Continuous Monitoring System:** Continuous Monitor 3 of 4

1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ <b>X</b> ] Other
4. Monitor Information: Manufacturer: <b>Bailey or equivalent</b> Model Number: <b>B-1</b> Serial Number: <b>See Comment</b>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):  <b>Existing permit condition requires monitoring of oil flow. No serial no. or installation date provided because meters are routinely replaced to ensure optimum performance.</b>	

**H. VISIBLE EMISSIONS INFORMATION**  
**(Only Regulated Emissions Units Subject to a VE Limitation)**

**Visible Emissions Limitation:** Visible Emissions Limitation \_\_\_\_\_ of \_\_\_\_\_

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: _____ %      Exceptional Conditions: _____ % Maximum Period of Excess Opacity Allowed: _____ min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

**I. CONTINUOUS MONITOR INFORMATION**  
**(Only Regulated Emissions Units Subject to Continuous Monitoring)**

**Continuous Monitoring System:** Continuous Monitor 4 of 4

1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ <b>x</b> ] Other
4. Monitor Information: Manufacturer: <b>Custom Design</b> Model Number: _____ Serial Number: _____	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):  <b>Existing permit condition requires monitoring of boiler steam flow rate. No serial no. or installation date provided because meters are routinely replaced to ensure optimum performance.</b>	

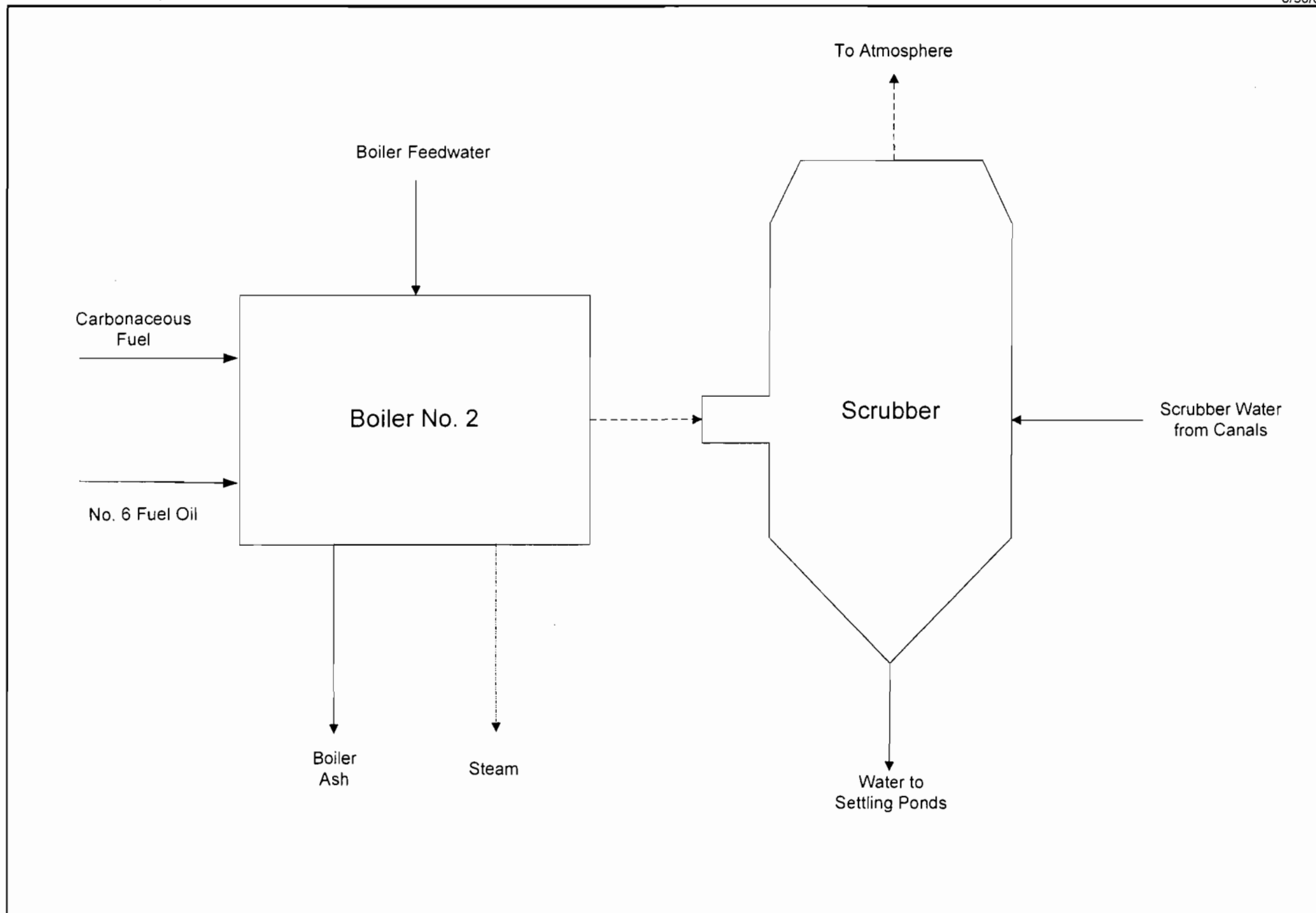
**J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION**  
**(Regulated Emissions Units Only)****Supplemental Requirements**

1. Process Flow Diagram [ <b>X</b> ] Attached, Document ID: <u>UB-EU2-J1</u> [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ <b>X</b> ] Attached, Document ID: <u>UB-EU1-J2</u> [ ] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID: _____ [ ] Not Applicable [ <b>X</b> ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID: _____ [ <b>X</b> ] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID: _____ [ ] Previously submitted, Date: _____ [ <b>X</b> ] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID: _____ [ <b>X</b> ] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID: _____ [ <b>X</b> ] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ <b>X</b> ] Attached, Document ID: <u>Attachment A</u> [ ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID: _____ [ <b>X</b> ] Not Applicable
10. Supplemental Requirements Comment:

**Additional Supplemental Requirements for Title V Air Operation Permit Applications**

11. Alternative Methods of Operation <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
12. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
13. Identification of Additional Applicable Requirements <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
14. Compliance Assurance Monitoring Plan <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
15. Acid Rain Part Application (Hard-copy Required) <input type="checkbox"/> Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID: _____ <input type="checkbox"/> Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

**ATTACHMENT UB-EU2-J1**  
**PROCESS FLOW DIAGRAM**



Attachment UB-EU2-J1  
Process Flow Diagram

U.S. Sugar Corporation - Bryant, Florida

Process Area: Boiler No. 2

Latest Revision Date: 8/30/02

Process Flow Legend:  
Solid / Liquid ———>  
Gas - - - - ->  
Steam - - - - ->





**III. EMISSIONS UNIT INFORMATION**

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

**A. GENERAL EMISSIONS UNIT INFORMATION**  
**(All Emissions Units)**

**Emissions Unit Description and Status**

1. Type of Emissions Unit Addressed in This Section: (Check one)			
<input checked="" type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).			
<input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.			
<input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.			
2. Regulated or Unregulated Emissions Unit? (Check one)			
<input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.			
<input type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.			
3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):			
<b>Boiler No. 3</b>			
4. Emissions Unit Identification Number:			
ID: <b>003</b>		<input type="checkbox"/> No ID <input type="checkbox"/> ID Unknown	
5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
<b>A</b>		<b>20</b>	<input type="checkbox"/>
9. Emissions Unit Comment: (Limit to 500 Characters)			
<b>Vibrating grate boiler fired by carbonaceous fuel (bagasse) and both new/virgin No. 6 residual fuel oil and on-spec used oil.</b>			

**Emissions Unit Control Equipment**

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

Joy Turbulaire Impingement Scrubber, Size 125, Type D

2. Control Device or Method Code(s): 002

**Emissions Unit Details**

1. Package Unit:	
Manufacturer:	Model Number:
2. Generator Nameplate Rating: MW	
3. Incinerator Information:	
Dwell Temperature:	°F
Dwell Time:	seconds
Incinerator Afterburner Temperature:	°F

**B. EMISSIONS UNIT CAPACITY INFORMATION  
(Regulated Emissions Units Only)****Emissions Unit Operating Capacity and Schedule**

1. Maximum Heat Input Rate:	385	mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:	194,600	lb/hr of steam
5. Requested Maximum Operating Schedule:		
	24	hours/day
	7	days/week
	52	weeks/year
	8,760	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):  Max heat input and steam rate is based on 24-hr avg firing carbonaceous fuel. Max fuel oil firing is 189 MMBtu/hr.		

**C. EMISSIONS UNIT REGULATIONS  
(Regulated Emissions Units Only)****List of Applicable Regulations**

62-296.410(1)(b), F.A.C: Carbonaceous Fuel Burning Equipment
62-296.410(3), F.A.C: Carbonaceous Fuel Burning Equipment
62-296.500(1)(b), F.A.C: RACT for VOC and NO <sub>x</sub>
62-296.500(2)(a), F.A.C: RACT for VOC and NO <sub>x</sub>
62-296.500(2)(c), F.A.C: RACT for VOC and NO <sub>x</sub>
62-296.500(6), F.A.C: RACT for VOC and NO <sub>x</sub>
62-296.570(1), F.A.C: RACT for VOC and NO <sub>x</sub>
62-296.570(2), F.A.C: RACT for VOC and NO <sub>x</sub>
62-296.570(3), F.A.C: RACT for VOC and NO <sub>x</sub>
62-296.570(4)(a), F.A.C: RACT for VOC and NO <sub>x</sub>
62-296.570(4)(b)6., F.A.C: RACT for VOC and NO <sub>x</sub>
62-297.310(1), F.A.C: General Compliance Test Requirements
62-297.310(2)(b), F.A.C: General Compliance Test Requirements
62-297.310(3), F.A.C: General Compliance Test Requirements
62-297.310(4), F.A.C: General Compliance Test Requirements
62-297.310(5), F.A.C: General Compliance Test Requirements
62-297.310(6), F.A.C: General Compliance Test Requirements
62-297.310(7)(a)3., F.A.C: General Compliance Test Requirements
62-297.310(7)(a)4., F.A.C: General Compliance Test Requirements
62-297.310(7)(a)5., F.A.C: General Compliance Test Requirements
62-297.310(7)(a)9., F.A.C: General Compliance Test Requirements
62-297.310(8), F.A.C: General Compliance Test Requirements
62-297.401(5), F.A.C: EPA Test Method 5
62-297.401(7)(e), F.A.C: EPA Test Method 7E
62-297.401(9), F.A.C: EPA Test Method 9
62-297.401(18), F.A.C: EPA Test Method 18
62-297.401(25)(a), F.A.C: EPA Test Method 25A
62-297.440(1)(b), F.A.C: Supplemental Test Procedures

**D. EMISSION POINT (STACK/VENT) INFORMATION  
(Regulated Emissions Units Only)****Emission Point Description and Type**

1. Identification of Point on Plot Plan or Flow Diagram? <b>BLR 3</b>		2. Emission Point Type Code: <b>1</b>	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: <b>V</b>	6. Stack Height: <b>65</b> feet	7. Exit Diameter: <b>5.40</b> feet	
8. Exit Temperature: <b>160</b> °F	9. Actual Volumetric Flow Rate: <b>156,000</b> acfm	10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone: East (km): North (km):			
14. Emission Point Comment (limit to 200 characters):  <b>Stack parameters based on stack test data.</b>			

**E. SEGMENT (PROCESS/FUEL) INFORMATION**  
(All Emissions Units)

**Segment Description and Rate:** Segment 1 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters):  <b>External Combustion Boilers – Industrial, Bagasse, All Boiler Sizes</b>		
2. Source Classification Code (SCC): <b>1-02-011-01</b>		3. SCC Units: <b>Tons Burned</b>
4. Maximum Hourly Rate: <b>53.47</b>	5. Maximum Annual Rate: <b>468,417</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>7.2</b>
10. Segment Comment (limit to 200 characters):  <b>Max hr rate based on max heat input rate of 385 MMBtu/hr (24-hr avg) and wet bagasse heating value of 3,600 Btu/lb.</b>		

**Segment Description and Rate:** Segment 2 of 2

1. Segment Description (Process/Fuel Type ) (limit to 500 characters):  <b>External Combustion Boilers – Industrial, Residual Oil, Grade 6 Oil</b>		
2. Source Classification Code (SCC): <b>1-02-004-01</b>		3. SCC Units: <b>Thousand Gallons Burned</b>
4. Maximum Hourly Rate: <b>1.295</b>	5. Maximum Annual Rate: <b>11,340</b>	6. Estimated Annual Activity Factor:
9. Maximum % Sulfur: <b>0.7</b>	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>146</b>
10. Segment Comment (limit to 200 characters):  <b>Max hourly rate based on max heat input of 189.0 MMBtu/hr. No. 6 fuel oil includes both virgin and on-spec used oil.</b>		

**F. EMISSIONS UNIT POLLUTANTS  
(All Emissions Units)**

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	002		EL
PM <sub>10</sub>	002		NS
SO <sub>2</sub>			EL
NO <sub>x</sub>			EL
CO			NS
VOC			EL
HAPs			Total Hazardous Air Pollutants
H001			Acetaldehyde
H017			Benzene
H052			p-Cresol
H095			Formaldehyde
H132			Napthalene
H144			Phenols
H151			POM
H169			Toluene
H058			Dibenzofurans

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units -**  
**Emissions-Limited and Preconstruction Review Pollutants Only)**

**Potential/Fugitive Emissions**

1. Pollutant Emitted: <b>SO<sub>2</sub></b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>151.3 lb/hour      662.7 tons/year</b>		4. Synthetically Limited? <input checked="" type="checkbox"/> [ X ]	
5. Range of Estimated Fugitive Emissions: [ ] 1      [ ] 2      [ ] 3      _____ to _____ tons/year			
6. Emission Factor: <b>0.7 % S oil</b> Reference: <b>See Comment</b>		7. Emissions Method Code: <b>5</b>	
8. Calculation of Emissions (limit to 600 characters):  $(196 \text{ MMBtu/hr} \times 0.06 \text{ lb/MMBtu}) + (189 \text{ MMBtu/hr} \times 0.738 \text{ lb/MMBtu}) = 11.8 \text{ lb/hr} + 139.5 = 151.3$ $151.3 \text{ lb/hr} \times 8,760 \text{ hr/yr} \times \text{ton}/2,000 \text{ lb} = 662.7 \text{ TPY}$			
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):  <b>Max emissions based on combined carbonaceous fuel and oil firing. Factors for bagasse and oil are 0.06 lb/MMBtu and 0.738 lb/MMBtu (0.7% S), respectively.</b>			

**Allowable Emissions** Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>OTHER</b>		2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: <b>0.7% S fuel oil</b>		4. Equivalent Allowable Emissions: <b>139.5 lb/hour      611.0 tons/year</b>	
5. Method of Compliance (limit to 60 characters):  <b>Fuel Analysis</b>			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):  <b>Applies to combustion of No. 6 residual fuel oil. Based on a maximum heat input of 189 MMBtu/hr and 0.7% S.</b>			



**H. VISIBLE EMISSIONS INFORMATION**  
**(Only Regulated Emissions Units Subject to a VE Limitation)**

**Visible Emissions Limitation:** Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: <b>VE30</b>	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Requested Allowable Opacity: Normal Conditions: <b>30</b> %      Exceptional Conditions: <b>40</b> % Maximum Period of Excess Opacity Allowed: <b>2</b> min/hour	
4. Method of Compliance: <b>EPA Method 9</b>	
5. Visible Emissions Comment (limit to 200 characters):  <b>Existing permit condition. 62-296.410(1)(b)1., F.A.C.</b>	

**I. CONTINUOUS MONITOR INFORMATION**  
**(Only Regulated Emissions Units Subject to Continuous Monitoring)**

**Continuous Monitoring System:** Continuous Monitor 1 of 4

1. Parameter Code: <b>PRS</b>	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information: Manufacturer: <b>Custom Design</b> Model Number:      Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):  <b>Existing permit condition requires monitoring of scrubber pressure drop. Parameter monitored to insure proper operation of the scrubbers.</b>	

**H. VISIBLE EMISSIONS INFORMATION**  
**(Only Regulated Emissions Units Subject to a VE Limitation)**

**Visible Emissions Limitation:** Visible Emissions Limitation \_\_\_\_\_ of \_\_\_\_\_

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: _____ %      Exceptional Conditions: _____ % Maximum Period of Excess Opacity Allowed: _____ min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

**I. CONTINUOUS MONITOR INFORMATION**  
**(Only Regulated Emissions Units Subject to Continuous Monitoring)**

**Continuous Monitoring System:** Continuous Monitor 2 of 4

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ <input checked="" type="checkbox"/> ] Other
4. Monitor Information: Manufacturer: <b>Custom Design</b> Model Number: _____ Serial Number: _____	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):  <b>Existing permit condition requires monitoring scrubber inlet water pressure. Parameter monitored to insure proper operation of the scrubbers.</b>	

**H. VISIBLE EMISSIONS INFORMATION**  
**(Only Regulated Emissions Units Subject to a VE Limitation)**

**Visible Emissions Limitation:** Visible Emissions Limitation \_\_\_\_\_ of \_\_\_\_\_

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: _____ %      Exceptional Conditions: _____ % Maximum Period of Excess Opacity Allowed: _____ min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

**I. CONTINUOUS MONITOR INFORMATION**  
**(Only Regulated Emissions Units Subject to Continuous Monitoring)**

**Continuous Monitoring System:** Continuous Monitor 3 of 4

1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ <b>X</b> ] Other
4. Monitor Information: Manufacturer: <b>Bailey or equivalent</b> Model Number: <b>B-1</b> Serial Number: <b>See Comment</b>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):  <b>Existing permit condition requires monitoring of oil flow. No serial no. or installation date provided because meters are routinely replaced to ensure optimum performance.</b>	

**H. VISIBLE EMISSIONS INFORMATION**  
**(Only Regulated Emissions Units Subject to a VE Limitation)**

**Visible Emissions Limitation:** Visible Emissions Limitation \_\_\_\_\_ of \_\_\_\_\_

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: _____ %      Exceptional Conditions: _____ % Maximum Period of Excess Opacity Allowed: _____ min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

**I. CONTINUOUS MONITOR INFORMATION**  
**(Only Regulated Emissions Units Subject to Continuous Monitoring)**

**Continuous Monitoring System:** Continuous Monitor 4 of 4

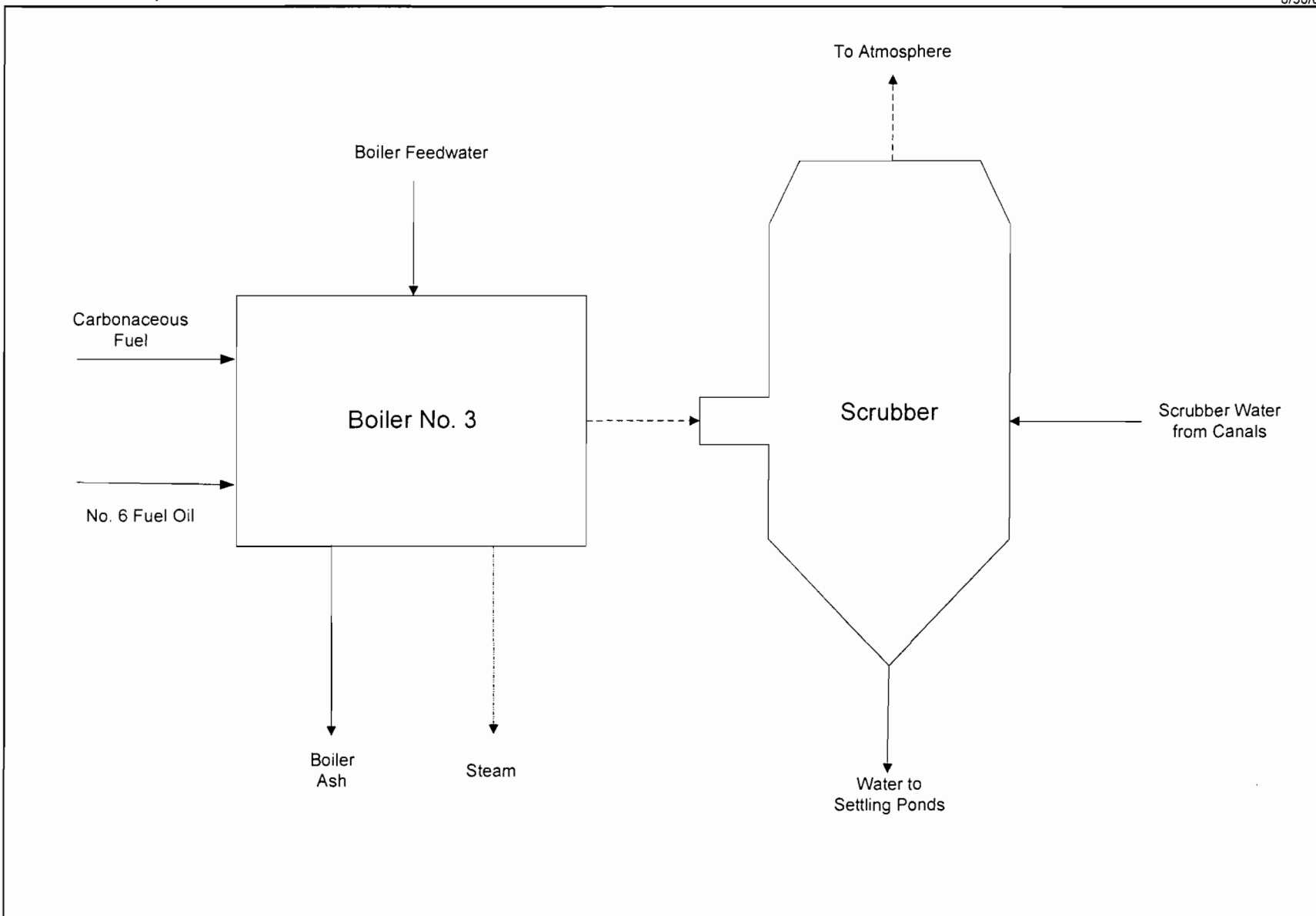
1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ <input checked="" type="checkbox"/> ] Other
4. Monitor Information: Manufacturer: <b>Custom Design</b> Model Number: _____ Serial Number: _____	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):  <b>Existing permit condition requires monitoring of boiler steam flow rate. No serial no. or installation date provided because meters are routinely replaced to ensure optimum performance.</b>	

**J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION**  
**(Regulated Emissions Units Only)****Supplemental Requirements**

1. Process Flow Diagram [ <b>X</b> ] Attached, Document ID: <u>UB-EU3-J1</u> [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ <b>X</b> ] Attached, Document ID: <u>UB-EU1-J2</u> [ ] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID: _____ [ ] Not Applicable [ <b>X</b> ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID: _____ [ <b>X</b> ] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID: _____ [ ] Previously submitted, Date: _____ [ <b>X</b> ] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID: _____ [ <b>X</b> ] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID: _____ [ <b>X</b> ] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ <b>X</b> ] Attached, Document ID: <u>Attachment A</u> [ ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID: _____ [ <b>X</b> ] Not Applicable
10. Supplemental Requirements Comment:          

**Additional Supplemental Requirements for Title V Air Operation Permit Applications****11. Alternative Methods of Operation**☐ Attached, Document ID: \_\_\_\_\_ ☐ Not Applicable**12. Alternative Modes of Operation (Emissions Trading)**☐ Attached, Document ID: \_\_\_\_\_ ☐ Not Applicable**13. Identification of Additional Applicable Requirements**☐ Attached, Document ID: \_\_\_\_\_ ☐ Not Applicable**14. Compliance Assurance Monitoring Plan**☐ Attached, Document ID: \_\_\_\_\_ ☐ Not Applicable**15. Acid Rain Part Application (Hard-copy Required)**☐ Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))  
Attached, Document ID: \_\_\_\_\_☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)  
Attached, Document ID: \_\_\_\_\_☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)  
Attached, Document ID: \_\_\_\_\_☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)  
Attached, Document ID: \_\_\_\_\_☐ Phase II NO<sub>x</sub> Compliance Plan (Form No. 62-210.900(1)(a)4.)  
Attached, Document ID: \_\_\_\_\_☐ Phase NO<sub>x</sub> Averaging Plan (Form No. 62-210.900(1)(a)5.)  
Attached, Document ID: \_\_\_\_\_☐ Not Applicable

**ATTACHMENT UB-EU3-J1**  
**PROCESS FLOW DIAGRAM**



Attachment UB-EU3-J1  
Process Flow Diagram

U.S. Sugar Corporation - Bryant, Florida

Process Area: Boiler No. 3

Latest Revision Date: 8/30/02

Process Flow Legend:  
Solid / Liquid ———→  
Gas - - - - -→  
Steam - . . . . .→





**III. EMISSIONS UNIT INFORMATION**

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

**A. GENERAL EMISSIONS UNIT INFORMATION  
(All Emissions Units)****Emissions Unit Description and Status**

1. Type of Emissions Unit Addressed in This Section: (Check one) <input checked="" type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent). <input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions. <input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.			
2. Regulated or Unregulated Emissions Unit? (Check one) <input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit. <input type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.			
3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):  <b>Boiler No. 5</b>			
4. Emissions Unit Identification Number: ID: <b>005</b>		<input type="checkbox"/> No ID <input type="checkbox"/> ID Unknown	
5. Emissions Unit Status Code: <b>A</b>	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: <b>20</b>	8. Acid Rain Unit? <input type="checkbox"/>
9. Emissions Unit Comment: (Limit to 500 Characters)  <b>Vibrating grate boiler fired by carbonaceous fuel (bagasse) and both new/virgin No. 6 residual fuel oil and on-spec used oil.</b>			

**Emissions Unit Control Equipment**

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

Two (2) Joy Turbulaire Impingement Scrubbers, Size 100, Type D

2. Control Device or Method Code(s): **002**

**Emissions Unit Details**

1. Package Unit:	
Manufacturer:	Model Number:
2. Generator Nameplate Rating:	MW
3. Incinerator Information:	
Dwell Temperature:	°F
Dwell Time:	seconds
Incinerator Afterburner Temperature:	°F

**B. EMISSIONS UNIT CAPACITY INFORMATION  
(Regulated Emissions Units Only)****Emissions Unit Operating Capacity and Schedule**

1. Maximum Heat Input Rate:	671	mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:	342,384	lb/hr of steam
5. Requested Maximum Operating Schedule:		
	24	hours/day
	7	days/week
	27	weeks/year
	4,572	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):		
<p>Max heat input and steam rate is based on 1-hr max from carbonaceous fuel firing. Max 24-hr avg firing carbonaceous fuel is 583 MMBtu/hr. Max fuel oil firing is 215.6 MMBtu/hr.</p>		

### C. EMISSIONS UNIT REGULATIONS (Regulated Emissions Units Only)

### List of Applicable Regulations

[illegible]

**D. EMISSION POINT (STACK/VENT) INFORMATION**  
(Regulated Emissions Units Only)**Emission Point Description and Type**

1. Identification of Point on Plot Plan or Flow Diagram? <b>BLR 5</b>		2. Emission Point Type Code: <b>1</b>	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: <b>V</b>	6. Stack Height: <b>150</b> feet	7. Exit Diameter: <b>9.5</b> feet	
8. Exit Temperature: <b>142</b> °F	9. Actual Volumetric Flow Rate: <b>206,000</b> acfm	10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone: East (km): North (km):			
14. Emission Point Comment (limit to 200 characters):  <b>Stack parameters based on stack test data.</b>			

**E. SEGMENT (PROCESS/FUEL) INFORMATION**  
**(All Emissions Units)**

**Segment Description and Rate:** Segment 1 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters):  <b>External Combustion Boilers – Industrial, Bagasse, All Boiler Sizes</b>		
2. Source Classification Code (SCC): <b>1-02-011-01</b>		3. SCC Units: <b>Tons Burned</b>
4. Maximum Hourly Rate: <b>93.2</b>	5. Maximum Annual Rate: <b>307,434</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>7.2</b>
10. Segment Comment (limit to 200 characters):  <b>Max hr rate based on max heat input rate of 671 MMBtu/hr and wet bagasse heating value of 3,600 Btu/lb. Max annual rate based on annual heat input rate of 2,213,522 MMBtu/yr (1,049,514,873 lb/yr steam).</b>		

**Segment Description and Rate:** Segment 2 of 2

1. Segment Description (Process/Fuel Type ) (limit to 500 characters):  <b>External Combustion Boilers – Industrial, Residual Oil, Grade 6 Oil</b>		
2. Source Classification Code (SCC): <b>1-02-004-01</b>		3. SCC Units: <b>Thousand Gallons Burned</b>
4. Maximum Hourly Rate: <b>1.477</b>	5. Maximum Annual Rate: <b>400</b>	6. Estimated Annual Activity Factor:
10. Maximum % Sulfur: <b>0.7</b>	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>146</b>
10. Segment Comment (limit to 200 characters):  <b>Max hourly and annual rates based on proposed permit conditions. No. 6 fuel oil includes both virgin and on-spec used oil.</b>		

**F. EMISSIONS UNIT POLLUTANTS  
(All Emissions Units)**

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	002		EL
PM <sub>10</sub>	002		NS
SO <sub>2</sub>			EL
NO <sub>x</sub>			EL
CO			NS
VOC			EL
HAPs			Total Hazardous Air Pollutants
H001			Acetaldehyde
H017			Benzene
H052			p-Cresol
H095			Formaldehyde
H132			Napthalene
H144			Phenols
H151			POM
H163			Styrene
H169			Toluene
H058			Dibenzofurans

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units -**  
**Emissions-Limited and Preconstruction Review Pollutants Only)**

**Potential/Fugitive Emissions**

1. Pollutant Emitted: <b>SO<sub>2</sub></b>	2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>186.5 lb/hour      86.2 tons/year</b>	4. Synthetically Limited? <b>[ X ]</b>	
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year		
6. Emission Factor: <b>0.7 % S oil</b> Reference: <b>See Comment</b>		7. Emissions Method Code: <b>5</b>
8. Calculation of Emissions (limit to 600 characters):  $(455.4 \text{ MMBtu/hr} \times 0.06 \text{ lb/MMBtu}) + (215.6 \text{ MMBtu/hr} \times 0.738 \text{ lb/MMBtu}) = 27.3 \text{ lb/hr} + 159.2 = 186.5$  $(2,155,122 \text{ MMBtu/hr} \times 0.06 \text{ lb/MMBtu}) \div 2,000 \text{ lb/ton} + (58,400 \text{ MMBtu/hr} \times 0.738 \text{ lb/MMBtu}) \div 2,000 \text{ lb/ton} = 86.2 \text{ TPY}$		
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):  <b>Max emissions based on combined carbonaceous fuel and oil firing. Factors for bagasse and oil are 0.06 lb/MMBtu and 0.738 lb/MMBtu (0.7% S), respectively.</b>		

**Allowable Emissions** Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: <b>0.7% S fuel oil</b>	4. Equivalent Allowable Emissions: <b>159.2 lb/hour      21.5 tons/year</b>	
5. Method of Compliance (limit to 60 characters):  <b>Fuel Analysis</b>		
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):  <b>Applies to combustion of No. 6 residual fuel oil. Based on a maximum heat input of 215.6 MMBtu/hr and maximum fuel oil (0.7% S) usage of 400,000 gal/yr.</b>		



**H. VISIBLE EMISSIONS INFORMATION**  
**(Only Regulated Emissions Units Subject to a VE Limitation)**

**Visible Emissions Limitation:** Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: <b>VE20</b>	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Requested Allowable Opacity: Normal Conditions: <b>20</b> %      Exceptional Conditions: <b>40</b> % Maximum Period of Excess Opacity Allowed: <b>2</b> min/hour	
4. Method of Compliance: <b>EPA Method 9</b>	
5. Visible Emissions Comment (limit to 200 characters):  <b>Existing permit condition. 62-296.410(2)(b), F.A.C.</b>	

**I. CONTINUOUS MONITOR INFORMATION**  
**(Only Regulated Emissions Units Subject to Continuous Monitoring)**

**Continuous Monitoring System:** Continuous Monitor 1 of 4

1. Parameter Code: <b>PRS</b>	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information: Manufacturer: <b>Custom Design</b> Model Number:      Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):  <b>Existing permit condition requires monitoring of scrubber pressure drop. Parameter monitored to insure proper operation of the scrubbers.</b>	

**H. VISIBLE EMISSIONS INFORMATION**  
**(Only Regulated Emissions Units Subject to a VE Limitation)**

**Visible Emissions Limitation:** Visible Emissions Limitation \_\_\_\_\_ of \_\_\_\_\_

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: _____ %      Exceptional Conditions: _____ % Maximum Period of Excess Opacity Allowed: _____ min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

**I. CONTINUOUS MONITOR INFORMATION**  
**(Only Regulated Emissions Units Subject to Continuous Monitoring)**

**Continuous Monitoring System:** Continuous Monitor 2 of 4

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ <input checked="" type="checkbox"/> ] Other
4. Monitor Information: Manufacturer: <b>Custom Design</b> Model Number: _____ Serial Number: _____	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):  <b>Existing permit condition requires monitoring scrubber inlet water pressure. Parameter monitored to insure proper operation of the scrubbers.</b>	

**H. VISIBLE EMISSIONS INFORMATION**  
**(Only Regulated Emissions Units Subject to a VE Limitation)**

**Visible Emissions Limitation:** Visible Emissions Limitation \_\_\_\_\_ of \_\_\_\_\_

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: _____ %      Exceptional Conditions: _____ % Maximum Period of Excess Opacity Allowed: _____ min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

**I. CONTINUOUS MONITOR INFORMATION**  
**(Only Regulated Emissions Units Subject to Continuous Monitoring)**

**Continuous Monitoring System:** Continuous Monitor 3 of 4

1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ <b>X</b> ] Other
4. Monitor Information: Manufacturer: <b>Bailey</b> Model Number: <b>B-1</b> Serial Number: <b>See Comment</b>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):  <b>Existing permit condition requires monitoring of oil flow. No serial no. or installation date provided because meters are routinely replaced to ensure optimum performance.</b>	

**H. VISIBLE EMISSIONS INFORMATION**  
**(Only Regulated Emissions Units Subject to a VE Limitation)**

**Visible Emissions Limitation:** Visible Emissions Limitation \_\_\_\_\_ of \_\_\_\_\_

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: _____ %      Exceptional Conditions: _____ % Maximum Period of Excess Opacity Allowed: _____ min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

**I. CONTINUOUS MONITOR INFORMATION**  
**(Only Regulated Emissions Units Subject to Continuous Monitoring)**

**Continuous Monitoring System:** Continuous Monitor 4 of 4

1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ <b>X</b> ] Other
4. Monitor Information: Manufacturer: <b>Custom Design</b> Model Number: _____ Serial Number: _____	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):  <b>Existing permit condition requires monitoring of scrubber water supply flow rate. Parameter monitored to insure proper operation of the scrubbers.</b>	

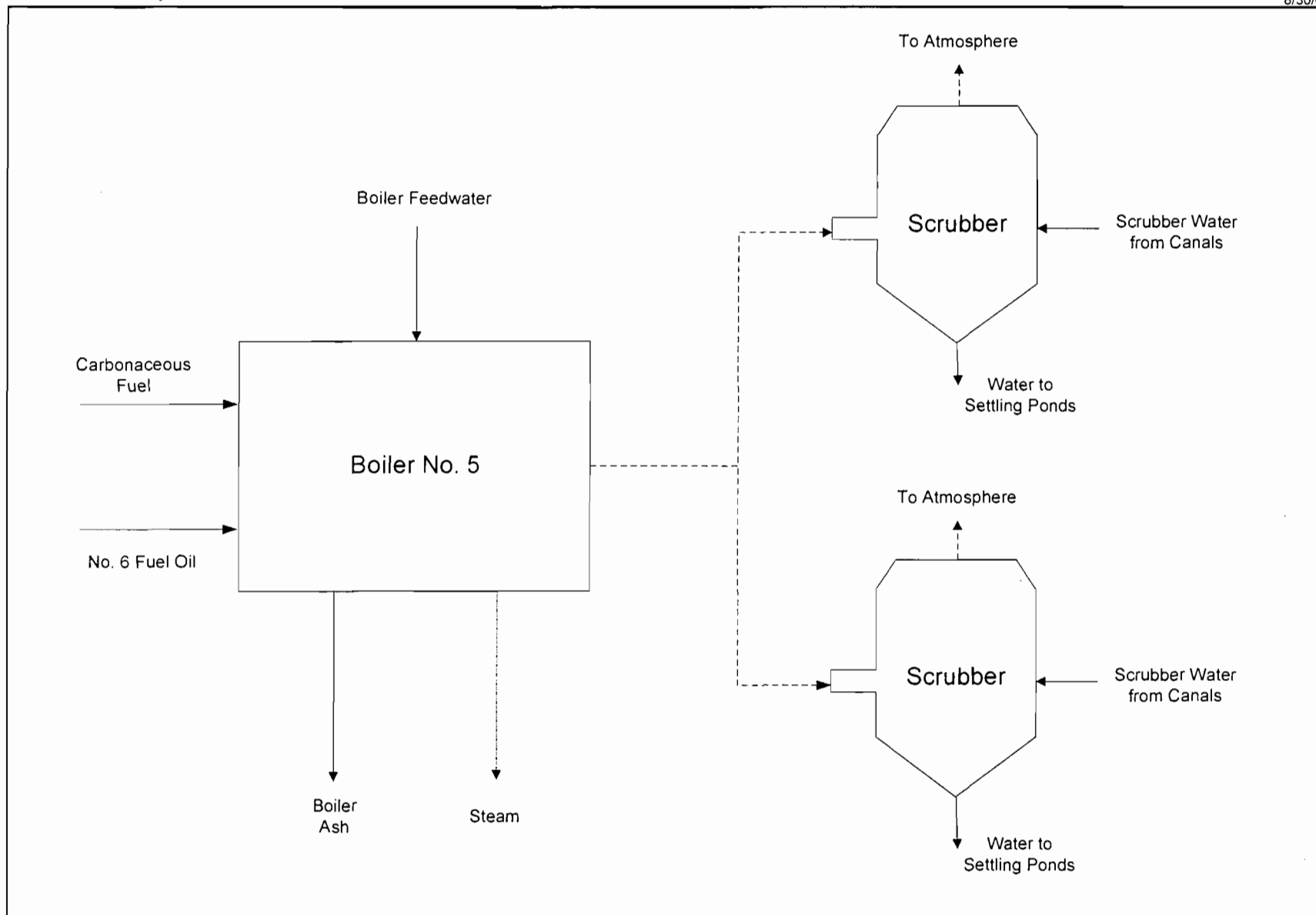
**J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION**  
(Regulated Emissions Units Only)**Supplemental Requirements**

1. Process Flow Diagram [ <b>X</b> ] Attached, Document ID: <u>UB-EU4-J1</u> [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ <b>X</b> ] Attached, Document ID: <u>UB-EU1-J2</u> [ ] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID: _____ [ ] Not Applicable [ <b>X</b> ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID: _____ [ <b>X</b> ] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID: _____ [ ] Previously submitted, Date: _____ [ <b>X</b> ] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID: _____ [ <b>X</b> ] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID: _____ [ <b>X</b> ] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ <b>X</b> ] Attached, Document ID: <u>Attachment A</u> [ ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID: _____ [ <b>X</b> ] Not Applicable
10. Supplemental Requirements Comment:          

**Additional Supplemental Requirements for Title V Air Operation Permit Applications**

11. Alternative Methods of Operation [ ] Attached, Document ID: _____ [ ] Not Applicable
12. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID: _____ [ ] Not Applicable
13. Identification of Additional Applicable Requirements [ ] Attached, Document ID: _____ [ ] Not Applicable
14. Compliance Assurance Monitoring Plan [ ] Attached, Document ID: _____ [ ] Not Applicable
15. Acid Rain Part Application (Hard-copy Required) [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____ [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID: _____ [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID: _____ [ ] Not Applicable

**ATTACHMENT UB-EU4-J1**  
**PROCESS FLOW DIAGRAM**



Attachment UB-EU4-J1  
Process Flow Diagram

U.S. Sugar Corporation - Bryant, Florida

Process Area: Boiler No. 5

Latest Revision Date: 8/30/02

Process Flow Legend:  
Solid / Liquid ———→  
Gas - - - - -→  
Steam - · - - - -→





**ATTACHMENT A**

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## 1.0 INTRODUCTION

In a recent air dispersion modeling analysis conducted for the proposed Palm Beach Power Corporation (PBPC) facility, exceedances of the State of Florida ambient air quality standards (AAQS) for sulfur dioxide (SO<sub>2</sub>) were predicted. This analysis was part of a prevention of significant deterioration (PSD) permit application submitted to the Florida Department of Environmental Protection. Further investigation revealed that the cause of the predicted exceedances was the use of permitted fuel usage rates and maximum allowed fuel oil sulfur content for the United States Sugar Corporation (U.S. Sugar) Bryant mill boilers.

The Bryant mill has four bagasse/oil-fired steam boilers that provide process steam to the sugar mill during the sugarcane processing season. Each boiler has a wet scrubber for particulate matter control. Boiler Nos. 1, 2 and 3 are identical boilers that are permitted to burn bagasse at up to 385 million British thermal units per hour (MMBtu/hr) heat input, and No. 6 fuel oil at up to 189 MMBtu/hr. The maximum allowable sulfur content of the fuel oil is 2.5 percent.

Boiler No. 5 is permitted to burn bagasse at up to 671 MMBtu/hr, and No. 6 fuel oil at up to 216.5 MMBtu/hr. The maximum sulfur content of the fuel oil burned in Boiler No. 5 is indirectly limited through a provision in its permit. The permit requires that Boiler No. 5 burn fuel oil from the common fuel oil system (one fuel oil tank supplies Boiler Nos. 1, 2, 3, and 5). Any fuel oil burned in Boiler No. 5 must be replaced in the common tank, during the season that it is burned, with fuel oil containing a sulfur content of equal to or less than 0.7 percent. Therefore, any fuel oil burned in Boiler No. 5 will contain a sulfur content of no greater than 2.5 percent.

These maximum fuel oil burning rates and maximum sulfur contents were used in the PSD modeling analysis for PBPC. Modeling with these rates indicated predicted exceedances of the AAQS for SO<sub>2</sub> at or near the Bryant mill's property line. As a result, U.S. Sugar is proposing to lower the maximum fuel oil sulfur content as well as further limit the 24-hour (daily) fuel oil usage rates in Boiler Nos. 1, 2, and 3, in order to resolve these predicted exceedances. Specifically, U.S. Sugar is proposing the following measures to reduce predicted SO<sub>2</sub> impacts:

- Any No. 6 fuel oil placed in the common fuel oil tank supplying Boiler Nos. 1, 2, 3, and 5 will contain no more than 0.7 percent sulfur.

- Limit the total 24-hour average (daily) fuel oil burning rate in Boiler Nos. 1, 2 and 3 to 80,000 gallons (all three boilers combined).

The purpose of this permit application is to impose federally enforceable limitations on the Bryant boilers that reflect the above limitations.

The following section presents the air modeling methodology, including revised SO<sub>2</sub> emission rates for the Bryant mill. Results of the AAQS and PSD Class II increment analysis are presented in Section 3.0.

## **2.0 AIR QUALITY IMPACT ANALYSIS METHODOLOGY**

### **2.1 GENERAL APPROACH**

The air modeling analysis for the Bryant Mill was designed to demonstrate that the maximum air quality impacts due to the proposed SO<sub>2</sub> emission reductions for the Mill will meet with the Florida ambient air quality standards (AAQS) and the allowable Prevention of Significant Deterioration (PSD) Class II increments. The general modeling approach followed EPA and FDEP modeling guidelines for determining compliance with AAQS and PSD Class II increments.

Because the proposed project involves only emission reductions for SO<sub>2</sub>, a significant impact analysis is not presented. Impacts at the Everglades National Park PSD Class I area are not addressed in this report. Recent modeling analysis submitted for PBPC addressed compliance with PSD Class I increments for SO<sub>2</sub> at the ENP, without any SO<sub>2</sub> reductions implemented at the Bryant mill. The proposed SO<sub>2</sub> emission reductions would only further reduce Class I impacts.

Generally, when using 5-years of meteorological data for the analysis, the highest annual and the highest, second-highest (HSH) short-term concentrations are compared to the applicable AAQS and allowable PSD increments. The HSH concentration is calculated for a receptor field by:

1. Eliminating the highest concentration predicted at each receptor,
2. Identifying the second-highest concentration at each receptor, and
3. Selecting the highest concentration among these second-highest concentrations.

The HSH approach is consistent with air quality standards and allowable PSD increments, which permit a short-term average concentration to be exceeded once per year at each receptor.

To develop the maximum short-term concentrations for the proposed project, the modeling approach was divided into screening and refined phases to reduce the computation time required to perform the modeling analysis. For this study, the only difference between the two modeling phases is the density of the receptor grid spacing employed when predicting concentrations. Concentrations are predicted for the screening phase using a coarse receptor grid and a 5-year meteorological data record.

If the original screening analysis indicates that the highest concentrations are occurring in a selected area(s) of the grid and, if the area's total coverage is too vast to directly apply a refined receptor grid,

then an additional screening grid(s) will be used over that area. The additional screening grid(s) will employ a greater receptor density than the original screening grid.

Refinements of the maximum predicted concentrations are typically performed for the receptors of the screening receptor grid at which the highest and/or HSH concentrations occurred over the 5-year period. Generally, if the maximum concentration from other years in the screening analysis are within 10 percent of the overall maximum concentration, then those other concentrations are refined as well. Typically, if the highest and HSH concentrations are in different locations, concentrations in both areas are refined.

A more detailed description of the model, along with the emission inventory, meteorological data, and screening receptor grids, is presented in the following sections.

## **2.2 AAQS AND PSD CLASS II ANALYSES**

The AAQS analysis is a cumulative source analysis that evaluates whether the post-project concentrations from all sources will comply with the AAQS. All sources include the post-project source configuration at the project site, the impacts from other nearby facility sources, plus a background concentration to account for sources not included in the modeling analysis.

The PSD Class II analysis is a cumulative source analysis that evaluates whether the post-project PSD increment consumption for all increment-affecting sources will comply with the allowable PSD Class II increments. All sources include the post-project PSD increment-affecting sources at the project site, plus the impacts from all nearby PSD increment-affecting sources at other facilities.

## **2.3 MODEL SELECTION**

The Industrial Source Complex Short-term (ISCST3, Version 02035) dispersion model (EPA, 2002) was used to evaluate the pollutant impacts in the vicinity of the Bryant Mill site. This model is maintained by the EPA on its internet web site, Support Center for Regulatory Air Models (SCRAM), within the Technical Transfer Network (TTN). A listing of ISCST3 model features is presented in Table 2-1. The ISCST3 model is designed to calculate hourly concentrations based on hourly meteorological data (i.e., wind direction, wind speed, atmospheric stability, ambient temperature, and mixing heights). The ISCST3 model is applicable to sources located in either flat or rolling terrain where terrain heights do not exceed stack heights. These areas are referred to as

simple terrain. The model can also be applied in areas where the terrain exceeds the stack heights. These areas are referred to as complex terrain.

In this analysis, the EPA regulatory default options were used to predict all maximum impacts. The ISCST3 model can be executed in the rural or urban land use mode that affects stability dispersion coefficients, wind speed profiles, and mixing heights. Land use can be characterized based on a scheme recommended by EPA (Auer, 1978). If more than 50 percent land use within a 3-km radius around a project is classified as industrial or commercial, or high-density residential, then the urban option should be selected. Otherwise, the rural option is appropriate. Based on the land-use within a 3-km radius of the Bryant Mill site, the rural dispersion coefficients were used in the modeling analysis. Also, since the terrain around the facility is flat to gently rolling, the simple terrain feature of the model was selected. The ISCST3 model was used to provide maximum SO<sub>2</sub> concentrations for the annual, 24- and 3-hour averaging times.

## **2.4 METEOROLOGICAL DATA**

Meteorological data used in the ISCST3 model to determine air quality impacts consisted of a concurrent 5-year period of hourly surface weather observations and twice-daily upper air soundings from the National Weather Service (NWS) office located at the Palm Beach International Airport (PBI). The 5-year period of meteorological data was from 1987 through 1991. The NWS office at PBI is located approximately 53 km east of the site and is the closest primary weather station to the study area considered to have meteorological data representative of the project site. The PBI station meteorological data have been approved by the FDEP and used for numerous air modeling studies submitted as part of air construction permit applications for sources located in Palm Beach County.

## **2.5 EMISSION INVENTORY**

### **2.5.1 BRYANT MILL SOURCES**

SO<sub>2</sub> emissions used in the air modeling analyses for the Bryant Mill are shown in Table 2-2. The emissions are based on 0.7 percent sulfur fuel oil content burned in all boilers. For the 3-hour average case, no restrictions in fuel oil usage are necessary (i.e., the rates are based on the maximum capacity of the fuel oil burners). For the 24-hour average operating case, Boiler Nos. 1 through 3 will be limited to a combined 80,000 gallons of fuel oil usage (daily usage).



SO<sub>2</sub> emissions due to bagasse firing are based on an emission rate of 0.06 lb/MMBtu. Historical sugar industry test data indicate this factor to represent a reasonable maximum SO<sub>2</sub> emission rate due to bagasse firing when wet scrubbers are employed for particulate matter control.

It is noted that the SO<sub>2</sub> emission calculations do not assume any SO<sub>2</sub> removal in the wet scrubbers. The wet scrubbers would be expected to provide some degree of SO<sub>2</sub> removal; however, this has not been quantified and therefore no removal was conservatively assumed.

Physical stack and operating parameter data for the Bryant boilers are summarized in Table 2-3. These parameters are based on historical stack test data for the boilers.

### **2.5.2 BACKGROUND SOURCES**

Because there is no project significant impact distance, the screening area for the proposed analysis was assumed to be 50 km. A listing of background SO<sub>2</sub> sources considered in the AAQS and PSD Class II modeling analyses and their locations relative to Bryant Mill is provided in Table 2-4. All facilities in the screening area were evaluated using the North Carolina screening technique. Based on this technique, facilities whose annual (i.e., ton per year) emissions are less than the threshold quantity, Q, are eliminated from the modeling analysis. Q is equal to  $20 \times (D-SIA)$ , where D is the distance in km from the facility to the Bryant Mill and the SIA is the distance of the proposed project's SO<sub>2</sub> significant impact area (assumed as zero). The SO<sub>2</sub> facilities that were not eliminated in the screening analysis are available for inclusion in the AAQS and/or PSD Class II analyses. It is noted that large sources (>1,000 TPY SO<sub>2</sub>) located beyond the screening area were also included in the modeling analysis.

Detailed SO<sub>2</sub> background source data that were used for the AAQS and/or PSD Class II analyses are presented in Appendix A, Table A-1. Data for non-Bryant SO<sub>2</sub> AAQS and PSD sources were obtained from the FDEP and were supplemented with current and historical information available within Golder.

### **2.6 RECEPTOR LOCATIONS**

The receptor grid consisted of discrete Cartesian receptors spaced along the Bryant Mill property line at intervals of 100 m or less. Beyond the boundary, additional Cartesian receptors are located around the property at a distance of 100 meters beyond the property receptors and additional receptors were

added to fill in areas between the property boundary and road to the north of the Mill. Additional Cartesian receptors were added in a polar grid pattern to extend the grid out to 5 km in all directions. The receptors in a polar grid pattern are located at 500-m intervals out to 5.0 km along 36 radials, having an angular spacing of 10 degrees.

A listing of the property boundary receptors is presented in Table 2-5. The modeling origin (0,0) is the Boiler No. 5 stack location. Two figures showing the full view and near view of the receptor grids are presented in Figures 2-1 and 2-2.

## **2.7 BACKGROUND CONCENTRATIONS**

To estimate total air quality concentrations in the site vicinity, a background concentration must be added to the AAQS modeling results. The background concentration is considered to be the air quality concentration contributed by sources not explicitly included in the modeling evaluation.

Recent air modeling studies for the Belle Glade area, including the recent PBPC application, have used the following background concentrations for SO<sub>2</sub>:

SO<sub>2</sub>:        5 µg/m<sup>3</sup>, annual average  
              13 µg/m<sup>3</sup>, 24-hour average  
              47 µg/m<sup>3</sup>, 3-hour average

These background levels were added to model-predicted concentrations to estimate total air quality levels for comparison to AAQS.

## **2.8 BUILDING DOWNWASH EFFECTS**

All significant building structures within the Bryant Mill were determined by a site plot plan. A listing of dimensions for each structure is presented in Table 2-6.

All building structures were processed in the EPA Building Input Profile (BPIP, Version 95086) program to determine direction-specific building heights and widths for each 10-degree azimuth direction for each source included in the modeling analysis. A summary of the BPIP model input and output files are presented in Appendix B along with a figure showing the location of all stacks and major buildings at the Mill.

Table 2-1. Major Features of the ISCST3 Model

ISCST3 Model Features	
•	Polar or Cartesian coordinate systems for receptor locations
•	Rural or one of three urban options which affect wind speed profile exponent, dispersion rates, and mixing height calculations
•	Plume rise due to momentum and buoyancy as a function of downwind distance for stack emissions (Briggs, 1969, 1971, 1972, and 1975; Bowers, et al., 1979).
•	Procedures suggested by Huber and Snyder (1976); Huber (1977); and Schulman and Scire (1980) for evaluating building wake effects
•	Procedures suggested by Briggs (1974) for evaluating stack-tip downwash
•	Separation of multiple emission sources
•	Consideration of the effects of gravitational settling and dry deposition on ambient particulate concentrations
•	Capability of simulating point, line, volume, area, and open pit sources
•	Capability to calculate dry and wet deposition, including both gaseous and particulate precipitation scavenging for wet deposition
•	Variation of wind speed with height (wind speed-profile exponent law)
•	Concentration estimates for 1 hour to annual average times
•	Terrain-adjustment procedures for elevated terrain including a terrain truncation algorithm for ISCST3; a built-in algorithm for predicting concentrations in complex terrain
•	Consideration of time-dependent exponential decay of pollutants
•	The method of Pasquill (1976) to account for buoyancy-induced dispersion
•	A regulatory default option to set various model options and parameters to EPA recommended values (see text for regulatory options used)
•	Procedure for calm-wind processing including setting wind speeds less than 1 m/s to 1 m/s.

Note: ISCST3 = Industrial Source Complex Short-Term.

#### References:

- Bowers, J.F., J.R. Bjorklund and C.S. Cheney. 1979. Industrial Source Complex (ISC) Dispersion Model User's Guide. Volume I, EPA-450/4-79-030; Volume II. EPA-450/4-79-031. U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711.
- Briggs, G.A. 1969. Plume Rise, USAEC Critical Review Series, TID-25075. National Technical Information Service, Springfield, Virginia 22161.
- Briggs, G.A. 1972. Discussion on Chimney Plumes in Neutral and Stable Surroundings. *Atmos. Environ.*, Q, 507-510.
- Briggs, G.A. 1974. Diffusion Estimation for Small Emissions. In: ERL, ARL USAEC Report ATDL-106. U.S. Atomic Energy Commission, Oak Ridge, Tennessee.
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- Huber, A.H. 1977. Incorporating Building/Terrain Wake Effects on Stack Effluents. Preprint Volume for the Joint Conference on Applications of Air Pollution Meteorology, American Meteorological Society, Boston, Massachusetts.
- Huber, A.H. and W.H. Snyder. 1976. Building Wake Effects on Short Stack Effluents. Preprint Volume for the Third Symposium on Atmospheric Diffusion and Air Quality, American Meteorological Society, Boston, Massachusetts.
- Pasquill, F. 1976. Atmospheric Dispersion Parameters in Gaussian Plume Modeling - Part II. Possible Requirements for Change in the Turner Workbook Values. EPA-600/4-76-030b, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711.
- Schulman, L.L. and J.S. Scire. 1980. Buoyant Line and Point Source (BLP) Dispersion Model User's Guide. Document P-7304B, Environmental Research and Technology, Inc., Concord, MA.

Table 2-2. U.S. Sugar Bryant Mill Maximum Fuel Oil Burning And SO<sub>2</sub> Emissions - Future Reduced Emissions:

Boilers 1-3 @ 0.7% sulfur fuel oil

Boiler 5 @ 0.7% sulfur fuel oil

Boiler	Total Maximum	Maximum Heat Input	Rates Used For Modeling Purposes <sup>a</sup>			Modeled SO <sub>2</sub> Emissions			
	Heat Input (MMBtu/hr)	From Fuel Oil (MMBtu/hr)	Fuel Oil		Bagasse	Fuel Oil <sup>b</sup> (lb/hr)	Bagasse <sup>c</sup> (lb/hr)	Total	
			gal/hr	MMBtu/hr	MMBtu/hr			(lb/hr)	(g/s)
<u>MAXIMUM 3-HOUR CASE</u>									
1	385	189	1,295	189.0	196.0	139.5	11.8	151.3	19.06
2	385	189	1,295	189.0	196.0	139.5	11.8	151.3	19.06
3	385	189	1,295	189.0	196.0	139.5	11.8	151.3	19.06
5	671.0	215.6	1,477	215.6	455.4	159.2	27.3	186.5	23.50
Totals	1,826.0		5,360	782.6	1,043.4	577.8	62.6	640.4	80.7
		(Boilers 1-5:	16,081	gal/3-hrs)					
		(Boilers 1-3:	11,651	gal/3-hrs)					
<u>MAXIMUM 24-HOUR CASE</u>									
1	385	189	1,111	162.2	222.8	119.8	13.4	133.1	16.78
2	385	189	1,111	162.2	222.8	119.8	13.4	133.1	16.78
3	385	189	1,111	162.2	222.8	119.8	13.4	133.1	16.78
5	583.0	215.6	1,477	215.6	367.4	159.2	22.0	181.2	22.84
Totals	1,738.0		4,810	702.3	1,035.7	518.5	62.1	580.7	73.2
		(Boilers 1-5:	115,441	gal/24-hrs)					
		(Boilers 1-3:	80,000	gal/24-hrs)					

<sup>a</sup> Assumes 55% combustion efficiency for both bagasse and fuel oil.

<sup>b</sup> Based on stoichiometric calculation for SO<sub>2</sub> emissions:

Fuel oil : 0.7% sulfur

18,961 Btu/lb; 146,000 Btu/gal

7.7 lb/gal

<sup>c</sup> Based on SO<sub>2</sub> from bagasse of 0.06 lb/MMBtu.

Table 2-3. Summary of Stack Parameters for Sources Used in Modeling of U.S. Sugar Bryant Mill

Emission Unit	Modeling ID	Stack Height		Stack Diameter		Temperature		Flow Rate (acfm)	Velocity		Relative Location (a)			
		(ft)	(m)	(ft)	(m)	(F)	(K)		(ft/s)	(m/s)	X		Y	
											(ft)	(m)	(ft)	(m)
Boiler 1	USSBRY1	65	19.8	5.40	1.65	160	344.3	156,000	113.5	34.6	25.6	7.8	-58.7	-17.9
Boiler 2	USSBRY2	65	19.8	5.40	1.65	160	344.3	156,000	113.5	34.6	10.2	3.1	-116.6	-35.5
Boiler 3	USSBRY3	65	19.8	5.40	1.65	160	344.3	156,000	113.5	34.6	-5.2	-1.6	-174.5	-53.2
Boiler 5	USSBRY5	150	45.7	9.50	2.90	142	334.3	206,000	48.4	14.8	0.0	0.0	0.0	0.0

(a) Relative to Boiler No. 5 stack location.

Note: Stack parameters based on last four years compliance testing, prorated to the maximum steam rate.

Table 2-4. Summary of SO<sub>2</sub> Facilities Considered for Inclusion in the AAQS and PSD Class II Air Modeling Analyses

AIRS Number	Facility	County	UTM Coordinates		Relative to US Sugar Bryant Mill <sup>a</sup>				Maximum	Q <sub>i</sub>	Include in
			East (km)	North (km)	X (km)	Y (km)	Distance (km)	Direction (deg)	SO <sub>2</sub> Emissions (TPY)	Emission Threshold <sup>b</sup> (Dist - SIA) x 20	
0990019	Osceola Farms	Palm Beach	544.2	2968.0	6.4	-1.2	6.5	100	1,467	130.1	YES
	Palm Beach Power Corp. (Osceola Cogen)	Palm Beach	544.4	2967.4	6.6	-1.8	6.8	105	451	136.6	YES
0990594	El Paso Belle Glade Generating Station	Palm Beach	533.5	2954.1	-4.3	-15.1	15.7	196	69	313.2	NO
0990026	Sugar Cane Growers	Palm Beach	534.9	2953.3	-2.9	-15.9	16.1	190	2,555	322.5	YES
0990086	Glades Correctional Institute	Palm Beach	523.4	2955.2	-14.4	-14.0	20.1	226	98	401.1	NO
0850102	Bechtel Indiantown	Martin	545.6	2991.5	7.8	22.3	23.7	19	2,629	473.3	YES
0850001	FPL - Martin	Martin	543.1	2992.9	5.3	23.7	24.3	13	22,982	486.5	YES
0990021	Pratt & Whitney (United Technologies)	Palm Beach	562.0	2960.0	24.2	-9.2	25.9	111	504	517.5	NO
0990016	Atlantic Sugar	Palm Beach	552.9	2945.2	15.1	-24.0	28.3	148	954	566.4	YES
0510001	Everglades Sugar	Hendry	509.6	2954.2	-28.2	-15.0	31.9	242	1,216	638.4	YES
0990332	New Hope Power Partnership (Okeelanta)	Palm Beach	524.1	2940.0	-13.7	-29.2	32.2	205	403	644.4	NO
0990349	South Florida WMD--Pump Stn. G-310/S-6	Palm Beach	554.2	2940.5	16.4	-28.7	33.0	150	5	660.4	NO
0510003	U.S. Sugar Clewiston	Hendry	506.1	2956.9	-31.7	-12.3	34.0	249	7,806	679.8	YES
0990005	Okeelanta	Palm Beach	525.0	2937.4	-12.8	-31.8	34.2	202	39	684.8	NO
0990234	Palm Beach Resource Recovery	Palm Beach	585.8	2960.2	48.0	-9.0	48.8	101	1,533	976.6	YES
1110103	CPV Cana, LTD.	St. Lucie	550.9	3018.1	13.1	48.9	50.7	15	76	1013.3	NO
0510015	Southern Gardens Citrus	Hendry	487.6	2957.6	-50.2	-11.6	51.5	257	409	1030.3	NO
0850021	Stuart Contracting	Martin	575.2	3006.8	37.4	37.6	53.1	45	100	1061.2	NO
0990042	FPL -Riviera Beach <sup>c</sup>	Palm Beach	594.2	2960.6	56.4	-8.6	57.0	99	73,475	1140.9	YES
0990045	Lake Worth Utilities <sup>c</sup>	Palm Beach	592.8	2943.7	55.0	-25.5	60.6	115	7,415	1212.1	YES
0990568	Lake Worth Generating	Palm Beach	592.8	2943.7	55.0	-25.5	60.6	115	54	1212.1	NO
1110003	Fort Pierce Utilities <sup>c</sup>	St. Lucie	566.8	3036.3	29.0	67.1	73.1	23	1,497	1462.7	YES
0112534	Enron/Deerfield Beach Energy Center	Broward	583.1	2907.9	45.3	-61.3	76.2	144	166	1523.8	NO
0112545	El Paso Broward Energy Center	Broward	583.3	2908.0	45.5	-61.2	76.2	143	87	1524.6	NO
0110120	North Broward Resource Recovery	Broward	583.6	2907.6	45.8	-61.6	76.7	143	896	1534.6	NO
0112515	Enron/Pompano Energy Center	Broward	583.7	2905.5	45.9	-63.7	78.5	144	166	1569.6	NO
0990350	South Florida WMD--Pump Stn. S-9	Broward	555.9	2882.2	18.1	-87.0	88.8	168	2	1776.3	NO
0610029	Vero Beach Power <sup>c</sup>	St. Lucie	567.1	3056.5	29.3	87.3	92.1	19	10,274	1842.5	YES
0112119	South Broward Resource Recovery <sup>c</sup>	Broward	579.6	2883.3	41.8	-85.9	95.5	154	1,318	1909.9	YES
0110037	FPL -Lauderdale <sup>c</sup>	Broward	580.1	2883.3	42.3	-85.9	95.7	154	47,858	1914.3	YES
0110036	FPL -Port Everglades <sup>c</sup>	Broward	587.4	2885.3	49.6	-83.9	97.4	149	170,215	1948.6	YES
0550018	TECO-Phillips <sup>c</sup>	Highlands	464.3	3035.4	-73.5	66.2	98.9	312	4,053	1978.9	YES
0550004	TECO-Sebring/Dinner Lake <sup>c</sup>	Highlands	456.8	3042.5	-81.0	73.3	109.3	312	1,313	2185.4	YES
0250020	Tarmac <sup>c</sup>	Dade	562.9	2861.7	25.1	-107.5	110.4	167	2,792	2207.0	YES
0250348	Dade Co. Resource Recovery	Dade	564.3	2857.4	26.5	-111.8	114.9	167	857	2297.2	NO
0710019	Lee County Resource Recovery	Lee	424.2	2945.7	-113.6	-23.5	116.0	258	163	2319.9	NO
0710000	FPL - Fort Myers <sup>c</sup>	Lee	422.1	2952.9	-115.7	-16.3	116.8	262	22,702	2336.7	YES

Note: deg = degrees  
km = kilometers  
SIA = significant impact area  
TPY = tons per year

<sup>a</sup> U.S. Sugar Bryant's East and North Coordinates (km) are: 537.8 and 2969.2, respectively.

<sup>b</sup> Based on North Carolina Screening Technique for annual average basis. "Dist" is the distance the facility is located from the project.

"SIA" is the significant impact area. The project's 24-hour SO<sub>2</sub> concentrations are predicted to be significant out to 0 km from the project.

<sup>c</sup> Large source with annual emissions greater than 1,000 TPY located beyond the screening area (50 km) that were included in the inventory.

Table 2-5. US Sugar Bryant Mill Property Boundary Receptors<sup>a</sup> Used In the Modeling Analysis

Coordinates <sup>b</sup>		Coordinates <sup>b</sup>		Coordinates <sup>b</sup>		Coordinates <sup>b</sup>		Coordinates <sup>b</sup>	
X	Y	X	Y	X	Y	X	Y	X	Y
(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)
2290.0	-3560.0	2477.1	-1910.0	348.0	270.0	-1838.5	-350.0	-2401.3	-3250.0
2290.0	-1910.0	2570.7	-1910.0	262.0	270.0	-1744.6	-350.0	-2500.0	-3327.5
3600.0	-1910.0	2664.3	-1910.0	176.0	270.0	-1650.8	-350.0	-2500.0	-3405.0
3100.0	-1410.0	2757.9	-1910.0	95.0	355.0	-1556.9	-350.0	-2500.0	-3482.5
2750.0	-1240.0	2851.4	-1910.0	160.0	500.0	-1463.1	-350.0	-2400.2	-3560.0
2290.0	-1240.0	2945.0	-1910.0	220.0	560.0	-1369.2	-350.0	-2300.4	-3560.0
2290.0	-860.0	3038.6	-1910.0	280.0	620.0	-1275.4	-350.0	-2200.6	-3560.0
1800.0	-410.0	3132.1	-1910.0	340.0	680.0	-1181.5	-350.0	-2100.8	-3560.0
1020.0	160.0	3225.7	-1910.0	325.0	790.0	-1087.7	-350.0	-2001.0	-3560.0
890.0	340.0	3319.3	-1910.0	250.0	840.0	-993.9	-350.0	-1901.3	-3560.0
600.0	160.0	3412.9	-1910.0	175.0	890.0	-900.0	-434.0	-1801.5	-3560.0
520.0	270.0	3506.4	-1910.0	100.0	940.0	-900.0	-518.0	-1701.7	-3560.0
90.0	270.0	3537.5	-1847.5	25.0	990.0	-900.0	-602.0	-1601.9	-3560.0
100.0	440.0	3475.0	-1785.0	-116.7	1101.1	-900.0	-686.0	-1502.1	-3560.0
400.0	740.0	3412.5	-1722.5	-183.3	1162.2	-982.0	-770.0	-1402.3	-3560.0
-50.0	1040.0	3350.0	-1660.0	-250.0	1223.3	-1064.0	-770.0	-1302.5	-3560.0
-650.0	1590.0	3287.5	-1597.5	-316.7	1284.4	-1146.0	-770.0	-1202.7	-3560.0
-900.0	1590.0	3225.0	-1535.0	-383.3	1345.6	-1228.0	-770.0	-1102.9	-3560.0
-900.0	1440.0	3162.5	-1472.5	-450.0	1406.7	-1310.0	-854.0	-1003.1	-3560.0
-1000.0	1440.0	3012.5	-1367.5	-516.7	1467.8	-1310.0	-938.0	-903.3	-3560.0
-1000.0	1060.0	2925.0	-1325.0	-583.3	1528.9	-1310.0	-1022.0	-803.5	-3560.0
-1700.0	1040.0	2837.5	-1282.5	-733.3	1590.0	-1310.0	-1106.0	-703.8	-3560.0
-1950.0	690.0	2658.0	-1240.0	-816.7	1590.0	-1410.0	-1190.0	-604.0	-3560.0
-1950.0	60.0	2566.0	-1240.0	-900.0	1515.0	-1510.0	-1190.0	-504.2	-3560.0
-2120.0	60.0	2474.0	-1240.0	-1000.0	1345.0	-1610.0	-1190.0	-404.4	-3560.0
-2120.0	-350.0	2382.0	-1240.0	-1000.0	1250.0	-1710.0	-1288.1	-304.6	-3560.0
-900.0	-350.0	2290.0	-1145.0	-1000.0	1155.0	-1710.0	-1386.2	-204.8	-3560.0
-900.0	-770.0	2290.0	-1050.0	-1087.5	1057.5	-1710.0	-1484.3	-105.0	-3560.0
-1310.0	-770.0	2290.0	-955.0	-1175.0	1055.0	-1710.0	-1582.4	-5.2	-3560.0
-1310.0	-1190.0	2220.0	-795.7	-1262.5	1052.5	-1710.0	-1680.5	94.6	-3560.0
-1710.0	-1190.0	2150.0	-731.4	-1350.0	1050.0	-1710.0	-1778.6	194.4	-3560.0
-1710.0	-3250.0	2080.0	-667.1	-1437.5	1047.5	-1710.0	-1876.7	294.2	-3560.0
-2500.0	-3250.0	2010.0	-602.9	-1525.0	1045.0	-1710.0	-1974.8	394.0	-3560.0
-2500.0	-3560.0	1940.0	-538.6	-1612.5	1042.5	-1710.0	-2072.9	493.8	-3560.0
2290.0	-3462.9	1870.0	-474.3	-1750.0	970.0	-1710.0	-2171.0	593.5	-3560.0
2290.0	-3365.9	1722.0	-353.0	-1800.0	900.0	-1710.0	-2269.1	693.3	-3560.0
2290.0	-3268.8	1644.0	-296.0	-1850.0	830.0	-1710.0	-2367.1	793.1	-3560.0
2290.0	-3171.8	1566.0	-239.0	-1900.0	760.0	-1710.0	-2465.2	892.9	-3560.0
2290.0	-3074.7	1488.0	-182.0	-1950.0	600.0	-1710.0	-2563.3	992.7	-3560.0
2290.0	-2977.7	1410.0	-125.0	-1950.0	510.0	-1710.0	-2661.4	1092.5	-3560.0
2290.0	-2880.6	1332.0	-68.0	-1950.0	420.0	-1710.0	-2759.5	1192.3	-3560.0
2290.0	-2783.5	1254.0	-11.0	-1950.0	330.0	-1710.0	-2857.6	1292.1	-3560.0
2290.0	-2686.5	1176.0	46.0	-1950.0	240.0	-1710.0	-2955.7	1391.9	-3560.0
2290.0	-2589.4	1098.0	103.0	-1950.0	150.0	-1710.0	-3053.8	1491.7	-3560.0
2290.0	-2492.4	976.7	220.0	-2035.0	60.0	-1710.0	-3151.9	1591.5	-3560.0
2290.0	-2395.3	933.3	280.0	-2120.0	-22.0	-1808.8	-3250.0	1691.3	-3560.0
2290.0	-2298.2	817.5	295.0	-2120.0	-104.0	-1907.5	-3250.0	1791.0	-3560.0
2290.0	-2201.2	745.0	250.0	-2120.0	-186.0	-2006.3	-3250.0	1890.8	-3560.0
2290.0	-2104.1	672.5	205.0	-2120.0	-268.0	-2105.0	-3250.0	1990.6	-3560.0
2290.0	-2007.1	560.0	215.0	-2026.2	-350.0	-2203.8	-3250.0	2090.4	-3560.0
2383.6	-1910.0	434.0	270.0	-1932.3	-350.0	-2302.5	-3250.0	2190.2	-3560.0

<sup>a</sup> Receptors were selected at 100-meter spacing along property boundary.<sup>b</sup> Distances are relative to Boiler No. 5 stack location.

Note: m = meter

Table 2-6. U.S. Sugar Bryant Mill Building Dimensions Used in the Air Modeling Analysis

Structure	Height		Length		Width	
	(ft)	(m)	(ft)	(m)	(ft)	(m)
Boiler House, Upper Tier	82.8	25.2	59	18.0	40	12.2
Boiler House, Lower Tier	61.0	18.6	260	79.2	30	9.1
Power House, North Tier	60.3	18.4	64	19.5	40	12.2
Power House, South Tier	42.0	12.8	80	24.4	64	19.5
Mill Bldg	57.0	17.4	230	70.1	84	25.6
Boiling House	102.0	31.1	160	48.8	150	45.7
NW Tier of Boiling House	66.8	20.3	60	18.3	56	17.1
Warehouse #2	55.0	16.8	765	233.2	140	42.7
Chemical Storage, (#4)	31.0	9.4	90	27.4	60	18.3
Warehouse #3	55.0	16.8	515	157.0	130	39.6
Warehouse #4	55.0	16.8	680	207.3	125	38.1
Warehouse #1	78.6	24.0	265	80.8	150	45.7
Shop	51.3	15.6	85	25.9	85	25.9
Water Treatment Plant	42.8	13.0	50	15.2	50	15.2



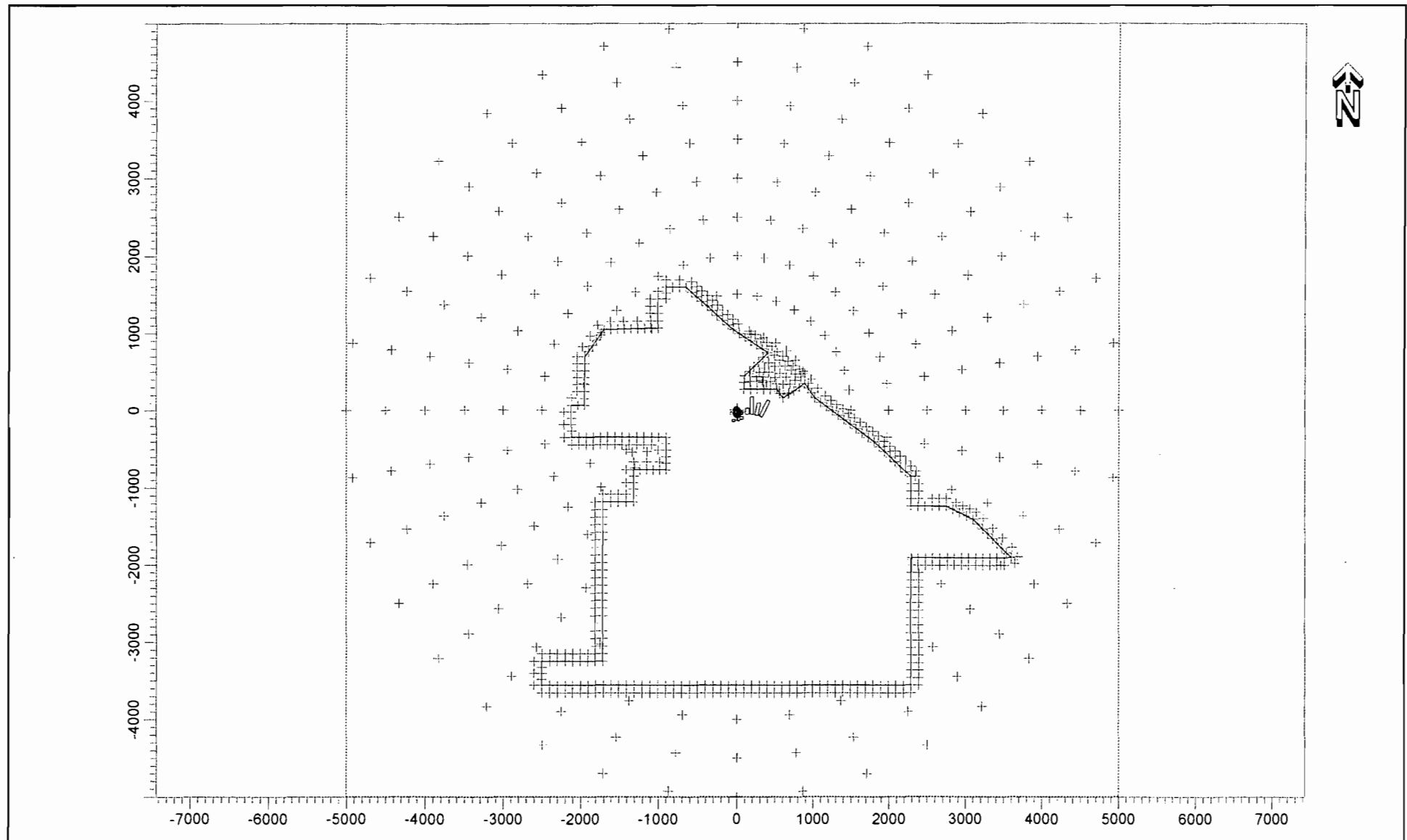


Figure 2-1  
U.S. Sugar Bryant Full Receptor Grid  
Note: Scale is in meters.

Source: Golder, 2002.

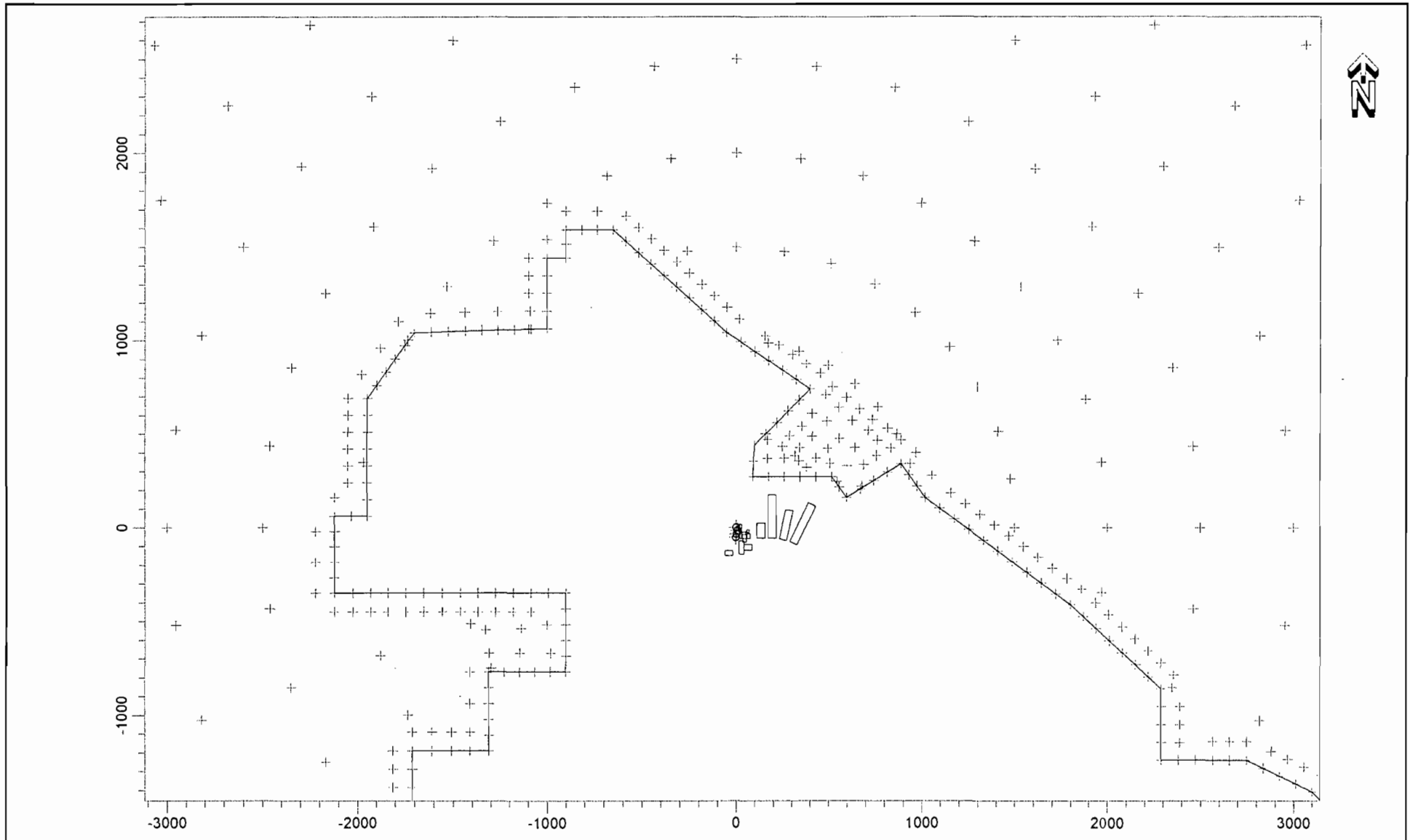


Figure 2-2  
U.S. Sugar Bryant Near View of Receptor Grid  
Note: Scale is in meters.

Source: Golder, 2002.

### 3.0 SO<sub>2</sub> IMPACT ANALYSIS RESULTS

#### 3.1 AAQS ANALYSIS

The maximum predicted annual, HSH 24-hour, and HSH 3-hour average SO<sub>2</sub> concentrations predicted for all sources is presented in Table 3-1. Because the maximum predicted concentrations occurred at the U.S. Sugar Bryant mill property boundary, additional modeling refinements were not necessary.

The air modeling results are added to a background concentration and compared with the AAQS in Table 3-2. The maximum predicted annual and HSH 24- and 3-hour SO<sub>2</sub> concentrations are 32.2, 250.4 and 1082.7 µg/m<sup>3</sup>, respectively. These concentrations are all below the Florida AAQS of 60, 260, and 1,300 µg/m<sup>3</sup>, respectively.

#### 3.2 PSD CLASS II ANALYSIS

A summary of the maximum SO<sub>2</sub> PSD Class II increment consumption predicted for all sources from the screening analysis is presented in Table 3-3. Because the maximum predicted concentrations occurred at the Bryant mill property boundary, additional modeling refinements were not necessary.

The air modeling results are compared with the allowable PSD Class II increments in Table 3-4. The maximum predicted annual and HSH 24- and 3-hour SO<sub>2</sub> increment consumption concentrations are 0.4, 18.2 and 144.6 µg/m<sup>3</sup>, respectively. These concentrations are well below the allowable PSD Class II increments of 20, 91 and 512 µ /m<sup>3</sup>, respectively.

Table 3-1. Maximum Predicted SO<sub>2</sub> Impacts Predicted for All Future Sources,  
AAQS Screening Analysis In the Vicinity of the U.S. Sugar Bryant Mill

Averaging Time	Concentration <sup>a</sup> (µg/m <sup>3</sup> )	Receptor Location <sup>b</sup>		Time Period (YYMMDDHH)
		X (m)	Y (m)	
Annual	16.7	-900.0	-350.0	87123124
	19.6	-900.0	-350.0	88123124
	19.8	-1000.0	1060.0	89123124
	28.2	-900.0	-350.0	90123124
	21.3	-900.0	-350.0	91123124
HSH 24-Hour	237.4	176.0	270.0	87021624
	229.6	262.0	270.0	88041924
	185.7	-900.0	-350.0	89021624
	231.6	-900.0	-350.0	90100724
	192.5	-900.0	-350.0	91102324
HSH 3-Hour	1035.7	176.0	270.0	87011018
	835.4	262.0	270.0	88112312
	736.9	-50.0	1040.0	89030324
	655.5	170.7	369.3	90021109
	831.5	25.0	990.0	91100303

<sup>a</sup> Based on 5-year meteorological record, West Palm Beach, 1987 to 1991.

<sup>b</sup> Relative to Boiler No. 5 Stack Location.

Note: YYMMDDHH = Year, Month, Day, Hour Ending

HSH = Highest, 2nd-Highest Concentration in 5 years.

Table 3-2. Maximum SO<sub>2</sub> Impacts for All Future Sources as Compared with the Florida AAQS, Refined Analysis  
In the Vicinity of the U.S. Sugar Bryant Mill

Pollutant/ Averaging Time	Concentration <sup>a</sup> (µg/m <sup>3</sup> )			Receptor Location <sup>b</sup>		Time Period (YYMMDDHH)	Florida AAQS (µg/m <sup>3</sup> )
	Total	Modeled	Background	X (m)	Y (m)		
Annual	33.2	28.2	5	-900.0	-350.0	90123124	60
HSH 24-Hour	250.4	237.4	13	176.0	270	87021624	260
HSH 3-Hour	1,082.7	1,035.7	47	176.0	270	87011018	1,300

<sup>a</sup> Based on 5-year meteorological record, West Palm Beach, 1987 to 1991.

<sup>b</sup> Relative to Boiler No. 5 Stack Location.

Note: YYMMDDHH = Year, Month, Day, Hour Ending

HSH = Highest, 2nd-Highest Concentration in 5 years.

Table 3-3. Maximum Predicted SO<sub>2</sub> PSD Class II Increment Consumption for All PSD-Affecting Sources  
Screening Analysis In the Vicinity of the U.S. Sugar Bryant Mill

Averaging Time	Concentration <sup>a</sup> (µg/m <sup>3</sup> )	Receptor Location <sup>b</sup>		Time Period (YYMMDDHH)
		X (m)	Y (m)	
Annual	0.3	560.0	215.0	87123124
	0.4	600.0	160.0	88123124
	0.4	600.0	160.0	89123124
	0.3	321.4	383.0	90123124
	0.3	680.9	218.8	91123124
HSH 24-Hour	15.6	600.0	160.0	87042524
	13.7	340.4	356.4	88030524
	18.2	560.0	215.0	89010424
	14.8	90.0	270.0	90062424
	17.9	547.3	245.0	91122424
HSH 3-Hour	134.6	434.0	270.0	87042924
	143.8	262.0	270.0	88100321
	144.6	560.0	215.0	89031324
	124.9	434.0	270.0	90052906
	118.3	90.0	270.0	91033009

<sup>a</sup> Based on 5-year meteorological record, West Palm Beach, 1987 to 1991.<sup>b</sup> Relative to Boiler No. 5 Stack Location.

Note: YYMMDDHH = Year, Month, Day, Hour Ending

HSH = Highest, 2nd-Highest Concentration in 5 years.

Table 3-4. Maximum Predicted SO<sub>2</sub> PSD Class II Increment Consumption for All PSD-Affecting Sources  
Refined Analysis In the Vicinity of the U.S. Sugar Bryant Mill

Averaging Time	Concentration <sup>a</sup> (µg/m <sup>3</sup> )	Receptor Location <sup>b</sup>		Time Period (YYMMDDHH)	Allowable PSD Class II Increments (µg/m <sup>3</sup> )
		X (m)	Y (m)		
Annual	0.4	600.0	160.0	88123124	20
HSH 24-Hour	18.2	560.0	215.0	89010424	91
HSH 3-Hour	144.6	560.0	215.0	89031324	512

<sup>a</sup> Based on 5-year meteorological record, West Palm Beach, 1987 to 1991.

<sup>b</sup> Relative to Boiler No. 5 Stack Location.

Note: YYMMDDHH = Year, Month, Day, Hour Ending

HSH = Highest, 2nd-Highest Concentration in 5 years.

## **APPENDIX A**

### **DETAILED SO<sub>2</sub> SOURCE DATA USED IN THE MODELING ANALYSIS**



Table A-1. Summary of SO<sub>2</sub> Sources Included in the Air Modeling Analysis

AIRS Number	Facility	Units	Modeling ID Name	Relative Location		Stack and Operating Parameters				Emission Rate(g/s)		PSD Source? (EXP/CON)	Modeled in		
				X (m)	Y (m)	Height (m)	Diameter (m)	Temper. (K)	Velocity (m/s)	3-Hour	24-Hour		AAQS	Class II	Class I
0990019	Osceola Farms PSD Baseline <sup>a</sup>	Unit 1 PSD Baseline	OSBLR1B	6,400	-1,160	22.0	1.52	342.0	8.18	-5.07	-5.07	EXP	No	Yes	Yes
		Unit 2 PSD Baseline	OSBLR2B	6,400	-1,160	22.0	1.52	341.0	18.10	-16.32	-16.32	EXP	No	Yes	Yes
		Unit 3 PSD Baseline	OSBLR3B	6,400	-1,160	22.0	1.93	341.0	14.50	-7.26	-7.26	EXP	No	Yes	Yes
		Unit 4 PSD Baseline	OSBLR4B	6,400	-1,160	22.0	1.83	341.0	18.80	-13.61	-13.61	EXP	No	Yes	Yes
	Palm Beach Power Corp. (Osceola Cogen)	2 Cogeneration Boilers	PBCOGEN	6,600	-1,760	60.7	2.44	419.3	24.87	57.46	38.30	CON	Yes	Yes	Yes
		Package Boiler	PBPACKB	6,600	-1,760	22.9	1.52	483.2	22.86	1.47	1.47	CON	Yes	Yes	Yes
0990026	Sugar Cane Growers <sup>a</sup>	Unit 1&2	SUGCN12	-2,900	-15,860	45.7	1.87	339.0	21.75	41.20	41.20	CON	Yes	Yes	Yes
		Unit 3	SUGCN3	-2,900	-15,860	27.4	1.52	339.0	22.25	16.20	16.20	CON	Yes	Yes	Yes
		Unit 4 PSD	SUGCN4	-2,900	-15,860	54.9	2.44	339.0	21.73	38.20	38.20	CON	Yes	Yes	Yes
		Unit 5	SUGCN5	-2,900	-15,860	45.7	2.30	339.0	15.94	27.90	27.90	CON	Yes	Yes	Yes
		Unit 8 PSD	SUGCN8	-2,900	-15,860	47.2	2.90	339.0	13.62	23.50	23.50	CON	Yes	Yes	Yes
		Unit 1&2 PSD Baseline	SUGCN12B	-2,900	-15,860	24.4	1.40	344.0	11.40	-24.20	-24.20	EXP	No	Yes	Yes
		Unit 3 PSD Baseline	SUGCN3B	-2,900	-15,860	24.4	1.60	344.0	15.60	-4.40	-4.40	EXP	No	Yes	Yes
		Unit 4 PSD Baseline	SUGCN4B	-2,900	-15,860	25.9	1.63	344.0	11.20	-24.20	-24.20	EXP	No	Yes	Yes
		Unit 5 PSD Baseline	SUGCN5B	-2,900	-15,860	24.4	1.40	344.0	15.20	-16.20	-16.20	EXP	No	Yes	Yes
		Unit 6&7 PSD Baseline	SUGCN67B	-2,900	-15,860	12.2	1.52	606.0	11.20	-51.00	-51.00	EXP	No	Yes	Yes
0850102	Bechtel Indiantown PSD		BECHTIND	7,800	22,340	150.9	4.88	333.2	30.50	75.64	75.64	CON	Yes	Yes	Yes
0850001	FPL Martin	Units 1&2	MART12	5,300	23,740	152.1	7.99	420.9	21.03	1743.79	1743.79	NO	Yes	No	No
		Aux Blr PSD	MARTAUX	5,300	23,740	18.3	1.10	535.4	15.24	12.90	12.90	CON	Yes	Yes	Yes
		Diesel Gens PSD	MARTGEN	5,300	23,740	7.6	0.30	785.9	39.62	0.51	0.51	CON	Yes	Yes	Yes
		Units 3&4 PSD	MART34	5,300	23,740	64.9	6.10	410.9	18.90	470.40	470.40	CON	Yes	Yes	Yes
		Unit 8	MART8	5,300	23,740	36.6	5.79	397.6	13.59	12.99	12.99	CON	Yes	Yes	Yes
0990016	Atlantic Sugar <sup>a</sup>	Unit 1	ATLSUG1	15,100	-23,960	27.4	1.83	346.0	17.97	16.28	16.28	CON	Yes	Yes	Yes
		Unit 2	ATLSUG2	15,100	-23,960	27.4	1.83	350.0	23.36	16.28	16.28	CON	Yes	Yes	Yes
		Unit 3	ATLSUG3	15,100	-23,960	27.4	1.83	350.0	21.56	16.02	16.02	CON	Yes	Yes	Yes
		Unit 4	ATLSUG4	15,100	-23,960	27.4	1.83	344.0	25.16	16.21	16.21	CON	Yes	Yes	Yes
		Unit 5 PSD <sup>b</sup>	ATLSUG5	15,100	-23,960	27.4	1.68	339.0	19.24	8.41	8.04	CON	Yes	Yes	Yes
		Unit 1 PSD Baseline	ATLSUG1B	15,100	-23,960	18.9	1.92	506.0	12.70	-17.24	-17.24	EXP	No	Yes	Yes
		Unit 2 PSD Baseline	ATLSUG2B	15,100	-23,960	18.9	1.92	511.0	10.90	-22.50	-22.50	EXP	No	Yes	Yes
		Unit 3 PSD Baseline	ATLSUG3B	15,100	-23,960	21.9	1.83	522.0	17.50	-16.88	-16.88	EXP	No	Yes	Yes
		Unit 4 PSD Baseline	ATLSUG4B	15,100	-23,960	18.3	1.83	344.0	15.00	-10.76	-10.76	EXP	No	Yes	Yes
0510001	Everglades Sugar <sup>b</sup>	Main Boiler	EVERGLAD	-28,200	-14,960	21.9	1.10	477.0	10.10	34.90	34.90	NO	Yes	No	No
0510003	US Sugar - Clewiston <sup>d</sup>	PSD Baseline (On-crop season only)													

AIRS Number	Facility	Units	Modeling ID Name	Relative Location		Stack and Operating Parameters				Emission Rate(g/s)		PSD Source? (EXP/CON)	Modeled in		
				X (m)	Y (m)	Height (m)	Diameter (m)	Temper. (K)	Velocity (m/s)	3-Hour	24-Hour		AAQS	Class II	Class I
		Unit 1 PSD Baseline	USSBRL1B	-31,700	-12,260	23.1	1.86	344.0	30.20	-79.86	-58.21	EXP	No	Yes	Yes
		Unit 2 PSD Baseline	USSBLR2B	-31,700	-12,260	23.1	1.86	343.0	35.70	-79.86	-58.21	EXP	No	Yes	Yes
		Unit 3 PSD Baseline	USSBLR3B	-31,700	-12,260	27.4	2.29	342.0	14.70	-48.30	-33.20	EXP	No	Yes	Yes
		East Pellet Plant PSD Baseline	EPELLET	-31,700	-12,260	12.2	1.52	347.0	8.54	-10.30	-10.30	EXP	No	Yes	Yes
		West Pellet Plant PSD Baseline	WPELLET	-31,700	-12,260	15.7	1.52	347.0	8.54	-10.30	-10.30	EXP	No	Yes	Yes
		<u>On-crop season future</u>													
		Unit 1	USSBRL1N	-31,700	-12,260	65.0	2.44	347.0	15.36	78.79	73.73	CON	Yes	Yes	Yes
		Unit 2	USSBLR2N	-31,700	-12,260	65.0	2.44	338.0	13.86	78.49	73.44	CON	Yes	Yes	Yes
		Unit 3	USSBLR3N	-31,700	-12,260	65.0	2.44	333.2	6.78	47.08	47.08	CON	Yes	Yes	Yes
		Unit 4	USSBLR4N	-31,700	-12,260	45.7	2.51	344.3	20.28	21.53	3.68	CON	Yes	Yes	Yes
		Unit 7	USSBLR7N	-31,700	-12,260	68.6	2.59	405.4	20.77	13.91	12.65	CON	Yes	Yes	Yes
		<u>Off-crop season future</u>													
		Unit 1	USSBRL1F	-31,700	-12,260	65.0	2.44	347.0	14.05	51.64	24.29	CON	Yes	Yes	Yes
		Unit 2	USSBLR2F	-31,700	-12,260	65.0	2.44	338.0	12.68	51.27	24.02	CON	Yes	Yes	Yes
		Unit 3	USSBLR3F	-31,700	-12,260	65.0	2.44	333.2	6.20	30.74	30.20	CON	Yes	Yes	Yes
		Unit 4	USSBLR4F	-31,700	-12,260	45.7	2.51	344.3	0.00	0.00	0.00	CON	Yes	Yes	Yes
		Unit 7	USSBLR7F	-31,700	-12,260	68.6	2.59	405.4	23.60	17.39	15.81	CON	Yes	Yes	Yes
0990234	Palm Beach Co. Resource Recovery 1&2 PSD		PBCRRF	48,000	-8,960	76.2	2.04	505.2	24.90	85.05	85.05	CON	Yes	Yes	Yes
0990042	FPL Riviera <sup>c</sup> Units 3&4 at 2.5% fuel oil		RIVU34	56,400	-8,560	90.8	4.88	401.5	18.90	2113.65	2113.65	NO	Yes	No	No
0990568	Lake Worth Utilities <sup>c</sup> Unit 3 Unit 4 Unit 5 HRSG	LAKWTHU3 LAKWTHU4 LAKWTHU5 LAKWTHHR		55,000 55,000 55,000 55,000	-25,460 -25,460 -25,460 -25,460	38.1 35.1 22.9 45.7	2.13 2.29 0.94 5.49	408.2 418.2 450.4 377.6	7.71 17.00 18.29 13.74	103.95 129.85 11.59 12.79	103.95 129.85 11.59 12.79	NO NO NO CON	Yes Yes Yes Yes	No No No Yes	No No No Yes
1110003	Fort Pierce Utilities <sup>c</sup> Units 6&7		FTPIER67	29,000	67,140	45.7	2.19	408.2	12.50	77.87	77.87	NO	Yes	No	No
0610029	Vero Beach Power <sup>c</sup> Unit 1 Unit 2 Unit 3 Unit 4 Unit 5 Simple Cycle CT	VERBU1 VERBU2 VERBU3 VERBU4 VERBU5		29,300 29,300 29,300 29,300 29,300	87,340 87,340 87,340 87,340 87,340	60.96 60.96 60.96 60.96 38.10	1.07 1.07 1.83 2.13 3.35	437.0 434.3 440.4 425.4 416.5	32.42 37.57 19.93 24.36 19.56	28.77 84.21 142.07 69.05 15.50	28.77 84.21 142.07 69.05 15.50	NO NO NO NO CON	Yes Yes Yes Yes Yes	No No No No Yes	No No No No No
0112119	South Broward RRF PSD <sup>c</sup>		SBCRRF	41,800	-85,860	59.4	3.96	381.0	18.01	37.91	37.91	CON	Yes	Yes	Yes
0110037	FPL - Lauderdale <sup>c</sup> CTs 1-4 PSD GT 1-12 (0.5% fuel oil)	LAUDU45 LDGT1_12		42,300 42,300	-85,860 -85,860	45.7 13.7	5.49 2.37	438.7 733.2	14.60 114.31	271.15 552.80	271.15 552.80	CON NO	Yes Yes	Yes No	Yes No

AIRS Number	Facility	Units	Modeling ID Name	Relative Location		Stack and Operating Parameters				Emission Rate(g/s)		PSD Source? (EXP/CON)	Modeled in		
				X (m)	Y (m)	Height (m)	Diameter (m)	Temper. (K)	Velocity (m/s)	3-Hour	24-Hour		AAQS	Class II	Class I
		GT 13-24 (0.5% fuel oil)	LDGT1324	42,300	-85,860	13.4	4.75	733.2	28.43	552.80	552.80	NO	Yes	No	No
		4&5 PSD Baseline	FTLAU45B	42,300	-85,860	46.0	4.27	422.0	14.63	-457.00	-457.00	EXP	No	Yes	Yes
0110036	FPL Port Everglades <sup>c</sup>														
		Units 1&2 at 2.5% fuel oil	PTEVU12	49,600	-83,860	104.5	4.27	415.9	26.72	1593.90	1593.90	NO	Yes	No	No
		Units 3&4 at 2.5% fuel oil	PTEVU34	49,600	-83,860	104.5	5.52	414.8	23.88	2772.00	2772.00	NO	Yes	No	No
		GT 1-12 (0.5% fuel oil)	PTEVGTS	49,600	-83,860	13.4	4.75	733.2	28.43	530.70	530.70	NO	Yes	No	No
0550018	TECO-Phillips <sup>c</sup>														
		Steam Boiler	TECOSB	-73,500	66,240	18.90	0.67	ND	ND	0.7	0.7	NO	No	No	No
		Diesel Generator Unit 1	TECO1	-73,500	66,240	45.72	1.83	441.0	24.1	58.0	29.0	NO	Yes	No	No
		Diesel Generator Unit 2	TECO2	-73,500	66,240	45.72	1.83	450.0	24.1	58.0	29.0	NO	Yes	No	No
0250020	Tarmac <sup>c</sup>														
		Kiln 1 PSD Baseline	TARMC1	25,100	-107,460	61.0	2.44	465.0	12.84	-5.71	-5.71	EXP	No	Yes	Yes
		Kiln 2 PSD Baseline	TARMC2B	25,100	-107,460	61.0	2.44	465.0	12.84	-5.71	-5.71	EXP	No	Yes	Yes
		Kiln 3 PSD Baseline	TARMC3B	25,100	-107,460	61.0	4.57	472.0	10.78	-2.76	-2.76	EXP	No	Yes	Yes
		Kiln 2 PSD	TABMC2P	25,100	-107,460	61.0	2.44	422.0	9.10	24.57	24.57	CON	Yes	Yes	Yes
		Kiln 3 PSD	TARMC3P	25,100	-107,460	61.0	4.57	450.0	11.04	51.43	51.43	CON	Yes	Yes	Yes
0550004	TECO-Sebring/Dinner Lake <sup>c</sup>														
		Steam Boiler	DINNSB	-81,000	73,340	22.9	1.83	394.3	5.79	37.78	37.78	CON	Yes	Yes	No
0710000	FPL Fort Myers <sup>c</sup>														
		Unit 1 PSD	FMU1	-115,700	-16,260	91.8	2.90	422.0	29.90	-585.50	-585.50	EXP	No	Yes	Yes
		Unit 2 PSD	FMU2	-115,700	-16,260	121.2	5.52	408.0	19.20	-1334	-1334.0	EXP	No	Yes	Yes
		HRSBs 1 - 6	FMYHR1_6	-115,700	-16,260	38.1	5.79	377.6	14.2	3.86	3.86	CON	Yes	Yes	Yes
		Gas Turbines 1 -12	FMYGT112	-115,700	-16,260	9.75	4.42	797.0	35.7	649.2	649.2	NO	Yes	No	No
0250348	Dade County RRF PSD														
		Units 1&2	DCRRF12	26,500	-111,760	76.2	3.66	405.4	15.86	26.41	12.32	CON	No <sup>c</sup>	No <sup>c</sup>	Yes
		Units 3&4	DCRRF34	26,500	-111,760	76.2	3.66	405.4	15.86	26.41	12.32	CON	No <sup>c</sup>	No <sup>c</sup>	Yes
0112515	Enron Pompano Beach Energy Center	3-170 MW CTs	ENPMPCT	45,900	-63,660	24.4	5.49	847.0	47.06	39.16	39.16	CON	No <sup>c</sup>	No <sup>c</sup>	Yes
0110120	North Broward RRF PSD		NBCRRF	45,800	-61,560	58.5	3.96	381.0	18.01	35.40	35.40	CON	No <sup>c</sup>	No <sup>c</sup>	Yes
0112534	Enron Deerfield Beach Energy Center	3-170 MW CTs	ENDFCT	45,300	-61,260	24.4	5.49	847.0	47.06	39.16	39.16	CON	No <sup>c</sup>	No <sup>c</sup>	Yes
0112545	El Paso Broward														
		Combined Cycle CT CC-1	EPBRCT1	45,500	-61,160	41.1	5.79	359.3	61.13	0.46	0.46	CON	No <sup>c</sup>	No <sup>c</sup>	Yes
		Simple Cycle SC-1	EPBRSC1	45,500	-61,160	41.1	5.79	862.0	146.96	0.46	0.46	CON	No <sup>c</sup>	No <sup>c</sup>	Yes
		Simple Cycle SC-2	EPBRSC2	45,500	-61,160	41.1	5.79	862.0	146.96	0.46	0.46	CON	No <sup>c</sup>	No <sup>c</sup>	Yes
		Simple Cycle SC-3	EPBRSC3	45,500	-61,160	41.1	5.79	862.0	146.96	0.46	0.46	CON	No <sup>c</sup>	No <sup>c</sup>	Yes

AIRS Number	Facility	Units	Modeling ID Name	Relative Location		Stack and Operating Parameters				Emission Rate(g/s)		PSD Source? (EXP/CON)	Modeled in		
				X (m)	Y (m)	Height (m)	Diameter (m)	Temper. (K)	Velocity (m/s)	3-Hour	24-Hour		AAQS	Class II	Class I
0710019	Lee County RRF PSD		LEECORRF	-113,600	-23,460	83.8	1.88	388.5	19.81	14.00	14.00	CON	No <sup>e</sup>	No <sup>e</sup>	Yes
0990332	New Hope Power Partnership (Okeelanta)														
	Okeelanta Power Blrs 1,2,3 <sup>b</sup>		OKCOGENF	-13,700	-29,160	60.7	3.05	450.9	19.39	54.1	54.1	CON	No <sup>e</sup>	No <sup>e</sup>	Yes
0990005	Okeelanta <sup>a</sup>														
	Boiler 4 PSD Baseline		OKBLR4B	-12,800	-31,760	22.9	2.29	333.0	7.36	-10.95	-10.95	EXP	No <sup>e</sup>	No <sup>e</sup>	Yes
	Boiler 5 PSD Baseline		OKBLR5B	-12,800	-31,760	22.9	2.29	333.0	12.07	-15.64	-15.64	EXP	No <sup>e</sup>	No <sup>e</sup>	Yes
	Boiler 6 PSD Baseline		OKBLR6B	-12,800	-31,760	22.9	2.29	334.0	8.74	-15.64	-15.64	EXP	No <sup>e</sup>	No <sup>e</sup>	Yes
	Boiler 10 PSD Baseline		OKBLR10B	-12,800	-31,760	22.9	2.29	334.0	10.35	-17.15	-17.15	EXP	No <sup>e</sup>	No <sup>e</sup>	Yes
	Boiler 11 PSD Baseline		OKBLR11B	-12,800	-31,760	22.9	2.29	342.0	9.89	-16.79	-16.79	EXP	No <sup>e</sup>	No <sup>e</sup>	Yes
	Boiler 16 PSD		OKBLR16	-12,800	-31,760	22.9	1.52	483.0	22.86	1.47	1.47	CON	No <sup>e</sup>	No <sup>e</sup>	Yes
0990568	Lake Worth Generating														
	4-GE Frame 7FA CTs & HRSG		LWGENCT	55,000	-25,460	45.7	5.49	377.6	24.29	51.16	51.16	CON	No <sup>e</sup>	No <sup>e</sup>	Yes
0990594	El Paso Belle Glade														
	Combined Cycle CT CC-1		EPBGLCT	-4,300	-15,060	41.1	5.79	359.3	61.13	0.46	0.46	CON	No <sup>e</sup>	No <sup>e</sup>	Yes
	Simple Cycle SC-1		EPBGSC1	-4,300	-15,060	41.1	5.79	862.0	146.96	0.46	0.46	CON	No <sup>e</sup>	No <sup>e</sup>	Yes
	Simple Cycle SC-2		EPBGSC2	-4,300	-15,060	41.1	5.79	862.0	146.96	0.46	0.46	CON	No <sup>e</sup>	No <sup>e</sup>	Yes
	Simple Cycle SC-3		EPBGSC3	-4,300	-15,060	41.1	5.79	862.0	146.96	0.46	0.46	CON	No <sup>e</sup>	No <sup>e</sup>	Yes
0510015	Southern Gardens Citrus - PSD														
	Peel Dryer		SGARDDRY	-50,200	-11,560	38.1	1.73	316.0	7.45	5.29	5.29	CON	No <sup>e</sup>	No <sup>e</sup>	Yes
	Boilers 1-3		SGARDBLR	-50,200	-11,560	16.8	1.22	478.0	14.22	6.88	6.88	CON	No <sup>e</sup>	No <sup>e</sup>	Yes

Note: EXP = PSD expanding source  
CON = PSD consuming source  
NO = Source does not affect PSD increment  
ND = No data available

<sup>a</sup> Facilities or sources within facilities that operate only during the October 1 through April 31 crop season.

<sup>b</sup> Sugar mill sources that operate all year.

<sup>c</sup> Large source with emissions greater than 1,000 TPY included in the AAQS or PSD Class II modeling even though the source is located outside of the screening area.

<sup>d</sup> Represents worst case emissions for May 1 through September 31 off-crop season operation, and October 1-April 30 for on-crop season.

Updated from PSD modeling information. Golder Associates (7/18/00). Baseline data represents November 1 through April 30.

<sup>e</sup> Not included in AAQS or Class II modeling analyses because they screened out.

## **APPENDIX B**

### **BPIP INPUT AND OUTPUT FILES**

'USS Bryant Future Buildings and Stacks 1/26/00'

'ST'

'FEET' 0.3048

'UTMN' 15.

14

'Blr Hse Upper' 1 0.0

4 82.79

11 20

70 20

70 -20

11 -20

'Blr Hse Lower' 1 0.0

4 61

70 -200

100 -200

100 60

70 60

'Pwr Hse North' 1 0.0

4 60.33

110 -80

174 -80

174 -120

110 -120

'Pwr Hse South' 1 0.0

4 42

116 -120

180 -120

180 -200

116 -200

'Mill Bldg' 1 0.0

4 57

56 -240

140 -240

140 -470

56 -470

'Boiling Hse' 1 0.0

4 102

140 -300

290 -300

290 -400

140 -400

'NW Tier Boiling Hse' 1 0.0

4 66.75

120 -200

180 -200

180 -256

120 -256

'WH#2' 1 0.0

4 55

715 -190

575 -190

575 570

715 570

'ChemStor' 1 0.0

4 31

196 -200

256 -200

256 -110

196 -110

'WH#3' 1 0.0

4 55

900 -230

770 -200

880 315

1020 295

'WH#4' 1 0.0

4 55

1080 -305

955 -245

1290 435

1420 370

'WH#1' 1 0.0

4 78.6

520 -190

370 -190

370 75

520 75

'Shop' 1 0.0

4 51.33

-50 -500

-190 -500

-190 -415

-50 -415

'W.T.P' 1 0.0

4 42.75

190 -40

240 -40

240 -90

190 -90

4

'Blr5' 0.0 65 0 0

'Blr1' 0.0 65 40 -50

'Blr2' 0.0 65 40 -110

'Blr3' 0.0 140 40 -170

0

BPIP (Dated: 95086)

DATE : 08/14/02

TIME : 15:20:10

USS Bryant Future Buildings and Stacks 1/26/00

## =====

## BPIP PROCESSING INFORMATION:

=====

The ST flag has been set for processing for an ISCST2 run.

Inputs entered in FEET will be converted to meters using  
a conversion factor of 0.3048. Output will be in meters.

UTMP is set to UTMN. The input is assumed to be in a local  
X-Y coordinate system as opposed to a UTM coordinate system.  
True North is in the positive Y direction.

Plant north is set to 15.00 degrees with respect to True North.

USS Bryant Future Buildings and Stacks 1/26/00

PRELIMINARY\* GEP STACK HEIGHT RESULTS TABLE  
(Output Units: meters)

Stack Name	Stack Height	Stack-Building Base Elevation Differences	GEP** EQN1	Preliminary* GEP Stack Height Value
Blr5	19.81	0.00	77.72	77.72
Blr1	19.81	0.00	77.72	77.72
Blr2	19.81	0.00	77.72	77.72
Blr3	42.67	0.00	77.72	77.72

\* Results are based on Determinants 1 & 2 on pages 1 & 2 of the GEP  
Technical Support Document. Determinant 3 may be investigated for  
additional stack height credit. Final values result after  
Determinant 3 has been taken into consideration.

\*\* Results were derived from Equation 1 on page 6 of GEP Technical  
Support Document. Values have been adjusted for any stack-building  
base elevation differences.

Note: Criteria for determining stack heights for modeling emission  
limitations for a source can be found in Table 3.1 of the  
GEP Technical Support Document.

BPIP (Dated: 95086)

DATE : 08/14/02

TIME : 15:20:10

USS Bryant Future Buildings and Stacks 1/26/00

BPIP output is in meters

SO BUILDHGT Blr5	25.23	25.23	25.23	25.23	25.23	25.23
SO BUILDHGT Blr5	25.23	25.23	25.23	18.59	18.59	25.23
SO BUILDHGT Blr5	25.23	25.23	25.23	25.23	25.23	25.23
SO BUILDHGT Blr5	25.23	25.23	25.23	25.23	25.23	25.23
SO BUILDHGT Blr5	25.23	25.23	23.96	23.96	23.96	23.96
SO BUILDHGT Blr5	23.96	25.23	31.09	31.09	31.09	31.09
SO BUILDWID Blr5	18.98	18.98	20.53	21.45	21.72	21.34
SO BUILDWID Blr5	20.30	18.65	16.43	79.74	79.74	16.43
SO BUILDWID Blr5	18.65	20.30	21.34	21.72	21.45	20.53
SO BUILDWID Blr5	18.98	18.98	20.53	21.45	21.72	21.34
SO BUILDWID Blr5	20.30	18.65	89.85	84.45	84.45	89.85
SO BUILDWID Blr5	92.53	20.30	53.88	54.93	54.32	52.05

SO BUILDHGT Blr1	25.23	25.23	25.23	25.23	25.23	25.23
SO BUILDHGT Blr1	25.23	25.23	25.23	18.59	18.59	25.23
SO BUILDHGT Blr1	25.23	25.23	25.23	25.23	25.23	25.23
SO BUILDHGT Blr1	25.23	25.23	25.23	25.23	25.23	25.23
SO BUILDHGT Blr1	25.23	23.96	23.96	23.96	23.96	23.96
SO BUILDHGT Blr1	23.96	25.23	31.09	31.09	31.09	31.09
SO BUILDWID Blr1	18.98	18.98	20.53	21.45	21.72	21.34
SO BUILDWID Blr1	20.30	18.65	16.43	79.74	79.74	16.43
SO BUILDWID Blr1	18.65	20.30	21.34	21.72	21.45	20.53
SO BUILDWID Blr1	18.98	18.98	20.53	21.45	21.72	21.34
SO BUILDWID Blr1	20.30	92.53	89.85	84.45	84.45	89.85
SO BUILDWID Blr1	92.53	20.30	53.88	54.93	54.32	52.05

SO BUILDHGT Blr2	25.23	25.23	25.23	25.23	25.23	18.59
SO BUILDHGT Blr2	18.59	18.59	18.59	18.59	18.59	18.59

SO BUILDHGT B1r2	20.35	31.09	20.35	25.23	25.23	25.23
SO BUILDHGT B1r2	25.23	25.23	25.23	25.23	25.23	18.59
SO BUILDHGT B1r2	23.96	23.96	23.96	23.96	23.96	23.96
SO BUILDHGT B1r2	20.35	31.09	31.09	31.09	31.09	31.09
SO BUILDWID B1r2	18.98	18.98	20.53	21.45	21.72	62.50
SO BUILDWID B1r2	70.16	75.69	78.91	79.74	79.74	78.91
SO BUILDWID B1r2	23.20	51.19	25.00	21.72	21.45	20.53
SO BUILDWID B1r2	18.98	18.98	20.53	21.45	21.72	62.50
SO BUILDWID B1r2	92.39	92.53	89.85	84.45	84.45	89.85
SO BUILDWID B1r2	23.20	51.19	53.88	54.93	54.32	52.05

SO BUILDHGT B1r3	18.59	18.59	18.59	18.59	18.59	18.59
SO BUILDHGT B1r3	18.59	18.59	18.59	18.59	20.35	20.35
SO BUILDHGT B1r3	31.09	31.09	31.09	31.09	31.09	31.09
SO BUILDHGT B1r3	25.23	25.23	25.23	18.59	18.59	18.59
SO BUILDHGT B1r3	23.96	23.96	23.96	23.96	23.96	20.35
SO BUILDHGT B1r3	31.09	31.09	31.09	31.09	31.09	31.09
SO BUILDWID B1r3	29.15	32.87	29.34	41.78	52.95	62.50
SO BUILDWID B1r3	70.16	75.69	78.91	79.74	61.79	21.22
SO BUILDWID B1r3	46.95	51.19	53.88	54.93	54.32	52.05
SO BUILDWID B1r3	18.98	18.98	20.53	41.78	52.95	62.50
SO BUILDWID B1r3	92.39	92.53	89.85	84.45	84.45	21.22
SO BUILDWID B1r3	46.95	51.19	53.88	54.93	54.32	52.05



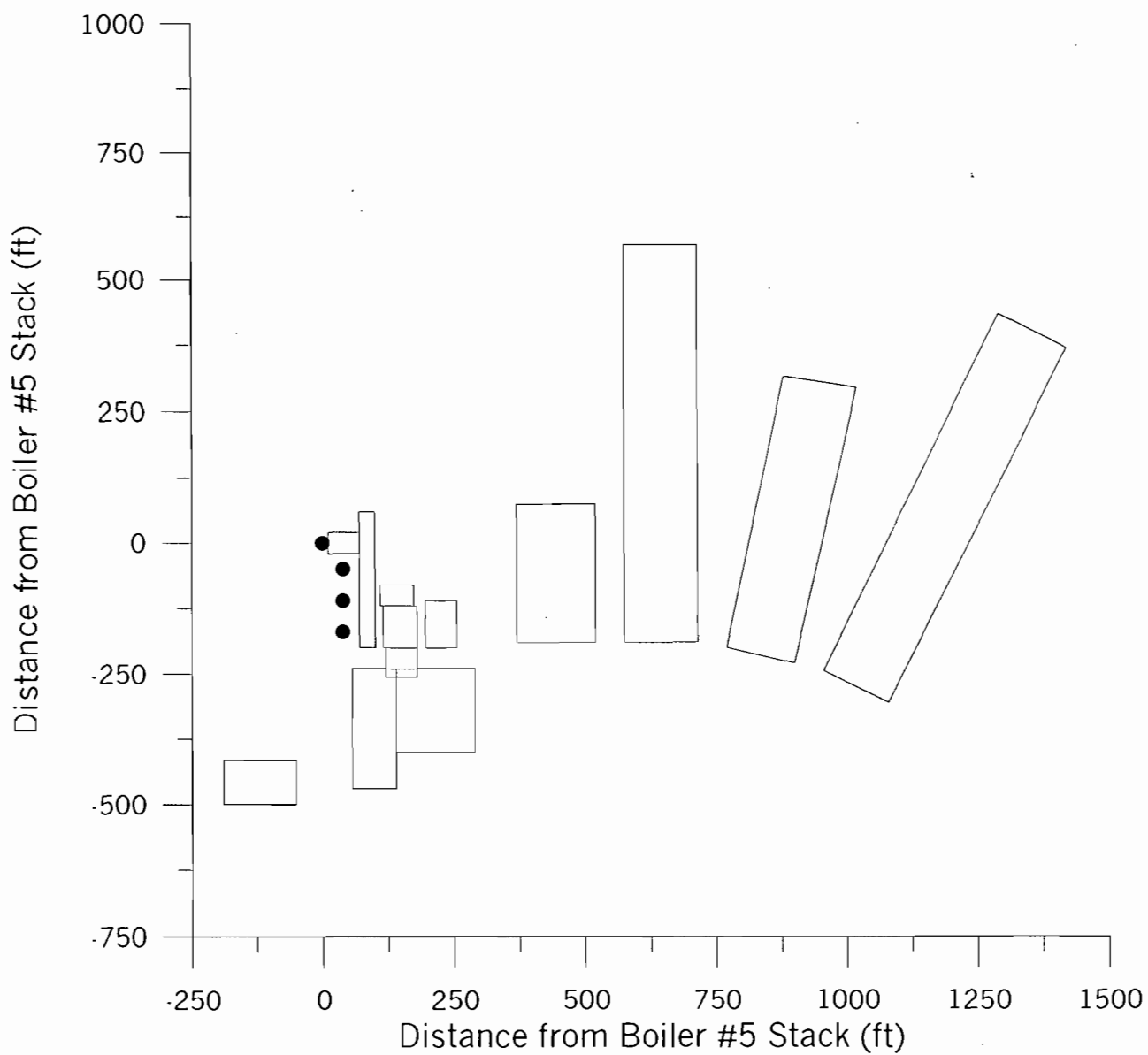


Figure B-1  
U.S. Sugar - Bryant Mill Building Layout

Source: Golder, 2002.

