# LANDERS & PARSONS, P.A.

ATTORNEYS AT LAW

DAVID S. DEE
RONALD A. LABASKY
JOSEPH W. LANDERS, JR.
JOHN T. LAVIA, III
PHILIP S. PARSONS
ROBERT SCHEFFEL WRIGHT

310 WEST COLLEGE AVENUE TALLAHASSEE, FL 32301

MAILING ADDRESS:
POST OFFICE BOX 271
TALLAHASSEE, FL 32302-0271

TELEPHONE (850) 681-0311 TELECOPY (850) 224-5595 www.landersandparsons.com

August 31, 2005

RECEIVED

AUG 31 2005

BUREAU OF AIR REGULATION

Jeffrey F. Koerner, P.E. Division of Air Resources Department of Environmental Protection 2600 Blair Stone Road, MS 5505 -Tallahassee, Florida 32399-2400

Re: Osceola Farms Company

Modification of Boilers 4 & 5

DEP Project No. 0990019-006-AC (PSD-FL-337)

Dear Mr. Koerner:

On behalf of Osceola Farms Company ("Osceola"), I am sending you this letter to formally notify the Department of Environmental Protection that Osceola is hereby withdrawing its pending application (DEP Project No. 0990019-006-AC (PSD-FL-337) for the proposed modifications to Boilers 4 & 5.

Osceola respectfully requests the Department to return the application fee that Osceola submitted with its application. If a refund cannot be granted, please apply the unused balance toward a future Osceola project, if possible.

Thank you for your cooperation and assistance with this matter. Please call me at (850) 681-0311 if you have any questions or need any additional information.

Sincerely,

David S. Dee

cc: Trina Vielhauer, DEP
 Carlos Rionda, Osceola
 David Buff, Golder

# Golder Associates Inc.

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



TRANSM	IITTAI.	LE	$\Gamma T F R$

To: Jeff Koerner FDEP

Date: August 30, 2004 Project No.: 0437543

Sent by:	nav			
•		Mail		UPS
		Air Freight	$\boxtimes$	Federal Express
		Hand Carried		

Per: David Buff

Quantity	Item	Description
7	Final, Bound	Revised PSD Permit Application for Boiler Nos. 4 and 5 at Osceola Farms Mill

Remarks:

Y:\Projects\2004\0437543 Osceola Farms Boiler Nos. 4-5\4\4.1\T083004.dot

RECEIVED

SEP 01 2004

BUREAU OF AIR REGULATION

1	U.S. Postal Service CERTIFIED MAIL RECEIPT (Domestic Mail Only; No Insurance Coverage Provided)								
1991	OFF	ECTAL.	USE						
011E E100	Postage  Certified Fee  Return Receipt Fee (Endorsement Required)  Restricted Delivery Fee (Endorsement Required)	\$	Postmark Here						
7000 1670	Str Osceola Farms Post Office Bo	Company x 679							
L	PS Form 3800, May 2000		See Reverse for Instructions						

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
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.  Article Addressed to:  Mr. Carlos Rionda	B. Received by (Printed Name)  C. Date of Delivery  D. Is delivery address different from item 1?   Yes  If YES, enter delivery address below:
Osceola Farms Company Post Office Box 679	USPS
Pahokee, Florida 33476	3. Service Type  Certified Mall  Registered  Insured Mail  C.O.D.
	4. Restricted Delivery? (Extra Fee) ☐ Yes
2 Article Number (Transfer from service label) 7000 16	70 0013 3110 1991

1380L

UNITED STATES POSTAL SERVICE



First-Class Mail Postage & Fees Paid USPS Permit No. G-10

99-M-

• Sender: Please print your name, address, and ZIP+4 in this box •

Dept. of Environmental Potretion
Division of Air Resources NGT
Bureau of Air Regulation, NSR
2600 Blair Stone Rd., MS 5595
Tallahassee, FL 32399-2400

Dept. of Environmental Potretion
Division of Air Resources NGT

Bureau of Air Resources NGT

Bure

Inflantial Inflation that the Hard back in Inflation

BUREAU OF AIR REGULATION



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

Colleen M. Castille Secretary

December 9, 2004

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Carlos Rionda, Vice President and General Manager Osceola Farms Company P.O. Box 679 Pahokee, Florida 33476

Re:

Request for Additional Information - Reminder

Project No. 0990019-006-AC (PSD-FL-337)

Modification of Boilers 4 and 5 – Revised Application

Dear Mr. Rionda:

On September 1, 2004, the Department received your revised application a PSD air construction permit to modify existing Boilers 4 and 5 at Osceola Farms Company's sugar mill located in Palm Beach County, Florida. The application was deemed incomplete and the Department requested additional information on September 28, 2004 that would allow continued processing of your application. To date, we have not received the requested additional information. Rule 62-4.055(1) of the Florida Administrative Code requires the following:

"The applicant shall have ninety days after the Department mails a timely request for additional information to submit that information to the Department. If an applicant requires more than ninety days in which to respond to a request for additional information, the applicant may notify the Department in writing of the circumstances, at which time the application shall be held in active status for one additional period of up to ninety days. Additional extensions shall be granted for good cause shown by the applicant. A showing that the applicant is making a diligent effort to obtain the requested additional information shall constitute good cause. Failure of an applicant to provide the timely requested information by the applicable deadline shall result in denial of the application."

It has been more than 60 days since our request for additional information (copy attached). You are reminded that the permit processing time clock has stopped for this project and that we will not continue our review until we receive the additional information. If you require a period of time in addition to the 90 days allowed by rule, please submit a written request indicating the amount of time necessary. If you fail to provide the additional information or request additional time to submit the additional information, the Department will deny your application for air permit. If you have any questions regarding this matter, please call me at 850/921-9536.

Sincerely,

Jeffery F. Koerner, P.E. Air Permitting South Program

cc: Mr. Paco Farinas, Osceola Farms Company

Mr. David Buff, Golder Associates Inc.

Mr. David Dee, Landers and Parsons

Mr. Ron Blackburn, SD Office

Mr. James Stormer, PBCHD

Mr. Gregg Worley, EPA Region 4

Mr. John Bunyak, NPS

"More Protection, Less Process"

Printed on recycled paper.



# Best Available Copy Department of Environmental Protection

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

Colleen M. Castille Secretary

September 28, 2004

# CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Carlos Rionda, Vice President and General Manager Osceola Farms Company U.S. Highway 98 and Hatton Road Pahokee, Florida 33476

Re:

Request for Additional Information - Revised Application

Project No. 0990019-006-AC (PSD-FL-337)

Modification of Boilers 4 and 5 – Revised Application

### Dear Mr. Rionda:

On September 1, 2004 the Department received your revised application a PSD air construction permit to modify existing Boilers 4 and 5 at Osceola Farms Company's sugar mill located in Palm Beach County, Florida. The revised application indicates that the project is now subject to PSD review for only for emissions of nitrogen oxides (NOx) and volatile organic compounds (VOC). 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 items below require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

# 1. NOx BACT Review

- a. Netting: The application requests a limit on the combined heat input from Boiler 4 and 5 of 2,000,000 MMBtu per year. This is 20% higher than 2003 and 30% higher than 2002. If a finite amount of cane is milled each year, why is Osceola Farms Company requesting a 20% to 30% increase over previous years? As shown for CO, PM, and SO2 for this project, the Department's PSD regulations allow projects to "net out" of PSD preconstruction review by improving emission rates and accepting operational restrictions such that future emissions increases will not be significant. Please consider and comment on other possible combinations of NOx emission rates and operational restrictions that would allow this project to net out of PSD review.
- b. *Proposed BACT:* Based on the Title V permit for this facility, the following table summarizes the CO, NOx, and VOC emissions standards for each permitted boiler.

Table A. Summary of Emissions Standards, Osceola Farms Company

Boiler	Year	Steam Rate	Grate Type	Emis	sion Limits (lb/M)	MBtu)
Boner	rear	lb/hour	Grate Type	CO	NOx	VOC
2	~ 1965	140,000	Inclined Pinhole		0.45 (RACT)	1.5 (RACT)
3	~ 1965	150,000	Inclined Pinhole	3.5 (PSD-FL-134)	0.16 (PSD-FL-134)	0.25 (PSD-FL-134)
4	1965	140,000	Horseshoe		0.45 (RACT)	1.5 (RACT)
5 .	1978	165,000	Horseshoe		0.45 (RACT)	1.5 (RACT)
6	1981	195,000	Traveling	6.5 (PSD)	0.16 (PSD)	0.25 (PSD)
Project 4/5	2004	170,000	Inclined Pinhole	3.7 (proposed)	0.22 (proposed)	0.40 (proposed)

- (1) As stated in the application, Boilers 2 and 3 are similarly sized existing boilers with water-cooled, pinhole, inclined grate systems. Rules 62-296.570 and 62-297.310(7), F.A.C. require annual testing to demonstrate compliance with the NOx and VOC standards. For Boilers 2 and 3, provide a summary of all CO, NOx and VOC emissions tests performed to date.
- (2) Explain why the proposed NOx and VOC BACT standards for Boilers 4 and 5 are less stringent than the BACT determination made in 1988 for Boiler 3 or 1981 for Boiler 6.
- (3) Osceola Farms Company requests a NOx BACT limit of 0.22 lb/MMBtu based on a 24-hour test average. The basis for the BACT standard is "good combustion practices". Continuous process monitors for oxygen and carbon monoxide will be installed and operated to ensure good combustion is maintained. However, the application identifies a "baseline" NOx emission rate of 0.18 lb/MMBtu. After installing the new grate system and employing the control techniques identified in the application (ultra low nitrogen fuel, air staging of combustion, additional overfire air, less excess air, and combustion optimization) explain why the previous NOx emission rate cannot be maintained on a 24-hour average if operators also adhere to the specific "good combustion practices" outlined in the application.
- c. SNCR Cost Analysis: Provide information and data to support the following items:
  - The "vendor quote" for a \$1.6 million direct SNCR installation cost;
  - The 8% factor for foundations and supports;
  - The engineering estimates for air and water piping and electrical and controls (explain the components that are not included in the vendor quote);
  - The 15% factor for project contingencies;
  - The engineering estimate of 2% of process equipment for "maintenance";
  - The annual "NOxOut cost" of \$153,600 (explain):
  - The 25% control efficiency estimate.

Also, the OAQPS cost manual bases the factors for "direct installation costs" (foundations and supports, labor, electrical, piping, insulation, painting, etc.) and for "indirect capital costs" (engineering, construction and field expense, contractor fees, startup, performance tests, contingencies, etc.) on the "purchased equipment costs" and not what is shown as the "direct capital costs". Revise accordingly.

- d. SCR Cost Analysis: Revise the SCR cost analysis to address the Department's comments and concerns identified above for the SNCR cost analysis.
- e. Flue Gas Recirculation: The application dismisses this technology because it has never been used on a bagasse-fired boiler. However, this straight-forward technology has been applied to similar grate fired boilers and is transferable to bagasse-fired boilers. Provide a vendor cost quote for flue gas recirculation specific to this project. Provide an economic analysis based on a vendor cost quote specifically for this project. Provide all supporting information. Explain diversions from the standard OAQPS cost analysis procedures.
- f. Opposed Fire Air Systems: In February of 2004, Mobotec USA gave the Bureau of Air Regulation presentations several of their technologies for controlling CO, NOx and VOC emissions. Their basic system is called "ROFA" for "rotating opposed fire air". In short, opposed fire air fans are placed in strategic positions of the boiler to swirl the combustion over fire combustion air and gases. Thorough mixing allows a more uniform combustion temperature, which reduces "hot" and "cold" spots. In turn, this reduces CO, NOx, and VOC emissions. The vendor indicates that ROFA results in improved combustion and boiler efficiencies. Mobotec also offers the "Rotomix" system, which is the ROFA system plus the injection of ammonia or urea to further reduce NOx emissions. Because the ROFA system promotes thorough mixing, only small amounts of urea or ammonia are necessary to achieve additional NOx reductions. Mobotec's project list includes several U.S. installations covering a variety of sold fuels fired on grate systems including coal, peat, wood powder, wood chips, and bark. The vendor made it clear that the ROFA and Rotomix systems can be installed on a sugar mill boiler.

For this project, provide separate cost effectiveness analyses for Mobotec's ROFA system and for the Rotamix system (with urea or ammonia injection). Please include the information provided to Mobotec, the Mobotec cost quote and emissions, all supporting information for assumptions and estimates, and explanations to deviations from the OAQPS cost manual. As these systems are capable of reducing CO, NOx and VOC emissions, please include separate cost effectiveness analysis (\$/ton of pollutants removed) based on: NOx only; NOx and VOC;

Request for Additional Information Project No. 0990019-006-AC (PSD-FL-337)

and NOx, VOC, and CO. The Mobotec web site is: <a href="http://www.mobotecusa.com/">http://www.mobotecusa.com/</a>. The contact information is: Jay S. Crilley, P.E., Director of Marketing and Development; <a href="jerillev@mobotecusa.com">jerillev@mobotecusa.com</a>; Mobotec USA, Inc.; 217 Executive Drive, Suite 301; Cranberry Township, PA 16066; Phone 724-772-0244; Fax 724-772-0242. Attached is an example of the information that may be needed to prepare a cost estimate.

# 2. VOC RACT

- a. Netting: For the VOC BACT proposed in the application, the Department offers comments similar to those made in 2c for the proposed NOx BACT. Please consider and comment on other possible combinations of VOC emission rates and operational restrictions that would allow this project to net out of PSD review.
- b. Proposed BACT: Osceola Farms Company requests a VOC BACT limit of 0.40 lb/MMBtu based on a 24-hour test average. The basis for the BACT standard is "good combustion practices". Continuous process monitors for oxygen and carbon monoxide will be installed and operated to ensure good combustion is maintained. However, the application identifies a "baseline" VOC emission rate of 0.23 lb/MMBtu. After improving combustion with the new grate system, explain why the VOC emission rate cannot be maintained on a 24-hour average if operators adhere to the specific "good combustion practices" outlined in the application.
- c. Opposed Fire Air Systems: Based on the Department's request in 1f above, provide a cost effectiveness estimate (\$\text{S/ton of VOC reduction}\$) for the Mobotec ROFA system based on VOC reductions.
- d. Regenerative Thermal Oxidizer: Provide a cost effectiveness analyses for a regenerative thermal oxidizer. Provide information submitted to the vendor, the vendor's cost quote and emissions, all supporting information for assumptions and estimates, and explanations to deviations from the OAQPS cost manual. Also evaluate the additional control of CO emissions with this system. Two facilities in the same general area have obtained air construction permits to add natural gas as a boiler fuel. Discuss the availability of natural gas for Osceola Farms Company.
- 3. New Grate System: Provide the vendor specification sheets for the water-cooled, pinhole, inclined grate systems. Submit any information available from the vendor related to emissions.
- 4. Mill Production: Page 2-1 of the application identifies the sugarcane processing rate for this facility over a 10-year period. Please explain the note, "Florida Crystals Corporation production only." Since 1994/1995 crop season, the sugarcane processing rate increased by about 33%. From where has the additional sugarcane come? Have new fields been acquired? The application states that the project will allow an increased milling rate (tons per day). Describe Osceola Farms Company's short term and long term plans for utilizing this increased capacity. For each of these years provide the steam production from the facility boilers.
- 5. <u>Previous PSD Determinations</u>: Has either Boiler 4 or Boiler 5 been previously subject to PSD preconstruction review? Please explain and provide any previous PSD permits and BACT determinations for these units. Provide copies of the PSD permits and BACT determinations for Permit No. PSD-FL-134 (Boiler 3).
- 6. <u>Air Quality Modeling Analysis</u>: Show how the NOx emission rates used for modeling purposes (gram/second) were determined.

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.

Jeffery F. Koerner, P.E.

Air Permitting South Program

effery J. Kee

Osceola Farms Company Modification of Boiler 4 and 5, Revised Application Page 4 of 4 Request for Additional Information Project No. 0990019-006-AC (PSD-FL-337)

cc: Mr. Paco Farinas, Osceola Farms Company

Mr. David Buff, Golder Associates Inc. Mr. Ron Blackburn, SD Office

Mr. Ron Blackburn, SD Office Mr. James Stormer, PBCHD Mr. Gregg Worley, EPA Region 4

Mr. John Bunyak, NPS

# Data Needed to Provide Estimated MobotecSystem Installation Cost

General Information:	
Date:	
Date: Name of Utility: Plant Name:	
Plant Name:	
Address:	
Contact:	
Tel: Fax:	E-mail:
Fuel - Coal:	
Fuel Components	Percent (%)
C - Carbon	
H2 – Hydrogen	
O2 – Oxygen	
N2 – Nitrogen	
S – Sulfur	
Ash	
Moisture	
·	
Sum	100.00%
*Note: For each of the following data collect measure. Both units of measure are shown.  Mass Flow of Fuel and Air:	tions please use either English or SI units of
1. Full load (MCR) =	Mwe.
Secondary and Primary Air:	
1. Temperature	
Secondary Air = Deg F	
Primary Air and Coal Flow =	Deg F

2. Total Primary and Secondary Air:

Total Primary Air = Kg/s

Total Secondary Air = Kg/s

# Burners:

- 1. Individual direction and flow through each burner (if possible)
- 2. Information on the burners type, year installed, drwgs if possible

# Heating Surfaces and Temperature:

- 1. Superheated steam flow, temperature and pressure
- 2. Individual square foot of heating surfaces --- reheat + superheat + economizer etc

# Components of Flow Gas:

- 1. NOx discharge lbs/Mbtu, where taken and at what loading levels
- 2. CO discharge PPM, where taken and at what loading levels
- 3. Excess O2 %, where taken and at what loading levels
- 4. LOI % and where taken
- 5. Flue gas flow ACFM and temperature (including temperature location)
- 6. SO2 discharge lbs/Mbtu, where taken and at what loading levels

# Geometric Furnace Data:

- Side, front, back and plan view drwgs of unit (one drwg of each is acceptable drwgs need not be full scale 8 ½ x 11 is fine)
- 2. Depth = ft.
- 3. Furnace width = ft.
- 4. Height differences between coal nozzles, air outlets, nose above centerline of burner, nose at wall to nose at neck, etc.

# Miscellaneous Information:

- 1. Please provide the FD and ID fan curves. A plot print out of the fan performance would also be acceptable.
- 2. Quantity and amount of spray that is used at full load and other regular running level(s)
- 3. Any fuel variation or fineness issues
- 4. NOx control system(s) currently in place. If in place, NOx discharge with and without controls

# Customer Objectives:

- Objectives of installation
   Short term and long term requirements
   Specific operating requirements



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

Colleen M. Castille Secretary

July 28, 2004

## CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Carlos Rionda, Vice President and General Manager Osceola Farms Company P.O. Box 679 Pahokee, Florida 33476-0606

Re: Air Permit Project No. 0990019-006-AC (PSD-FL-337) Modifications to Sugar Mill Boilers 4 and 5 Extension of Time to Provide Additional Information

Dear Mr. Rionda:

We received this application on November 3, 2003 and requested additional information in letters dated December 1 and 18, 2003. Since then we have met twice with your consultant, David Buff of Golder Associates, to discuss the project. We have extended the time to submit the requested information on at least three occasions. On July 27, 2004, we received an email from Mr. Buff stating your intentions of going forward with this project. It is our understanding that Mr. Buff is preparing a response that will substantially modify the current application on file. As a result, he requested an extension of time (August 30, 2004) to provide a response. We agree to extend the period of time to respond to August 30, 2004. You are reminded of the following requirements in Rule 62-4.055(1) of the Florida Administrative Code:

"The applicant shall have ninety days after the Department mails a timely request for additional information to submit that information to the Department. If an applicant requires more than ninety days in which to respond to a request for additional information, the applicant may notify the Department in writing of the circumstances, at which time the application shall be held in active status for one additional period of up to ninety days. Additional extensions shall be granted for good cause shown by the applicant. A showing that the applicant is making a diligent effort to obtain the requested additional information shall constitute good cause. Failure of an applicant to provide the timely requested information by the applicable deadline shall result in denial of the application."

This is the last extension. If you fail to provide the additional information, the Department will deny your application for air permit. Alternatively, you may decide to withdraw you application and resubmit when ready. We 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. If you have any questions regarding this matter, please call me at 850/921-9536.

Sincerely.

Jeffery F. Koorner, Air Permitting South

Bureau of Air Regulation

cc: Mr. Jorge Cabrera, Osceola Farms Company

Mr. David Buff, Golder Associates Inc.

Mr. Ron Blackburn, SD Office

Mr. James Stormer, PBCHD

Mr. Gregg Worley, EPA Region 4

Mr. John Bunyak, NPS

"More Protection, Less Process"

	U.S. Postal Service CERTIFIED MAIL RECEIPT (Domestic Mail Only; No Insurance Coverage Provided)									
3680	OFF	CIA	LUSE							
7028	Postage Certified Fee	\$ 	Postmark							
0000	Return Receipt Fee (Endorsement Required) Restricted Delivery Fee (Endorsement Required)		Here							
2870		\$ ionda								
2000	Street, Apt. No.; or PO PO box 6	80x No. 79								
7	Pahokee, PS Form 3800, May	FL 33476 2000	See Reverse for Instructions							

#### COMPLETE THIS SECTION ON DELIVERY SENDER: COMPLETE THIS SECTION ■ Complete items 1, 2, and 3. Also complete Received by (Please Print Clearly) B. Date of Delivery item 4 if Restricted Delivery is desired. ■ Print your name and address on the reverse C. Sįgnature 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. ☐ Yes D. Is delivery address different from item 1? 1. Article Addressed to: If YES, enter delivery address below: Mr. Carlos Rionda Vice President and General Manager Osceola Farms Company Post Office Box 679 3. Service Type Pahokee, FL 33476 Certified Mail Registered ☐ Express Mail ☐ Return Receipt for Merchandise ☐ Insured Mail ☐ C.O.D. 4. Restricted Delivery? (Extra Fee) ☐ Yes 2 Article Number (Copy from service label) 7000 2870 0000 7028 3680

UNITED STATES POSTAL SERVICE



First-Class Mail Postage & Fees Paid USPS Permit No. G-10

• Sender: Please print your name, address, and ZIP+4 in this box •

Dept. of Environmental Protection Division of Air Resources Mgt. Bureau of Air Regulation, NSR 2600 Blair Stone Rd., MS 5505 Tallahassee, FL 32399-2400 RECLIE

DEC 26 2003

BUREAU OF AIR REGULATION



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

David B. Struhs Secretary

December 18, 2003

# CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Carlos Rionda, Vice President and General Manager Osceola Farms Company (U.S. Highway 98 and Hatton Road) Post Office Box 679 Pahokee, Florida 33476

Re:

Request for Additional Information, Follow-up Project No. 0990019-006-AC (PSD-FL-337) Modification of Boilers 4 and 5

### Dear Mr. Rionda:

On November 3, 2003, the Department received your application and sufficient fee for a PSD air construction permit to modify existing Boilers 4 and 5 at the Osceola Farms Sugar Mill located in Palm Beach County, Florida. The application was deemed incomplete and a request for additional information was sent on December 1<sup>st</sup>. As noted in that request, the Department did not receive the air dispersion modeling files until November 19<sup>th</sup> and reserved the right to ask additional questions after completing the review. In order to continue processing your application, the Department will also need the additional information requested below. Should your response to any of the items below require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

- 1. Refer to Tables B-7 and B-8. The current "short-term" emission rates for many of the pollutants in this table are lower than the requested emission standards proposed as BACT for the project. For example, the "current short-term emissions rates for CO are listed as 3.98 lb/MMBtu and the proposed "BACT" CO emission standard is 6.0 lb/MMBtu. Discuss the issue of the BACT standard being 50% higher than the short-term emission rates for current operations. Explain the significance and use of the information shown in these tables to support the PSD application. Discuss the use of this information in any of the required modeling analyses.
- 2. The project triggers PSD preconstruction review for VOC emissions. Please address the impacts from VOC emissions on soils, vegetation, wildlife and visibility in the required Additional Impact Analysis.
- 3. For each piece of existing equipment, identify the following information.
  - a. Boilers: schematic drawing showing flue gas path and identifying flow rates (acfm and dscfm), temperatures (° F), approximate boiler and duct dimensions (ft), residence times (seconds), and elevation drawing of boiler with dimensions.
  - b. Wet Scrubbers: drawing of existing equipment showing placement of proposed mist eliminators; approximate dimensions (length, width, height in feet); inlet/outlet duct diameters (feet); and inlet/outlet flue gas flow rates (acfm and dscfm) and temperatures (° F).
- 4. What is the area (ft<sup>2</sup>) of the proposed grate system?
- 5. How many tons (on average) of raw sugar does the Osceola Farms sugar mill produce each year? Approximately, how many tons of refined sugar can be produced from one ton of raw sugar?
- 6. Did Osceola Farms Company install the package boiler that was part of the Palm Beach Power application, which was later withdrawn? Please explain.

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,

leffery F. Koerner

New Source Review Section

cc: Mr. Jorge Cabrera, Osceola Farms Company

Mr. David Buff, Golder Associates Inc.

Mr. Ron Blackburn, SD Office

Mr. James Stormer, PBCHD

Mr. Gregg Worley, EPA Region 4

Mr. John Bunyak, NPS

	U.S. Postal Service CERTIFIED MAIL RECEIPT (Domestic Mail-Only; No Insurance Coverage Provided)									
+										
3604	0 F	F		E-2733	A		U	S	E.	
-0		Postage	\$							
702	Cert	Ifled Fee					Sant	tmark		
	Return Red (Endorsement							ere ere		
0000	Restricted Del (Endorsement									
2	Total Postage	e & Fees	\$							
28	Sent To Carlos	Rio	nda							
7000	Street, Apt. No.; or PO Box No. PO Box 679									
2	<b>City, State, Zil</b> Pahoke	e, F	L 33	476						
<u> </u>	PS Form 380					See Rev	erse for	r Instru	ıctions	

#### SENDER: COMPLETE THIS SECTION COMPLETE THIS SECTION ON DELIVERY ■ Complete items 1, 2, and 3. Also complete Received by (Please Print Clearly) B. Date of Delivery item 4 if Restricted Delivery is desired. Print your name and address on the reverse C. Signature so that we can return the card to you. Attach this card to the back of the mailpiece, □ Agent ☐ Addressee □ or on the front if space permits. D. Is deliven ☐ Yes 1 Article Addressed to: If YES ☐ No Mr. Carlos Rionda Vice President and General Manager Osceola Farms Company Post Office Box 679 Pahokee, FL 33476 3. Service Type Certified Mail Registered Express Mail ☐ Return Receipt for Merchandise ☐ Insured Mail □ C.O.D. 4. Restricted Delivery? (Extra Fee) ☐ Yes 2 Article Number (Copy from service label) 7000 2870 0000 7028 3604

UNITED STATES POSTAL SERVICE



First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

Οi

• Sender: Please print your name, addless, and ZIR fin this box •

Dept. of Environmental Protection
Division of Air Resources Mgt.
Bureau of Air Regulation, NSR
2600 Blair Stone Rd., MS 5505
Tallahassee, FL 32399-2400



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

David B. Struhs Secretary

December 1, 2003

### CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Carlos Rionda, Vice President and General Manager Osceola Farms Company U.S. Highway 98 and Hatton Road Pahokee, Florida 33476

Re: Requ

Request for Additional Information Project No. 0990019-006-AC (PSD-FL-337)

Modification of Boilers 4 and 5

### Dear Mr. Rionda:

On November 3, 2003, the Department received your application and sufficient fee for a PSD air construction permit to modify existing Boilers 4 and 5 at the Osceola Farms Sugar Mill located in Palm Beach County, Florida. 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 items below require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

- 1. In general terms, describe the financial and business relationships between Osceola Farms Company and the Palm Beach Power, L.L.C. (cogeneration plant). Does Osceola Farms Company maintain an interest in the defunct cogeneration plant? Does Osceola Farms Company own or lease out the land on which the cogeneration plant rests? Identify any equipment located at the cogeneration plant that is owned by Osceola Farms Company. Describe the short term and long term plans for the cogeneration plant equipment (boilers, electrostatic precipitators, mechanical dust collectors, SNCR systems, etc.). Evaluate restarting the cogeneration boilers solely to replace the existing sugar mill boilers with modern well-controlled equipment.
- 2. Provide the annual mill production rate (total tons per year of sugarcane processed) since 1993. When was Boiler 1 initially constructed? When was Boiler 1 installed at the Osceola Sugar Mill? Why was Boiler 1 permanently shut down in 1993?
- 3. For each boiler, provide a schematic drawing that identifies the major components including, but not limited to: shell, refractory, steam drums, main steam generating bank, superheater, economizer, combustion air fans, air preheaters, fuel feeders, fuel feed grates, supplemental fuel burners, induced/forced draft fans, ash discharge, etc. The project proposes the following work for Boilers 4 and 5: replace the steam drum, main steam tube generating bank, and superheater tubes in 2004; replace the existing horseshoe cell-type boilers with water-cooled, pinhole inclined grate systems in 2005; and install new bagasse feeders with overfire air in 2005. Provide details for the capital costs as well as the construction labor and installation costs.
- 4. Appendix A of the application shows the original dates of manufacture as 1965 for Boiler 4 and 1978 for Boiler 5. Identify the original maximum continuous steam production rates as manufactured. When was each boiler installed on site at the Osceola Sugar Mill? Were either of these units modified or refurbished before initial installation at the Osceola Sugar Mill? Was Boiler 5 subject to PSD preconstruction review?
- 5. For Boilers 4 and 5, identify maintenance and repair activities performed since 1997. To the extent possible, summarize the equipment and labor costs to perform these activities. Besides the modifications proposed in the application, describe other maintenance and repair activities planned for Boiler 4 and 5 during the next five years.
- 6. In 1999, the sugarcane industry provided a report to EPA summarizing emissions from sugar mill boilers. The report categorized existing boilers as "old" (circa 1966), "middle-aged" (circa 1982) and "new" (circa 1996). In 1993, a PSD permit was issued for the adjacent Osceola Cogeneration Plant to fire bagasse and wood in new boilers that would

eventually replace the existing sugar mill boilers. In November of this year, the Department issued a PSD permit to U.S. Sugar Corporation for a new bagasse-fired boiler. The following table summarizes the emission rates for bagasse-fired boilers based on the report to EPA, the PSD permit for the 1993 cogeneration boilers, the PSD permit for U.S. Sugar's proposed new boiler, and Osceola Farms Company's current proposed application.

Table 1. Sugar Mill Boiler Emission Rates (lb/MMBtu)

Pollutant	Old 1962	Middle-Aged 1986	New 1996	Osceola Cogen Plant 1993, Original	USSC Boiler 8 2003	Proposed 2003
СО	7.86	0.38	0.22	0.35	0.38 (Not BACT)	6.0
NOx ·	0.14	0.20	0.32	0.14 (SNCR)	0.14 (SNCR)	0.25
PM	0.13	0.063	0.22	0.03	0.026 (ESP)	0.15
VOC	0.39	0.14	0.029	0.06	0.05	0.60
Organic HAP	0.36	0.017	0.0013			

Despite these and other substantial changes, the emissions rates proposed for Boilers 4 and 5 continue to reflect environmental performance of units constructed in the 1960s or before. A project to replace the steam drums and fuel grates as well as re-tube the superheaters and main steam generating banks suggests that the useful life of the boilers will be extended for perhaps an additional 25 to 30 years. Projects initiating such substantial physical modifications should be capable of meeting environmental standards for similar boilers being constructed at this time. The application does not currently reflect the "Best Available Control Technology" for units that are expected to operate anther 20 to 25 years after completion of the project. Please comment.

- 7. Describe the process of feeding bagasse to the modified boilers. Do the proposed new bagasse feeders have air lock systems to prevent tramp air intrusion? What are the physical capacities of the proposed new bagasse feeders? Provide the manufacturer's specification sheets for the bagasse feeders and the water-cooled pinhole grates. Provide information from the manufacturer related to emissions performance for water-cooled pinhole grate systems. Summarize available operational and emissions performance data based on test results for similar grate replacements.
- 8. What percentage of the combustion air will be provided as overfire air above the grate? How will the overfire air be delivered and distributed? What measures will be taken to provide thorough mixing of the flue gas to prevent hot/cold spots in the furnace? How many nozzles will be used? Show the overfire air system in a schematic drawing. Identify the company that will perform the engineering design for the overfire air system. Literature suggests that, for bagasse moisture contents in the range of 50% moisture by weight, preheated combustion air should be used to stabilize and improve the combustion efficiency. Will the combustion air be preheated? To what temperature?
- 9. As mentioned in the application, the high moisture content of bagasse (~ 55% moisture by weight) inhibits efficient fuel combustion, which leads to elevated emissions of carbon monoxide and organic compounds. Literature suggests that reducing the moisture content of bagasse down to 40% or less promotes efficient, stable combustion and may negate even the need for preheated combustion air. Provide an evaluation for a bagasse dryer that includes a vendor bid for this project, the specifications for the dryer, and a cost effectiveness analysis.
- 10. Will ash continue to be manually raked? Describe the process of removing ash from the boiler. How frequently will the boilers be raked? Describe the impacts of ash removal on combustion. Describe and quantify to the extent practical the impacts on emissions during ash removal.
- 11. Boilers 4 and 5 are currently "cell type" boilers that burn bagasse in a conical pile on the boiler hearth. The project proposes to modify the existing grate to reflect the slightly more modern design of a water-cooled, pinhole inclined grate system. The pinhole grate design allows more overfire air to stage and complete the combustion process. Other grate designs may provide more efficient combustion and lower emissions. Provide an evaluation for modifying these units with a spreader-stoker configuration and traveling or vibrating grates.
- 12. The Department determines that this facility is a major source of hazardous air pollutants based on the potential emissions. Please revise your application accordingly. In 2003, EPA proposed a new regulation for the Maximum Achievable Control Technology (MACT) to reduce hazardous air pollutant emissions (HAP) for industrial, institutional, and commercial boilers. EPA expects to sign the final version of this rule in February of 2004. The proposed rule divides the regulated sources by fuel type (solid, liquid, and gas), size (large and small), and use (limited

use and other). The Osceola boilers would be categorized as existing large boilers without restricted use firing a solid fuel.

- a. The MACT proposes to reduce particulate HAP emissions (primarily metals) by the use of add-on control equipment (fabric filters, wet scrubbers, or electrostatic precipitators) and the use of fuels containing low levels of particulate HAP. As a surrogate for particulate HAP emissions, the proposed MACT allows compliance to be demonstrated by reducing particulate matter emissions below 0.026 lb/MMBtu of heat input. The proposed particulate matter standard for this project is 0.15 lb/MMBtu, which is nearly six times the proposed MACT standard. Explain how Boilers 4 and 5 will comply with the upcoming MACT. New particulate matter control equipment is available that can achieve this standards. If possible, identify how the existing wet scrubbing system can be added to or modified to achieve this level of performance.
- b. The MACT proposes to reduce organic HAP emissions by promoting efficient combustion and completing the burnout of these combustible materials. As a surrogate for organic HAP emissions, the proposed MACT requires continuous compliance (CEMS) to be demonstrated by reducing carbon monoxide (CO) emissions to 400 ppmvd @ 3% oxygen or less based on a 24-hour average. The proposed CO standard for this project is 6.0 lb/MMBtu, which is roughly 7600 ppmvd @ 3% oxygen or nearly 20 times the proposed MACT standard. Explain how Boilers 4 and 5 will comply with the upcoming MACT.
- 13. Provide the vendor bid estimates and equipment specifications used in the application for the dry ESP, wet ESP, and SCR. Bid estimates should be based on the specifics of this project. The cost analyses in the application assume contingency factors ranging from 35% to 50% of the purchased equipment cost. Provide justifications for these high multipliers or revise the cost effectiveness analyses accordingly. The cost analyses in the application assume a material maintenance cost multiplier of 10% of the purchased equipment cost. The OAQPS cost manual recommends 1%. Revise the cost analyses accordingly. Based on items included in the vendor bids, the Department may have additional questions regarding the cost analyses.
- 14. Provide additional cost analyses for a baghouse (~ 99.5% control efficiency), a mechanical collector (~ 50% control efficiency), a selective non-catalytic reduction (SNCR) system (~ 45% control efficiency), a catalytic oxidation system (~ 90% control efficiency), and a thermal oxidation system (~ 95% control efficiency) that are based on the specifics of this project. Provide all information related to the bid specifications and the vendors' estimates.
- 15. Provide an evaluation for each of the following NOx reduction technologies that includes a vendor bid estimate for this project: flue gas recirculation (FGR), oxygen enrichment of under-fire air, and the Ecotube technology.
- 16. The initial application was received on November 3, 2003, but did not include the air dispersion modeling files. We finally received these files on November 19, 2003 and are still reviewing the information. After a cursory review of the modeling analysis, we have the following questions.
  - a. The Class II modeling analysis was completed using the ISC-Prime Model. Use of the ISC-Prime Model requires approval from the EPA Region IV, unless it has been used for previous modeling for Osceola Farms. Please indicate where Prime has been used in previous modeling for Osceola Farms, gain approval for use of the model or submit another modeling analysis using ISCST3 exclusively for the Class II analysis.
  - b. For the AAQS multi-source Class II modeling analysis, please verify that worst-case potential emission rates, not actual emission rates, were used for Boilers 2, 3 and 6.

Once we complete a detailed review, we will ask for any additional information related to modeling issues needed to complete the application before December 19, 2003.

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.

Osceola Farms Company Modification of Boiler 4 and 5 Page 4 of 4 Request for Additional Information Project No. 0990019-006-AC PSD-FL-337

Sincerely,

Jeffery F. Koerner

New Source Review Section

cc: Mr. Jorge Cabrera, Osceola Farms Company

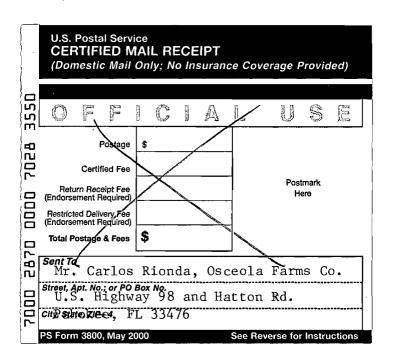
Mr. David Buff, Golder Associates Inc.

Mr. Ron Blackburn, SD Office

Mr. James Stormer, PBCHD

Mr. Gregg Worley, EPA Region 4

Mr. John Bunyak, NPS



5505

5515

Department of Environmental Protection 2600 Blair Stone Rd Tailahassee FL 32399-2400

DEC -2.03

7000 2870 0000 7028 3550

DEC 0 9 2003

Sent to the P.O. by

Sent to the P.O. by

Mr. Carlos Rionda Vice President and General Manager Osceola Farms Company U.S. Highway 98 and Hatton Road Pahokee, FL 33476

32399-683976495 Inflantabilitation of the ballion ballion of the ba

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul> <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> <li>Article Addressed to:</li> <li>Mr. Carlos Rionda</li> <li>Vice President and General Mgr.</li> <li>Osceola Farms Company</li> <li>U.S. Highway 98 and Hatton Rd.</li> <li>Pahokee, FL 33476</li> </ul>	A. Received by (Please Print Clearly)  C. Signature  X
2. Article Number (Copy from service label) 7000 2870 0000 7028 3550	
PS Form 3811, July 1999 Domestic Re	eturn Receipt 102595-99-M-17

5505

5515

Department of Environmental Protection 2600 Blair Stone Rd Tallahassee FL 32399-2400

RECEIVED

DEC 0 8 2003

BUREAU OF AIR REGULATION 79

P.O. BY 679

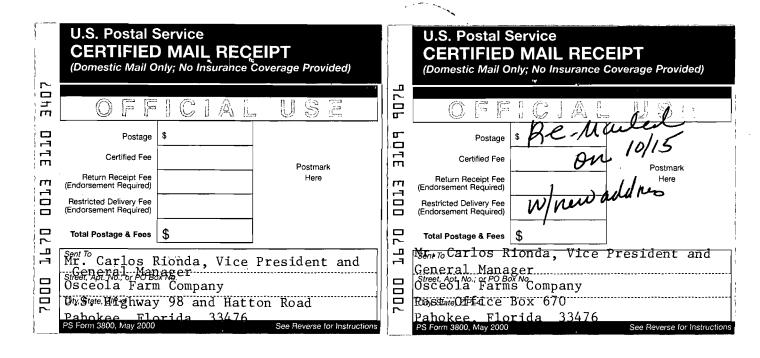
P.O. BY 679

FITH THE SEMBER UNDELLUERABLE TO THE PROPERTY BOOK

Mr. Jorge Cabrera Osceola Farms Company U.S. Highway 98 and Hatton Road Pahokee, FL 33476

73347£2990

Tallandaladlahalaladadlah





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

Colleen M. Castille Secretary

September 28, 2004

### CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Carlos Rionda, Vice President and General Manager Osceola Farms Company U.S. Highway 98 and Hatton Road Pahokee, Florida 33476

Re: Request for Additional Information - Revised Application

Project No. 0990019-006-AC (PSD-FL-337)

Modification of Boilers 4 and 5 – Revised Application

## Dear Mr. Rionda:

On September 1, 2004 the Department received your revised application a PSD air construction permit to modify existing Boilers 4 and 5 at Osceola Farms Company's sugar mill located in Palm Beach County, Florida. The revised application indicates that the project is now subject to PSD review for only for emissions of nitrogen oxides (NOx) and volatile organic compounds (VOC). 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 items below require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

# NOx BACT Review

- a. Netting: The application requests a limit on the combined heat input from Boiler 4 and 5 of 2,000,000 MMBtu per year. This is 20% higher than 2003 and 30% higher than 2002. If a finite amount of cane is milled each year, why is Osceola Farms Company requesting a 20% to 30% increase over previous years? As shown for CO, PM, and SO2 for this project, the Department's PSD regulations allow projects to "net out" of PSD preconstruction review by improving emission rates and accepting operational restrictions such that future emissions increases will not be significant. Please consider and comment on other possible combinations of NOx emission rates and operational restrictions that would allow this project to net out of PSD review.
- b. *Proposed BACT*: Based on the Title V permit for this facility, the following table summarizes the CO, NOx, and VOC emissions standards for each permitted boiler.

Table A. Summary of Emissions Standards, Osceola Farms Company

Boiler	Year	Steam Rate	Grate Type	Emission Limits (lb/MMBtu)			
Boner	1 041	lb/hour	Grait Type	СО	NOx	VOC	
2	~ 1965	140,000	Inclined Pinhole		0.45 (RACT)	1.5 (RACT)	
3	~ 1965	150,000	Inclined Pinhole	3.5 (PSD-FL-134)	0.16 (PSD-FL-134)	0.25 (PSD-FL-134)	
4	1965	140,000	Horseshoe		0.45 (RACT)	1.5 (RACT)	
5	1978	165,000	Horseshoe	**-	0.45 (RACT)	1.5 (RACT)	
6	1981	195,000	Traveling	6.5 (PSD)	0.16 (PSD)	0.25 (PSD)	
Project 4/5	2004	170,000	Inclined Pinhole	3.7 (proposed)	0.22 (proposed)	0.40 (proposed)	

- (1) As stated in the application, Boilers 2 and 3 are similarly sized existing boilers with water-cooled, pinhole, inclined grate systems. Rules 62-296.570 and 62-297.310(7), F.A.C. require annual testing to demonstrate compliance with the NOx and VOC standards. For Boilers 2 and 3, provide a summary of all CO, NOx and VOC emissions tests performed to date.
- (2) Explain why the proposed NOx and VOC BACT standards for Boilers 4 and 5 are less stringent than the BACT determination made in 1988 for Boiler 3 or 1981 for Boiler 6.
- (3) Osceola Farms Company requests a NOx BACT limit of 0.22 lb/MMBtu based on a 24-hour test average. The basis for the BACT standard is "good combustion practices". Continuous process monitors for oxygen and carbon monoxide will be installed and operated to ensure good combustion is maintained. However, the application identifies a "baseline" NOx emission rate of 0.18 lb/MMBtu. After installing the new grate system and employing the control techniques identified in the application (ultra low nitrogen fuel, air staging of combustion, additional overfire air, less excess air, and combustion optimization) explain why the previous NOx emission rate cannot be maintained on a 24-hour average if operators also adhere to the specific "good combustion practices" outlined in the application.
- c. SNCR Cost Analysis: Provide information and data to support the following items:
  - The "vendor quote" for a \$1.6 million direct SNCR installation cost;
  - The 8% factor for foundations and supports;
  - The engineering estimates for air and water piping and electrical and controls (explain the components that are not included in the vendor quote);
  - The 15% factor for project contingencies;
  - The engineering estimate of 2% of process equipment for "maintenance";
  - The annual "NOxOut cost" of \$153,600 (explain);
  - The 25% control efficiency estimate.

Also, the OAQPS cost manual bases the factors for "direct installation costs" (foundations and supports, labor, electrical, piping, insulation, painting, etc.) and for "indirect capital costs" (engineering, construction and field expense, contractor fees, startup, performance tests, contingencies, etc.) on the "purchased equipment costs" and not what is shown as the "direct capital costs". Revise accordingly.

- d. *SCR Cost Analysis*: Revise the SCR cost analysis to address the Department's comments and concerns identified above for the SNCR cost analysis.
- e. Flue Gas Recirculation: The application dismisses this technology because it has never been used on a bagasse-fired boiler. However, this straight-forward technology has been applied to similar grate fired boilers and is transferable to bagasse-fired boilers. Provide a vendor cost quote for flue gas recirculation specific to this project. Provide an economic analysis based on a vendor cost quote specifically for this project. Provide all supporting information. Explain diversions from the standard OAQPS cost analysis procedures.
- f. Opposed Fire Air Systems: In February of 2004, Mobotec USA gave the Bureau of Air Regulation presentations several of their technologies for controlling CO, NOx and VOC emissions. Their basic system is called "ROFA" for "rotating opposed fire air". In short, opposed fire air fans are placed in strategic positions of the boiler to swirl the combustion over fire combustion air and gases. Thorough mixing allows a more uniform combustion temperature, which reduces "hot" and "cold" spots. In turn, this reduces CO, NOx, and VOC emissions. The vendor indicates that ROFA results in improved combustion and boiler efficiencies. Mobotec also offers the "Rotomix" system, which is the ROFA system plus the injection of ammonia or urea to further reduce NOx emissions. Because the ROFA system promotes thorough mixing, only small amounts of urea or ammonia are necessary to achieve additional NOx reductions. Mobotec's project list includes several U.S. installations covering a variety of sold fuels fired on grate systems including coal, peat, wood powder, wood chips, and bark. The vendor made it clear that the ROFA and Rotomix systems can be installed on a sugar mill boiler.

For this project, provide separate cost effectiveness analyses for Mobotec's ROFA system and for the Rotamix system (with urea or ammonia injection). Please include the information provided to Mobotec, the Mobotec cost quote and emissions, all supporting information for assumptions and estimates, and explanations to deviations from the OAQPS cost manual. As these systems are capable of reducing CO, NOx and VOC emissions, please include separate cost effectiveness analysis (\$/ton of pollutants removed) based on: NOx only; NOx and VOC;

and NOx, VOC, and CO. The Mobotec web site is: <a href="http://www.mobotecusa.com/">http://www.mobotecusa.com/</a>. The contact information is: Jay S. Crilley, P.E., Director of Marketing and Development; <a href="jcrilley@mobotecusa.com">jcrilley@mobotecusa.com</a>; Mobotec USA, Inc.; 217 Executive Drive, Suite 301; Cranberry Township, PA 16066; Phone 724-772-0244; Fax 724-772-0242. Attached is an example of the information that may be needed to prepare a cost estimate.

### 2. VOC RACT

- a. Netting: For the VOC BACT proposed in the application, the Department offers comments similar to those made in 2c for the proposed NOx BACT. Please consider and comment on other possible combinations of VOC emission rates and operational restrictions that would allow this project to net out of PSD review.
- b. *Proposed BACT*: Osceola Farms Company requests a VOC BACT limit of 0.40 lb/MMBtu based on a 24-hour test average. The basis for the BACT standard is "good combustion practices". Continuous process monitors for oxygen and carbon monoxide will be installed and operated to ensure good combustion is maintained. However, the application identifies a "baseline" VOC emission rate of 0.23 lb/MMBtu. After improving combustion with the new grate system, explain why the VOC emission rate cannot be maintained on a 24-hour average if operators adhere to the specific "good combustion practices" outlined in the application.
- c. Opposed Fire Air Systems: Based on the Department's request in 1f above, provide a cost effectiveness estimate (\$\structure{S}\text{ton of VOC reduction}) for the Mobotec ROFA system based on VOC reductions.
- d. Regenerative Thermal Oxidizer: Provide a cost effectiveness analyses for a regenerative thermal oxidizer. Provide information submitted to the vendor, the vendor's cost quote and emissions, all supporting information for assumptions and estimates, and explanations to deviations from the OAQPS cost manual. Also evaluate the additional control of CO emissions with this system. Two facilities in the same general area have obtained air construction permits to add natural gas as a boiler fuel. Discuss the availability of natural gas for Osceola Farms Company.
- 3. <u>New Grate System</u>: Provide the vendor specification sheets for the water-cooled, pinhole, inclined grate systems. Submit any information available from the vendor related to emissions.
- 4. <u>Mill Production</u>: Page 2-1 of the application identifies the sugarcane processing rate for this facility over a 10-year period. Please explain the note, "Florida Crystals Corporation production only." Since 1994/1995 crop season, the sugarcane processing rate increased by about 33%. From where has the additional sugarcane come? Have new fields been acquired? The application states that the project will allow an increased milling rate (tons per day). Describe Osceola Farms Company's short term and long term plans for utilizing this increased capacity. For each of these years provide the steam production from the facility boilers.
- 5. <u>Previous PSD Determinations</u>: Has either Boiler 4 or Boiler 5 been previously subject to PSD preconstruction review? Please explain and provide any previous PSD permits and BACT determinations for these units. Provide copies of the PSD permits and BACT determinations for Permit No. PSD-FL-134 (Boiler 3).
- 6. <u>Air Quality Modeling Analysis</u>: Show how the NOx emission rates used for modeling purposes (gram/second) were determined.

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, P.E.

Air Permitting South Program

Osceola Farms Company Modification of Boiler 4 and 5, Revised Application Page 4 of 4 Request for Additional Information Project No. 0990019-006-AC (PSD-FL-337)

cc: Mr. Paco Farinas, Osceola Farms Company

Mr. David Buff, Golder Associates Inc.

Mr. Ron Blackburn, SD Office Mr. James Stormer, PBCHD

Mr. Gregg Worley, EPA Region 4

Mr. John Bunyak, NPS

# Data Needed to Provide Estimated MobotecSystem Installation Cost

General Information:	
Date:	
Name of Utility:	
Plant Name:	
Address:	<del></del>
Contact:	
Tel: Fax:	E-mail:
Fuel – Coal:	·
Fuel Components	Percent (%)
C - Carbon	
H2 – Hydrogen	
O2 – Oxygen	
N2 – Nitrogen	
S – Sulfur	
Ash	
Moisture	
Sum	100.00%
*Note: For each of the following data collec measure. Both units of measure are shown.	tions please use either English or SI units of
Mass Flow of Fuel and Air:	
<ol> <li>Full load (MCR) =</li></ol>	Mwe. erates at
Secondary and Primary Air:	
1. Temperature	
Secondary Air = Deg F	
Primary Air and Coal Flow =	Deg F

2. '	Total	Primary	and	Secondary	Air:
------	-------	---------	-----	-----------	------

Total Primary Air =	Kg/s	
Total Secondary Air =		Kg/s

### **Burners:**

- 1. Individual direction and flow through each burner (if possible)
- 2. Information on the burners type, year installed, drwgs if possible

# Heating Surfaces and Temperature:

- 1. Superheated steam flow, temperature and pressure
- 2. Individual square foot of heating surfaces --- reheat + superheat + economizer etc

# Components of Flow Gas:

- 1. NOx discharge lbs/Mbtu, where taken and at what loading levels
- 2. CO discharge PPM, where taken and at what loading levels
- 3. Excess O2 %, where taken and at what loading levels
- 4. LOI % and where taken
- 5. Flue gas flow ACFM and temperature (including temperature location)
- 6. SO2 discharge lbs/Mbtu, where taken and at what loading levels

### Geometric Furnace Data:

1.	Side, front, back and plan view drwgs of unit (one drwg of each is acceptable – drv	₽gs
	need not be full scale – 8 ½ x 11 is fine)	

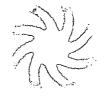
- 2. Depth = \_\_\_\_ ft.
- 3. Furnace width = ft.
- 4. Height differences between coal nozzles, air outlets, nose above centerline of burner, nose at wall to nose at neck, etc.

### Miscellaneous Information:

- 1. Please provide the FD and ID fan curves. A plot print out of the fan performance would also be acceptable.
- 2. Quantity and amount of spray that is used at full load and other regular running level(s)
- 3. Any fuel variation or fineness issues
- 4. NOx control system(s) currently in place. If in place, NOx discharge with and without controls

# Customer Objectives:

- 1. Objectives of installation
- 2. Short term and long term requirements
- 3. Specific operating requirements



# RECEIVED

NOV 03 2003

October 31, 2003

BUREAU OF AIR REGULATION

Mr. Al Linero, P.E. Administrator New Source Review Section Florida Department of Environmental Protection 111 South Magnolia Dr., Suite 4 Tallahassee, FL 32301

Re: PSD Permit Application for Boiler Nos. 4 and 5 Osceola Farms Co. - Facility Identification No. 0990019

Dear Mr. Linero:

Enclosed please find seven copies of the PSD Permit Application for Boilers 4 and 5 for Osceola Farms Co. Also enclosed is our check #0000135618 for \$7,500.00 to cover the application fee.

If you have any questions please do not hesitate to contact me.

Sincerely,

OSCEOLA FARMS CO.

Carlos S. Riónda Vice President and General Manager

CSR/gr

Enclosures

cc: Ajaya K. Satyal - Palm Beach County Health Unit Jorge Cabrera

cc without enclosures:

Paco Fariñas
William F. Tarr
David Buff - Golder Associates



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

David B. Struhs Secretary

November 5, 2003

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

RE: Osceola Farms Company Boiler Nos. 4 and 5 DEP File No. 0990019-006-AC, PSD-FL-337

Dear Mr. Bunyak:

Enclosed for your review and comment is a PSD application submitted by Osceola Farms Company for proposed modifications at their facility in Palm Beach County, Florida.

Your comments may be forwarded to my attention at the letterhead address or faxed to the Bureau of Air Regulation at 850/921-9533. If you have any questions, please contact Jeff Koerner, review engineer, at 850/921-9536.

Sincerely,

<sup>C</sup>Al Linero, P.E.

Administrator

New Source Review Section

Patty adams

AL/pa Enclosure cc: J. Koerner



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

David B. Struhs Secretary

November 5, 2003

Mr. Gregg Worley, Chief Air, Radiation Technology Branch Preconstruction/HAP Section U.S. EPA, Region 4 61 Forsyth Street Atlanta, Georgia 30303

RE: Osceola Farms Company Boiler Nos. 4 and 5 DEP File No. 0990019-006-AC, PSD-FL-337

Dear Mr. Worley

Enclosed for your review and comment is a PSD application submitted by Osceola Farms Company for proposed modifications at their facility in Palm Beach County, Florida.

Your comments may be forwarded to my attention at the letterhead address or faxed to the Bureau of Air Regulation at 850/921-9533. If you have any questions, please contact Jeff Koerner, review engineer, at 850/921-9536.

Sincerely,

Al Linero, P.E.
Administrator

New Source Review Section

Patty adams

AL/pa Enclosure cc: J. Koerner