

Sugar Cane Growers Cooperative of Florida



POST OFFICE BOX 666

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BELLE GLADE, FLORIDA

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SEP 01 2004

BUREAU OF AIR REGULATION

August 23, 2004

Certified Mail #7099 3400 0002 3353 9247
Return Receipt Requested

Mr. A. A. Linero, P. E.
New Source Review Section
Florida Department of Environmental Protection
2600 Blair Stone Road, MS #5505
Tallahassee, FL 32399-2400

RE: Sugar Cane Growers Cooperative of Florida, Inc. – Glades Sugar House
Boiler Nos. 4 and 5 Addition of Natural Gas Firing Capability
Draft Permit No. 0990026-008-AC
Comments on Draft Permit

Dear Mr. Blackburn:

Sugar Cane Growers Cooperative of Florida (SCGCF) has received the Department's draft air construction permit dated July 21, 2004, regarding the addition of natural gas firing capability in Boiler Nos. 4 and 5 at the Glades Sugar House. We have reviewed the draft permit and offer the following comments:

Technical Evaluation and Preliminary Determination

Page 2 of 4 – Facility Description and Location –Note that Palm Beach County is a "maintenance area" for ozone.

Attachment A - Table 2 Fuel Oil Usage (ARMS Data)

1999 Boiler 4 Fuel Oil should be 247.49; 1999 Boiler 5 Fuel Oil should be 185.82
1999 Boiler 4 Used Oil should be 6.9; 1999 Boiler 5 Used Oil should be 5.2

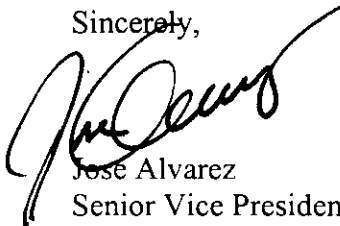
Draft Permit

Condition 12. Monitoring – It is requested that 15 calendar days after the end of each month be allowed to complete the necessary records.

In addition to the changes requested above, after further consideration, it is requested that SCGCF be allowed the option of installing two gas burners in each Boiler Nos. 4 and 5 instead of one burner in Boiler No. 4 and three burners in Boiler No. 5. This will not affect the overall emissions from the two boilers combined due to natural gas burning.

Please call (561-996-4759) or e-mail (jfalvarez@scgc.org) me if you have any questions concerning this information.

Sincerely,



Jose Alvarez
Senior Vice President Planning and Operations

cc: D. Buff, Golder
A. Satyal, PBCHU
K. Lockhart, SCGCF

Golder Associates Inc.

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



June 3, 2004

0237588

Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blairstone Road
Tallahassee, Florida 32399-2400

RECEIVED

JUN 07 2004

BUREAU OF AIR REGULATION

Attention: Mr. Jeff F. Koerner, P.E.

RE: Sugar Cane Growers Cooperative of Florida
Project No. 0990026-008-AC
Request to Add Natural Gas Firing to Boiler Nos. 4 & 5

Dear Mr. Koerner:

Sugar Cane Growers Cooperative of Florida (SCGC) owns and operates a sugar cane processing facility, Glades Sugar House, located in Belle Glade, Florida. In November 2003, SCGC submitted an Air Construction Permit application to the Department requesting the modification of Boiler Nos. 4 and 5 at Glades Sugar House so that natural gas could be fired in addition to No. 6 fuel oil, used oil, and bagasse.

The Department responded to the application with a Request for Additional Information (RAI) dated, January 7, 2004, to continue processing the Air Construction Permit application for Boiler Nos. 4 and 5. On February 18, 2004, SCGC submitted the requested information to the Department. On March 5, 2004, SCGC received a second RAI. SCGC is submitting this letter to the Department to satisfy this second request. Each of the Department's inquiries is answered below in the same order as they appear in the RAI:

1. At the Department's suggestion, Table 3 has been revised to reflect a particulate matter (PM) emission factor of 15.1 pounds per thousands of gallons (lb/10³ gal) of fuel oil.
2. At the Department's suggestion, Table 3 has been revised to reflect a volatile organic compound emission factor of 0.28 lb/10³ gal of fuel oil.
3. SCGC is willing to accept a permit condition limiting the combined firing of natural gas in Boiler Nos. 4 and 5 to 632 million standard cubic feet per year (MMscf/yr) to avoid permitting under Prevention of Significant Deterioration (PSD) regulations. Maximum potential hourly and annual emission rates for firing natural gas in Boiler No. 4 are presented in Table 1. Annual emission rates for Boiler No. 4 are based on firing natural gas at a rate of 0.1 MMscf/hr for the requested 4,800 hour annual operating schedule.

Maximum potential hourly and annual emission rates for firing natural gas in Boiler No. 5 are presented in Table 2. Annual emission rates for Boiler No. 5 are based on firing the entire allotment of natural gas of 632 MMscf/yr, since the boiler is capable of burning this amount of gas.

Past actual annual emissions from firing No. 6 and used fuel oil in Boiler Nos. 4 and 5 are presented in Table 3. Annual emission rates are based on the maximum consecutive 2-year average oil consumption which occurred during 2000 and 2001.

Annual emission rates for the proposed combined firing of 632 MMscf/yr of natural gas in Boiler Nos. 4 and 5 are presented in Table 4. The estimated potential annual emission rate for nitrogen oxides, the emissions-limited pollutant for PSD avoidance, is 63.2 tons per year (TPY).


The PSD applicability analysis is summarized in Table 5. As shown in Table 5, by limiting the combined firing of natural gas in Boiler Nos. 4 and 5 to 632 MMscf/yr, permitting under PSD regulations is avoided.

Attached are the revised tables and application pages including the P.E. certification page.

If you have any questions concerning this information, please call me at (352) 336-5600, ext. 545.

Sincerely,

GOLDER ASSOCIATES INC.



Scott A. McCann, P.E.
Associate



David A Buff, P.E., Q.E.P.
Principal

SAM/nav

Enclosures

cc: Jose Alvarez – SCGC
Kathy Lockhart – SCGC

D. Nelson
Y:\Projects\2002\0237588 SCGC - Glades 4\4.1\060304\1.060304 doc

R. Blackburn, SD
K. Harley, EPA
G. Demayak, NPS
G. Lethman, PBCHD

Table 1. Calculation of Maximum Hourly and Annual Emission Rates from Firing 100 MMBtu/hr of Natural Gas in Boiler No. 4

Regulated Pollutant	Emission Factor (lb/10 ⁶ scf) (lb/MMBtu)		Activity Factor		Emission Rate (lb/hr) (TPY)	
			Hourly ^a (10 ⁶ scf/hr)	Annual ^b (10 ⁶ scf/yr)		
Particulate Matter (PM)	7.6	0.0076	0.10	480	0.76	1.82
Sulfur Dioxide (SO ₂)	0.6	0.00060	0.10	480	0.060	0.14
Nitrogen Oxides (NO _x)	200 ^c	0.20	0.10	480	20.0	48.00
Carbon Monoxide (CO)	166 ^d	0.166	0.10	480	16.6	39.84
Volatile Organic Compounds (VOC)	5.5	0.0055	0.10	480	0.55	1.32

Footnotes:

^a Based on modification to the boiler to allow firing of 100 MMBtu/hr of natural gas and a heating value of 1,000 Btu/scf.

^b Based on the maximum amount of gas that can be fired in in Boiler No. 4 in 4,800 hours of operation at a usage rate of 0.1 MMscf/hr.

^c Based on a 0.20 lb/MMBtu NO_x emission factor provided by Babcock Power Systems and a heating value of natural gas of 1,000 Btu/scf (0.20 lb/MMBtu x 1 MMBtu/10⁶ Btu x 1,000 Btu/scf x 1,000,000 scf/10⁶ scf = 200 lb/10⁶ scf).

^d Based on a vendor guarantee for CO of 200 ppm at 3% O₂, dry, and the following calculations:

Exhaust flow rate (20% excess air [equivalent to 3% O₂], standard conditions, dry) = 100 MMBtu/hr x 1 scf/1,000 Btu x 1x10⁶ Btu/MMBtu x 11.442 ft³ exhaust/ft³ natural gas = 1,144,200 scf/hr.

CO Emissions (lb/hr) = 200/10⁶ x 2116.8 lb_p/ft² x 1,144,200 scf/hr x 28/(1545.6 ft-lb_p/lb_m deg. R) x 1/528 deg. R = 16.6 lb/hr

CO Emissions (lb/10⁶ ft³ natural gas) = 16.6 lb/hr /100 MMBtu/hr x 1 MMBtu/10⁶ Btu x 1,000 Btu/scf x 1,000,000 scf/10⁶ scf = 166 lb/10⁶ scf

Table 2. Calculation of Maximum Hourly and Annual Emission Rates from Firing 300 MMBtu/hr of Natural Gas in Boiler No. 5

Regulated Pollutant	Emission Factor (lb/10 ⁶ scf) (lb/MMBtu)		Activity Factor		Emission Rate	
			Hourly ^a (10 ⁶ scf/hr)	Annual ^b (10 ⁶ scf/yr)	(lb/hr)	(TPY)
Particulate Matter (PM)	7.6	0.0076	0.30	632	2.28	2.40
Sulfur Dioxide (SO ₂)	0.6	0.00060	0.30	632	0.18	0.19
Nitrogen Oxides (NO _x)	200 ^c	0.20	0.30	632	60.00	63.20
Carbon Monoxide (CO)	166 ^d	0.166	0.30	632	49.86	52.52
Volatile Organic Compounds (VOC)	5.5	0.0055	0.30	632	1.65	1.74

Footnotes:

^a Based on modification to the boiler to allow firing of 300 MMBtu/hr of natural gas and a heating value of 1,000 Btu/scf.

^b Based on maximum annual amount of natural gas that can be fired in Boiler Nos. 4 and 5 while avoiding PSD.

^c Based on a 0.20 lb/MMBtu NO_x emission factor provided by Babcock Power Systems and a heating value of natural gas of 1,000 Btu/scf (0.20 lb/MMBtu x 1 MMBtu/10⁶ Btu x 1,000 Btu/scf x 1,000,000 scf/10⁶ scf = 200 lb/10⁶ scf).

^d Based on a vendor guarantee for CO of 200 ppm at 3% O₂ dry, and the following calculations:

Exhaust flow rate (20% excess air [equivalent to 3% O₂], standard conditions, dry) = 300 MMBtu/hr x 1 scf/1,000 Btu x 1x10⁶ Btu/MMBtu x 11.442 ft³ exhaust/ft³ natural gas = 3,432,600 scf/hr

CO Emissions (lb/hr) = 200/10⁶ x 2116.8 lb_f/ft³ x 3,432,600 scf/hr x 28/(1545.6 ft-lb_f/lb_m deg. R) x 1/528 deg. R = 49.86 lb/hr

CO Emissions (lb/10⁶ ft³ natural gas) = 49.86 lb/hr /300 MMBtu/hr x 1 MMBtu/10⁶ Btu x 1,000 Btu/scf x 1,000,000 scf/10⁶ scf = 166 lb/10⁶ scf

Table 3. Calculation of Past Actual Annual Emission Rates from Firing No. 6 Fuel Oil and Used Oil in Boiler Nos. 4 & 5 Combined

Regulated Pollutant	Emission Factor		Annual Activity Factor ^b		Annual Emission Rate
	(lb/10 ³ gal)	(lb/MMBtu)	(10 ³ gal)	(MMBtu/yr)	(TPY)
Particulate Matter (PM)	15.1 ^a	0.100	992.459	149.861	7.49
Sulfur Dioxide (SO ₂)	393.6 ^c	2.607	992.459	149,861 ^c	195.34
Nitrogen Oxides (NO _x)	47	0.311	992.459	149.861	23.32
Carbon Monoxide (CO)	5	0.033	992.459	149.861	2.48
Volatile Organic Compounds (VOC)	0.28	0.0019	992.459	149,861	0.14

Footnotes:

^a PM emissions factors based on a permitted PM emission limit of 0.1 lb/MMBtu and a heat content of the fuel oil of 151,000 Btu/gal.

^b Based on the maximum average combined fuel oil (No.6 and used oil) usage for Boiler Nos. 4 and 5 in any consecutive 2-year period, in this case 2000 and 2001.

Year	Boiler No. 4 (gal.)	Boiler No. 5 (gal.)	Total (gal.)	Average of Current and Previous Year
2003	535,497	353,755	889,252	933,280
2002	600,423	376,885	977,308	949,307
2001	526,764	394,542	921,306	992,459
2000	616,871	446,741	1,063,612	754,509
1999	254,401	191,005	445,406	--

^c Calculated stoichiometrically based on a No. 6 fuel oil density of 8.2 lb/gal. and a sulfur content of the oil of 2.4% by weight:

$$\text{Emission Factor (lb/10}^3 \text{ gal.)} = 8.2 \text{ lb/gal} \times 2.4 \text{ lb S/100 lb oil} \times 2 \text{ lb SO}_2 \text{/lb S} \times 1,000 \text{ gal./10}^3 \text{ gal.}$$

$$= 393.6 \text{ lb/10}^3 \text{ gal.}$$

$$\text{Emission Factor (lb/MMBtu)} = 393.6 \text{ lb/10}^3 \text{ gal.} \times 10^3 \text{/1,000 gal.} \times 1 \text{ gal./151,000 Btu} \times 10^6 \text{ Btu/MMBtu}$$

$$= 2.61 \text{ lb/MMBtu}$$

Table 4. Calculation of Annual Emission Rates from Firing 632 MMBtu/yr of Natural Gas in Boiler Nos. 4 and 5 Combined.

Regulated Pollutant	Emission Factor		Annual Activity Factor ^a (10 ⁶ scf/yr)	Emission Rate (TPY)
	(lb/10 ⁶ scf)	(lb/MMBtu)		
Particulate Matter (PM)	7.6	0.0076	632	2.40
Sulfur Dioxide (SO ₂)	0.6	0.00060	632	0.19
Nitrogen Oxides (NO _x)	200 ^b	0.20	632	63.20
Carbon Monoxide (CO)	166 ^c	0.166	632	52.46
Volatile Organic Compounds (VOC)	5.5	0.0055	632	1.74

Footnotes:

^a Based on maximum annual natural gas firing rate to avoid PSD.

^b Based on a 0.20 lb/MMBtu NO_x emission factor provided by Babcock Power Systems and a heating value of natural gas of 1,000 Btu/scf (0.20 lb/MMBtu x 1 MMBtu/10⁶ Btu x 1,000 Btu/scf x 1,000,000 scf /10⁶ scf = 200 lb/10⁶ scf).

^c Based on a vendor guarantee for CO of 200 ppm at 3% O₂ dry, and the following calculations:
Exhaust flow rate (20% excess air [equivalent to 3% O₂], standard conditions, dry) = 100 MMBtu/hr x 1 scf/1,000 Btu x 1x10⁶ Btu/MMBtu x 11.442 ft³ exhaust/ft³ natural gas = 1,144,200 scf/hr.

CO Emissions (lb/hr) = 200/10⁶ x 2116.8 lb_p/ft² x 1,144,200 scf/hr x 28/(1545.6 ft-lb_p/lb_m deg. R) x 1/528 deg. R = 16.6 lb/hr.

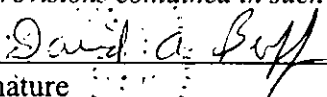
CO Emissions (lb/10⁶ ft³ natural gas) = 16.6 lb/hr /100 MMBtu/hr x 1 MMBtu/10⁶ Btu x 1,000 Btu/scf x 1,000,000 scf/10⁶ scf = 166 lb/10⁶ scf.

Table 5. Summary of the Increase in Annual Emission Due to the Project and Comparison with Significant Emission Rates

Regulated Pollutant	Combined Actual Annual Emissions for No. 6/Used Fuel Oil Firing in Boilers 4 & 5 ^a (TPY)	Combined Potential Annual Emissions for Natural Gas Firing in Boilers 4 & 5 (TPY)	Net Change in Annual Emission (TPY)	PSD Significant Emission Rate (TPY)	PSD Review Triggered? (Yes/No)
Particulate Matter (TSP)	7.5	2.40	-5.1	25	No
Particulate Matter (PM ₁₀)	7.5	2.40	-5.1	15	No
Sulfur Dioxide (SO ₂)	195.3	0.19	-195.2	40	No
Nitrogen Oxides (NO _x)	23.3	63.2	39.9	40	No
Carbon Monoxide (CO)	2.48	52.5	50.0	100	No
Volatile Organic Compounds (VOCs)	0.14	1.74	1.6	40	No

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: David A. Buff Registration Number: 19011
2. Professional Engineer Mailing Address... Organization/Firm: Golder Associates Inc.** Street Address: 6241 NW 23rd Street, Suite 500 City: Gainesville State: FL Zip Code: 32653
3. Professional Engineer Telephone Numbers... Telephone: (352) 336-5600 ext. 545 Fax: (352) 336-6603
4. Professional Engineer Email Address: dbuff@golder.com
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <i>(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</i> <i>(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.</i> <i>(3) If the purpose of this application is to obtain a Title V air operation permit (check here <input type="checkbox"/>, 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 plan and schedule is submitted with this application.</i> <i>(4) If the purpose of this application is to obtain an air construction permit (check here <input checked="" type="checkbox"/>, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here <input type="checkbox"/>, 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.</i> <i>(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here <input type="checkbox"/>, 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.</i>  Signature _____ Date <u>6/03/04</u> (seal)

* Attach any exception to certification statement.

** Board of Professional Engineers Certificate of Authorization #00001670

EMISSIONS UNIT INFORMATION

Section [1] of [2]

Boiler No. 4

D. SEGMENT (PROCESS/FUEL) INFORMATION**Segment Description and Rate:** Segment 3 of 4

1. Segment Description (Process/Fuel Type): External Combustion Boiler; Natural Gas (> 100 MMBtu/hr)		
2. Source Classification Code (SCC): 1-02-006-01		3. SCC Units: Million Cubic Feet Burned
4. Maximum Hourly Rate: 0.10	5. Maximum Annual Rate: 480	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 1,000
10. Segment Comment: Maximum annual usage rate based on 4,800 hours per year of operation.		

Segment Description and Rate: Segment 4 of 4

1. Segment Description (Process/Fuel Type): External Combustion Boiler; Solid Waste (Bagasse Residue)		
2. Source Classification Code (SCC): 1-02-012-01		3. SCC Units: Tons Burned
4. Maximum Hourly Rate: 28.26	5. Maximum Annual Rate: 135,649	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 17.8
10. Segment Comment: Maximum hourly rate based on 503.03 MMBtu/hr (24-hour average) from residue firing. Maximum annual rate based on 4,800 hours of operation per year.		

EMISSIONS UNIT INFORMATION

Section [2] of [2]

Boiler No. 5

D. SEGMENT (PROCESS/FUEL) INFORMATION**Segment Description and Rate:** Segment 3 of 4

1. Segment Description (Process/Fuel Type): External Combustion Boiler; Natural Gas (> 100 MMBtu/hr)		
2. Source Classification Code (SCC): 1-02-006-01		3. SCC Units: Million Cubic Feet Burned
4. Maximum Hourly Rate: 0.300	5. Maximum Annual Rate: 632	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 1,000
10. Segment Comment: Maximum annual usage rate based on the proposed limit on amount of natural gas fired in Boiler Nos. 4 and 5 combined.		

Segment Description and Rate: Segment 4 of 4

1. Segment Description (Process/Fuel Type): External Combustion Boiler; Solid Waste (Bagasse Residue)		
2. Source Classification Code (SCC): 1-02-012-01		3. SCC Units: Tons Burned
4. Maximum Hourly Rate: 21.71	5. Maximum Annual Rate: 104,198	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 17.8
10. Segment Comment: Maximum hourly rate based on 386.4 MMBtu/hr from bagasse residue firing. Maximum annual rate based on 4,800 hours of operation per year.		



Department of Environmental Protection

Jeb Bush
Governor

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

Colleen M. Castille
Secretary

April 9, 2004

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Jose F. Alvarez, Vice President Planning and Plant Operations
Sugar Cane Growers Cooperative of Florida - Glades Sugar House
Post Office Box 666
Belle Glade, Florida 33430-0666

Re: Air Permit Project Status Updates
Sugar Cane Growers Cooperative of Florida, Glades Sugar House

Dear Mr. Alvarez:

This is simply a courtesy letter to provide an update on the status of two pending applications for air permits for the Glades Sugar House located in Belle Glade, Florida.

Project No. 0990026-007-AC - Request for a Revised Boiler Operating Season

Status: We received this application on September 3, 2003 and requested additional information in a letter dated September 26, 2003. On November 7, 2003, we sent a reminder. On December 17, 2003, we received an email request for an additional 90 days, which we approved on December 18, 2003. On February 23, 2004, we received an email request for an additional 30 days, which we approved on the same day. On March 26, 2004, we received an email request for an additional 30 days, which we approved on March 29, 2004. It is our understanding that your consultant is completing the air dispersion modeling analysis to support the request. This application remains incomplete and cannot be processed without the requested additional information. The final deadline for submitting this information is April 30, 2004.

Project No. 0990026-008-AC - Request to add Natural Gas to Boilers 4 and 5

Status: Our South District office received this application on December 8, 2003 and requested additional information in a letter dated January 7, 2004. On February 17, 2004, this application was transferred to the Bureau of Air Regulation in Tallahassee for processing. On February 23, 2004, the South District Office received your submittal of additional information, which was forwarded to the Bureau of Air Regulation on February 26, 2004. In a letter dated March 5, 2004, we requested additional information. Based on conversations with your consultant, we believe that the additional information will be submitted shortly. This application remains incomplete and cannot be processed without the requested additional information. The deadline for submitting this information is June 3, 2004.

We will resume processing your applications after receipt of the requested information. Rule 62-4.050(3), F.A.C. requires that all applications for a Department 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. If you have any questions regarding this matter, please call me at 850/921-9536.

Sincerely,

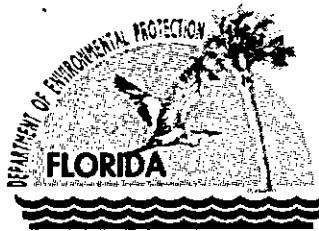
Jeffery F. Koerner, Air Permitting South
Bureau of Air Regulation

cc: Ms. Kathy Lockhart, SCG Coop
Mr. David Buff, Golder
Mr. Ron Blackburn, SD

Mr. James Stormer, PBCHD
Mr. Gregg Worley, EPA Region 4
Mr. John Bunyak, NPS

"More Protection, Less Process"

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Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

March 5, 2004

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Jose F. Alvarez, Vice President Planning and Plant Operations
Glades Sugar House
Sugar Cane Growers Cooperative of Florida
Post Office Box 666
Belle Glade, Florida 33430-0666

Re: Project No. 0990026-008-AC
Second Request for Additional Information
Sugar Cane Growers Cooperative of Florida, Glades Sugar House
Request to Add Natural Gas to Boilers 4 and 5

Dear Mr. Alvarez:

On February 23, 2004, the Department received your additional information response for the project to add natural gas as an authorized fuel to Boilers 4 and 5 at the Glades Sugar House in Belle Glade, Florida. Please note that your application has been transferred to the Bureau of Air Regulation for processing. The application remains incomplete. In order to continue processing your application, the Department will need the additional information requested below. Should your response to any of the requested items require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

1. **PM Factor:** Table 3 of the application lists the emission factor for particulate matter as 14.1 lb/1000 gallons. However, this factor is calculated from a particulate matter limit of 0.10 lb/MMBtu and a heating value of 151 MMBtu/1000 gallons. It appears that the emissions factor should be:

$$\text{PM Factor} = (0.10 \text{ lb/MMBtu}) (151 \text{ MMBtu/1000 gallons oil}) = 15.1 \text{ lb/1000 gallons of oil}$$

Please revise or comment.

2. **VOC Factor:** Table 3 of the application lists the emission factor for VOC as 0.76 lb/1000 gallons of oil and references Table 1.3-3 in AP-42. However, the factor referenced is for "utility boilers" firing No. 6 fuel oil. The appropriate factor for "industrial boilers" is 0.28 lb/1000 gallons of oil. Please revise or comment.
3. **PSD Applicability:** As discussed in your response, Table 4 of the application summarizes the expected increase in annual emissions and compares the net change in emissions to the PSD significant emission rates. However, this is a comparison of potential emissions for oil versus natural gas based on maximum heat input rates of 260,000 MMBtu/year for Boiler 4 and 780,000 MMBtu/year for Boiler 5, which is a total of 1,040,000 MMBtu/year. For industrial boilers, Rule 62-212.400, F.A.C. requires a comparison of past actual emissions to future potential emissions.

Attachment A-1 to this letter summarizes the Department's PSD applicability review based on your initial request and the fuel oil usage over the last five years as provided in the Annual Operating Reports. The highest past actual 2-year average fuel oil firing rate for both boilers combined is 1,020,525 gallons per year. This includes used oil fuel, which is similar. Based on a heating value of 151,000 Btu per gallon, the

"More Protection, Less Process"

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past actual 2-year average heat input rate is 154,099 MMBtu/year. The comparison shows that your current request will trigger PSD preconstruction review based on a comparison of past actual oil usage to requested future potential gas usage.

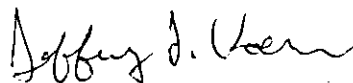
Note that your initial request for 1,040,000 MMBtu/year of gas firing is nearly 7 times the highest past actual 2-year average heat input rate for oil firing of 154,099 MMBtu/year. As shown in Attachment A-2 to this letter, reducing your request to 616,400 MMBtu/year of gas firing may allow the project to avoid PSD preconstruction review. This annual heat input rate for gas firing is still four times the highest past actual 2-year average for oil firing.

Please submit an application for a PSD permit based on your initial request or revise your request to avoid PSD preconstruction review.

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 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. 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.

If you have any questions regarding this matter, please call me at 850/921-9536.

Sincerely,



Jeffery F. Koerner
New Source Review Section

cc: Mr. David Buff, Golder Associates Inc.
Mr. Ron Blackburn, DEP South District Office
Mr. James Stormer, PBCHD
Mr. Gregg Worley, EPA Region 4
Mr. John Bunyak, NPS

Sugar Cane Growers Cooperative of Florida
Addition of Natural Gas to Boilers 4 and 5
Attachment A-1

Boilers 4 and 5

1,020,525 gallons/year of oil (2-year average for 2001-2002)
 151,000 Btu/gallon of oil
 154,099 MMBtu/year from oil
 1,040,000 MMBtu/year from gas or oil

Pollutant	No. 6 Fuel Oil		Natural Gas		Project TPY	PSD SER TPY	PSD?
	EF lb/MMBtu	Emission Rate TPY	EF lb/MMBtu	Emission Rate TPY			
CO	0.033	2.6	0.166	86.3	83.8	100	No
NOx	0.311	24.0	0.200	104.0	80.0	40	Yes
PM	0.100	7.7	0.008	4.0	-3.8	25/15	No
SO ₂	2.607	200.8	0.001	0.3	-200.5	40	No
VOC	0.002	0.1	0.006	2.9	2.7	40	No

Notes:

- Based on the following maximum heat input rates:
 Boiler 4: 100 MMBtu/hour x 2600 hour/year = 260,000 MMBtu/year
 Boiler 5: 300 MMBtu/hour x 2600 hour/year = 780,000 MMBtu/year
 Total = 1,040,000 MMBtu/year
- This compares the past actual emissions from oil firing to the future potential emissions from the requested gas firing. Table 4 in the application compares emissions from potential oil firing to future gas firing.

**Sugar Cane Growers Cooperative of Florida
Addition of Natural Gas to Boilers 4 and 5
Attachment A-2**

Boiler 4 and 5

1,020,525 gallons/year of oil (2-year average for 2001-2002)

151,000 Btu/gallon of oil

154,099 MMBtu/year from oil

616,397 MMBtu/year from gas

Pollutant	No. 6 Fuel Oil		Natural Gas		Project (Difference) TPY	PSD SER TPY	PSD?
	EF lb/MMBtu	Emission Rate TPY	EF lb/MMBtu	Emission Rate TPY			
CO	0.033	2.6	0.166	51.2	48.6	100	No
NOx	0.311	24.0	0.200	61.6	37.7	40	No
PM	0.100	7.7	0.008	2.3	-5.4	25/15	No
SO ₂	2.607	200.8	0.001	0.2	-200.7	40	No
VOC	0.002	0.1	0.006	1.7	1.6	40	No

Notes:

1. The new revised restriction on gas firing (616,397 MMBtu/year) is four times the past actual 2-year average heat input for oil firing.
2. CO emissions increases are less than half of the PSD significant emission rate. Other increases are very small.

Sugar Cane Growers Cooperative of Florida

POST OFFICE BOX 666

BELLE GLADE, FLORIDA

33430-0666

February 18, 2004

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FEB 23 2004

Certified Mail #7099 3400 0002 3354 0359
Return Receipt Requested

BUREAU OF AIR REGULATION

Mr. Ron Blackburn, P. E.
 Florida Department of Environmental Protection
 South District
 2295 Victoria Avenue
 Ft. Myers, FL 33901

RE: Sugar Cane Growers Cooperative of Florida, Inc. – Glades Sugar House
 Boiler Nos. 4 and 5 Addition of Natural Gas Firing Capability
 Permit No. 0990026-008-AC

Dear Mr. Blackburn:

Sugar Cane Growers Cooperative of Florida (SCGCF) has received the Department's request for additional information (RAI) dated January 7, 2004, regarding the application for the addition of natural gas burning to Boiler Nos. 4 and 5 at the Glades Sugar House. Each of the Department's questions is answered below, in the same order as they appear in the RAI.

1.a. SCGCF is requesting the ability to burn natural gas alone or in combination with No. 6 fuel oil, consistent with the capacities stated in the application. The ability to burn No. 6 fuel oil only is also being retained (of course any fossil fuel would normally be burned in combination with bagasse). This will give SCGCF the maximum flexibility when burning fossil fuels. However, it is also emphasized that SCGCF does not intend to burn more fossil fuel as a result of adding natural gas capability. As in the past, fossil fuel burning in the boilers will be minimized to the extent possible, since fossil fuel is much more costly to burn than bagasse.

1.b. The answer to the Department's question is found in Tables 1 and 2 of Part B in the application. As shown in Table 1, for Boiler No. 4, the CO emissions from firing 100 MMBtu/hr of natural gas are 16.6 lb/hr, and the CO emissions from firing 260,000 MMBtu/yr of natural gas are 21.58 tons per year (TPY). These are the proposed maximum firing rates for natural gas for Boiler No. 4.

As shown in Table 2, for Boiler No. 5, the CO emissions from firing 300 MMBtu/hr of natural gas are 49.86 lb/hr, and the CO emissions from firing 780,000 MMBtu/yr of natural gas are 64.82 TPY. These are the proposed maximum firing rates for natural gas for Boiler No. 5.

Taken together, the total annual CO emissions due to natural gas firing are 86.4 TPY. This figure is below the PSD significant emission rate of 100 TPY. In reality, the increase will be much less than this because the gas firing will replace fuel oil firing, which also creates CO emissions. The true increase in CO emissions is shown in Table 4 of Part B, which shows that the increase in CO at the maximum annual firing rate will be only 69.1 TPY.

2. SCGCF is requesting 4,800 hrs/yr of operation for Boiler Nos. 4 and 5, as shown on page 16 of the application form. SCGCF does not wish to be limited to less than 4,800 hr/yr of operation on natural gas; instead, they desire 4,800 hr/yr on natural gas for each boiler, with an annual heat input limit of 260,000 MMBtu/yr for Boiler No. 4 (equivalent to 260 MMscf/yr) and 780,000 MMBtu/yr for Boiler No. 5 (equivalent to 780 MMscf/yr) (note that these rates are shown on page 18 of the application for each boiler). This is because SCGCF may fire natural gas at much lower heat input rates than the maximum heat input rate, and may want to utilize natural gas for more than 2,600 hr/yr. The reference to 2,600 hr/yr for each boiler was made only to provide the "equivalent" operating hours if natural gas were fired continuously at the maximum heat input rate. Regardless, annual emissions are only dependent upon the annual amount of fuel fired, not the hours of fuel firing.

3. Comment acknowledged.

4. There is no dust collector on Boiler No. 4. The description in the permit application was in error. Updates to the application form are provided in Attachment A.

5. The information is provided in Attachment A.

6. See Attachment A.

7. The maximum NOx emissions occur due to residue firing. The maximum heat input for residue is 503.03 MMBtu/hr; therefore the calculation and the form are correct. Refer also to Section D. Segment (Process/Fuel) Information, which shows the heat input rates for the various fuels.

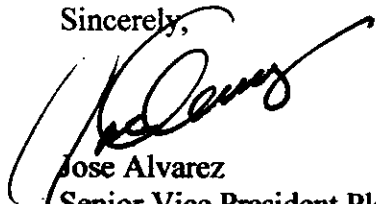
8. Condition H.2. of the Title V permit places conditions on the facility-wide emissions of SO₂, i.e. 14 TPD. It also requires monitoring and recordkeeping. However, these are facility-wide conditions and as such do not regulate individual boilers. The maximum SO₂ emissions for Boiler Nos. 4 and 5 individually are presented in Attachments SCG-EU1-F8 and SCG-EU2-F8, respectively. These calculations are based on the worst-case assumptions for each fuel (i.e., bagasse, residue and fuel oil). Emissions due to fuel oil are based on 2.4% sulfur, and assuming no removal in the scrubbers. The use of 2.4% sulfur is worst-case, and could occur if Boiler No. 8 fired no fuel oil and therefore no 1% sulfur fuel oil was added to

the plant common tank. The assumptions used for bagasse residue are consistent with Condition H.2.2 of the Title V permit. SO2 emissions due to bagasse firing are based on sugar industry test data from bagasse-firing.

9. Comment acknowledged.

Please call or e-mail me if you have any questions concerning this request.

Sincerely,



Jose Alvarez
Senior Vice President Planning and Operations

cc: D. Buff, Golder
A. Satyal, PBCHU

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FEB 23 2004

BUREAU OF AIR REGULATION

ATTACHMENT A

**UPDATES TO APPLICATION FORM
FOR BOILER NO. 4**

EMISSIONS UNIT INFORMATION

Section [1] of [2]
Boiler No. 4

POLLUTANT DETAIL INFORMATION

Page [1] of [6]
Particulate Matter Total

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F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – FEB 23 2004
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

BUREAU OF AIR REGULATION

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: PM		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 114.4 lb/hour 274.6 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.20 lb PM/MMBtu (Carbonaceous Fuels) Reference: Permitted PM emission rate for bagasse (worst-case fuel)		7. Emissions Method Code: 0	
8. Calculation of Emissions: Hourly: 0.20 lb PM/MMBtu x 572 MMBtu/hr = 114.4 lb/hr Annual: 114.4 lb/hr x 4,800 hr/yr x 1 ton/2,000 lb = 274.6 TPY			
9. Pollutant Potential/Estimated Fugitive Emissions Comment: Annual potential PM emissions based on 4,800 hr/yr of operation firing bagasse. Although Boiler No. 4 may also fire fuel oil and natural gas, firing bagasse results in worst-case PM emissions.			

EMISSIONS UNIT INFORMATION

Section [1] of [2]
Boiler No. 4

POLLUTANT DETAIL INFORMATION

Page [1] of [6]
Particulate Matter - Total

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.20 lb/MMBtu (Carbonaceous Fuels)	4. Equivalent Allowable Emissions: 114.4 lb/hour 274.6 tons/year
5. Method of Compliance: EPA Method 5	
6. Allowable Emissions Comment (Description of Operating Method): Permit No. AC50-42476/PSD-FL-077 dated 10/28/81.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.1 lb/MMBtu (Fossil Fuel)	4. Equivalent Allowable Emissions: 31.5 lb/hour 75.7 tons/year
5. Method of Compliance: EPA Method 5	
6. Allowable Emissions Comment (Description of Operating Method): Based on firing No. 6 Fuel Oil at a maximum heat input rate for fuel oil of 315.25 MMBtu/hr. Annual allowable emissions based on 4,800 hr/yr of operation. Permit No. AC50-42476/PSD-FL-077 dated 10/28/81.	

Allowable Emissions Allowable Emissions of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATIONSection [1] of [2]
Boiler No. 4**POLLUTANT DETAIL INFORMATION**Page [2] of [6]
Nitrogen Oxide**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS****(Optional for unregulated emissions units.)****Potential/Estimated Fugitive Emissions**

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: NO_x		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 327.0 lb/hour 784.8 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.65 lb/MMBtu (Residue Firing) Reference: Permitted maximum emission rate for firing worst-case fuel.		7. Emissions Method Code: 0	
8. Calculation of Emissions: Hourly: 0.65 lb/MMBtu x 503.03 MMBtu/hr = 327.0 lb/hr Annual: 327.0 lb/hr x 4,800 hr/yr x 1 ton/2,000 lb = 784.8 TPY			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

EMISSIONS UNIT INFORMATION

Section [1] of [2]
Boiler No. 4

POLLUTANT DETAIL INFORMATION

Page [2] of [6]
Nitrogen Oxide

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.45 lb/MMBtu	4. Equivalent Allowable Emissions: 257.4 lb/hour 617.8 tons/year
5. Method of Compliance: EPA Method 7E	
6. Allowable Emissions Comment (Description of Operating Method): Permit No. AO50-191735 dated 1/27/97, RACT Permit Amendment. Applies when firing bagasse @ 572 MMBtu/hr.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.65 lb/MMBtu	4. Equivalent Allowable Emissions: 327.0 lb/hour 784.8 tons/year
5. Method of Compliance: EPA Method 7E	
6. Allowable Emissions Comment (Description of Operating Method): Applies when firing bagasse residue @ 503.03 MMBtu/hr.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1] of [2]
Boiler No. 4

Page [3] of [6]
Volatile Organic Compounds

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: VOC	2. Total Percent Efficiency of Control:
3. Potential Emissions: 400.4 lb/hour 961 tons/year	4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 0.7 lb VOC/MMBtu Reference: Permitted VOC Emission Rate	7. Emissions Method Code: 0
8. Calculation of Emissions: Hourly: $0.7 \text{ lb VOC/MMBtu} \times 572 \text{ MMBtu/hr} = 400.4 \text{ lb/hr}$ Annual: $400.4 \text{ lb/hr} \times 4,800 \text{ hr/yr} \times 1 \text{ ton}/2,000 \text{ lb} = 961 \text{ TPY}$	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

EMISSIONS UNIT INFORMATIONSection [1] of [2]
Boiler No. 4**POLLUTANT DETAIL INFORMATION**Page [3] of [6]
Volatile Organic Compounds**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS****Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.****Allowable Emissions** Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.7 lb/MMBtu	4. Equivalent Allowable Emissions: 400.4 lb/hour 961 tons/year
5. Method of Compliance: EPA Methods 25A and 18, combined.	
6. Allowable Emissions Comment (Description of Operating Method): Permit No. 0990026-005-AC; dated 04/28/03.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [1] of [2]
Boiler No. 4

POLLUTANT DETAIL INFORMATION

Page [4] of [6]
Sulfur Dioxide

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: SO₂		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 1,099 lb/hour 2,638 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 2.4% S fuel oil Reference: Permit Limit		7. Emissions Method Code: 3	
8. Calculation of Emissions: Hourly: see Attachment SCG-EU1-F8 Annual: 1,099 lb/hr x 4,800 hr/yr x 1 ton/2,000 lb = 2,637.6 TPY			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1] of [2]
Boiler No. 4

Page [4] of [6]
Sulfur Dioxide

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: Maximum sulfur content of fuel = 2.4%	4. Equivalent Allowable Emissions: 1,024 lb/hour 2,458 tons/year
5. Method of Compliance: Record keeping of total fuel oil to Boiler Nos. 1 through 5 as described in the current Title V permit.	
6. Allowable Emissions Comment (Description of Operating Method): Construction Permit No. AC50-2334 dated 10/14/74 and Permit No. AC50-42476/PSD-FL-077 dated 10/28/81. See Attachment SCG-EU1-F8 for calculations.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [1] of [2]
 Boiler No. 4

POLLUTANT DETAIL INFORMATION

Page [5] of [6]
 Methanol (H115)

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
 POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: Methanol (H115)		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 3.73 lb/hour 8.95 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 6.52E-03 lb/MMBtu (Carbonaceous Fuels) Reference: Test Data		7. Emissions Method Code: 1	
8. Calculation of Emissions: Hourly: 6.52E-03 lb/MMBtu x 572 MMBtu/hr = 3.73 lb/hr Annual: 3.73 lb/hr x 4,800 hr/yr x 1 ton/2,000 lb = 8.95 TPY			
9. Pollutant Potential/Estimated Fugitive Emissions Comment: Annual potential PM emissions based on 4,800 hr/yr of operation firing bagasse. Although Boiler No. 4 may also fire fuel oil and natural gas, firing bagasse results in worst-case methanol emissions.			

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1] of [2]
Boiler No. 4

Page [6] of [6]
POM (H151)

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: POM (H151)	2. Total Percent Efficiency of Control:
3. Potential Emissions: <p style="text-align: center;">7.66 lb/hour 18.40 tons/year</p>	4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 1.34E-02 lb/MMBtu (Carbonaceous Fuels) Reference: Test Data	7. Emissions Method Code: 1
8. Calculation of Emissions: Hourly: 1.34E-02 lb/MMBtu x 572 MMBtu/hr = 7.66 lb/hr Annual: 7.66 lb/hr x 4,800 hr/yr x 1 ton/2,000 lb = 18.40 TPY	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: Annual potential PM emissions based on 4,800 hr/yr of operation firing bagasse. Although Boiler No. 4 may also fire fuel oil and natural gas, firing bagasse results in worst-case methanol emissions.	

EMISSIONS UNIT INFORMATIONSection [1] of [2]
Boiler No. 4**POLLUTANT DETAIL INFORMATION**Page [6] of [6]
POM (H151)**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS****Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.****Allowable Emissions** Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

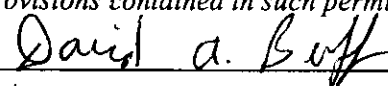
1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: David A. Buff Registration Number: 19011
2. Professional Engineer Mailing Address... Organization/Firm: Golder Associates Inc.** Street Address: 6241 NW 23rd Street, Suite 500 City: Gainesville State: FL Zip Code: 32653
3. Professional Engineer Telephone Numbers... Telephone: (352) 336-5600 ext. 545 Fax: (352) 336-6603
4. Professional Engineer Email Address: dbuff@golder.com
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <i>(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</i> <i>(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.</i> <i>(3) If the purpose of this application is to obtain a Title V air operation permit (check here <input type="checkbox"/> 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 plan and schedule is submitted with this application.</i> <i>(4) If the purpose of this application is to obtain an air construction permit (check here <input checked="" type="checkbox"/> if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here <input type="checkbox"/> 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.</i> <i>(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here <input type="checkbox"/> 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.</i> <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">  _____ Signature </div> <div style="text-align: center;"> _____ 2/17/04 Date </div> </div> (seal)

* Attach any exception to certification statement.

** Board of Professional Engineers Certificate of Authorization #00001670

ATTACHMENT A

**UPDATES TO APPLICATION FORM
FOR BOILER NO. 4**

EMISSIONS UNIT INFORMATION

Section [1] of [2]

Boiler No. 4

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

Two parallel Joy Turbulaire Type D wet impingement scrubbers.

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

EMISSIONS UNIT INFORMATION

Section [1] of [2]

Boiler No. 4

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	002		EL
NO _x			EL
VOC			EL
SO ₂			EL
Methanol (H115)			NS
POM (H151)			NS

EMISSIONS UNIT INFORMATION

Section [1] of [2]
Boiler No. 4

POLLUTANT DETAIL INFORMATION

Page [1] of [6]
Particulate Matter - Total

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.20 lb/MMBtu (Carbonaceous Fuels)	4. Equivalent Allowable Emissions: 114.4 lb/hour 274.6 tons/year
5. Method of Compliance: EPA Method 5	
6. Allowable Emissions Comment (Description of Operating Method): Permit No. AC50-42476/PSD-FL-077 dated 10/28/81.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.1 lb/MMBtu (Fossil Fuel)	4. Equivalent Allowable Emissions: 31.5 lb/hour 75.7 tons/year
5. Method of Compliance: EPA Method 5	
6. Allowable Emissions Comment (Description of Operating Method): Based on firing No. 6 Fuel Oil at a maximum heat input rate for fuel oil of 315.25 MMBtu/hr. Annual allowable emissions based on 4,800 hr/yr of operation. Permit No. AC50-42476/PSD-FL-077 dated 10/28/81.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATIONSection [1] of [2]
Boiler No. 4**POLLUTANT DETAIL INFORMATION**Page [2] of [6]
Nitrogen Oxide**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS****(Optional for unregulated emissions units.)****Potential/Estimated Fugitive Emissions****Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.**

1. Pollutant Emitted: NO_x		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 327.0 lb/hour 784.8 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.65 lb/MMBtu (Residue Firing) Reference: Permitted maximum emission rate for firing worst-case fuel.		7. Emissions Method Code: 0	
8. Calculation of Emissions: Hourly: 0.65 lb/MMBtu x 503.03 MMBtu/hr = 327.0 lb/hr Annual: 327.0 lb/hr x 4,800 hr/yr x 1 ton/2,000 lb = 784.8 TPY			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

EMISSIONS UNIT INFORMATION

Section [1] of [2]
Boiler No. 4

POLLUTANT DETAIL INFORMATION

Page [2] of [6]
Nitrogen Oxide

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.45 lb/MMBtu	4. Equivalent Allowable Emissions: 257.4 lb/hour 617.8 tons/year
5. Method of Compliance: EPA Method 7E	
6. Allowable Emissions Comment (Description of Operating Method): Permit No. AO50-191735 dated 1/27/97, RACT Permit Amendment. Applies when firing bagasse @ 572 MMBtu/hr.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.65 lb/MMBtu	4. Equivalent Allowable Emissions: 327.0 lb/hour 784.8 tons/year
5. Method of Compliance: EPA Method 7E	
6. Allowable Emissions Comment (Description of Operating Method): Applies when firing bagasse residue @ 503.03 MMBtu/hr.	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATIONSection [1] of [2]
Boiler No. 4**POLLUTANT DETAIL INFORMATION**Page [3] of [6]
Volatile Organic Compounds**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS****(Optional for unregulated emissions units.)****Potential/Estimated Fugitive Emissions**

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: VOC	2. Total Percent Efficiency of Control:	
3. Potential Emissions: 400.4 lb/hour 961 tons/year	4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year		
6. Emission Factor: 0.7 lb VOC/MMBtu Reference: Permitted VOC Emission Rate	7. Emissions Method Code: 0	
8. Calculation of Emissions: Hourly: 0.7 lb VOC/MMBtu x 572 MMBtu/hr = 400.4 lb/hr Annual: 400.4 lb/hr x 4,800 hr/yr x 1 ton/2,000 lb = 961 TPY		
9. Pollutant Potential/Estimated Fugitive Emissions Comment:		

EMISSIONS UNIT INFORMATION

Section [1] of [2]
Boiler No. 4

POLLUTANT DETAIL INFORMATION

Page [3] of [6]
Volatile Organic Compounds

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.7 lb/MMBtu	4. Equivalent Allowable Emissions: 400.4 lb/hour 961 tons/year
5. Method of Compliance: EPA Methods 25A and 18, combined.	
6. Allowable Emissions Comment (Description of Operating Method): Permit No. 0990026-005-AC; dated 04/28/03.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1] of [2]
Boiler No. 4

Page [4] of [6]
Sulfur Dioxide

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: Maximum sulfur content of fuel = 2.4%	4. Equivalent Allowable Emissions: 1,024 lb/hour 2,458 tons/year
5. Method of Compliance: Record keeping of total fuel oil to Boiler Nos. 1 through 5 as described in the current Title V permit.	
6. Allowable Emissions Comment (Description of Operating Method): Construction Permit No. AC50-2334 dated 10/14/74 and Permit No. AC50-42476/PSD-FL-077 dated 10/28/81. See Attachment SCG-EU1-F8 for calculations.	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: Methanol (H115)	2. Total Percent Efficiency of Control:
3. Potential Emissions: 3.73 lb/hour 8.95 tons/year	4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: 6.52E-03 lb/MMBtu (Carbonaceous Fuels) Reference: Test Data	7. Emissions Method Code: 1
8. Calculation of Emissions: Hourly: 6.52E-03 lb/MMBtu x 572 MMBtu/hr = 3.73 lb/hr Annual: 3.73 lb/hr x 4,800 hr/yr x 1 ton/2,000 lb = 8.95 TPY	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: Annual potential PM emissions based on 4,800 hr/yr of operation firing bagasse. Although Boiler No. 4 may also fire fuel oil and natural gas, firing bagasse results in worst-case methanol emissions.	

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1] of [2]
Boiler No. 4

Page [5] of [6]
Methanol (H115)

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [1] of [2]
Boiler No. 4

POLLUTANT DETAIL INFORMATION

Page [6] of [6]
POM (H151)

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: POM (H151)	2. Total Percent Efficiency of Control:	
3. Potential Emissions: 7.66 lb/hour 18.40 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year		
6. Emission Factor: 1.34E-02 lb/MMBtu (Carbonaceous Fuels) Reference: Test Data		7. Emissions Method Code: 1
8. Calculation of Emissions: Hourly: 1.34E-02 lb/MMBtu x 572 MMBtu/hr = 7.66 lb/hr Annual: 7.66 lb/hr x 4,800 hr/yr x 1 ton/2,000 lb = 18.40 TPY		
9. Pollutant Potential/Estimated Fugitive Emissions Comment: Annual potential PM emissions based on 4,800 hr/yr of operation firing bagasse. Although Boiler No. 4 may also fire fuel oil and natural gas, firing bagasse results in worst-case methanol emissions.		

EMISSIONS UNIT INFORMATIONSection [1] of [2]
Boiler No. 4**POLLUTANT DETAIL INFORMATION**Page [6] of [6]
POM (H151)**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS****Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.****Allowable Emissions** Allowable Emissions __ of __

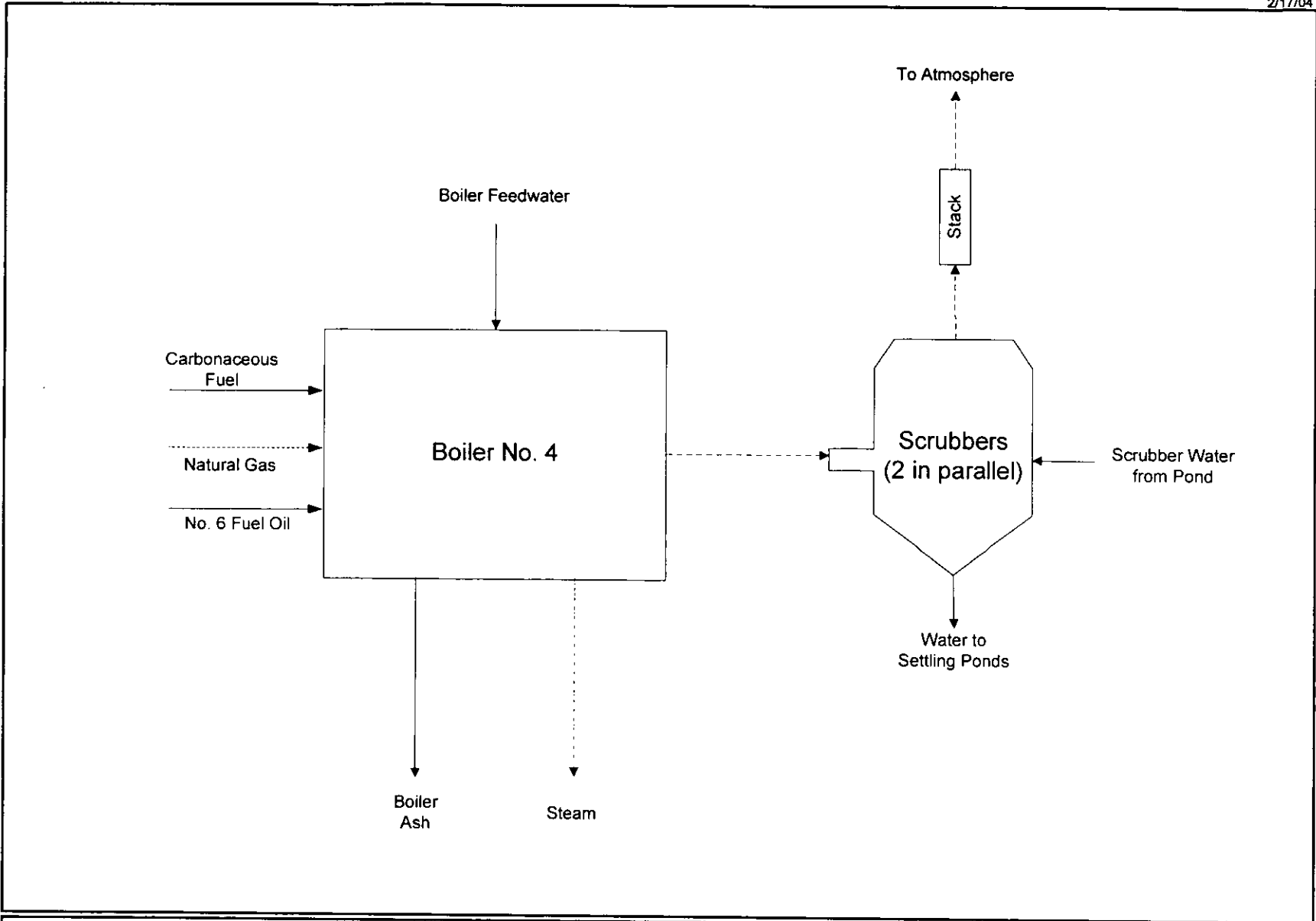
1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions __ of __

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	



Attachment SCG-EU1-11
Process Flow Diagram

Source: Golder, 2003.

Process Area: Boiler No. 4
0237588/4/4.4/4.1 Boilers 4&5/SCG-EU1-
11new.vsd
Latest Revision Date: 2/17/2004

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



ATTACHMENT SCG-EU1-13
DETAILED DESCRIPTION OF CONTROL EQUIPMENT

SUGAR CANE GROWERS COOPERATIVE OF FLORIDA
BOILER NO. 4

Control equipment: Two (2) Joy Turbulaire wet impingement scrubbers, custom design.

Scrubbing Liquid:	Water
Inlet Water Pressure (psi)	0-100
Pressure Drop Across Scrubber (Inches H ₂ O)	0-15



Jeb Bush
Governor

Department of Environmental Protection

FILE

South District
P.O. Box 2549
Fort Myers, Florida 33902-2549

David B. Struhs
Secretary

January 7, 2004

RECEIVED

FEB 19 2004

Mr. Jose F. Alvarez
Senior Vice President Planning and Operations
Sugar Cane Growers
Post Office Box 666
Belle Glade, Florida 33430-0666

BUREAU OF AIR REGULATION

Re: Palm Beach Co. – AP
Request for Additional Information
Permit No. 0990026-008-AC
Glades Sugar House

Dear Mr. Alvarez:

The Department received the construction application concerning Boiler Nos. 4 & 5 for Sugar Cane Growers Cooperative of Florida on December 8, 2003. Upon review, the Department has some questions regarding the addition of natural gas. In order to continue processing your application, the Department will need the additional information listed in this letter no later than 90 days from receipt. 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.

The Department will resume processing your application after the receipt of the requested information.

1. Part B of the application concerning section 1.0 Project Description

- a. It is stated in the 5th paragraph "SCGCF is proposing to add the capability to fire natural gas as a **substitute** for No. 6 fuel oil in Boilers Nos. 4 and 5." However in the 7th paragraph, it is stated that "the addition of natural gas burning capabilities will allow SCGCF the option of burning either oil, gas, or both when fossil fuels are needed." Please clarify if the burning of No. 6 Fuel oil is being substituted by natural gas for Boiler Nos. 4 and 5 or is the facility requesting the capability of using both.
- b. In the 8th paragraph, it is mentioned that "based on the best available data, emission of carbon monoxide (CO) may increase compared to fuel oil firing, but this increase will be less then the PSD significant emissions rate for CO of 100 tons per year." Please submit the calculations of carbon monoxide (CO) for natural gas usage for Boilers Nos. 4 and 5 for Section F1. Emissions Unit Pollutant Detail Information – Potential/Estimated Fugitive Emissions.

2. Part B of the application concerning section 2.0 Air Emissions and section 3.1 New Source Review
 - a. Since there are some discrepancies throughout the application for the two boilers, please indicate what the hours of operation will be for Boilers Nos. 4 and 5. (In the 1st paragraph of section 2.0 Air Emission, it is stated that the estimates of Tables 1 and 2 are based on the AP-42 emissions factors for PM, SO₂ and VOC, vendor performances data for NO_x and CO, and the equivalent of 2,600 hr/yr of firing natural gas in each boiler. In the 3rd paragraph of section 3.1 New Source Review, it is stated that “in order to determine the potential increase in actual emissions due to the proposed modification of the burners, maximum annual emission rates due to firing natural gas for an equivalent of 2,600~~0~~ hr/yr in both Boiler Nos. 4 and 5 were calculated.” On page 16 for both Boiler Nos. 4 and 5, the requested maximum operating schedule for each boiler indicates 4,800 hours/year.)
3. Part B of the application concerning section 3.2 New Source Performance Standards

We will be consulting the Central Office for a determination of NSPS.
4. Emissions Unit Control Equipment for Boiler No. 4

On page 15, it is stated in the Control Equipment/Method(s) Description that the “multi-cyclone dust collector followed by two parallel Joy Turbulaire Type D wet impingement scrubbers”. At this time, the Department has been unable to verify the construction of the multi-cyclone dust collector. Please indicate if it is new to boiler?
5. Section E. Emissions Unit Pollutants.

The list of pollutants emitted by Emission Unit for Boiler No. 4 had Methanol (H115) and POM (H151) listed but there are no corresponding F1. Emissions Unit Pollutant Detail Information – Potential/Estimated Fugitive Emissions sheets for these two HAPs. Please submit additional information of these HAPs for our files.
6. Particulate Matter (PM) for Boiler No. 4 of F1. Emissions Unit Pollutant Detail Information – Potential/Estimated Fugitive Emissions.

The Emission Factor that is listed for Particulate Matter (PM) is 0.25 lb PM/MMBtu (Carbonaceous Fuels) for worst-case fuel. In Permit 0990026-004-AV, the limit for PM for Boiler No. 4 is listed as 0.20 lb/ MMBtu. Please explain the change in this and submit in calculations for the correct emission factor.
7. Nitrogen Oxides (NO_x) for Boiler No. 4 of F1. Emissions Unit Pollutant Detail Information – Potential/Estimated Fugitive Emissions.

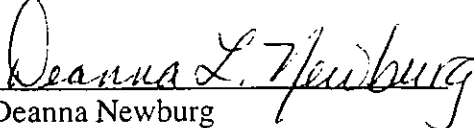
For the hourly calculation for NO_x, the heat input rate is listed as 503.03 MMBtu/hr. Under Section B. Emissions Unit Capacity Information, the Maximum Heat Input Rate for Boiler No. 4 is listed as 572 MMBtu/hr. Please revisit this issue.
8. Sulfur Dioxide (SO₂) for Boiler No. 4 and Boiler No. 5 of F1. Emissions Unit Pollutant Detail Information – Potential/Estimated Fugitive Emissions.

The Potential to Emit Emissions for SO₂ is based on 2.4% S fuel oil. Please submit the calculations for the limit of SO₂ using the common conditions in Section H. of Permit 0990026-004-AV, Conditions H.1. and H.2.
9. C. Emission Point (Stack/Vent) Information for Boilers No. 4 and 5.

We are in the process of verifying the information submitted and we will be discussing this further.

If you should have any questions, please contact me at 239/332-6975 ext 173 or Mara Nasca at ext 188.

Sincerely,


Deanna Newburg
Engineer III

DLN/dln

Cc: David A. Buff, P.E., Golder Associates Inc.

Kathy Lockhart, Environmental Manager, Sugar Cane Growers Cooperative of Florida

Sugar Cane Growers Cooperative of Florida



POST OFFICE BOX 666

BELLE GLADE, FLORIDA

33430-0666

January 28, 2004

VIA: Certified Mail # 7099 3400 0002 3354 0380
Return Receipt Requested

Mr. Ron Blackburn
Florida Department of Environmental Protection
South District Office
P. O. Box 2549
Ft. Myers, FL 33902-2549

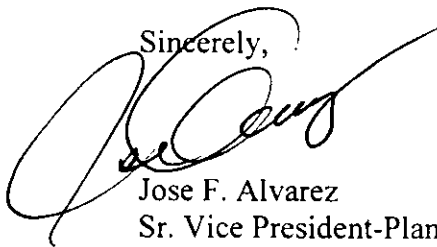
Re: Scrubber Replacement for Boiler 5

Dear Mr. Blackburn:

Sugar Cane Growers Cooperative of Florida is planning to replace the two scrubbers on Boiler 5 with two new scrubbers during the upcoming 2004 off-season. The existing scrubbers are more than twenty years old and in need of replacement. No increase in emissions is expected as a result of this replacement.

Should you have any questions, please contact Kathy Lockhart (561-996-4779). We would like to receive written confirmation that SCGC may proceed with the planned replacement.

Sincerely,



Jose F. Alvarez
Sr. Vice President-Planning and Operations

cc: A. K. Satyal – Palm Beach County Health Dept.
David Buff – Golder Associates, Inc.

RECEIVED

FEB 02 2004

D.E.P. - South District

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul style="list-style-type: none"> 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. 	<p>A. Received by (Please Print Clearly) <u>Evelyn B. Taylor</u> B. Date of Delivery <u>3/11/04</u></p> <p>C. Signature <u>X Evelyn B. Taylor</u> <input type="checkbox"/> Agent <input checked="" type="checkbox"/> Addressee</p>
<p>1. Article Addressed to:</p> <p>Mr. Jose F. Alvarez Vice President Planning and Plant Operations Glades Sugar House Sugar Cane Growers Cooperative of Florida P. O. Box 666 Belle Glade, FL 33430-0666</p>	<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>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.</p> <p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>
<p>2. Article Number (Copy from service label) <u>7000 0600 0226 4129 8825</u></p>	
PS Form 3811, July 1999	Domestic Return Receipt
	102595-99-M-1789

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

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Certified Fee		
Return Receipt Fee (Endorsement Required)		
Restricted Delivery Fee (Endorsement Required)		
Total Postage & Fees	\$	

Recipient's Name (Please Print Clearly) (to be completed by mailer)
Mr. Jose Alvarez, Sugar Cane Growers
Street, Apt. No., or PO Box No.
P.O. Box 666
Belle Glade, FL 33430-0666

PS Form 3800, February 2000 See Reverse for instructions