

To: Cindy Phillips, B.A.R, Tallahassee

From: Carter Endlsey, South District

RE: Risk Assessment for Sugar Cane Growers (DEP File No. 0990026-013-AV)

Date: September 25, 2006


It is my understanding per Trina's email dated September 22, 2006 that you will be co-reviewing the risk assessments related to MACT Subparts DDDD and DDDDD as well as providing us with tools/guidance to enable our staff to complete the risk assessment evaluations long-term.

Please find enclosed a copy of the above referenced Title V revision application we recently received. The application is to incorporate in the Title V operating permit the controlling process parameters for the Health-Based Compliance Alternative (HBCA) in 40 CFR 63 Subpart DDDDD.

The application was submitted with one CD that was indicated to contain the modeling files. However, the CD was blank. The P.E. of record has been contacted about this. A CD with the modeling files will be forwarded to you upon receipt of new CDs.

I will be the reviewer for this application. Please contact me if you have any questions at SunCom 748-6975 Ext. 127.

Thank you.

A handwritten signature in cursive script, reading "Carter B. Endlsey". The signature is written in black ink and is positioned below the "Thank you." text.

DEP ROUTING AND TRANSMITTAL SLIP

TO: (NAME, OFFICE, LOCATION) 3. _____
1. Cindy Phillips, ARM 4. _____
2. MAIL STATION #5500 -MAGNOLIA CENTER 5. _____

PLEASE PREPARE REPLY FOR:
____ SECRETARY'S SIGNATURE
____ DIV/DIST DIR SIGNATURE
____ MY SIGNATURE
____ YOUR SIGNATURE
____ DUE DATE: _____

ACTION/DISPOSITION:
____ DISCUSS WITH ME
____ COMMENTS/ADVISE
____ REVIEW AND RETURN
____ SET UP MEETING
____ FOR YOUR INFORMATION
____ HANDLE APPROPRIATELY
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____ SHARE WITH STAFF
 FOR YOUR FILES

COMMENTS:
**SUGAR CANE GROWERS
0990026-013-AV**

RECEIVED
SEP 27 2006
BUREAU OF AIR REGULATION

FROM: Susan Machinski/South District DATE: 09/25/06 PHONE: SC 748-6975

**DEPARTMENT OF ENVIRONMENTAL PROTECTION
ARMS / AIR - PERMIT DATA ENTRY FORM**

THIS FORM MUST BE COMPLETED AND RETURNED TO THE DATA PROCESSING TEAM WITHIN THREE BUSINESS DAYS FROM THE "CHECK DATE RECEIVED" LISTED BELOW. SUSPENSE

LOG # 1398 Processor's Name C. ENDSLEY

Check # _____ Amount _____ Date Rec'd _____
 Check # N/A Amount N/A Date Rec'd N/A

Coding Information:	Fee Information:	Override Information:
Type <u>AV</u>	Correct Fee <u>- 0 -</u>	Override? Y or <input checked="" type="radio"/> N
Subtype <u>02</u>	Fee Received <u>- 0 -</u>	Reason: _____
County <u>50</u>	To Be Refunded <u>- 0 -</u>	

SysReceipt # _____ SysPayment # _____
 SysApplication/PA # 0990026 - 013 - AV CRA # _____

ARMS INPUT BY ADMINISTRATION ONLY

Check One: Existing Facility New Facility Airs ID: 0990026 Point or Area

Project Information:
 Project Name: TITLE V PERMIT REVISION (NESHAP 40 CFR 63, SUBPART DDDDD)
 Description: SUGAR MILL

Related Party:
 Role: Owner/ Responsible Official
 Name: JOSE F. ALVAREZ (SR. VICE PRESIDENT)
 Company: SUGAR CANE GROWERS COOPERATIVE OF FLORIDA
 Address: 1500 N.W. SUGAR HOUSE RD. City/State: BELLE GLADE FL. Zip: 33430
 Phone: (561) 996-4759 Fax: (561) 996-4747

New Facility Information:
 Owner/Company Name: _____ Site _____
 & Address _____ Zip Code _____

For New Facility Only:

UTM Zone: 17 East: 534.90 North: 2953.30 Lat: 26/42/06 Long: 80/38/57
 Status: Active Construction Inactive Major Group SIC 20
 Relocatable Yes No Gov't Facility (option 0 - 5) AOR Req: Yes No
 Title V Source or N Syn NON Title v Source Y or N
 Major Non-HAP or N Syn Minor NON HAP Y or N
 Major HAPS or N Syn Minor HAPS Y or N
 NESHAP or N NSPS Y or N
 Title V EPA Design Y or N Small Bus. Stationary Y or N

SUSPENSE (3 DAYS)	Receipt Date (Please Initial & Date)	Completion Date (Please Initial & Date)
Mail Processor (Stamping/Suspending/Sorting)	-	-
Air Administrator (Distribution)	-	-
Permitting Supervisor (Fee Verification & Coding)	<u>CBE 9/18/06</u>	<u>CBE 9/18/06</u>
Administrative Assistant (Project Creation)	<u>CBE 9/18/06</u>	<u>CBE 9/18/06</u>
Data Processing Team (Money Linking)	-	-
Permitting Supervisor (Distribution)	<u>CBE 9/18/06</u>	<u>CBE 9/18/06</u>
Permit Processor (Permit Events/Facility Update)		

Golder Associates Inc.

6241 NW 23rd Street, Suite 500
Gainesville, FL USA 32653
Telephone (352) 336-5600
Fax (352) 336-6603
www.golder.com



September 13, 2006

0637534

Florida Department of Environmental Protection
South District
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33901-3881

Attention: Mr. Ron Blackburn, District Air Program Director

RE: SUGAR CANE GROWERS COOPERATIVE OF FLORIDA
FACILITY ID: 0990026
NESHAPS SUBPART DDDDD
HEALTH-BASED COMPLIANCE ALTERNATIVE DEMONSTRATION AND TITLE V
PERMIT REVISION APPLICATION

Dear Mr. Blackburn:

On behalf of Sugar Cane Growers Cooperative of Florida, please find attached a demonstration of eligibility for the health-based compliance alternative (HBCA) for the total selected metals (TSM) emission limit under the NESHAPS, 40 CFR 63, Subpart DDDDD. The demonstration includes an application for revision of the Title V operating permit, as required by Subpart DDDDD. Since this submittal is also a Title V operating permit application, four copies are being submitted to you, along with the signed responsible official signature page and signed compliance statement.

As required by Subpart DDDDD, a copy of the HBCA report is also being submitted to U.S. EPA, Risk and Exposure Assessment Group, Emission Standards Division, Research Triangle Park, North Carolina.

If you have any questions this information, please do not hesitate to call me at (352)336-5600 or email at dbuff@golder.com.

Sincerely,

GOLDER ASSOCIATES INC.

A handwritten signature in cursive script that reads 'David A. Buff'.

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

Enclosures

DB/nav

cc: Kathy Lockhart
Jose Alvarez

Y:\Projects\2006\0637534 SCGC HBCA Application\4.1\091306-534-FDEP.doc

SEP 14 2006
D.E.P. - South District

**NESHAPS SUBPART DDDDD
HEALTH-BASED COMPLIANCE
ALTERNATIVE DEMONSTRATION**

**SUGAR CANE GROWERS COOPERATIVE
OF FLORIDA
*BELLE GLADE, FLORIDA***

**Prepared For:
Sugar Cane Growers Cooperative of Florida
1500 West Sugar House Road
Belle Glade, Florida 33430-0666**

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

September 2006

0637534

SEP 14 2006
D.E.P. - South District

**NESHAPS SUBPART DDDDD
HEALTH-BASED COMPLIANCE
ALTERNATIVE DEMONSTRATION**

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September 2006

0637534

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TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE</u>
1.0 INTRODUCTION	1-1
2.0 GENERAL DESCRIPTION OF THE FACILITY	2-1
2.1 General Facility Information	2-1
2.2 Boiler Characterization	2-1
3.0 HBCA – LOOK-UP TABLE ANALYSIS	3-1
3.1 Basis for Worst-Case Manganese Emissions	3-1
3.2 Maximum Hourly Emission Rate for Manganese	3-2
3.3 Look-Up Table Comparison for Manganese	3-2
4.0 HBCA – SITE-SPECIFIC DEMONSTRATION	4-1
4.1 Risk-Assessment Methodology	4-1
4.1.1 Emission Inventory	4-1
4.1.2 Model Selection	4-2
4.1.3 Building Downwash Effects	4-4
4.1.4 Meteorological Data	4-4
4.1.5 Model Receptor Grid	4-5
4.2 Dispersion Modeling Results	4-5
5.0 TITLE V PERMIT PARAMETERS	5-1

APPENDICES

- A Fuel Analysis
- B Model Input/Output Data
- C Title V Revision Application Pages

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TABLE OF CONTENTS

(Cont'd)

LIST OF TABLES

- 1-1 Cross-Reference of Demonstration Requirements
- 2-1 Affected Boilers Addressed in the HBCA Demonstration
- 2-2 Stack and Operating Parameters and Locations Used in the HBCA Modeling Analysis
- 3-1 Worst-Case Short-Term Manganese Emissions
- 3-2 Weighted Averaged Stack Height (Look-Up Table Analysis)
- 3-3 Look-Up Table Comparison for Manganese
- 4-1 Maximum Annual Manganese Emissions during the Crop Season, Site-Specific Demonstration
- 4-2 Maximum Annual Manganese Emissions during the Off-Crop Season, Site-Specific Demonstration
- 4-3 Maximum Annual Manganese Emissions during the Off-Crop Season, Site-Specific Demonstration (Modeling Inputs)
- 4-4 AERMOD Model Features
- 4-5 Maximum Predicted Manganese Impacts
- 5-1 Title V Permit Limits for Subpart DDDDD Sources
- A-1 Proximate, Ultimate, and Heat Content Analyses Results for Bagasse from Sugar Cane Growers Cooperative of Florida
- A-2 Metals and Chlorine Analysis for Bagasse from Sugar Cane Growers Cooperative of Florida
- A-3 Boiler MACT Final Rule Analytical Procedures
- A-4 Comparison of Subpart DDDDD Fuel Analysis Methods with SCGCF Mill Methods

LIST OF FIGURES

- 2-1 Plot Plan of Facility
- 2-2 Aerial Map of Facility
- 3-1 Minimum Distance from Subpart DDDDD Source to Property Boundary
- 4-1 Source and Building Locations
- 4-2 Receptor Grid Locations Overlaid on an Aerial Photograph
- 4-3 Location of Maximum Manganese Concentrations

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1.0 INTRODUCTION

Sugar Cane Growers Cooperative of Florida, Inc. (SCGCF) operates a sugar mill located on West Sugar House Road in Belle Glade, Palm Beach County, Florida. At the mill, sugarcane is ground to remove the sugarcane juice and the remaining fibrous material is burned to provide steam and heating requirements for the Mill. SCGCF operates six bagasse boilers ranging in capacity from 125,000 to 300,000 pounds per hour (lb/hr) steam production. SCGCF is subject to 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters (Boiler MACT). This report, entitled "*Health-Based Compliance Alternative Demonstration for Sugar Cane Growers Cooperative of Florida*", supports the determination that this facility meets the requirements established in *Appendix A to Subpart DDDDD—Methodology and Criteria for Demonstrating Eligibility for the Health-Based Compliance Alternatives*.

This report addresses the Health Based Compliance Alternative (HBCA) for manganese (Mn) in order to demonstrate compliance with the total selected metals (TSM) emission limit contained in Subpart DDDDD. TSM includes eight metals: arsenic, beryllium, cadmium, chromium, lead, manganese, nickel and selenium. The methodology used in the demonstration includes two options for showing compliance. The first method is to conduct a look-up table analysis using the maximum hourly emissions from each emission unit subject to Subpart DDDDD that emits Mn. The second method is to conduct a site-specific demonstration using annual emissions and an acceptable risk assessment model. SCGCF will utilize the site-specific demonstration to show compliance with the Mn HBCA since building downwash may affect emissions from the boiler stacks.

To demonstrate compliance with the Mn HBCA, the maximum hourly Mn emission rate from each source subject to Subpart DDDDD that emits Mn must be determined according to Equation 1 in Appendix A of Subpart DDDDD. If the total calculated Mn emission rate from all Subpart DDDDD boilers is less than the value in the look-up table for Mn (Table 3, Appendix A, Subpart DDDDD), based on the weighted averaged stack height (Equation 3, Appendix A, Subpart DDDDD) and the minimum distance between any Subpart DDDDD emission point and the property boundary, the facility complies with the HBCA for Mn. By complying with the HBCA for TSM, the facility is allowed to exclude Mn from the TSM calculation for each Subpart DDDDD source when demonstrating compliance with the Boiler MACT standards.

If compliance is not demonstrated using the look-up table, the facility may perform a site-specific compliance demonstration. This option, as described in Appendix A of Subpart DDDDD, includes using a scientifically-accepted, peer-reviewed risk assessment methodology; examples of which are found on the U.S. Environmental Protection Agency (EPA) Air Toxics Website (http://www.epa.gov/ttn/fera/risk_atoxic.html). Risk assessment modeling is performed to demonstrate that the maximum hazard quotient (HQ) for Mn from all Subpart DDDDD sources is less than or equal to 1.0.

HQ is the ratio of the predicted concentration of a pollutant to the concentration at which no adverse effects are expected. For inhalation exposure, the HQ is calculated as the air concentration divided by the reference concentration, also known as the reference value (RV). By demonstrating that the HQ for Mn is equal to or less than 1.0, the facility may exclude Mn from the TSM calculations for each Subpart DDDDD source when demonstrating compliance with Boiler MACT. The TSM emission limit in Subpart DDDDD is 0.001 pound per million British thermal units (lb/MMBtu) for existing boilers and 0.0003 lb/MMBtu for new boilers.

SCGCF will meet the hydrogen chloride (HCl) Boiler MACT limit through fuel analysis, which is why the HBCA for HCl will not be utilized in this demonstration.

For ease of reference, the required elements for the look-up table analysis and site-specific demonstration (specified in Section 8 of Appendix A to Subpart DDDDD) are cross-referenced in Table 1-1. The fuel sampling and analysis results are attached in Appendix A of this document.

TABLE 1-1

**CROSS-REFERENCE OF DEMONSTRATION REQUIREMENTS, 40 CFR 63,
SUBPART DDDDD, APPENDIX A, SECTION 8**

Requirement	Description	Report Section/Table/Figure Number
Look-Up Table Analysis		
(a) (1)	Identification of each appropriate emission point and the maximum rated capacity of each.	Table 2-1
(a) (2) (i)	Emission release type.	Table 2-1
(a) (2) (ii)	Stack height, stack area, stack gas temperature, and stack gas velocity.	Table 2-2
(a) (2) (iii)	Plot plan showing all emission points, nearby residences, and fenceline.	Figure 2-1
(a) (2) (iv)	Identification of any control devices used to reduce emissions from each emission point.	Table 2-1
(a) (3)	Emission test reports and the test methods, including a description of the worst-case process parameters. Fuel analysis for each fuel and emission point, including collection and analytical methods used.	Section 3.1, Appendix A
(a) (4)	Identification of the RV values used.	Section 4.0
(a) (5)	Calculations used to determine the HCl-equivalent or Mn emission rates.	Section 3.2, Table 3-1
(a) (6)	Identification of the controlling process factors that will become Federally enforceable permit conditions.	Not Applicable
(b) (1)	Calculations used to determine the weighted average stack height.	Section 3.3, Table 3-2
(b) (2)	Identification of the Subpart DDDDD emission points that emit either Mn or HCl and Cl ₂ , with the minimum distance to the property boundary of the facility.	Section 3.3, Figure 3-1
(b) (3)	Comparison of the values in the look-up tables to the maximum HCl-equivalent or Mn emission rates.	Section 3.3, Table 3-3
(d)	Submittal of parameters for incorporation into Title V permit as federally enforceable limits.	Not Applicable

TABLE 1-1

**CROSS-REFERENCE OF DEMONSTRATION REQUIREMENTS, 40 CFR 63,
SUBPART DDDDD, APPENDIX A, SECTION 8**

Requirement	Description	Report Section/Table/Figure Number
Site-Specific Compliance Demonstration		
(a) (1)	Identification of each appropriate emission point and the maximum rated capacity of each.	Table 2-1
(a) (2) (i)	Emission release type.	Table 2-1
(a) (2) (ii)	Stack height, stack area, stack gas temperature, and stack gas velocity.	Table 2-2
(a) (2) (iii)	Plot plan showing all emission points, nearby residences, and fence line.	Figure 2-1
(a) (2) (iv)	Identification of any control devices used to reduce emissions from each emission point.	Table 2-1
(a) (3)	Emission test reports and the test methods, including a description of the worst-case process parameters. Fuel analysis for each fuel and emission point, including collection and analytical methods used.	Section 3.1, Appendix A
(a) (4)	Identification of the RV values used.	Section 4.0
(a) (5)	Calculations used to determine the HCl-equivalent or Mn emission rates.	Tables 4-1, 4-2, and 4-3
(a) (6)	Identification of the controlling process factors that will become Federally enforceable permit conditions.	Table 5-1
(c) (1)	Identification of the risk assessment methodology used.	Section 4.1
(c) (2)	Documentation of the fate and transport model used.	Section 4.1.2
(c) (3)	Documentation of the fate and transport model inputs including the information in (a) (1) through (a) (5) and all the following that apply: meteorological data, building, land use, and terrain data; receptor locations and population data; and other facility-specific parameter inputs.	Appendix B
(c) (4)	Documentation of the fate and transport model outputs.	Appendix B
(c) (5)	Documentation of any exposure assessment and risk characterization calculations.	Not Applicable
(c) (6)	Comparison of the HQ or HI to the limit of 1.0.	Section 4.2, Table 4-5
(d)	Submittal of parameters for incorporation into Title V permit as federally enforceable limits.	Table 5-1, Appendix C

2.0 GENERAL DESCRIPTION OF THE FACILITY

2.1 General Facility Information

SCGCF owns and operates a sugar mill located in Belle Glade, Palm Beach County, Florida that currently operates under Title V Permit No. 0990026-012-AV. Six boilers operate at the Mill to provide steam to the sugar mill. Each of the boilers is subject to 40 CFR Part 63, Subpart DDDDD (Boiler MACT). The boilers at the facility that are subject to Boiler MACT are shown in Table 2-1.

2.2 Boiler Characterization

Stack and operating parameters for each boiler subject to Boiler MACT are provided in Table 2-2. These parameters are used in the risk assessment modeling for each boiler. Stack and operating data are based on the Title V renewal application (May 2005), except for the stack flow rates, which are based on 2005-2006 crop season stack testing.

Figure 2-1 is a scale drawing showing the plot plan for the facility, including location of the emission points for each Boiler MACT boiler and the property boundary of the facility.

**TABLE 2-1
AFFECTED BOILERS ADDRESSED IN THE HBCA DEMONSTRATION, SCGCF**

Emission Unit	Model ID	Description	Maximum Heat Input		Control Device(s)
			Capacity (MMBtu/hr)	Fuel(s)	
Boiler No. 1	BLR10/F	Water-cooled, pin-hole, traveling grate boiler	266.7	Bagasse, residue, fuel oil	Wet scrubber
Boiler No. 2	BLR20/F	Water-cooled, pin-hole, traveling grate boiler	263.8	Bagasse, residue, fuel oil	Wet scrubbers (2)
Boiler No. 3	BLR30/F	Water-cooled, pin-hole grate boiler	229	Bagasse, residue, fuel oil	Wet scrubber
Boiler No. 4	BLR40/F	Traveling grate boiler	573	Bagasse, residue, fuel oil	Wet scrubbers (2)
Boiler No. 5	BLR50/F	Traveling grate boiler	439	Bagasse, residue, fuel oil	Wet scrubbers (2)
Boiler No. 8	BLR80/F	Traveling grate boiler	504	Bagasse, residue, fuel oil	Wet scrubbers (2)

Notes:

MMBtu/hr = million British thermal units per hour

TABLE 2-2
SUMMARY OF STACK PARAMETERS AND LOCATIONS USED IN THE HBCA MODELING ANALYSIS, SCGCF

Emission Unit	Modeling ID	Stack Height		Stack Diameter		Temperature		Flow Rate ^a (acfm)	Velocity		UTM Coordinates ^b	
		(ft)	(m)	(ft)	(m)	(F°)	(K)		(ft/s)	(m/s)	East (m)	North (m)
Boiler No. 1	BLR10/F	150✓	45.7	4.3 7.00	2.13	148 156	342.0	62,650 90,000	71.0 39.0	11.88	534871.9	2953689.8
Boiler No. 2	BLR20/F	150✓	45.7	4.3 7.00	2.13	148 156	342.0	66,252 91,500	76.0 39.6	12.08	534871.9	2953708.0
Boiler No. 3	BLR30/F	180 90	54.9	5.30 5.33	1.62	155 156	342.0	69,991 54,000	52.0 40.3	12.29	534871.9	2953722.4
Boiler No. 4	BLR40/F	180 110	54.9	9.50 8.92	2.72	148 162	345.4	116,159 180,000	27.0 48.0	14.63	534875.2	2953734.7
Boiler No. 5	BLR50/F	150✓	45.7	7.00✓	2.13	155 160	344.3	93,271 178,000	40.4 77.1	23.50	534869.8	2953749.3
Boiler No. 8	BLR80/F	155✓	47.2	9.50 ✓	2.90	161 154	340.9	130,004 160,000	30.0 37.6	11.47	534826.3	2953695.6

Notes:

- ft = feet
- m = meters
- F° = degrees Fahrenheit
- acfm = actual cubic feet per minute
- ft/s = feet per second
- m/s = meters per second

^a Based on 2005-2006 crop season stack testing.

^b UTM Zone 17, NAD27 Datum

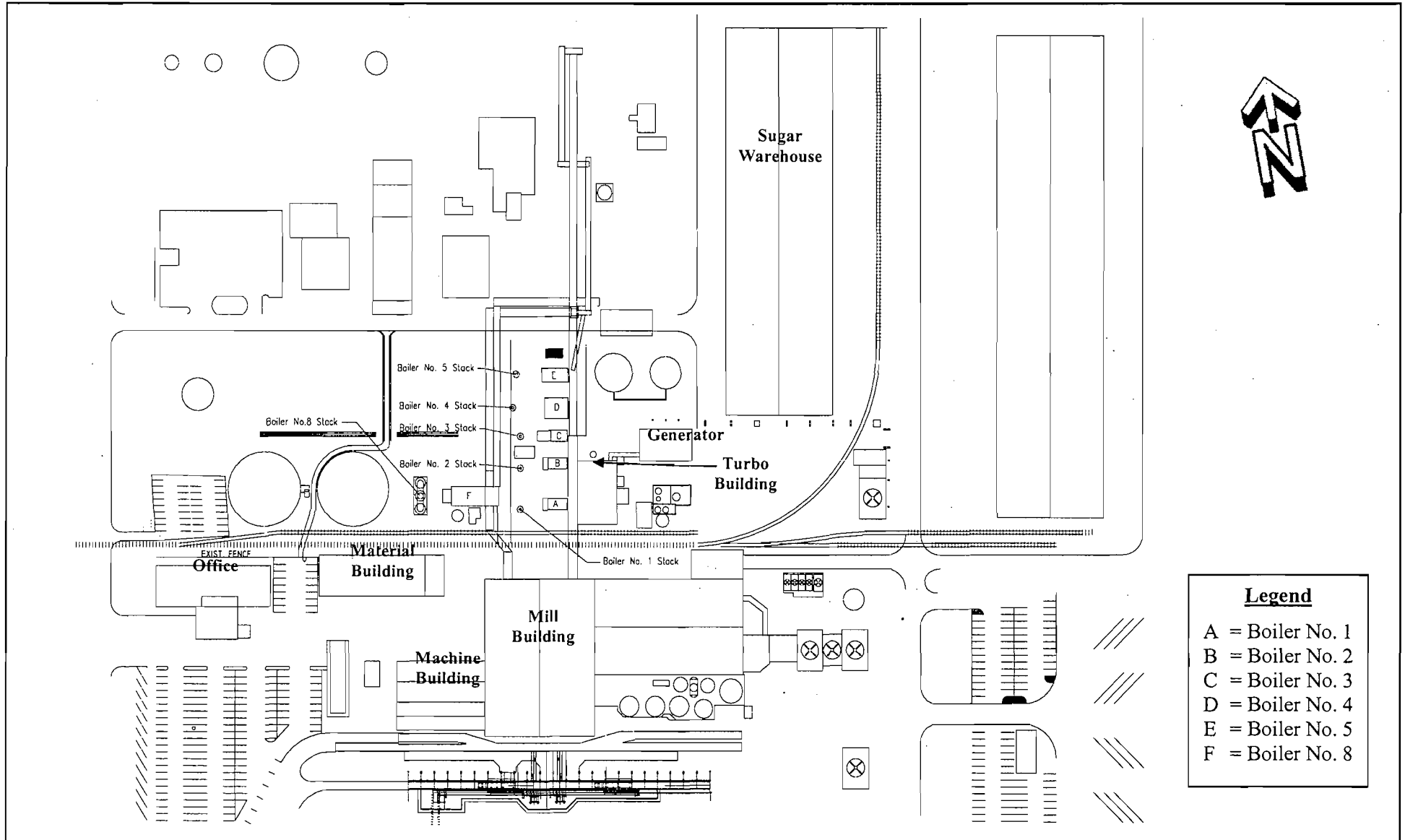


Figure 2-1
Facility Plot Plan
Glades Sugar House Mill
Sugar Cane Growers Cooperative of Florida
Source: Golder, 2005.



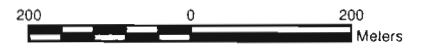


LEGEND

 Property Boundary

REFERENCE

Projection: Transverse Mercator Datum: NAD 27 Coordinate System: UTM Zone 17



PROJECT
Health-based Compliance Alternative Demonstration for the
Sugar Cane Growers Cooperative of Florida

TITLE
Aerial Map of Facility



PROJECT No			SCALE AS SHOWN	REV 0
DESIGN	AB	08 Sept 2006		
GIS	AB	08 Sept 2006		
CHECK	CB	09 Sept 2006		
REVIEW	BS	08 Sept 2006		

FIGURE 2-2

3.0 HBCA – LOOK-UP TABLE ANALYSIS

3.1 Basis for Worst-Case Manganese Emissions

Fuel analysis data for bagasse are attached, which are the basis of the emissions estimation for each boiler (see Appendix A of this document):

- Mn HBCA
 - Emissions based on fuel analyses for Mn for the following boilers:
 - Boiler No. 1
 - Boiler No. 2
 - Boiler No. 3
 - Boiler No. 4
 - Boiler No. 5
 - Boiler No. 8

Appendix A includes the following information related to the fuel analysis:

- Collection and analytical methods used;
- Fuel analysis data; and
- Calculation of 90th percentile value of fuel analysis data.

It is noted that many of the bagasse fuel samples were obtained prior to the final Boiler MACT rule promulgated on September 13, 2004. However, the sampling was extensive and the fuel samples and analysis are considered to be highly representative. The Boiler MACT final rule fuel analysis methods are presented in Table A-3. The comparison of the fuel analysis methods utilized by SCGCF to the Boiler MACT final rule is presented in Table A-4. Because the bagasse samples were collected between January 2002 and June 2005, the bagasse sampling protocols during those seasons are included in Appendix A. The fuel analysis laboratory reports for the Boiler MACT testing, which occurred in December 2004 and January 2005, are also included in Appendix A of this document.

The worst-case fuel for Mn emissions from Boilers No. 1, 2, 3, 4, 5 and 8 is bagasse. Historical fuel analysis results for bagasse are shown in Tables A-1 and A-2. Table A-1 provides the proximate, ultimate, and heat content analyses results, while Table A-2 provides the metal and chlorine analyses results.

The Mn emission factor for bagasse is 1.3×10^{-3} lb/MMBtu, which is based on the 90th percentile of historical fuel analyses data collected from January 2002 through June 2005 for bagasse (see Table A-2). The 90th percentile value is required by the Boiler MACT regulations, and was calculated according to Equation 8 in 40 CFR 63.7530(d).

Fuel analysis for Mn content of No. 6 fuel oil was not conducted. U.S. EPA Publication AP-42 provides an uncontrolled Mn emission factor for No. 6 fuel oil of 3×10^{-3} lb/1000 gallons of fuel oil burned. Based on a heating value for No. 6 fuel oil of 151,000 Btu/gal, the equivalent Mn emissions are 2×10^{-5} lb/MMBtu. Therefore, it is concluded that No. 6 fuel oil is not the worst case fuel for Mn emissions.

SCGCF is permitted to burn bagasse residue, but has not burned this fuel for several years. If SCGCF burns this fuel in the future, the HBCA for Mn will be re-evaluated.

3.2 Maximum Hourly Emission Rate for Manganese

The maximum hourly emission rate for the hazardous air pollutant (HAP) is expressed according to the equation below:

$$E_{i,s} = \sum_{j=1}^t (R_{i,j} \times I_j)$$

- where,
- $E_{i,s}$ is the maximum hourly emission rate for the HAP in lb/hr,
 - $R_{i,j}$ is the emission rate of each emission unit in lb/MMBtu,
 - I_j is the maximum rated heat input capacity of each Subpart DDDDD unit in MMBtu/hr,
 - “i” represents each applicable HAP,
 - “s” represents each individual emission point,
 - “j” represents each Subpart DDDDD emission unit, and
 - “t” represents the total number of Subpart DDDDD emission units.

The maximum hourly emission rates for Mn from each emission unit are presented in Table 3-1 with a total maximum hourly emission rate of 2.94 lb/hr.

3.3 Look-Up Table Comparison for Manganese

The weighted average stack height for determining the maximum allowable emission rate for Mn from the look-up table is defined by the following equation:

$$H_{Mn} = \frac{\sum_{s=1}^n (E_{Mn,s} \times H_s)}{E_{Mn,T}}$$

- H_{Mn} is the weighted average stack height in meters (m),
- $E_{Mn,s}$ is the maximum hourly Mn emissions in lb/hr,
- H_s is the height of each individual stack in meters (m),
- $E_{Mn,T}$ is the total maximum hourly Mn emissions in lb/hr,
- “s” represents the individual emission points, and
- “n” represents the total number of emission points.

Using the stack heights and the maximum hourly Mn emissions, the weighted average stack height for Mn is 49 m (see Table 3-2), as shown below:

$$H_{Mn} = \frac{144.7 \frac{\text{lb} \cdot \text{m}}{\text{hr}}}{2.94 \frac{\text{lb}}{\text{hr}}} = 49 \text{ m}$$

The minimum distance between any Subpart DDDDD stack and the property boundary, as shown in Figure 3-1, is 156 meters. The comparison between the maximum hourly Mn emission rate and the allowable emission rate in the look-up table is shown in Table 3-3. If the weighted averaged stack height or minimum distance values do not match the values in the look-up table, the next lowest value is used. For this analysis, the averaged weighted stack height for TSM is 49 meters. Therefore, the 40-meter stack height in the look-up table was used. In addition, the 150-meter distance to property boundary value in the look-up table was used since the actual minimum distance from any Subpart DDDDD source to the property boundary is 156 meters.

Because the value in the Mn look-up table is exceeded (see Table 3-3), and because building downwash may affect emissions from some of the boiler stacks, the site-specific determination will be utilized to comply with the HBCA for Mn (see Section 4.0).

**TABLE 3-1
WORST-CASE SHORT-TERM MANGANESE EMISSIONS, SCGCF**

Emission Unit	Model ID	Emission Estimation Method	Heat Input (MMBtu/hr)	Mn Emission Factor (lb/MMBtu)^a	Maximum Hourly Mn Emission Rate (lb/hr)
Boiler No. 1	BLR10/F	Bagasse Fuel Analysis	266.7	1.3E-03	0.34
Boiler No. 2	BLR20/F	Bagasse Fuel Analysis	263.8	1.3E-03	0.34
Boiler No. 3	BLR30/F	Bagasse Fuel Analysis	229	1.3E-03	0.30
Boiler No. 4	BLR40/F	Bagasse Fuel Analysis	573	1.3E-03	0.74
Boiler No. 5	BLR50/F	Bagasse Fuel Analysis	439	1.3E-03	0.57
Boiler No. 8	BLR80/F	Bagasse Fuel Analysis	504	1.3E-03	0.65
Total			--	--	2.94

^a Based on the 90th percentile of historical stack test data for bagasse (see Table A-2).

**TABLE 3-2
WEIGHTED AVERAGED STACK HEIGHT (LOOK-UP TABLE ANALYSIS)**

Emission Unit	Boiler ID	Stack Height	Mn Maximum	$E_{Mn,s} \times H_s$	Mn Weighted
		(H_s) ^a (m)	Hourly Emissions ($E_{Mn,s}$) ^b (lb/hr)		Average Stack Height ^c (m)
Boiler No. 1	BLR10/F	45.7	0.34	15.7	--
Boiler No. 2	BLR20/F	45.7	0.34	15.6	--
Boiler No. 3	BLR30/F	54.9	0.30	16.2	--
Boiler No. 4	BLR40/F	54.9	0.74	40.6	--
Boiler No. 5	BLR50/F	45.7	0.57	25.9	--
Boiler No. 8	BLR80/F	47.2	0.65	30.7	--
	Total	--	2.94	144.7	49

^a Based on Table 2-2.

^b Based on Table 3-1.

^c Subpart DDDDD, Appendix A, Equation 4.

**TABLE 3-3
LOOK-UP TABLE COMPARISON FOR MANGANESE**

HBCA	Weighted Averaged Stack Height (m)	Minimum Distance to Property Boundary (m)^a	Look-Up Table Value (lb/hr)^b	Calculated Emission Rate (lb/hr)^c	Pass/Fail?
Mn	49	156	1.02	2.9	Fail

^a Based on Figure 3-1.

^b Based on Table 3 in Appendix A, Subpart DDDDD.

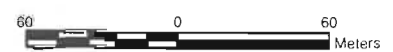
^c Based on Table 3-2.



LEGEND

- Source Location
- Property Boundary

REFERENCE
 Projection: Transverse Mercator Datum: NAD 27 Coordinate System: UTM Zone 17



PROJECT
 Health-based Compliance Alternative Demonstration for the
 Sugar Cane Growers Cooperative of Florida

TITLE
**Minimum Distance from Subpart DDDDD
 Source to Property Boundary**



PROJECT No.	2013-004	SCALE	AS SHOWN	REV.	
DESIGN	AS	DATE	08 Sept 2008		
CHECK	AS	DATE	08 Sept 2008		
DESIGN	AS	DATE	08 Sept 2008		
REVIEW	DB	DATE	08 Sept 2008		

FIGURE 3-1

4.0 HBCA – SITE-SPECIFIC DEMONSTRATION

In accordance with 40 CFR 63, Subpart DDDDD, Appendix A, the site-specific demonstration estimates the long-term inhalation exposure of Mn by estimating annual or multi-year average ambient concentrations for the individual most exposed to the facility's emissions. The corresponding chronic inhalation dose-response value (RV) for Mn is used in this HBCA demonstration.

The RV is an estimate of a continuous inhalation exposure to the human population without causing deleterious effects during a lifetime. RV values for various chemicals are found in Prioritized Chronic Dose-Response Values (2/28/05), Table 1, published by the EPA Office of Air Quality Planning and Standards (OAQPS) at <http://www.epa.gov/ttn/atw/toxsource/summary.html>. Table 1 presents values for long-term (chronic) inhalation and oral exposures. Based on these values, the RV for Mn is 0.05 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) based on non-cancer chronic inhalation.

4.1 Risk-Assessment Methodology

This section documents the air quality dispersion modeling analysis to support the site-specific inhalation risk assessment for the low-risk demonstration in accordance with Appendix A of Subpart DDDDD. The risk assessment and dispersion analysis methods follow the procedures established by the *Air Toxics Risk Assessment Reference Library, Volume 2: Facility-Specific Assessment* and U.S. EPA's *Guideline on Air Quality Models (Appendix W to 40 CFR Part 51)*.

A more detailed description of the model, along with a discussion of the emissions inventory, model selection, building downwash effects, meteorological data, receptor locations, and other model input data, is presented in the following sections.

4.1.1 Emission Inventory

Annual emissions during the crop and off-crop seasons are estimated for Mn, based on the fuel analysis results of bagasse from SCGCF. The annual crop season emissions for Mn are provided in Table 4-1 and the annual off-crop season emissions for Mn are provided in Tables 4-2 and 4-3

During the crop season, all boilers (Boiler Nos. 1, 2, 3, 4, 5, and 8) operate. However, during the off-crop season only three boilers may operate at one time. There are eight possible off-crop season scenarios. However, only the worst stack parameters and emissions were modeled to obtain the

worst-case impacts. The two off-crop season scenarios that were modeled are shown below and in Table 4-3.

- Scenario A –
 - Stack parameters based on Boiler Nos. 1, 2, and 5.
 - Emissions based on Boiler Nos. 4, 5, and 8.
- Scenario B –
 - Stack parameters based on Boiler Nos. 1, 2, and 8.
 - Emissions based on Boiler Nos. 4, 5, and 8.

Based on Table 2-2, Boiler Nos. 1, 2, 5, and 8 have the lowest, and approximately equal, stack heights.

The SCGCF boilers are permitted to operate a total of 7,296 hours per year (hr/yr). The annual crop season emissions are based on 4,440 hr/yr operation (October 13 - April 15), based on the current Title V permit. For modeling purposes, the total crop season emissions were extended over a 7-month period (October - April, 212 days) spanning the permitted operating period. The annual off-crop season emissions are based on 2,856 hr/yr operation (119 days). For modeling purposes, the total off-crop season emissions were extended over the remaining 5-month period (May-September, 153 days).

The maximum heat input values for each boiler were obtained from the Title V renewal application (May 2005). In addition, the emission factor for Mn for bagasse firing was obtained from the 90th percentile of historical fuel analysis data (see Table A-2). The 90th percentile of the historical bagasse data is 1.3×10^{-3} lb/MMBtu.

The worst-case crop and off-crop season Mn emissions for each Subpart DDDDD source were modeled.

4.1.2 Model Selection

The American Meteorological Society and EPA Regulatory Model (AERMOD) dispersion model was used in the air quality modeling analysis to assess long-term off-site exposure due to manganese emissions from all Subpart DDDDD boilers at the SCGCF Mill.

On November 9, 2005, the EPA implemented AERMOD into its *Guideline of Air Quality Models (Appendix W to 40 CFR Part 51)* as the recommended model for regulatory modeling applications. The Florida Department of Environmental Protection (FDEP) is allowing the use of AERMOD for air permitting projects as a replacement for the Industrial Source Complex Short-Term Model (ISCST3). The ISCST3 model will no longer be in effect as of November 9, 2006.

The AERMOD dispersion model (Version 04300) is available on the EPA's Internet web site, Support Center for Regulatory Air Models (SCRAM), within the Technical Transfer Network (TTN). A listing of AERMOD model features is presented in Table 4-4.

The EPA and FDEP recommend that the AERMOD model be used to predict pollutant concentrations at receptors located within 50 kilometers (km) from a source. The AERMOD model calculates hourly concentrations based on hourly meteorological data. The AERMOD model is applicable for most applications since it is recognized as containing the latest scientific algorithms for simulating plume behavior in all types of terrain. For evaluating plume behavior within the building wake of structures, the AERMOD model incorporates the Plume Rise Model Enhancement (PRIME) downwash algorithm developed by the Electric Power Research Institute (EPRI). AERMOD can predict pollutant concentrations for averaging times of annual and 24-, 8-, 3-, and 1-hours.

The AERMOD model was used to predict the maximum pollutant concentrations for the SCGCF Mill in nearby areas surrounding the Mill. The predicted concentrations were then compared to the HQ for Mn.

For this analysis, the EPA regulatory default options were used to predict all maximum impacts.

These options include:

- Final plume rise at all receptor locations
- Stack-tip downwash
- Buoyancy-induced dispersion
- Default wind speed profile coefficients
- Default vertical potential temperature gradients
- Calm wind processing

4.1.3 Building Downwash Effects

Based on the building dimensions associated with buildings and structures at the Mill, all stacks will comply with the good engineering practice (GEP) stack height regulations (i.e., the stacks do not exceed GEP height). However, these stacks are less than GEP height. Therefore, the potential for building downwash to occur was considered in the air modeling analysis for these stacks.

The location of the buildings used in downwash and the boiler stacks are presented in Figure 4-1. All direction-specific building parameters were calculated with the Building Profile Input Program (BPIP), Version 04274.

4.1.4 Meteorological Data

Meteorological data used in the AERMOD model to determine air quality impacts consisted of a concurrent 5-year period of hourly surface weather observations and twice-daily upper air soundings from the National Weather Service (NWS) offices located at the Palm Beach International Airport and Miami, respectively. Concentrations were predicted using 5 years of hourly meteorological data from 2001 through 2005. The NWS office at Palm Beach International Airport is located approximately 55 km (34 miles) east of the Mill site and is the closest primary weather station to the study area considered to have meteorological data representative of the site. The meteorological data from this NWS station have been used for numerous air modeling studies within the sugar industry and for the Mill.

The data for these stations were processed into a format that can be input to the AERMOD model using the meteorological preprocessor program AERMET. The data were acquired and processed by FDEP.

A unique feature of AERMOD is its incorporation of land use parameters for the processing of boundary layer parameters used for the dispersion. Based on the most recent regulatory guidance, the land use parameters should be representative of the data measurement site (i.e., Palm Beach International Airport). Land use data, representing the average surface roughness, albedo, and Bowen ratio that exist within a 3-km radius of the NWS station at Palm Beach International Airport were extracted from 1-degree land use files from the U.S. Geographical Survey (USGS) using the AERSURFACE program. AERSURFACE currently extracts land use data in 12 wind direction sectors covering 360 degrees. The land use values for each wind direction sector were input into Stage 3 of the AERMET preprocessor program to create the surface and profile meteorological files that AERMOD requires.

4.1.5 Model Receptor Grid

For predicting maximum concentrations in the vicinity of the Mill, more than 1,800 receptors were located at the Mill's restricted property line and at offsite receptors. The receptors, as presented in Figure 4-2, were modeled using the Universal Transverse Mercator (UTM) coordinate system from 17, North American Datum 1927 (NAD27).

Nested Cartesian receptor grids were used in addition to discrete Cartesian receptors along the Mill fence line. The impact analysis used the following receptor spacing:

- 100-meter intervals along the fence line,
- 100-meter intervals beyond the fence line to 2 km from the Mill,
- 500-meter intervals from 2 km to 4 km from the Mill.

Receptor elevations and hill scale heights for all receptors were obtained from 7.5-minute USGS Digital Elevation Model (DEM) data using the AERMOD terrain preprocessor program AERMAP, Version 04300.

4.2 Dispersion Modeling Results

To evaluate long-term non-carcinogenic impacts, AERMOD was run for each of the five years of meteorological data and the predicted annual average concentrations for each year were evaluated. These results were used to determine the maximum annual Mn concentration at any receptor over the 5-year period.

The results of the dispersion modeling for Mn are provided in Table 4-5. The HQ for Mn is computed by dividing the modeled concentration by the respective RV. Table 4-5 indicates that the HQ for Mn is greater than 1.0 at offsite locations. To determine the location and extent of areas with impacts greater than an HQ of 1.0, a map showing the 0.05 $\mu\text{g}/\text{m}^3$ Mn impact contour was developed, and is shown in Figure 4-3. As presented in Figure 4-3, no residential areas or areas where people potentially congregate are predicted to experience an annual Mn impact of greater than 0.05 $\mu\text{g}/\text{m}^3$. Therefore, the Mn HBCA risk requirement is achieved.

**TABLE 4-1
MAXIMUM ANNUAL MANGANESE EMISSIONS DURING THE CROP SEASON, SCGCF**

HAP	Boiler ID	Model ID	Emission Estimation Method	Heat Input (MMBtu/hr)	Hours of Operation (hr/yr) ^a	Manganese Emission Factor (lb/MMBtu) ^b	Maximum Annual Mn Emissions (TPY)	Mn Emissions For 7-Months ^c (lb/day)	(g/s)
Mn	Boiler No. 1	BLR10	Bagasse Fuel Analysis	266.7	4,440	1.3E-03	0.76	7.21	0.0378
Mn	Boiler No. 2	BLR20	Bagasse Fuel Analysis	263.8	4,440	1.3E-03	0.76	7.13	0.0374
Mn	Boiler No. 3	BLR30	Bagasse Fuel Analysis	229	4,440	1.3E-03	0.66	6.19	0.0325
Mn	Boiler No. 4	BLR40	Bagasse Fuel Analysis	573	4,440	1.3E-03	1.64	15.48	0.0813
Mn	Boiler No. 5	BLR50	Bagasse Fuel Analysis	439	4,440	1.3E-03	1.26	11.86	0.0623
Mn	Boiler No. 8	BLR80	Bagasse Fuel Analysis	504	4,440	1.3E-03	1.44	13.62	0.0715
Total Mn				—	—	—	6.52	61.48	0.3228

Notes:

MMBtu/hr = million British thermal units per hour
 hr/yr = hour per year
 lb/MMBtu = pound per million British thermal units
 lb/hr = pound per hour
 g/s = gram per second
 TPY = tons per year

- ^a Based on operating October 13 through April 15 during the crop season.
- ^b Based on the 90th percentile of historical bagasse fuel analysis data (see Table A-2).
- ^c Based on October-April crop season operation.

TABLE 4-2
MAXIMUM ANNUAL MANGANESE EMISSIONS DURING THE OFF-CROP SEASON, SCGCF

Off-Crop Season Scenario	HAP	Boiler ID	Model ID	Emission Estimation Method	Heat Input (MMBtu/hr)	Hours of Operation (hr/yr) ^a	Manganese Emission Factor (lb/MMBtu) ^b	Maximum Annual Mn Emissions (TPY)	Mn Emissions For 5-Months ^c (lb/day)	(g/s)
Scenario A	Mn	Boiler No. 1	BLR1F	Bagasse Fuel Analysis	266.7	2,856	1.3E-03	0.49	6.42	0.034
	Mn	Boiler No. 2	BLR2F	Bagasse Fuel Analysis	263.8	2,856	1.3E-03	0.49	6.35	0.033
	Mn	Boiler No. 4	BLR4F	Bagasse Fuel Analysis	573	2,856	1.3E-03	1.06	13.80	0.072
	Total Mn				--	--	--		26.57	0.140
Scenario B	Mn	Boiler No. 1	BLR1F	Bagasse Fuel Analysis	266.7	2,856	1.3E-03	0.49	6.42	0.034
	Mn	Boiler No. 2	BLR2F	Bagasse Fuel Analysis	263.8	2,856	1.3E-03	0.49	6.35	0.033
	Mn	Boiler No. 5	BLR5F	Bagasse Fuel Analysis	439	2,856	1.3E-03	0.81	10.57	0.055
	Total Mn				--	--	--		23.35	0.123
Scenario C	Mn	Boiler No. 1	BLR1F	Bagasse Fuel Analysis	266.7	2,856	1.3E-03	0.49	6.42	0.034
	Mn	Boiler No. 2	BLR2F	Bagasse Fuel Analysis	263.8	2,856	1.3E-03	0.49	6.35	0.033
	Mn	Boiler No. 8	BLR8F	Bagasse Fuel Analysis	504	2,856	1.3E-03	0.93	12.14	0.064
	Total Mn				--	--	--		24.91	0.131
Scenario D	Mn	Boiler No. 1	BLR1F	Bagasse Fuel Analysis	266.7	2,856	1.3E-03	0.49	6.42	0.034
	Mn	Boiler No. 4	BLR4F	Bagasse Fuel Analysis	573	2,856	1.3E-03	1.06	13.80	0.072
	Mn	Boiler No. 5	BLR5F	Bagasse Fuel Analysis	439	2,856	1.3E-03	0.81	10.57	0.055
	Total Mn				--	--	--		30.79	0.162
Scenario E	Mn	Boiler No. 2	BLR2F	Bagasse Fuel Analysis	263.8	2,856	1.3E-03	0.49	6.35	0.033
	Mn	Boiler No. 4	BLR4F	Bagasse Fuel Analysis	573	2,856	1.3E-03	1.06	13.80	0.072
	Mn	Boiler No. 5	BLR5F	Bagasse Fuel Analysis	439	2,856	1.3E-03	0.81	10.57	0.055
	Total Mn				--	--	--		30.72	0.161
Scenario F	Mn	Boiler No. 4	BLR4F	Bagasse Fuel Analysis	573	2,856	1.3E-03	1.06	13.80	0.072
	Mn	Boiler No. 5	BLR5F	Bagasse Fuel Analysis	439	2,856	1.3E-03	0.81	10.57	0.055
	Mn	Boiler No. 8	BLR5F	Bagasse Fuel Analysis	504	2,856	1.3E-03	0.93	12.14	0.064
	Total Mn				--	--	--		36.51	0.192
Scenario G	Mn	Boiler No. 1	BLR1F	Bagasse Fuel Analysis	266.7	2,856	1.3E-03	0.49	6.42	0.034
	Mn	Boiler No. 5	BLR5F	Bagasse Fuel Analysis	439	2,856	1.3E-03	0.81	10.57	0.055
	Mn	Boiler No. 8	BLR5F	Bagasse Fuel Analysis	504	2,856	1.3E-03	0.93	12.14	0.064
	Total Mn				--	--	--		29.13	0.153
Scenario H	Mn	Boiler No. 2	BLR2F	Bagasse Fuel Analysis	263.8	2,856	1.3E-03	0.49	6.35	0.033
	Mn	Boiler No. 5	BLR5F	Bagasse Fuel Analysis	439	2,856	1.3E-03	0.81	10.57	0.055
	Mn	Boiler No. 8	BLR8F	Bagasse Fuel Analysis	504	2,856	1.3E-03	0.93	12.14	0.064
	Total Mn				--	--	--		29.06	0.153

Notes:

MMBtu/hr = million British thermal units per hour
 hr/yr = hours per year
 lb/MMBtu = pound per million British thermal units
 lb/hr = pound per hour
 g/s = gram per second
 TPY = tons per year

^a Based on 119 days of operation during the off-crop season.

^b Based on the 90th percentile of historical bagasse fuel analysis data (see Table A-2).

^c Based on May-September off-crop season operation (153 days).

**TABLE 4-3
MAXIMUM ANNUAL MANGANESE EMISSIONS DURING THE OFF-CROP SEASON, SCGCF (MODELING INPUTS)**

Off-Crop Season Scenario	HAP	Boiler ID	Model ID	Emission Estimation Method	Hours of Operation (hr/yr) ^a	Manganese Emission Factor (lb/MMBtu) ^b	Maximum Annual Mn Emissions ^c (TPY)	Mn Emissions For 5-Months ^d (lb/day)	(g/s)
Scenario A	Mn	Boiler No. 1	BLR1F	Bagasse Fuel Analysis	2,856	1.3E-03	1.06	13.80	0.0724
	Mn	Boiler No. 2	BLR2F	Bagasse Fuel Analysis	2,856	1.3E-03	0.81	10.57	0.0555
	Mn	Boiler No. 5	BLR5F	Bagasse Fuel Analysis	2,856	1.3E-03	0.93	12.14	0.0637
	Total Mn				--	--	2.79	36.51	0.1917
Scenario B	Mn	Boiler No. 1	BLR1F	Bagasse Fuel Analysis	2,856	1.3E-03	1.06	13.80	0.072
	Mn	Boiler No. 2	BLR2F	Bagasse Fuel Analysis	2,856	1.3E-03	0.81	10.57	0.055
	Mn	Boiler No. 8	BLR8F	Bagasse Fuel Analysis	2,856	1.3E-03	0.93	12.14	0.064
	Total Mn				--	--	2.79	36.51	0.1917

^a Based on 119 days of operation during the off-crop season.

^b Based on the 90th percentile of historical bagasse fuel analysis data (see Table A-2).

^c Worst-case emissions based on Boiler Nos. 4, 5 and 8 emissions and Boiler Nos. 1, 2 and 5 or Boiler Nos. 1, 2 and 8 stack parameters.

^d Based on May-September off-crop season operation (153 days).

TABLE 4-4

MAJOR FEATURES OF THE AERMOD MODEL, VERSION 04300

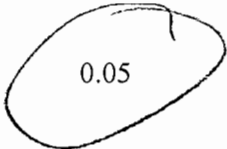
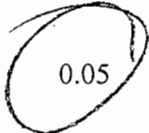
AERMOD Model Features

- Plume dispersion/growth rates are determined by the profile of vertical and horizontal turbulence, vary with height, and use a continuous growth function.
- In a convective atmosphere, uses three separate algorithms to describe plume behavior as it comes in contact with the mixed layer lid; in a stable atmosphere uses a mechanically mixed layer near the surface.
- Polar or Cartesian coordinate systems for receptor locations can be included directly or by an external file reference.
- Urban model dispersion is input as a function of city size and population density; sources can also be modeled individually as urban sources.
- Stable plume rise: uses Briggs equations with winds and temperature gradients at stack top up to half-way up to plume rise. Convective plume rise: plume superimposed on random convective velocities.
- Procedures suggested by Briggs (1974) for evaluating stack-tip downwash.
- Has capability of simulating point, volume, area, and multi-sized area sources.
- Accounts for the effects of vertical variations in wind and turbulence (Brower *et al.*, 1998).
- Uses measured and computed boundary layer parameters and similarity relationships to develop vertical profiles of wind, temperature, and turbulence (Brower *et al.*, 1998).
- Concentration estimates for 1-hour to annual average times.
- Creates vertical profiles of wind, temperature, and turbulence using all available measurement levels.
- Terrain features are depicted by use of a controlling hill elevation and a receptor point elevation.
- Modeling domain surface characteristics are determined by selected direction and month/season values of surface roughness length, Albedo, and Bowen ratio.
- Contains a mechanical and convective mixed layer height, the latter based on the hourly accumulation of sensible heat flux.
- The method of Pasquill (1976) to account for buoyancy-induced dispersion.
- A default regulatory option to set various model options and parameters to EPA-recommended values.
- Contains procedures for calm-wind and missing data for the processing of short term averages.

Note: AERMOD = the American Meteorological Society and Environmental Protection Agency Regulatory Model.

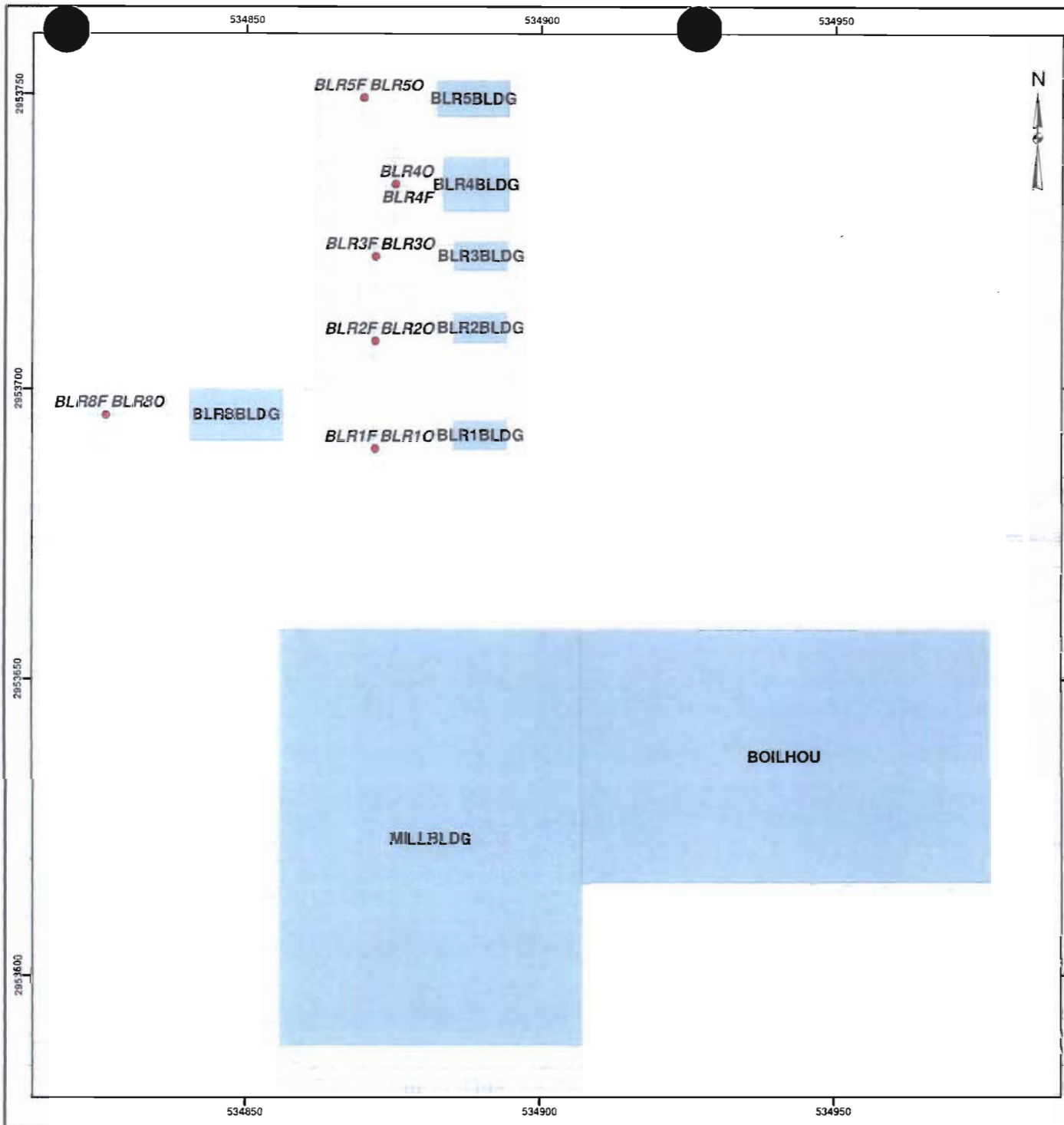
Source: Paine *et al.*, 2004.

**TABLE 4-5
MAXIMUM PREDICTED MANGANESE IMPACTS - SCGCF**

Averaging Period	Year	Maximum Predicted Impacts ($\mu\text{g}/\text{m}^3$)	Receptor Location ^a		Mn Criteria ($\mu\text{g}/\text{m}^3$)	Hazard Quotient
			East (m)	North (m)		
<u>CASE A</u>						
Annual	2001	0.095 ✓	534360	2953620		1.90
	2002	0.093 ✓	534460	2953920		1.86
	2003	0.082 ✓	534560	2954020		1.64
	2004	0.096 ✓	534360	2953720		1.92
	2005	0.077 ✓	534360	2953720		1.54
<u>CASE B</u>						
Annual	2001	0.097 ✓	534360	2953620		1.94
	2002	0.094 ✓	534460	2953920		1.88
	2003	0.082 ✓	534560	2954020		1.64
	2004	0.098 ✓	534360	2953720		1.96
	2005	0.079 ✓	534360	2953720		1.58

^a UTM coordinates in Zone 17.

Note: Concentrations are highest predicted with AERMOD model and 5-years of meteorological data from Palm Beach/Miami 2001-2005.



LEGEND

- Source Location
- Building Used in Downwash
- Property Boundary

PROPERTY BOUNDARY



REFERENCE

Projection: Transverse Mercator Datum: NAD 27 Coordinate System: UTM Zone 17

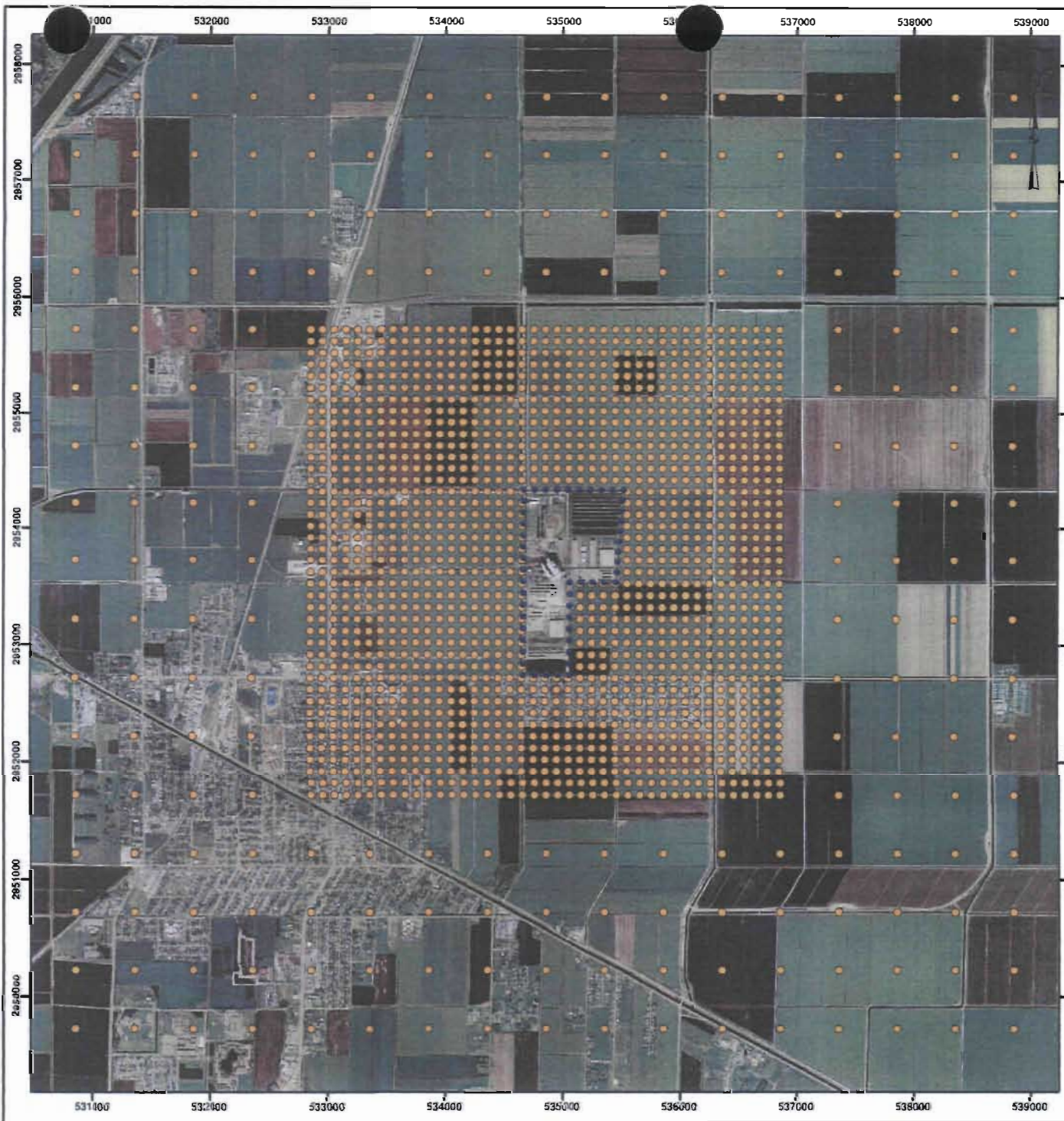


PROJECT
Health-based Compliance Alternative Demonstration for the
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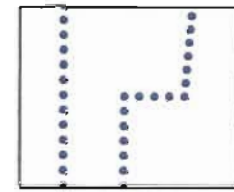
TITLE
Source and Building Locations



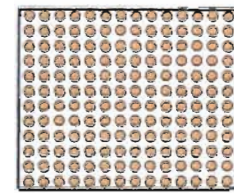
PROJECT No.		SCALE AS SHOWN	REV. 0
DESIGN	AB 08 Sep. 2006		FIGURE 4-1
GIS	AB 08 Sep. 2006		
CHECK	CB 08 Sept. 2006		
REVIEW	DB 08 Sep. 2006		



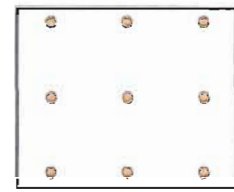
LEGEND



Property Boundary
- 100m Spacing



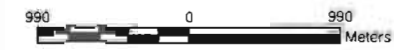
Receptor Grid:
- 100m Spacing



Receptor Grid:
- 500m Spacing

REFERENCE

Projection: Transverse Mercator Datum: NAD 27 Coordinate System: UTM Zone 17



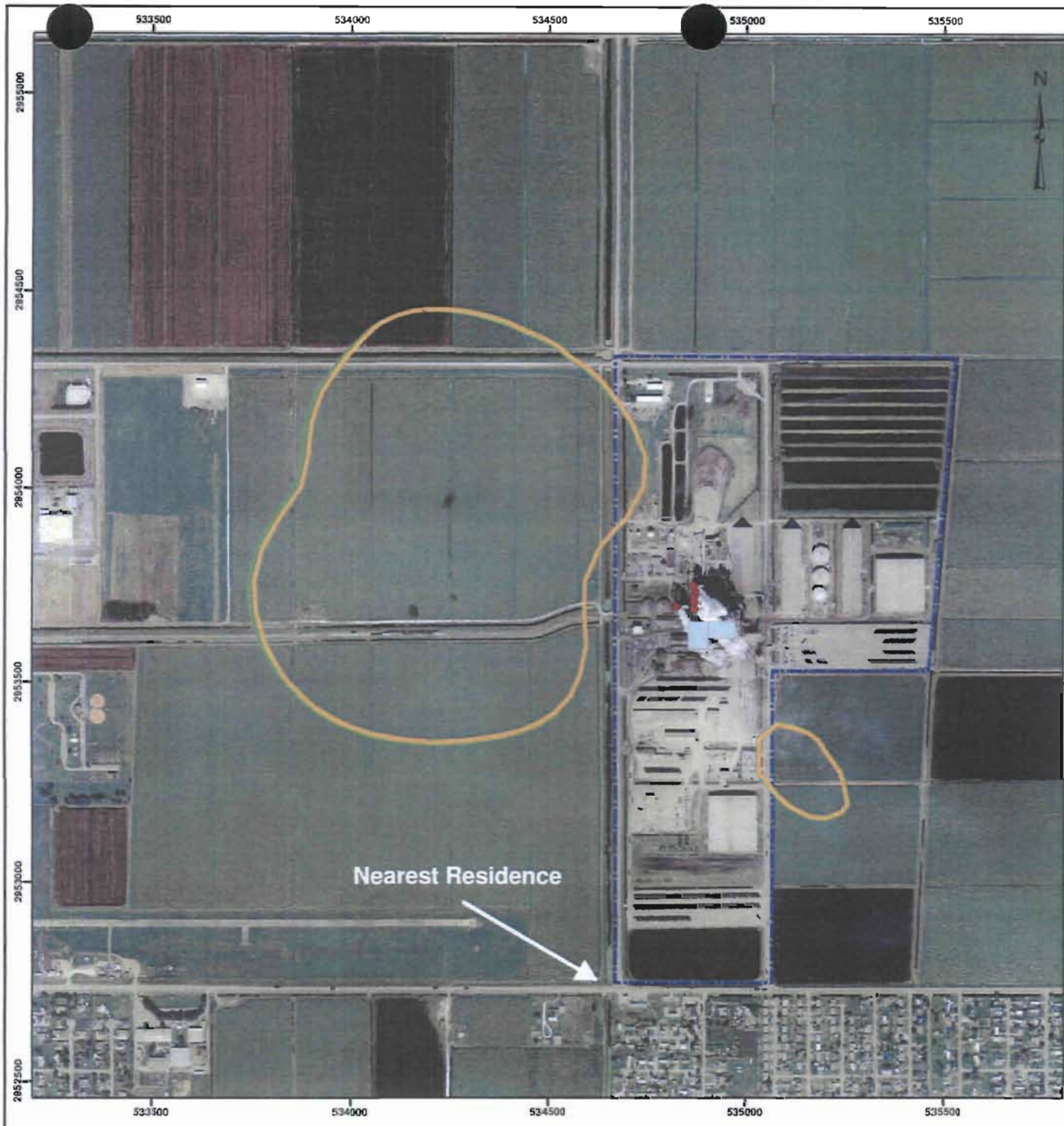
PROJECT
Health-based Compliance Alternative Demonstration for the
Sugar Cane Growers Cooperative of Florida

TITLE
**Receptor Grid Locations
Overlaid on an Aerial Photograph**



PROJECT NO.	SCALE AS SHOWN	REV. 0
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GIS	AB 08 Sept. 2006	
CHECK	CD 08 Sept. 2006	
REVIEW	DB 08 Sept. 2006	

FIGURE 4-2

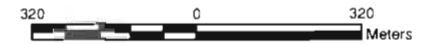


LEGEND

- Source Location
- Building Used in Downwash
- Property Boundary
- Scenario A Contour of 0.05 ug/m³ MN
- Scenario B Contour of 0.05 ug/m³ MN

REFERENCE

Projection: Transverse Mercator Datum: NAD 27 Coordinate System: UTM Zone 17



PROJECT		Health-based Compliance Alternative Demonstration for the Sugar Cane Growers Cooperative of Florida	
TITLE		Location of Maximum Manganese Concentrations	
 Golder Associates Gainesville, Florida	PROJECT NO.	MS-7504	SCALE AS SHOWN
	DESIGN	AB 1 06 Sept. 2006	REV. 3
	GIS	AB 06 Sept. 2006	FIGURE 4-3
	CHECK	CB 06 Sept. 2006	
	REVIEW	DB 1 06 Sept. 2006	

5.0 TITLE V PERMIT PARAMETERS

To be eligible for either HBCA, the parameters that defined the affected source as eligible for the HBCA are submitted to the permitting authority for incorporation into the Title V permit, as federally enforceable limits. These parameters include fuel type, fuel mix (annual average), emission rate, type of control devices, process parameters (e.g., maximum heat input), and non-process parameters. The parameters that SCGCF proposes to be incorporated into the Title V permit are listed in Table 5-1.

**TABLE 5-1
TITLE V PERMIT LIMITS FOR SUBPART DDDDD SOURCES, SCGCF**

Unit	Process Parameter	Limit	Units	Averaging Time
Boiler No. 1	Maximum Heat Input	2267	MMBtu/hr	24-hr
	Mn Emissions	0.0013	lb/MMBtu	--
Boiler No. 2	Maximum Heat Input	263.8	MMBtu/hr	24-hr
	Mn Emissions	0.0013	lb/MMBtu	--
Boiler No. 3	Maximum Heat Input	229	MMBtu/hr	24-hr
	Mn Emissions	0.0013	lb/MMBtu	--
Boiler No. 4	Maximum Heat Input	573	MMBtu/hr	24-hr
	Mn Emissions	0.0013	lb/MMBtu	--
Boiler No. 5	Maximum Heat Input	439	MMBtu/hr	24-hr
	Mn Emissions	0.0013	lb/MMBtu	--
Boiler No. 8	Maximum Heat Input	504	MMBtu/hr	24-hr
	Mn Emissions	0.0013	lb/MMBtu	--

MMBtu/hr = million British thermal units per hour
 lb/MMBtu = pound per million British thermal units

APPENDIX A

FUEL ANALYSIS

APPENDIX A
BAGASSE SAMPLING PROTOCOL
FOR 2002-2003 SEASON

SUGAR CANE GROWERS COOPERATIVE OF FLORIDA

1.0 SAMPLING SUPPLIES

For bagasse collection and storage purposes, the following supplies must be acquired prior to sampling:

- Five 5-gallon buckets with sealable lids,
- Several large coolers (if refrigerator is not available), and
- Pint-size (16-ounce) unused Ziploc® bags.

Each mill will need enough Ziploc® bags to perform the sample collection at the current bagasse sampling frequency (not to exceed once every 4 hours) for 10 weeks every other week, or until the end of the crop. For example, a mill that collects samples every 4 hours will need up to 420 bags (6 samples per day, 7 days per week, 10 weeks).

Current bagasse sampling frequency can vary from once every hour to once every shift, depending upon the mill. However, it is recommended to sample no more than once every four hours due to sample size considerations.

2.0 COLLECTION PROCEDURES

Mill personnel will collect bagasse samples at the current sampling frequency, every other week, and by the current sampling methods used for internal quality control purposes. Bagasse samples will be placed into the Ziploc® bags; one sample per bag. Each pint-size Ziploc® bag will hold (1) one sample each, and must be filled as completely as practical. Mill personnel must ensure that all bags have been completely sealed. Each bag must also be marked with the sample date and time and the mill from which the sample was collected. All bagasse samples must be immediately stored (refer to Section 3.0 for storage procedures).

3.0 STORAGE PROCEDURES

All bagasse samples are to remain in the sealed Ziploc® bags throughout the storage period. Samples that are collected during the designated sampling weeks (i.e. Monday through Sunday) are to be placed in 1 or 2 of the 5-gallon buckets (depending on the number of samples being stored). Each 5-gallon bucket should be labeled with the mill name. The sampling weeks are as follows:

- November 25 – December 1
- December 9 – 15
- December 23 – 29
- January 6 – 12
- January 20 – 26
- February 3 – 9
- February 17 – 23
- March 3 – 9
- March 17 – 23
- March 31 – April 6

The buckets must be closed and stored in a refrigerator or cooler (temperature approximately 40°F), until picked up by Golder staff. Each Monday, beginning December 2, the 5-gallon buckets containing the previous week's bagasse samples will be picked up by Golder staff. The remaining buckets (of the original five) will be left at each mill for the following week's sample storage.

These collection and storage procedures will begin Monday, November 25, 2002 and continue until the end of the crop season. The first weekly collection of samples will be picked up by Golder staff on Monday, December 2, 2002.

**BAGASSE SAMPLING PROTOCOL
FOR 2004-2005 SEASON**

SUGAR CANE GROWERS COOPERATIVE OF FLORIDA

1.0 SAMPLING SUPPLIES

For bagasse collection and storage purposes the following supplies must be acquired prior to sampling:

- (5) Five 5-gallon buckets with sealable lids,
- Several large coolers (if refrigerator is not available), and
- Pint-size (16-ounce) unused Ziploc® bags. *Golder to provide bags.*

Each mill will need enough Ziploc® bags to perform the sample collection at the current bagasse sampling frequency (not to exceed once every 4 hours) for 10 weeks every other week, or until the end of the crop. For example, a mill that collects samples every 4 hours will need up to 420 bags (6 samples per day, 7 days per week, 10 weeks).

Current bagasse sampling frequency can vary from once every hour to once every shift, depending upon the mill. However, it is recommended to sample no more than once every four hours due to sample size considerations.

2.0 COLLECTION PROCEDURES

Mill personnel will collect bagasse samples each day of operation at the current sampling frequency, every other week, and by the current sampling methods used for internal quality control purposes. Bagasse samples will be placed into the Ziploc® bags; one sample per bag. Each pint-size Ziploc® bag will hold (1) one sample each, and must be filled as completely as practical. Mill personnel must ensure that all bags have been completely sealed. Each bag must also be marked with the sample date and time and the mill from which the sample was collected. All bagasse samples must be immediately stored (refer to Section 3.0 for storage procedures).

3.0 STORAGE PROCEDURES

All bagasse samples are to remain in the sealed Ziploc® bags throughout the storage period. Samples that are collected during the designated sampling weeks (i.e., Monday through Sunday) are to be placed in 1 or 2 of the 5-gallon buckets (depending on the number of samples being stored). Each 5-gallon bucket should be labeled with the mill name. The sampling weeks are as follows:

- November 15 – November 21
- November 29 – December 5
- December 13 – December 19
- December 27 – January 2
- January 10 – January 16
- January 24 – January 30
- February 7 – February 13
- February 21 – February 27
- March 7 – March 13
- March 21 – March 27

The buckets must be closed and stored in a refrigerator or cooler (temperature approximately 40°F), until picked up by Golder's courier, Pro-Run. Every other Monday, beginning November 22, the 5-gallon buckets containing the previous week's bagasse samples will be picked up by Pro-Run. The remaining buckets (of the original 5) will be left at each mill for the following week's sample storage.

These bagasse sample collection and storage procedures will begin Monday, November 15, 2004 and continue until the end of the crop season. The first weekly collection of samples will be picked up by Pro-Run on Monday, November 22, 2004.

**TABLE A-1
PROXIMATE, ULTIMATE, AND HEAT CONTENT ANALYSES RESULTS FOR BAGASSE FROM SUGAR CANE GROWERS COOPERATIVE OF FLORIDA**

Parameter	Units	Analysis Results (dry basis) for Sample Weeks (collection dates)													
		1/14-1/20/02	1/21-1/27/02	1/28-2/3/02	2/4-2/10/02	2/11-2/17/02	2/18-2/24/02	2/25-3/3/02	3/4-3/10/02	3/11-3/17/02	3/18-3/24/02	3/25-3/31/02	11/25-12/1/02	12/9-12/15/02	12/23-12/29/02
No. of Samples Composited		48	40	42	38	10	42	42	41	40	42	3	41	30	33
Moisture	% , as received	54.37	54.22	52.85	53.29	55.63	55.07	54.55	54.24	52.47	53.20	52.75	57.44	56.01	54.60
Ash	%	1.38	1.25	1.67	1.39	2.55	1.66	1.81	2.01	2.28	1.90	2.31	1.41	1.21	1.22
Ash	lb/MMBtu	1.70	1.54	2.07	1.72	3.15	2.03	2.23	2.46	2.80	2.33	2.85	1.69	1.46	1.45
Volatiles	%	86.57	87.61	86.85	88.07	85.87	88.30	87.09	85.97	87.57	87.88	88.98	87.32	86.73	86.20
Fixed C	%	12.05	11.14	11.48	10.54	11.58	10.04	11.10	12.02	10.15	10.22	8.71	11.27	12.06	12.58
HHV	Btu/lb	8,117	8,097	8,058	8,098	8,097	8,161	8,120	8,165	8,151	8,152	8,105	8,330	8,311	8,385
MMF	Btu/lb	8,239	8,208	8,205	8,221	8,326	8,310	8,282	8,346	8,356	8,322	8,312	8,458	8,422	8,497
MAF	Btu/lb	8,230	8,200	8,194	8,212	8,309	8,299	8,270	8,332	8,341	8,310	8,297	8,449	8,413	8,489
Air Dry Loss	%	53.79	53.76	52.30	51.95	55.15	54.53	53.66	53.09	51.12	52.26	52.20	56.85	55.50	53.11
Carbon	%	49.20	48.65	48.79	49.16	48.12	49.08	48.87	48.36	48.57	49.39	48.54	49.89	49.84	49.48
Hydrogen	%	5.81	5.62	5.82	5.72	5.95	5.93	6.16	6.31	5.92	6.32	6.59	5.26	5.15	5.57
Nitrogen	%	0.36	0.38	0.35	0.35	0.38	0.43	0.40	0.38	0.36	0.39	0.42	0.28	0.30	0.33
Sulfur	%	0.05	0.04	0.04	0.05	0.08	0.06	0.05	0.05	0.06	0.07	0.08	0.06	0.06	0.07
Oxygen	%	43.20	44.06	43.33	43.33	42.92	42.84	42.71	42.89	42.81	41.93	42.06	43.10	43.47	43.33
SO ₂	lb/MMBtu	0.12	0.10	0.10	0.13	0.20	0.15	0.13	0.13	0.15	0.18	0.20	0.15	0.15	0.17
F-Factor															
Fd	dscf/MMBtu	9,441	9,226	9,428	9,407	9,341	9,443	9,561	9,469	9,355	9,737	9,748	9,091	9,034	9,080

Note: % = percent.
 Btu/lb = British thermal unit per pound.
 C = carbon.
 HHV = higher heating value.
 lb/MMBtu = pounds per million British thermal unit.
 MAF = moisture and ash free; dry basis heating value without ash included.
 MMF = mineral and matter free; heating value without sulfur and ash included.
 SO₂ = sulfur dioxide.

**TABLE A-1
PROXIMATE, ULTIMATE, AND HEAT CONTENT ANALYSES RESULTS FOR BAGASSE FROM SUGAR CANE GROWERS COOPERATIVE OF FLORIDA**

Parameter	Units	BOILER MACT TESTING											Range		Avg	Parameter	
		1/6-1/12/03	1/20-1/26/03	2/3-2/9/03	2/17-2/23/03	3/3-3/9/03	3/17-3/23/03	12/16/04	12/16/04	12/17/04	1/19/05	1/19/05	1/19/05	Min			Max
No. of Samples Compositied		38	46	42	37	36	41	3	3	3	3	3	3	--	--	--	
Moisture	% , as received	53.87	55.31	53.15	54.14	52.93	54.06	55.49	57.48	56.62	55.94	54.58	52.83	52.47	57.48	54.50	Moisture
Ash	%	2.23	2.05	1.22	1.69	1.96	1.96	4.17	2.12	3.27	1.05	1.70	1.25	1.05	4.17	1.87	Ash
Ash	lb/MMBtu	2.78	2.51	1.48	2.07	2.42	2.35	5.24	2.58	4.02	1.24	2.07	1.54	1.24	5.24	2.30	Ash
Volatiles	%	87.29	86.29	87.06	86.78	87.56	87.07	84.55	86.04	84.88	85.96	85.41	85.89	84.55	88.98	86.76	Volatiles
Fixed C	%	10.48	11.66	11.72	11.53	10.48	10.97	11.28	11.84	11.85	12.99	12.89	12.86	8.71	12.99	11.37	Fixed C
HHV	Btu/lb	8,032	8,174	8,259	8,166	8,093	8,336	7,955	8,209	8,127	8,459	8,216	8,132	7,955	8,459	8,173	HHV
MMF	Btu/lb	8,230	8,359	8,369	8,318	8,268	8,516	8,330	8,401	8,423	8,555	8,369	8,243	8,205	8,555	8,342	MMF
MAF	Btu/lb	8,216	8,345	8,361	8,306	8,256	8,503	8,301	8,387	8,401	8,548	8,358	8,235	8,194	8,548	8,329	MAF
Air Dry Loss	%	53.20	54.60	52.36	53.55	52.36	53.49	54.83	56.69	55.72	54.75	53.53	51.69	51.12	56.85	53.69	Air Dry Loss
Carbon	%	48.65	52.20	52.32	52.54	51.60	51.68	50.50	51.14	50.75	52.35	51.46	51.37	48.12	52.54	50.10	Carbon
Hydrogen	%	5.05	6.45	5.95	6.33	6.31	6.66	6.03	5.90	6.15	6.10	5.91	6.15	5.05	6.66	5.97	Hydrogen
Nitrogen	%	0.31	0.36	0.29	0.30	0.38	0.32	0.48	0.46	0.55	0.50	0.49	0.46	0.28	0.55	0.39	Nitrogen
Sulfur	%	0.06	0.08	0.06	0.08	0.07	0.08	0.05	0.05	0.06	0.04	0.05	0.06	0.04	0.08	0.06	Sulfur
Oxygen	%	43.70	38.86	40.16	39.06	39.68	39.30	38.77	40.33	39.22	39.96	40.39	40.71	38.77	44.06	41.62	Oxygen
SO ₂	lb/MMBtu	0.15	0.20	0.15	0.20	0.18	0.19	0.13	0.12	0.15	0.10	0.12	0.15	0.10	0.20	0.15	SO ₂
F-Factor																	
Fd	dscf/MMBtu	9,063	10,468	10,087	10,476	10,349	10,236	10,242	9,899	10,103	9,932	9,952	10,127	9,034	10,476	9,704	Fd

Note: % = percent.
 Btu/lb = British thermal unit per pound.
 C = carbon.
 HHV = higher heating value.
 lb/MMBtu = pounds per million British thermal unit.
 MAF = moisture and ash free; dry basis heating value without ash included.
 MMF = mineral and matter free; heating value without sulfur and ash included.
 SO₂ = sulfur dioxide.

TABLE A-2
METALS AND CHLORINE ANALYSIS FOR BAGASSE FROM SUGAR CANE GROWERS COOPERATIVE OF FLORIDA

Parameter	Units	Concentration (dry basis) for Sample Weeks (collection dates)																			
		1/14-1/20/02	1/21-1/27/02	1/28-2/3/02	1/28-2/3/02 Duplicate	2/4-2/10/02	2/11-2/17/02	2/18-2/24/02	2/25-3/3/02	2/25-3/3/02 Duplicate	3/4-3/10/02	3/11-3/17/02	3/18-3/24/02	3/18-3/24/02 Duplicate	3/25-3/31/02	11/25-12/1/02	12/9-12/15/02	12/23-12/29/02	1/6-1/12/03	1/6-1/12/03 Duplicate	1/20-1/26/03
Chlorine	ppm	--	--	--	--	--	--	--	--	--	--	--	--	--	323.25	268.67	371.76	348.90	--	291.90	
Arsenic	ppm	0.6	0.6	< 0.3	< 0.3	< 0.4	0.3	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.2	0.7	--	0.3	--	--	< 1.3
Beryllium	ppm	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	--	< 0.1	--	--	< 0.1	
Cadmium	ppm	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	--	--	< 0.2	
Chromium	ppm	< 0.1	0.1	0.2	< 0.2	0.4	0.3	0.2	0.2	0.2	0.4	0.2	< 0.1	0.1	0.1	0.2	--	0.1	--	--	< 0.3
Lead	ppm	< 0.3	< 0.3	< 0.3	< 0.3	< 0.4	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	0.3	--	0.3	--	--	< 1.2
Manganese	ppm	8.8	10.9	9.8	8.0	10.4	5.3	9.0	8.3	5.9	10.3	6.9	8.4	7.7	7.3	10.3	9.6	8.5	8.9	8.7	7.5
Nickel	ppm	< 0.2	< 0.2	0.2	< 0.2	< 0.3	0.3	0.2	< 0.2	< 0.2	0.2	< 0.2	< 0.2	< 0.2	0.2	0.1	--	0.2	--	--	< 1.0
Selenium	ppm	1.0	0.9	0.6	0.6	< 0.3	0.7	0.8	0.9	0.8	1.0	0.6	0.7	0.8	0.7	1.0	--	1.2	--	--	< 1.0
Mercury	ppm	< 0.1	< 0.1	< 0.1	< 0.1	< 0.19	< 0.22	< 0.1	< 0.1	< 0.1	< 0.21	< 0.22	< 0.02	< 0.02	< 0.02	< 0.2	--	< 0.2	--	--	< 0.02
Moisture	%	54.0	46.9	49.4	53.4	53.2	56.5	52.7	53.2	52.0	48.9	51.4	53.1	50.3	52.0	55.3	53.3	53.7	51.8	53.0	50.3
No. of Samples Compositied		48	40	42	42	38	10	42	42	42	41	40	42	42	3	41	30	33	38	38	46

Parameter	Units	Concentration (dry basis) for Sample Weeks (collection dates)																			
		1/14-1/20/02	1/21-1/27/02	1/28-2/3/02	1/28-2/3/02 Duplicate	2/4-2/10/02	2/11-2/17/02	2/18-2/24/02	2/25-3/3/02	2/25-3/3/02 Duplicate	3/4-3/10/02	3/11-3/17/02	3/18-3/24/02	3/18-3/24/02 Duplicate	3/25-3/31/02	11/25-12/1/02	12/9-12/15/02	12/23-12/29/02	1/6-1/12/03	1/6-1/12/03 Duplicate	1/20-1/26/03
HHV	Btu/lb	8,117	8,097	8,058	8,058	8,098	8,097	8,161	8,120	8,120	8,165	8,151	8,152	8,152	8,105	8,330	8,311	8,385	8,032	--	8,174
Chlorine	lb/MMBtu	--	--	--	--	--	--	--	--	--	--	--	--	--	0.039	0.032	0.044	0.043	--	--	0.036
Arsenic	lb/MMBtu	7.39E-05	7.41E-05	< 3.72E-05	< 3.72E-05	< 4.94E-05	3.71E-05	6.13E-05	6.16E-05	4.93E-05	4.90E-05	4.91E-05	3.68E-05	3.68E-05	2.47E-05	8.40E-05	--	3.58E-05	--	--	< 1.59E-04
Beryllium	lb/MMBtu	< 1.23E-05	< 1.24E-05	< 1.24E-05	< 1.24E-05	< 1.23E-05	< 1.24E-05	< 1.23E-05	< 1.23E-05	< 1.23E-05	< 1.22E-05	< 1.23E-05	< 1.23E-05	< 1.23E-05	< 1.23E-05	< 1.20E-05	--	< 1.19E-05	--	--	< 1.22E-05
Cadmium	lb/MMBtu	< 1.23E-05	< 1.24E-05	< 1.24E-05	< 1.24E-05	< 1.23E-05	< 1.24E-05	< 1.23E-05	< 1.23E-05	< 1.23E-05	< 1.22E-05	< 1.23E-05	< 1.23E-05	< 1.23E-05	< 1.23E-05	< 1.20E-05	--	< 1.19E-05	--	--	< 2.45E-05
Chromium	lb/MMBtu	< 1.23E-05	1.24E-05	2.48E-05	< 2.48E-05	4.94E-05	1.24E-05	2.45E-05	2.46E-05	2.46E-05	2.45E-05	2.45E-05	< 1.23E-05	2.45E-05	1.23E-05	2.40E-05	--	1.19E-05	--	--	< 3.67E-05
Lead	lb/MMBtu	< 3.70E-05	< 3.71E-05	< 3.72E-05	< 3.72E-05	< 4.94E-05	< 3.71E-05	< 3.68E-05	< 3.69E-05	< 3.69E-05	< 3.67E-05	< 3.68E-05	< 3.68E-05	< 3.68E-05	< 3.70E-05	3.60E-05	--	3.58E-05	--	--	< 1.47E-04
Manganese	lb/MMBtu	1.08E-03	1.35E-03	1.22E-03	9.93E-04	1.28E-03	6.55E-04	1.10E-03	1.02E-03	7.27E-04	1.26E-03	8.47E-04	1.03E-03	9.45E-04	9.01E-04	1.24E-03	1.16E-03	1.01E-03	1.11E-03	--	9.18E-04
Nickel	lb/MMBtu	< 2.46E-05	< 2.47E-05	2.48E-05	< 2.48E-05	< 3.70E-05	3.71E-05	2.45E-05	< 2.46E-05	< 2.46E-05	2.45E-05	< 2.45E-05	2.45E-05	< 2.45E-05	2.47E-05	1.20E-05	--	2.39E-05	--	--	< 1.22E-04
Selenium	lb/MMBtu	1.23E-04	1.11E-04	7.45E-05	7.45E-05	< 3.70E-05	8.65E-05	9.80E-05	1.11E-04	9.85E-05	1.22E-04	7.36E-05	8.59E-05	9.81E-05	8.64E-05	1.20E-04	--	1.43E-04	--	--	< 1.22E-04
8-Metals Total		1.33E-03	1.59E-03	1.39E-03	1.14E-03	1.43E-03	8.58E-04	1.34E-03	1.26E-03	9.42E-04	1.51E-03	1.04E-03	1.21E-03	1.15E-03	1.08E-03	1.52E-03	1.28E-03	--	--	--	1.23E-03
8-Metals w/o Mn	lb/MMBtu	2.46E-04	2.41E-04	1.74E-04	1.49E-04	1.48E-04	2.04E-04	2.39E-04	2.40E-04	2.16E-04	2.51E-04	1.90E-04	1.84E-04	2.02E-04	1.79E-04	2.88E-04	--	2.62E-04	--	--	3.12E-04
Mercury ^b	lb/MMBtu	< 1.23E-05	< 1.24E-05	< 1.24E-05	< 1.24E-05	< 2.35E-05	< 2.72E-05	< 1.23E-05	< 1.23E-05	< 1.23E-05	< 2.57E-05	< 2.70E-05	< 2.45E-06	< 2.45E-06	< 2.47E-06	< 2.40E-05	--	< 2.39E-05	--	--	< 2.45E-06
Manganese	lb/MMBtu	1.08E-03	1.35E-03	1.22E-03	9.93E-04	1.28E-03	6.55E-04	1.10E-03	1.02E-03	7.27E-04	1.26E-03	8.47E-04	1.03E-03	9.45E-04	9.01E-04	1.24E-03	1.16E-03	1.01E-03	1.11E-03	--	9.18E-04

^a For concentrations that are reported as below the detection limit, the minimum, maximum, average, and standard deviation were calculated by taking one-half the detection limit. Duplicate samples were not included in the calculations.

^b For mercury, only samples with lower detection limits (0.02 ppm or less) were included in the statistical analysis.

^c 90% confidence level calculated based on the following equation (40 CFR 63.7530(d)(2)):

$$P_{90} = \text{mean} + (\text{SD} * t); \text{ where:}$$

P_{90} = 90% confidence level pollutant concentration (lb/MMBtu)

mean = average of fuel samples analyzed (lb/MMBtu)

SD = standard deviation of pollutant concentrations (lb/MMBtu)

t = t-distribution critical value for 90% confidence probability (0.1) for n-1 degrees of freedom

n = number of samples

^d Not included because an outlier

TABLE A-2
METALS AND CHLORINE ANALYSIS FOR BAGASSE FROM SUGAR CANE GROWERS COOPERATIVE OF FLORIDA

Parameter	Units	BOILER MACT TESTING											Range ^a		Avg ^a	Parameter
		2/3-2/9/03	2/17-2/23/03	2/17-2/23/03 Duplicate	3/3-3/9/03	3/17-3/23/03	12/16/04	12/16/04	12/17/04	1/19/05	1/19/05	1/19/05	Min	Max		
Chlorine	ppm	401.80	382.50	--	508.87	430.83	150	150	150	130	170	150	130	509	282	Chlorine
Arsenic	ppm	--	0.4	0.3	--	0.4	0.6	0.6	0.7	0.5	0.5	0.5	0.15	0.70	0.45	Arsenic
Beryllium	ppm	--	< 0.2	< 0.2	--	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.05	0.10	0.07	Beryllium
Cadmium	ppm	--	< 0.4	< 0.4	--	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.05	0.20	0.11	Cadmium
Chromium	ppm	--	< 0.2	0.2	--	0.4	0.4	0.3	0.8	0.1	0.2	0.1	0.05	0.80	0.23	Chromium
Lead	ppm	--	< 0.3	< 0.3	--	0.3	0.4	0.3	0.4	0.2	0.2	^d	0.15	0.60	0.23	Lead
Manganese	ppm	9.5	9.4	8.4	7.9	8.9	8.3	10.1	12.9	7.8	9.5	7.4	5.30	12.90	8.92	Manganese
Nickel	ppm	--	0.1	0.2	--	0.3	0.2	0.2	0.5	^d	0.2	0.1	0.10	0.50	0.20	Nickel
Selenium	ppm	--	0.8	0.8	--	0.6	0.8	0.8	0.9	0.9	1.0	0.9	0.15	1.20	0.79	Selenium
Mercury	ppm	--	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.11	0.04	Mercury
Moisture	%	50.8	52.2	50.9	52.9	54.1	55.5	57.5	56.6	55.9	54.6	52.8	46.9	57.5	53.0	Moisture
No. of Samples Composited		42	37	37	36	41	3	3	3	3	3	3	--	--	--	

Parameter	Units	BOILER MACT TESTING											Range ^a		Avg ^a	Standard Deviation	90% Confidence Level ^c	Parameter
		2/3-2/9/03	2/17-2/23/03	2/17-2/23/03 Duplicate	3/3-3/9/03	3/17-3/23/03	12/16/04	12/16/04	12/17/04	1/19/05	1/19/05	1/19/05	Min	Max				
HHV	Btu/lb	8,259	8,166	--	8,093	8,336	7,955	8,209	8,127	8,459	8,216	8,132	7,955	8,459	8,191	--	--	HHV
Chlorine	lb/MMBtu	0.049	0.047	--	0.063	0.052	0.019	0.018	0.018	0.015	0.021	0.018	0.015	0.063	0.034	0.015	0.055 n = 15 t = 1.345	Chlorine
Arsenic	lb/MMBtu	--	4.90E-05	--	--	4.80E-05	7.54E-05	7.31E-05	8.61E-05	5.91E-05	6.09E-05	6.15E-05	1.86E-05	8.61E-05	5.56E-05	--	--	Arsenic
Beryllium	lb/MMBtu	--	< 2.45E-05	--	--	< 2.40E-05	< 2.51E-05	< 2.44E-05	< 2.46E-05	< 2.36E-05	< 2.43E-05	< 2.46E-05	< 5.96E-06	1.26E-05	8.34E-06	--	--	Beryllium
Cadmium	lb/MMBtu	--	< 4.90E-05	--	--	< 4.80E-05	< 5.03E-05	< 4.87E-05	< 4.92E-05	< 4.73E-05	< 4.87E-05	< 4.92E-05	< 5.96E-06	2.51E-05	1.31E-05	--	--	Cadmium
Chromium	lb/MMBtu	--	< 2.45E-05	--	--	4.80E-05	5.03E-05	3.65E-05	9.84E-05	1.18E-05	2.43E-05	1.23E-05	6.13E-06	9.84E-05	2.59E-05	--	--	Chromium
Lead	lb/MMBtu	--	< 3.67E-05	--	--	3.60E-05	5.03E-05	3.65E-05	4.92E-05	2.36E-05	2.43E-05	^d	1.84E-05	7.34E-05	2.91E-05	--	--	Lead
Manganese	lb/MMBtu	1.15E-03	1.15E-03	--	9.76E-04	1.07E-03	1.04E-03	1.23E-03	1.59E-03	9.22E-04	1.16E-03	9.10E-04	6.55E-04	1.59E-03	1.09E-03	--	--	Manganese
Nickel	lb/MMBtu	--	1.22E-05	--	--	3.60E-05	2.51E-05	2.44E-05	6.15E-05	^d	2.43E-05	1.23E-05	1.20E-05	6.15E-05	2.48E-05	--	--	Nickel
Selenium	lb/MMBtu	--	9.80E-05	--	--	7.20E-05	1.01E-04	9.75E-05	1.11E-04	1.06E-04	1.22E-04	1.11E-04	1.85E-05	1.43E-04	9.69E-05	--	--	Selenium
8-Metals Total			1.38E-03			1.34E-03	1.38E-03	1.53E-03	2.03E-03	1.16E-03	1.45E-03	1.14E-03	8.58E-04	2.03E-03	1.34E-03	2.36E-04	1.65E-03 n = 22 t = 1.323	8-Metals
8-Metals w/o Mn	lb/MMBtu	--	2.27E-04	--	--	2.76E-04	1.26E-06	1.22E-06	1.23E-06	1.18E-06	1.22E-06	1.23E-06	1.18E-06	3.12E-04	1.67E-04	1.11E-04	3.13E-04 n = 22 t = 1.323	8-Metals w/o Mn
Mercury ^b	lb/MMBtu	--	< 1.22E-06	--	--	< 1.20E-06	< 1.26E-06	< 1.22E-06	< 1.23E-06	< 1.18E-06	< 1.22E-06	< 1.23E-06	< 5.91E-07	1.23E-06	8.16E-07	3.04E-07	1.23E-06 n = 12 t = 1.363	Mercury ^b
Manganese	lb/MMBtu	1.15E-03	1.15E-03	--	9.76E-04	1.07E-03	1.04E-03	1.23E-03	1.59E-03	9.22E-04	1.16E-03	9.10E-04	6.55E-04	1.59E-03	1.09E-03	1.85E-04	1.3E-03 n = 26 t = 1.316	Manganese

^a For concentrations that are reported as below the detection limit, the minimum, maximum, average, and standard deviation were calculated by taking one-half the detection limit. Duplicate samples were not included in the calculations.

^b For mercury, only samples with lower detection limits (0.02 ppm or less) were included in the statistical analysis.

^c 90% confidence level calculated based on the following equation (40 CFR 63.7530(d)(2)):

$P_{90} = \text{mean} + (\text{SD} * t)$; where:

P_{90} = 90% confidence level pollutant concentration (lb/MMBtu)

mean = average of fuel samples analyzed (lb/MMBtu)

SD = standard deviation of pollutant concentrations (lb/MMBtu)

t = t-distribution critical value for 90% confidence probability (0.1) for n-1 degrees of freedom

n = number of samples

^d Not included because an outlier

TABLE A-3

BOILER MACT FINAL RULE ANALYTICAL PROCEDURES

Rule	40 CFR 63 Subpart DDDDD
Citation	Boiler MACT Requirement

Table 6	<u>Analytical Procedures:</u>
	1. Collect fuel samples--63.7521(c) or ASTM D6323-98 (2003) or equivalent
	2. Composite fuel samples--63.7521(d) or equivalent
	3. Prepare composited fuel samples--SW846-3050B or ASTM D5198-92 (2003) or equivalent
	4. Determine heat content of fuel type--ASTM E711-87 (1996) or equivalent
	5. Determine moisture content of fuel type--ASTM D3173-02 or ASTM E871-82 (1998) or equivalent
	6. Measure pollutant concentration in fuel sample:
	--Mercury--SW-846-7471A
	--Total selected metals--ASTM E885-88 (1996)
	--Chlorine--SW-846-9250 or ASTM E776-87 (1996) or equivalent

**TABLE A-4
COMPARISON OF SUBPART DDDDD FUEL ANALYSIS METHODS WITH SCGCF MILL METHODS**

Analysis	Boiler MACT Rule Method	SCGCF Method Used for Analysis	Description of Differences and Similarities in Methods and Procedures, Detection Limits, etc.
Prepare Composited Fuel Samples	SW-846-3050B, or ASTM D5198-92 (2003), or equivalent	SW-846-3050B	N/A
Heat Content	ASTM E711-87 (1996), or equivalent	ASTM E711-87 (1996)	N/A
Moisture Content	ASTM D3173-02, or ASTM E871-82 (1998), or equivalent	ASTM D3173-02	N/A
Mercury Concentration	SW-846-7471A	SW-846-7471A	N/A
Eight Selected Metals	ASTM 885-88 (1996)	SW-846-6010	SW-846-6010 was used since both SW-846-6010 and ASTM E885-88 are ICP methods, but use different equipment. SW-846-6010 is the industry standard because it yields faster results and has lower detection limits. A detection limit of approximately 0.1 ppm (dry) is acceptable.
Chlorine Concentration	SW-846-9250, or ASTM E776-87 (1996), or equivalent	ASTM 2361	ASTM E776-87 is for <u>forms</u> of chlorine. ASTM 2361 was used to provide <u>total</u> chlorine.

1/19/05

REPORT OF ANALYSES (SN-00003625)

Golder Associates Inc.
 6241 NW 23rd St
 Suite 500
 Gainesville, FL 32653-1500
 Attn: Mr David Buff

DATE: 03/30/05
 FDH # E82001

(Page 1 of 2)

CLIENT STATION ID	LAB NUMBER	%SOLIDS %	AS/S/ICP mg/kg	BE/S/ICP mg/kg	CD/S/ICP mg/kg	CR/S/ICP mg/kg	PB/S/ICP mg/kg
SCGC-1216-1 RUN	262466	51.1 Q	0.6	0.2 U	0.4 U	0.4	0.4
SCGC-1216-2 RUN	262467	44.9 Q	0.6	0.2 U	0.4 U	0.3	0.3
SCGC-1217-3 RUN	262468	45.1 Q	0.7	0.2 U	0.0 I	0.8	0.4
ASA-0105-B1R1	262469	39.2 Q	0.6	0.2 U	0.4 U	0.2	2.4 U
ASA-0105-B1R2	262470	52.1 Q	0.5	0.2 U	0.4 U	0.1	2.4 U
ASA-0105-B1R3	262471	50.0 Q	0.6	0.2 U	0.4 U	0.2	2.4 U
ASA-0106-B5R1	262472	50.4 Q	0.8	0.2 U	0.0 I	0.2	2.4 U
ASA-0106-B5R2	262473	49.4 Q	0.6	0.0 I	0.4 U	0.2	0.2
ASA-0106-B5R3	262474	50.4 Q	0.6	0.0 I	0.4 U	0.1	0.1
ASA-0106-B5R4	262475	57.2 Q	0.5	0.0 I	0.4 U	0.1	0.1
ASA-0104-B3R1	262476	50.1 Q	0.4	0.0 I	0.4 U	0.1	2.4 U
ASA-0104-B3R2	262477	53.8 Q	0.6	0.0 I	0.4 U	0.2	0.4
ASA-0104-B3R3	262478	47.2 Q	0.6	0.2 U	0.4 U	0.2	2.4 U
SCGC-0110	262605	47.1	0.6	0.0 I	0.4 U	0.4	0.2
OSCEOLA OSC-011	262743	44.7	0.9	0.2 U	0.0 I	0.6	0.5
SCGC 043-7524	262938	46.4	0.2	0.2 U	0.0 I	0.2	0.2
OCEOLA OSC-0131	263135	50.9	0.5	0.2 U	0.0 I	0.4	0.2
SCGC-0119-B8R1	263149	47.5	0.5	0.2 U	0.4 U	0.1	0.2
SCGC-0119-B8R2	263150	44.6	0.5	0.2 U	0.4 U	0.2	0.2
SCGC-0119-B8R3	263151	45.9	0.5	0.2 U	0.4 U	0.1	2.4 U
SCGC-0207	263239	42.9	0.5	0.2 U	0.4 U	0.2	0.2
OSC-0214 OSCEOL	263474	44.7	0.3	0.0 I	0.4 U	0.4	0.3
SCGS-0224	263700	44.4	0.4	0.2 U	0.0 I	0.3	2.4 U

I = Result between detection limit and practical quantitation limit
 U = Result below detection limit
 Q = Result analyzed out of holding time

PROJECT MANAGER _____

REPORT OF ANALYSES (SN-00003625)

Golder Associates Inc.
 6241 NW 23rd St
 Suite 500
 Gainesville, FL 32653-1500
 Attn: Mr David Buff

DATE: 03/30/05
 FDH # E82001
 DEP CQAP # 870017G

(Page 2 of 2)

CLIENT STATION ID	LAB NUMBER	MN/S/ICP mg/kg	HG/S/CVAA mg/kg	NI/S/ICP mg/kg	SE/S/ICP mg/kg
SCGC-1216-1 RUN	262466	8.3	0.01 U	0.2	0.8
SCGC-1216-2 RUN	262467	10.1	0.01 U	0.2	0.8
SCGC-1217-3 RUN	262468	12.9	0.01 U	0.5	0.9
ASA-0105-B1R1	262469	8.6	0.01 U	0.1	1.0
ASA-0105-B1R2	262470	10.0	0.01 U	0.1	0.9
ASA-0105-B1R3	262471	11.2	0.01 U	2.0 U	1.0
ASA-0106-B5R1	262472	8.2	0.01 U	0.1	0.6
ASA-0106-B5R2	262473	12.0	0.01 U	0.1	1.1
ASA-0106-B5R3	262474	9.8	0.01 U	2.0 U	1.0
ASA-0106-B5R4	262475	6.5	0.01 U	0.0 I	0.9
ASA-0104-B3R1	262476	11.1	0.01 U	2.0 U	1.0
ASA-0104-B3R2	262477	51.2	0.01 U	0.2	1.0
ASA-0104-B3R3	262478	14.6	0.01 U	2.0 U	1.0
SCGC-0110	262605	9.9	0.01 U	0.2	1.2
OSCEOLA OSC-011	262743	13.4	0.01 U	0.5	1.1
SCGC 043-7524	262938	9.0	0.01 U	0.2	0.4
OSCEOLA OSC-0131	263135	19.5	0.01 U	0.2	0.8
SCGC-0119-B8R1	263149	7.8	0.01 U	2.0 U	0.9
SCGC-0119-B8R2	263150	9.5	0.01 U	0.2	1.0
SCGC-0119-B8R3	263151	7.4	0.01 U	0.1	0.9
SCGC-0207	263239	7.9	0.01 U	0.2	0.8
OSC-0214 OSCEOL	263474	14.0	0.01 U	0.2	0.8
SCGS-0224	263700	14.2	0.01 U	2.0 U	0.9

I = Result between detection limit and practical quantitation limit
 U = Result below detection limit

PROJECT MANAGER _____



Hazen Research, Inc.
 4601 Indiana St.
 Golden, CO 80403 USA
 Tel: (303) 279-4501
 Fax: (303) 278-1528

Date February 18 2005
 HRI Project 009-555
 HRI Series No. B29/05-14
 Date Rec'd. 02/07/05
 Cust. P.O.#

Golder Associates, Inc.
 David Buff
 6241 NW 23rd Street, Suite 500
 Gainesville, FL 32653

Sample Identification
 SCGC 0119-B8R1

Reporting Basis >	As Rec'd	Dry	Air Dry
Proximate (%)			
Moisture	55.94	0.00	2.62
Ash	0.46	1.05	1.02
Volatile	37.88	85.96	83.71
Fixed C	5.72	12.99	12.65
Total	100.00	100.00	100.00

Sulfur	0.02	0.04	0.04
Btu/lb (HHV)	3727	8459	8237
MMF Btu/lb	3745	8555	
MAF Btu/lb		8548	
Air Dry Loss (%)		54.75	

Ultimate (%)			
Moisture	55.94	0.00	2.62
Carbon	23.07	52.35	50.98
Hydrogen	2.69	6.10	5.94
Nitrogen	0.22	0.50	0.49
Sulfur	0.02	0.04	0.04
Ash	0.46	1.05	1.02
Oxygen*	17.60	39.96	38.91
Total	100.00	100.00	100.00
Chlorine**	0.006	0.013	0.013

Forms of Sulfur (as S,%)

Sulfate		
Pyritic		
Organic		
Total	0.02	0.04

Lb. Alkali/MM Btu=
 Lb. Ash/MM Btu= 1.24
 Lb. SO2/MM Btu= 0.10
 HGI= @ % Moisture
 As Rec'd. Sp.Gr.=
 Free Swelling Index=

Report Prepared By:

Gerard H. Cunningham
 Fuels Laboratory Supervisor

Water Soluble Alkalies (%)

Na2O
 K2O

* Oxygen by Difference.

** Not usually reported as part of the ultimate analysis.



Hazen Research, Inc.
 4601 Indiana St.
 Golden, CO 80403 USA
 Tel: (303) 279-4501
 Fax: (303) 278-1528

Date February 18 2005
 HRI Project 009-555
 HRI Series No. B29/05-15
 Date Rec'd. 02/07/05
 Cust. P.O.#

Golder Associates, Inc.
 David Buff
 6241 NW 23rd Street, Suite 500
 Gainesville, FL 32653

Sample Identification
 SCGC 0119-B8R2

Reporting Basis > As Rec'd Dry Air Dry

Proximate (%)

Moisture	54.58	0.00	2.25
Ash	0.77	1.70	1.66
Volatile	38.80	85.41	83.49
Fixed C	5.85	12.89	12.60
Total	100.00	100.00	100.00

Sulfur	0.02	0.05	0.05
Btu/lb (HHV)	3732	8216	8031
MMF Btu/lb	3763	8369	
MAF Btu/lb		8358	
Air Dry Loss (%)		53.53	

Ultimate (%)

Moisture	54.58	0.00	2.25
Carbon	23.37	51.46	50.30
Hydrogen	2.69	5.91	5.78
Nitrogen	0.22	0.49	0.48
Sulfur	0.02	0.05	0.05
Ash	0.77	1.70	1.66
Oxygen*	18.35	40.39	39.48
Total	100.00	100.00	100.00

Chlorine**	0.008	0.017	0.017
------------	-------	-------	-------

Forms of Sulfur (as S,%)

Sulfate		
Pyritic		
Organic		
Total	0.02	0.05

Lb. Alkali/MM Btu=
 Lb. Ash/MM Btu= 2.07
 Lb. SO2/MM Btu= 0.12
 HGI= @ % Moisture
 As Rec'd. Sp.Gr.=
 Free Swelling Index=

Report Prepared By:

Water Soluble Alkalies (%)

Na2O
 K2O

Gerard H. Cunningham
 Gerard H. Cunningham
 Fuels Laboratory Supervisor

* Oxygen by Difference.

** Not usually reported as part of the ultimate analysis.



Hazen Research, Inc.
 4601 Indiana St.
 Golden, CO 80403 USA
 Tel: (303) 279-4501
 Fax: (303) 278-1528

Date February 18 2005
 HRI Project 009-555
 HRI Series No. B29/05-16
 Date Rec'd. 02/07/05
 Cust. P.O.#

Golder Associates, Inc.
 David Buff
 6241 NW 23rd Street, Suite 500
 Gainesville, FL 32653

Sample Identification
 SCGC 0119-B8R3

Reporting Basis > As Rec'd Dry Air Dry

Proximate (%)

Moisture	52.83	0.00	2.37
Ash	0.59	1.25	1.22
Volatile	40.51	85.89	83.85
Fixed C	6.07	12.86	12.56
Total	100.00	100.00	100.00

Sulfur	0.03	0.06	0.06
Btu/lb (HHV)	3836	8132	7940
MMF Btu/lb	3859	8243	
MAF Btu/lb		8235	
Air Dry Loss (%)		51.69	

Ultimate (%)

Moisture	52.83	0.00	2.37
Carbon	24.23	51.37	50.15
Hydrogen	2.90	6.15	6.00
Nitrogen	0.22	0.46	0.45
Sulfur	0.03	0.06	0.06
Ash	0.59	1.25	1.22
Oxygen*	19.20	40.71	39.75
Total	100.00	100.00	100.00

Chlorine**	0.007	0.015	0.015
------------	-------	-------	-------

Forms of Sulfur (as S,%)

Sulfate		
Pyritic		
Organic		
Total	0.03	0.06

Lb. Alkali/MM Btu=
 Lb. Ash/MM Btu= 1.54
 Lb. SO2/MM Btu= 0.15
 HGI= @ % Moisture
 As Rec'd. Sp.Gr.=
 Free Swelling Index=

Report Prepared By:

Gerard H. Cunningham
 Fuels Laboratory Supervisor

Water Soluble Alkalies (%)

Na2O
 K2O

* Oxygen by Difference.

** Not usually reported as part of the ultimate analysis.

12/16/04 – 12/17/04

REPORT OF ANALYSES (SN-00003625)

Golder Associates Inc.
 6241 NW 23rd St
 Suite 500
 Gainesville, FL 32653-1500
 Attn: Mr David Buff

DATE: 03/30/05
 FDH # E82001

(Page 1 of 2)

CLIENT STATION ID	LAB NUMBER	%SOLIDS %	AS/S/ICP mg/kg	BE/S/ICP mg/kg	CD/S/ICP mg/kg	CR/S/ICP mg/kg	PB/S/ICP mg/kg
SCGC-1216-1 RUN	262466	51.1 Q	0.6	0.2 U	0.4 U	0.4	0.4
SCGC-1216-2 RUN	262467	44.9 Q	0.6	0.2 U	0.4 U	0.3	0.3
SCGC-1217-3 RUN	262468	45.1 Q	0.7	0.2 U	0.0 I	0.8	0.4
ASA-0105-B1R1	262469	39.2 Q	0.6	0.2 U	0.4 U	0.2	2.4 U
ASA-0105-B1R2	262470	52.1 Q	0.5	0.2 U	0.4 U	0.1	2.4 U
ASA-0105-B1R3	262471	50.0 Q	0.6	0.2 U	0.4 U	0.2	2.4 U
ASA-0106-B5R1	262472	50.4 Q	0.8	0.2 U	0.0 I	0.2	2.4 U
ASA-0106-B5R2	262473	49.4 Q	0.6	0.0 I	0.4 U	0.2	0.2
ASA-0106-B5R3	262474	50.4 Q	0.6	0.0 I	0.4 U	0.1	0.1
ASA-0106-B5R4	262475	57.2 Q	0.5	0.0 I	0.4 U	0.1	0.1
ASA-0104-B3R1	262476	50.1 Q	0.4	0.0 I	0.4 U	0.1	2.4 U
ASA-0104-B3R2	262477	53.8 Q	0.6	0.0 I	0.4 U	0.2	0.4
ASA-0104-B3R3	262478	47.2 Q	0.6	0.2 U	0.4 U	0.2	2.4 U
SCGC-0110	262605	47.1	0.6	0.0 I	0.4 U	0.4	0.2
OSCEOLA OSC-011	262743	44.7	0.9	0.2 U	0.0 I	0.6	0.5
SCGC 043-7524	262938	46.4	0.2	0.2 U	0.0 I	0.2	0.2
OCEOLA OSC-0131	263135	50.9	0.5	0.2 U	0.0 I	0.4	0.2
SCGC-0119-B8R1	263149	47.5	0.5	0.2 U	0.4 U	0.1	0.2
SCGC-0119-B8R2	263150	44.6	0.5	0.2 U	0.4 U	0.2	0.2
SCGC-0119-B8R3	263151	45.9	0.5	0.2 U	0.4 U	0.1	2.4 U
SCGC-0207	263239	42.9	0.5	0.2 U	0.4 U	0.2	0.2
OSC-0214 OSCEOL	263474	44.7	0.3	0.0 I	0.4 U	0.4	0.3
SCGS-0224	263700	44.4	0.4	0.2 U	0.0 I	0.3	2.4 U

I = Result between detection limit and practical quantitation limit
 U = Result below detection limit
 Q = Result analyzed out of holding time

PROJECT MANAGER _____

REPORT OF ANALYSES (SN-00003625)

Golder Associates Inc.
 6241 NW 23rd St
 Suite 500
 Gainesville, FL 32653-1500
 Attn: Mr David Buff

DATE: 03/30/05
 FDH # E82001
 DEP CQAP # 870017G

(Page 2 of 2)

CLIENT STATION ID	LAB NUMBER	MN/S/ICP mg/kg	HG/S/CVAA mg/kg	NI/S/ICP mg/kg	SE/S/ICP mg/kg
SCGC-1216-1 RUN	262466	8.3	0.01 U	0.2	0.8
SCGC-1216-2 RUN	262467	10.1	0.01 U	0.2	0.8
SCGC-1217-3 RUN	262468	12.9	0.01 U	0.5	0.9
ASA-0105-B1R1	262469	8.6	0.01 U	0.1	1.0
ASA-0105-B1R2	262470	10.0	0.01 U	0.1	0.9
ASA-0105-B1R3	262471	11.2	0.01 U	2.0 U	1.0
ASA-0106-B5R1	262472	8.2	0.01 U	0.1	0.6
ASA-0106-B5R2	262473	12.0	0.01 U	0.1	1.1
ASA-0106-B5R3	262474	9.8	0.01 U	2.0 U	1.0
ASA-0106-B5R4	262475	6.5	0.01 U	0.0 I	0.9
ASA-0104-B3R1	262476	11.1	0.01 U	2.0 U	1.0
ASA-0104-B3R2	262477	51.2	0.01 U	0.2	1.0
ASA-0104-B3R3	262478	14.6	0.01 U	2.0 U	1.0
SCGC-0110	262605	9.9	0.01 U	0.2	1.2
OSCEOLA OSC-011	262743	13.4	0.01 U	0.5	1.1
SCGC 043-7524	262938	9.0	0.01 U	0.2	0.4
OSCEOLA OSC-0131	263135	19.5	0.01 U	0.2	0.8
SCGC-0119-B8R1	263149	7.8	0.01 U	2.0 U	0.9
SCGC-0119-B8R2	263150	9.5	0.01 U	0.2	1.0
SCGC-0119-B8R3	263151	7.4	0.01 U	0.1	0.9
SCGC-0207	263239	7.9	0.01 U	0.2	0.8
OSC-0214 OSCEOL	263474	14.0	0.01 U	0.2	0.8
SCGS-0224	263700	14.2	0.01 U	2.0 U	0.9

I = Result between detection limit and practical quantitation limit
 U = Result below detection limit

PROJECT MANAGER _____



Hazen Research, Inc.
 4601 Indiana St.
 Golden, CO 80403 USA
 Tel: (303) 279-4501
 Fax: (303) 278-1528

Date February 18 2005
 HRI Project 009-555
 HRI Series No. B29/05-1
 Date Rec'd. 02/07/05
 Cust. P.O.#

Golder Associates, Inc.
 David Buff
 6241 NW 23rd Street, Suite 500
 Gainesville, FL 32653

Sample Identification
 SCGC 1216-1

FEB 28 2005

GAINESVILLE

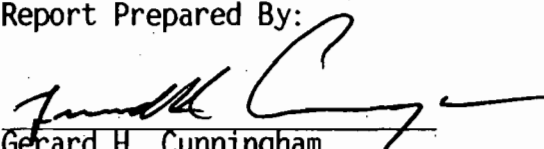
Reporting Basis >	As Rec'd	Dry	Air Dry
Proximate (%)			
Moisture	55.49	0.00	1.46
Ash	1.86	4.17	4.11
Volatile	37.64	84.55	83.32
Fixed C	5.01	11.28	11.11
Total	100.00	100.00	100.00
Sulfur	0.02	0.05	0.05
Btu/lb (HHV)	3541	7955	7839
MMF Btu/lb	3613	8330	
MAF Btu/lb		8301	
Air Dry Loss (%)		54.83	
Ultimate (%)			
Moisture	55.49	0.00	1.46
Carbon	22.48	50.50	49.76
Hydrogen	2.69	6.03	5.95
Nitrogen	0.21	0.48	0.47
Sulfur	0.02	0.05	0.05
Ash	1.86	4.17	4.11
Oxygen*	17.25	38.77	38.20
Total	100.00	100.00	100.00
Chlorine**	0.007	0.015	0.015

Forms of Sulfur (as S,%)

Sulfate	_____	_____
Pyritic	_____	_____
Organic	_____	_____
Total	0.02	0.05

Lb. Alkali/MM Btu=
 Lb. Ash/MM Btu= 5.24
 Lb. SO₂/MM Btu= 0.13
 HGI= @ % Moisture
 As Rec'd. Sp.Gr.=
 Free Swelling Index=

Report Prepared By:


 Gerard H. Cunningham
 Fuels Laboratory Supervisor

* Oxygen by Difference.

** Not usually reported as part of the ultimate analysis.



Hazen Research, Inc.
 4601 Indiana St.
 Golden, CO 80403 USA
 Tel: (303) 279-4501
 Fax: (303) 278-1528

Date February 18 2005
 HRI Project 009-555
 HRI Series No. B29/05-2
 Date Rec'd. 02/07/05
 Cust. P.O.#

Golder Associates, Inc.
 David Buff
 6241 NW 23rd Street, Suite 500
 Gainesville, FL 32653

Sample Identification
 SCGC 1216-2

Reporting Basis > As Rec'd. Dry Air Dry

Proximate (%)

Moisture	57.48	0.00	1.83
Ash	0.90	2.12	2.08
Volatile	36.58	86.04	84.47
Fixed C	5.04	11.84	11.62
Total	100.00	100.00	100.00
Sulfur	0.02	0.05	0.05
Btu/lb (HHV)	3490	8209	8059
MMF Btu/lb	3524	8401	
MAF Btu/lb		8387	
Air Dry Loss (%)	56.69		

Ultimate (%)

Moisture	57.48	0.00	1.83
Carbon	21.74	51.14	50.20
Hydrogen	2.51	5.90	5.80
Nitrogen	0.19	0.46	0.45
Sulfur	0.02	0.05	0.05
Ash	0.90	2.12	2.08
Oxygen*	17.16	40.33	39.59
Total	100.00	100.00	100.00
Chlorine**	0.006	0.015	0.015

Forms of Sulfur (as S,%)

Sulfate		
Pyritic		
Organic		
Total	0.02	0.05

Lb. Alkali/MM Btu=
 Lb. Ash/MM Btu= 2.58
 Lb. SO2/MM Btu= 0.12
 HGI= @ % Moisture
 As Rec'd. Sp.Gr.=
 Free Swelling Index=

Report Prepared By:

Water Soluble Alkalies (%)

Na2O
 K2O

Gerard H. Cunningham
 Fuels Laboratory Supervisor

* Oxygen by Difference.

** Not usually reported as part of the ultimate analysis.



Hazen Research, Inc.
 4601 Indiana St.
 Golden, CO 80403 USA
 Tel: (303) 279-4501
 Fax: (303) 278-1528

Date February 18 2005
 HRI Project 009-555
 HRI Series No. B29/05-3
 Date Rec'd. 02/07/05
 Cust. P.O.#

Golder Associates, Inc.
 David Buff
 6241 NW 23rd Street, Suite 500
 Gainesville, FL 32653

Sample Identification
 SCGC 1217-3

Reporting Basis > As Rec'd Dry Air Dry

Proximate (%)

Moisture	56.62	0.00	2.03
Ash	1.42	3.27	3.20
Volatile	36.82	84.88	83.16
Fixed C	5.14	11.85	11.61
Total	100.00	100.00	100.00

Sulfur	0.03	0.06	0.06
Btu/lb (HHV)	3525	8127	7962
MMF Btu/lb	3579	8423	
MAF Btu/lb		8401	
Air Dry Loss (%)		55.72	

Ultimate (%)

Moisture	56.62	0.00	2.03
Carbon	22.02	50.75	49.72
Hydrogen	2.67	6.15	6.02
Nitrogen	0.24	0.55	0.54
Sulfur	0.03	0.06	0.06
Ash	1.42	3.27	3.20
Oxygen*	17.00	39.22	38.43
Total	100.00	100.00	100.00
Chlorine**	0.007	0.015	0.015

Forms of Sulfur (as S,%)

Sulfate		
Pyritic		
Organic		
Total	0.03	0.06

Lb. Alkali/MM Btu=
 Lb. Ash/MM Btu= 4.02
 Lb. SO2/MM Btu= 0.15
 HGI= @ % Moisture
 As Rec'd. Sp.Gr.=
 Free Swelling Index=

Report Prepared By:

Gerard H. Cunningham
 Fuels Laboratory Supervisor

Water Soluble Alkalies (%)

Na2O
 K2O

* Oxygen by Difference.

** Not usually reported as part of the ultimate analysis.

3/17/03 – 3/23/03



Hazen Research, Inc.
 4601 Indiana St.
 Golden, CO 80403 USA
 Tel: (303) 279-4501
 Fax: (303) 278-1528

Date April 10 2003
 HRI Project 009-555
 HRI Series No. C366/03-4
 Date Rec'd. 03/27/03
 Cust. P.O.#

Golder Associates, Inc.
 Fawn Bergen
 6241 NW 23rd Street, Suite 500
 Gainesville, FL 32653

Sample Identification
 SCGC-0324

Reporting Basis > As Rec'd Dry Air Dry

Proximate (%)

Moisture	54.06	0.00	1.23
Ash	0.90	1.96	1.94
Volatile	40.00	87.07	86.00
Fixed C	5.04	10.97	10.83
Total	100.00	100.00	100.00

Sulfur	0.04	0.08	0.08
Btu/lb (HHV)	3829	8336	8233
MMF Btu/lb	3866	8516	
MAF Btu/lb		8503	
Air Dry Loss (%)		53.49	

Ultimate (%)

Moisture	54.06	0.00	1.23
Carbon	23.74	51.68	51.04
Hydrogen	3.06	6.66	6.58
Nitrogen	0.15	0.32	0.32
Sulfur	0.04	0.08	0.08
Ash	0.90	1.96	1.94
Oxygen*	18.05	39.30	38.81
Total	100.00	100.00	100.00

Chlorine**

Forms of Sulfur (as S,%)

Sulfate		
Pyritic		
Organic		
Total	0.04	0.08

Lb. Alkali/MM Btu=
 Lb. Ash/MM Btu= 2.36
 Lb. SO2/MM Btu= 0.19
 HGI= @ % Moisture
 As Rec'd. Sp.Gr.=
 Free Swelling Index=

Report Prepared By:

Gerard H. Cunningham
 Fuels Laboratory Supervisor

Water Soluble Alkalies (%)

Na2O
 K2O

* Oxygen by Difference.

** Not usually reported as part of the ultimate analysis.

NGS Analytical Laboratory

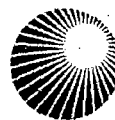
P.O. Box 2010

West Springfield, MA 01090-2010

Phone (413) 787-9064 Fax (413) 787-9056

Mass Certification - MA-00071

Conn Certification - PH-0520.



**Northeast
Generation Services**

The Northeast Utilities System

April 3, 2003

Report Date

Customer	Contact	Laboratory Supervisor	eMail
Golder Associates, Inc.	F. Bergen	Madhu Shah	shahmp@nu.com
Sample Description Analysis of Sugar Cane for Chlorine			

Samples Analyzed

Enclosed are Report No(s): 1808 to 1811

Visit our web site at www.ngs-nu.com

Thank you for your business

Madhu Shah, NGS Laboratory Supervisor

Date

Sample Analysis

Sample Description	Source	Taken	Received	Work Order
1808 ASA-0324	Golder Associates, Inc.	3/24/03	3/27/03	03-0530
Parameter	Results	MDL	Method	Analyzed
Chlorine	419.81 mg/Kg	100.00	ASTM D-4208	4/2/03

Sample Description	Source	Taken	Received	Work Order
1809 USSC-B-0324	Golder Associates, Inc.	3/24/03	3/27/03	03-0530
Parameter	Results	MDL	Method	Analyzed
Chlorine	600.59 mg/Kg	100.00	ASTM D-4208	4/2/03

Sample Description	Source	Taken	Received	Work Order
1810 USSC-C-0324	Golder Associates, Inc.	3/24/03	3/27/03	03-0530
Parameter	Results	MDL	Method	Analyzed
Chlorine	605.89 mg/Kg	100.00	ASTM D-4208	4/2/03

Sample Description	Source	Taken	Received	Work Order
1811 SCGC-0324	Golder Associates, Inc.	2/24/03	3/27/03	03-0530
Parameter	Results	MDL	Method	Analyzed
Chlorine	430.83 mg/Kg	100.00	ASTM D-4208	4/2/03



**PPB ENVIRONMENTAL
LABORATORIES, INC.**

GOLDER ASSOCIATES INC.

MAY 21 2003

GAINESVILLE

6821 SW Archer Road, Gainesville, FL 32608 Ph: (352) 377-2349 Fax: (352) 395-6639 E-mail: ppb@ppb-envlabs.com NELAP Certified--FDH # E82001

May 19, 2003

Ms. Fawn Bergen
Golder Associates, Inc.
6241 NW 23 St., Suite 500
Gainesville, FL 32653-1500

Dear Ms. Bergen:

Enclosed are the analytical results for the samples received March 10, March 28 and April 8, 2003.

All data were determined in accordance with published procedures (EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, December 1996, 3rd Edition incl. Updates I-III; and Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992). Our laboratory is certified by Florida Department of Health (FDH No. E82001) and our CompQAP is approved by FDEP (#870017G).

If you have any questions concerning this report, please contact me.

Sincerely,

Paul Berman
Project Manager

Enclosures



**PPB ENVIRONMENTAL
LABORATORIES, INC.**

6821 SW Archer Road, Gainesville, FL 32608 Ph: (352) 377-2349 Fax: (352) 395-6639 E-mail: ppb@ppb-envlabs.com NELAP Certified—FDH # E82001

REPORT OF ANALYSES (SN-00002956)

Golder Associates Inc.
6241 NW 23rd St
Suite 500
Gainesville, FL 32653-1500
Attn: Ms. Fawn Bergen

DATE: 05/13/03
FDH # E82001
DEP CQAP # 870017G

Samples received 3/10, 3/28 and 4/8/03 (Page 1 of 2)

CLIENT STATION ID	LAB NUMBER	%SOLIDS %	AS/V/ICP mg/kg	BE/V/ICP mg/kg	CD/V/ICP mg/kg	CR/V/ICP mg/kg	PB/V/ICP mg/kg
USSC-C-0310	240895	48.8	N.R.	N.R.	N.R.	N.R.	N.R.
USSC-C-0310 DUP	240895	48.8	N.R.	N.R.	N.R.	N.R.	N.R.
USSC-B-0310	240896	49.2	N.R.	N.R.	N.R.	N.R.	N.R.
ASA-0310	240897	49.2	N.R.	N.R.	N.R.	N.R.	N.R.
USSC-C-0310	240898	50.5	N.R.	N.R.	N.R.	N.R.	N.R.
USSC-C-0324	241644	51.3	0.3	0.2 U	0.4 U	0.5	0.3
USSC-B-0324	241645	50.2	0.4	0.2 U	0.4 U	0.3	0.2
ASA-0324	241646	48.5	0.4	0.2 U	0.4 U	0.5	0.3
ASA-0324-DUP	241647	50.2	0.4	0.2 U	0.4 U	0.4	0.2
SCGC-0324	241648	49.4	0.4	0.2 U	0.4 U	0.4	0.3
USSC-C-0407	242096	49.5	N.R.	N.R.	N.R.	N.R.	N.R.
USSC-C-0407-DUP	242097	50.5	N.R.	N.R.	N.R.	N.R.	N.R.
USSC-B-0407	242098	47.1	N.R.	N.R.	N.R.	N.R.	N.R.

I = Result between detection limit and practical quantitation limit
U = Result below detection limit

NOTE: N. R. = ANALYSIS NOT REQUIRED

PROJECT MANAGER

Paul Bertram



**PPB ENVIRONMENTAL
LABORATORIES, INC.**

6821 SW Archer Road, Gainesville, FL 32608 Ph: (352)377-2349 Fax: (352)395-6639 E-mail: ppb@ppb-envlabs.com NELAP Certified--FDH # E82001

REPORT OF ANALYSES (SN-00002956)

Golder Associates Inc.
6241 NW 23rd St
Suite 500
Gainesville, FL 32653-1500
Attn: Ms. Fawn Bergen

DATE: 05/13/03
FDH # E82001
DEP CQAP # 870017G

Samples received 3/10, 3/28 and 4/8/03 (Page 2 of 2)

CLIENT STATION ID	LAB NUMBER	MN/V/ICP mg/kg	HG/V/CVAA mg/kg	NI/V/ICP mg/kg	SE/V/ICP mg/kg
USSC-C-0310	240895	7.4	N.R.	N.R.	N.R.
USSC-C-0310 DUP	240895	6.3	N.R.	N.R.	N.R.
USSC-B-0310	240896	8.9	N.R.	N.R.	N.R.
ASA-0310	240897	11.9	N.R.	N.R.	N.R.
SCGC-0310	240898	7.9	N.R.	N.R.	N.R.
USSC-C-0324	241644	11.0	0.01 U	0.2	0.4
USSC-B-0324	241645	6.8	0.01 U	0.2	0.5
ASA-0324	241646	12.3	0.01 U	0.3	0.6
ASA-0324-DUP	241647	10.2	0.01 U	0.2	0.5
SCGC-0324	241648	8.9	0.01 U	0.3	0.6
USSC-C-0407	242096	11.8	N.R.	N.R.	N.R.
USSC-C-0407-DUP	242097	9.0	N.R.	N.R.	N.R.
USSC-B-0407	242098	7.2	N.R.	N.R.	N.R.

I = Result between detection limit and practical quantitation limit
U = Result below detection limit

NOTE: N. R. = ANALYSIS NOT REQUIRED

PROJECT MANAGER

Paul Bernard



**PPB ENVIRONMENTAL
LABORATORIES, INC.**

6821 SW Archer Road, Gainesville, FL 32608 Ph: (352) 377-2349 Fax: (352) 395-6639 E-mail: ppb@ppb-envlabs.com NELAP Certified—FDH # E82001

QC REPORT FOR Golder Associates Inc. 05/13/03 PAGE 1

TOTAL SOLIDS % VG Method: EPA 160.3 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
241644	USSC-C-0324	51.3	52.0	0.68	0.93	7.62
242097	USSC-C-0407-DUP	50.5	49.7	0.80	1.13	7.61

NO SPIKE QC DATA FOUND

NO REFERENCE QC DATA FOUND

ARSENIC IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

NO DUPLICATE QC DATA FOUND

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	QC Control Limit
241648	SCGC-0324	86	---	80 TO 120	----	----
241648	SCGC-0324	85	---	80 TO 120	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1960	98	90 TO 110

BERYLLIUM IN SED. mg/kg VG Method: EPA 6010 Alt. Method: None

NO DUPLICATE QC DATA FOUND

Best Available Copy



**PPB ENVIRONMENTAL
LABORATORIES, INC.**

6821 SW Archer Road, Gainesville, FL 32608 Ph: (352)377-2349 Fax: (352)395-6639 E-mail: ppb@ppb-envlabs.com NELAP Certified—FDH # E82001

QC REPORT FOR Golder Associates Inc. 05/13/03 PAGE 2

Spikes

PPB Number	Client ID	Spike Recovery		% RSD	
		% MS	% MSD Control Limits	% RSD	Control Limit
241648	SCGC-0324	88	---	80 TO 120	----
241648	SCGC-0324	82	---	80 TO 120	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	2000	100	85 TO 123

CADMIUM IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None
NO DUPLICATE QC DATA FOUND

Spikes

PPB Number	Client ID	Spike Recovery		% RSD	
		% MS	% MSD Control Limits	% RSD	Control Limit
241648	SCGC-0324	89	---	80 TO 120	----
241648	SCGC-0324	82	---	80 TO 120	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1970	99	90 TO 110
ICV	2000	2010	100	90 TO 110

CHROMIUM IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None
NO DUPLICATE QC DATA FOUND



**PPB ENVIRONMENTAL
LABORATORIES, INC.**

6821 SW Archer Road, Gainesville, FL 32608 Ph: (352) 377-2349 Fax: (352) 395-6639 E-mail: ppb@ppb-envlabs.com NELAP Certified—FDH # E82001

QC REPORT FOR Golder Associates Inc. 05/13/03 PAGE 3

Spikes

PPB Number	Client ID	Spike Recovery		% RSD	
		% MS	% MSD	Control Limits	% RSD Control Limit
241648	SCGC-0324	82	---	80 TO 120	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1960	98	90 TO 110
ICV	2000	2000	100	90 TO 110

LEAD IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

NO DUPLICATE QC DATA FOUND

Spikes

PPB Number	Client ID	Spike Recovery		% RSD	
		% MS	% MSD	Control Limits	% RSD Control Limit
241648	SCGC-0324	77	---	80 TO 120	----
241648	SCGC-0324	72	---	80 TO 120	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1960	98	90 TO 110

MANGANESE IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

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**PPB ENVIRONMENTAL
LABORATORIES, INC.**

6821 SW Archer Road, Gainesville, FL 32608 Ph: (352) 377-2349 Fax: (352) 395-6639 E-mail: ppb@ppb-envlabs.com NELAP Certified—FDH # E82001

QC REPORT FOR Golder Associates Inc. 05/13/03 PAGE 4

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
240895	USSC-C-0310	7.37	6.31	1.1	10.96	12.87
240896	USSC-B-0310	8.90	9.21	0.31	2.42	16.70

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	QC Control Limit
240897	ASA-0310	99	---	80 TO 120	----	----
241648	SCGC-0324	103	---	80 TO 120	----	----
242097	USSC-C-0407-DUP	103	---	80 TO 120	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1970	98	92 TO 105
ICV	2000	2000	100	92 TO 105

MERCURY IN VEGETATION mg/kg VG Method: EPA 7471 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
241644	USSC-C-0324	<0.01	<0.01	0	0.00	61.97



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QC REPORT FOR Golder Associates Inc. 05/13/03 PAGE 5

Spikes

PPB Number	Client ID	Spike Recovery		% RSD	
		% MS	% MSD	Control Limits	% RSD Control Limit
241645	USSC-B-0324	57	60	44 TO 152	3.63 32.69

References

Reference ID	Target	Found	% Recovery	Control Limits
MS2710	32.6	31.7	97	90 TO 110

NICKEL IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

NO DUPLICATE QC DATA FOUND

Spikes

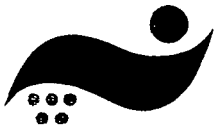
PPB Number	Client ID	Spike Recovery		% RSD	
		% MS	% MSD	Control Limits	% RSD Control Limit
241648	SCGC-0324	81	---	80 TO 120	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1960	98	77 TO 122
ICV	2000	2030	102	78 TO 122

SELENIUM IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

NO DUPLICATE QC DATA FOUND



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LABORATORIES, INC.**

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QC REPORT FOR Golder Associates Inc. 05/13/03 PAGE 6

Spikes

PPB Number	Client ID	Spike Recovery		% RSD	
		% MS	% MSD Control Limits	% RSD	Control Limit
241648	SCGC-0324	94	---	80 TO 120	----
241648	SCGC-0324	95	---	80 TO 120	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1970	98	90 TO 110



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DATE, TIME, ANALYST REPORT

ANALYSIS	METHOD	PREP		ANALYSIS			
		DATE	BY	DATE	TIME	BY	MATRIX
%SOLIDS	EPA 160.3	/	/	03/26/03	1000	JTM	VG
%SOLIDS	EPA 160.3	/	/	04/01/03	1424	CM	VG
%SOLIDS	EPA 160.3	/	/	04/10/03	1222	CM	VG
AS/V/ICP	EPA 6010	03/31/03	ECS	04/01/03	0132	KTB	VG
BE/V/ICP	EPA 6010	03/31/03	ECS	04/01/03	0132	KTB	VG
CD/V/ICP	EPA 6010	03/31/03	ECS	04/01/03	0132	KTB	VG
CR/V/ICP	EPA 6010	03/31/03	ECS	04/01/03	0132	KTB	VG
HG/V/CVAA	EPA 7471	/	/	03/28/03	1713	ECS	VG
MN/V/ICP	EPA 6010	03/19/03	ECS	03/31/03	1247	KTB	VG
MN/V/ICP	EPA 6010	03/31/03	ECS	04/01/03	0132	KTB	VG
MN/V/ICP	EPA 6010	04/10/03	ECS	04/12/03	1759	KTB	VG
NI/V/ICP	EPA 6010	03/31/03	ECS	04/01/03	0132	KTB	VG
PB/V/ICP	EPA 6010	03/31/03	ECS	04/01/03	0132	KTB	VG
SE/V/ICP	EPA 6010	03/31/03	ECS	04/01/03	0132	KTB	VG

3/3/03 – 3/9/03



Hazen Research, Inc.
 4601 Indiana St.
 Golden, CO 80403 USA
 Tel: (303) 279-4501
 Fax: (303) 278-1528

Date March 21 2003
 HRI Project 009-555
 HRI Series No. C122/03-4
 Date Rec'd. 03/12/03
 Cust. P.O.#

Golder Associates, Inc.
 Fawn Bergen
 6241 NW 23rd Street, Suite 500
 Gainesville, FL 32653

Sample Identification
 SCGC-0310

Reporting Basis >	As Rec'd	Dry	Air Dry
Proximate (%)			
Moisture	52.93	0.00	1.20
Ash	0.92	1.96	1.94
Volatile	41.21	87.56	86.51
Fixed C	4.94	10.48	10.35
Total	100.00	100.00	100.00

Sulfur	0.03	0.07	0.07
Btu/lb (HHV)	3809	8093	7996
MMF Btu/lb	3847	8268	
MAF Btu/lb		8256	
Air Dry Loss (%)		52.36	

Ultimate (%)			
Moisture	52.93	0.00	1.20
Carbon	24.29	51.60	50.98
Hydrogen	2.97	6.31	6.24
Nitrogen	0.18	0.38	0.38
Sulfur	0.03	0.07	0.07
Ash	0.92	1.96	1.94
Oxygen*	18.68	39.68	39.19
Total	100.00	100.00	100.00

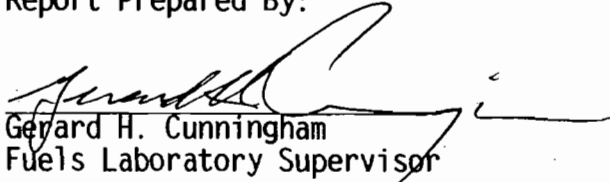
Chlorine**

Forms of Sulfur (as S,%)

Sulfate		
Pyritic		
Organic		
Total	0.03	0.07

Lb. Alkali/MM Btu=
 Lb. Ash/MM Btu= 2.43
 Lb. SO₂/MM Btu= 0.18
 HGI= @ % Moisture
 As Rec'd. Sp.Gr.=
 Free Swelling Index=

Report Prepared By:


 Gerard H. Cunningham
 Fuels Laboratory Supervisor

Water Soluble Alkalies (%)

Na₂O
 K₂O

* Oxygen by Difference.

** Not usually reported as part of the ultimate analysis.

NGS Analytical Laboratory

P.O. Box 2010

West Springfield, MA 01090-2010

Phone (413) 787-9064 Fax (413) 787-9056

Mass Certification - MA-00071

Conn Certification - PH-0520

GOLDER ASSOCIATES INC.

MAR 20 2003

GAINESVILLE**Northeast
Generation Services**

The Northeast Utilities System

March 14, 2003

Report Date

Customer	Contact	Laboratory Supervisor	eMail
Golder Associates, Inc.	F. Bergen	Madhu Shah	shahmp@nu.com
Sample Description Analysis of Sugar Cane for Chlorine			

Samples Analyzed

Enclosed are Report No(s): 1454 to 1457

Visit our web site at www.ngs-nu.com**Thank you for your business**

Madhu Shah, NGS Laboratory Supervisor

3/14/03

Date

Sample Analysis

Sample Description	Source	Taken	Received	Work Order
1454 USSC-C-0310	Golder Associates, Inc.	3/11/03	3/12/03	03-0418

Parameter	Results	MDL	Method	Analyzed
Chlorine	681.00 mg/Kg	100.00	ASTM D-4208	3/14/03

Sample Description	Source	Taken	Received	Work Order
1455 USSC-B-0310	Golder Associates, Inc.	3/11/03	3/12/03	03-0418

Parameter	Results	MDL	Method	Analyzed
Chlorine	591.02 mg/Kg	100.00	ASTM D-4208	3/14/03

Sample Description	Source	Taken	Received	Work Order
1456 ASA-0310	Golder Associates, Inc.	3/11/03	3/12/03	03-0418

Parameter	Results	MDL	Method	Analyzed
Chlorine	553.85 mg/Kg	100.00	ASTM D-4208	3/14/03

Sample Description	Source	Taken	Received	Work Order
1457 SCGC-0310	Golder Associates, Inc.	3/11/03	3/12/03	03-0418

Parameter	Results	MDL	Method	Analyzed
Chlorine	508.87 mg/Kg	100.00	ASTM D-4208	3/14/03



**PPB ENVIRONMENTAL
LABORATORIES, INC.**

GOLDER ASSOCIATES INC.

MAY 21 2003

GAINESVILLE

6821 SW Archer Road, Gainesville, FL 32608 Ph: (352)377-2349 Fax: (352)395-6639 E-mail: ppb@ppb-envlabs.com NELAP Certified—FDH # E82001

May 19, 2003

Ms. Fawn Bergen
Golder Associates, Inc.
6241 NW 23 St., Suite 500
Gainesville, FL 32653-1500

Dear Ms. Bergen:

Enclosed are the analytical results for the samples received March 10, March 28 and April 8, 2003.

All data were determined in accordance with published procedures (EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, December 1996, 3rd Edition incl. Updates I-III; and Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992). Our laboratory is certified by Florida Department of Health (FDH No. E82001) and our CompQAP is approved by FDEP (#870017G).

If you have any questions concerning this report, please contact me.

Sincerely,

Paul Berman
Project Manager

Enclosures



**PPB ENVIRONMENTAL
LABORATORIES, INC.**

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REPORT OF ANALYSES (SN-00002956)

Golder Associates Inc.
6241 NW 23rd St
Suite 500
Gainesville, FL 32653-1500
Attn: Ms. Fawn Bergen

DATE: 05/13/03
FDH # E82001
DEP CQAP # 870017G

Samples received 3/10, 3/28 and 4/8/03 (Page 1 of 2)

CLIENT STATION ID	LAB NUMBER	%SOLIDS %	AS/V/ICP mg/kg	BE/V/ICP mg/kg	CD/V/ICP mg/kg	CR/V/ICP mg/kg	PB/V/ICP mg/kg
USSC-C-0310	240895	48.8	N.R.	N.R.	N.R.	N.R.	N.R.
USSC-C-0310 DUP	240895	48.8	N.R.	N.R.	N.R.	N.R.	N.R.
USSC-B-0310	240896	49.2	N.R.	N.R.	N.R.	N.R.	N.R.
ASA-0310	240897	49.2	N.R.	N.R.	N.R.	N.R.	N.R.
EC-0310	240898	50.5	N.R.	N.R.	N.R.	N.R.	N.R.
USSC-C-0324	241644	51.3	0.3	0.2 U	0.4 U	0.5	0.3
USSC-B-0324	241645	50.2	0.4	0.2 U	0.4 U	0.3	0.2
ASA-0324	241646	48.5	0.4	0.2 U	0.4 U	0.5	0.3
ASA-0324-DUP	241647	50.2	0.4	0.2 U	0.4 U	0.4	0.2
SCGC-0324	241648	49.4	0.4	0.2 U	0.4 U	0.4	0.3
USSC-C-0407	242096	49.5	N.R.	N.R.	N.R.	N.R.	N.R.
USSC-C-0407-DUP	242097	50.5	N.R.	N.R.	N.R.	N.R.	N.R.
USSC-B-0407	242098	47.1	N.R.	N.R.	N.R.	N.R.	N.R.

I = Result between detection limit and practical quantitation limit
U = Result below detection limit

NOTE: N. R. = ANALYSIS NOT REQUIRED

PROJECT MANAGER

Paul Bergman



**PPB ENVIRONMENTAL
LABORATORIES, INC.**

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REPORT OF ANALYSES (SN-00002956)

Golder Associates Inc.
6241 NW 23rd St
Suite 500
Gainesville, FL 32653-1500
Attn: Ms. Fawn Bergen

DATE: 05/13/03
FDH # E82001
DEP CQAP # 870017G

Samples received 3/10, 3/28 and 4/8/03 (Page 2 of 2)

CLIENT STATION ID	LAB NUMBER	MN/V/ICP mg/kg	HG/V/CVAA mg/kg	NI/V/ICP mg/kg	SE/V/ICP mg/kg
USSC-C-0310	240895	7.4	N.R.	N.R.	N.R.
USSC-C-0310 DUP	240895	6.3	N.R.	N.R.	N.R.
USSC-B-0310	240896	8.9	N.R.	N.R.	N.R.
ASA-0310	240897	11.9	N.R.	N.R.	N.R.
SCGC-0310	240898	7.9	N.R.	N.R.	N.R.
USSC-C-0324	241644	11.0	0.01 U	0.2	0.4
USSC-B-0324	241645	6.8	0.01 U	0.2	0.5
ASA-0324	241646	12.3	0.01 U	0.3	0.6
ASA-0324-DUP	241647	10.2	0.01 U	0.2	0.5
SCGC-0324	241648	8.9	0.01 U	0.3	0.6
USSC-C-0407	242096	11.8	N.R.	N.R.	N.R.
USSC-C-0407-DUP	242097	9.0	N.R.	N.R.	N.R.
USSC-B-0407	242098	7.2	N.R.	N.R.	N.R.

I = Result between detection limit and practical quantitation limit
U = Result below detection limit

NOTE: N. R. = ANALYSIS NOT REQUIRED

PROJECT MANAGER

Paul Berman



**PPB ENVIRONMENTAL
LABORATORIES, INC.**

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QC REPORT FOR Golder Associates Inc. 05/13/03 PAGE 1

TOTAL SOLIDS % VG Method: EPA 160.3 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
241644	USSC-C-0324	51.3	52.0	0.68	0.93	7.62
242097	USSC-C-0407-DUP	50.5	49.7	0.80	1.13	7.61

NO SPIKE QC DATA FOUND

NO REFERENCE QC DATA FOUND

ARSENIC IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

NO DUPLICATE QC DATA FOUND

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	QC Control Limit
241648	SCGC-0324	86	---	80 TO 120	----	----
241648	SCGC-0324	85	---	80 TO 120	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1960	98	90 TO 110

BERYLLIUM IN SED. mg/kg VG Method: EPA 6010 Alt. Method: None

NO DUPLICATE QC DATA FOUND

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QC REPORT FOR Golder Associates Inc. 05/13/03 PAGE 2

Spikes

PPB Number	Client ID	Spike Recovery		% RSD	
		% MS	% MSD Control Limits	% RSD	Control Limit
241648	SCGC-0324	88	---	80 TO 120	----
241648	SCGC-0324	82	---	80 TO 120	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	2000	100	85 TO 123

CADMIUM IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

NO DUPLICATE QC DATA FOUND

Spikes

PPB Number	Client ID	Spike Recovery		% RSD	
		% MS	% MSD Control Limits	% RSD	Control Limit
241648	SCGC-0324	89	---	80 TO 120	----
241648	SCGC-0324	82	---	80 TO 120	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1970	99	90 TO 110
ICV	2000	2010	100	90 TO 110

CHROMIUM IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

NO DUPLICATE QC DATA FOUND



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QC REPORT FOR Golder Associates Inc. 05/13/03 PAGE 3

Spikes

PPB Number	Client ID	Spike Recovery		% RSD	
		% MS	% MSD Control Limits	% RSD	Control Limit
241648	SCGC-0324	82	---	80 TO 120	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1960	98	90 TO 110
ICV	2000	2000	100	90 TO 110

LEAD IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

NO DUPLICATE QC DATA FOUND

Spikes

PPB Number	Client ID	Spike Recovery		% RSD	
		% MS	% MSD Control Limits	% RSD	Control Limit
241648	SCGC-0324	77	---	80 TO 120	----
241648	SCGC-0324	72	---	80 TO 120	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1960	98	90 TO 110

MANGANESE IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None



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QC REPORT FOR Golder Associates Inc. 05/13/03 PAGE 4

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
240895	USSC-C-0310	7.37	6.31	1.1	10.96	12.87
240896	USSC-B-0310	8.90	9.21	0.31	2.42	16.70

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	QC Control Limit
240897	ASA-0310	99	---	80 TO 120	----	----
241648	SCGC-0324	103	---	80 TO 120	----	----
242097	USSC-C-0407-DUP	103	---	80 TO 120	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1970	98	92 TO 105
ICV	2000	2000	100	92 TO 105

MERCURY IN VEGETATION mg/kg VG Method: EPA 7471 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
241644	USSC-C-0324	<0.01	<0.01	0	0.00	61.97



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LABORATORIES, INC.**

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QC REPORT FOR Golder Associates Inc. 05/13/03 PAGE 5

Spikes

PPB Number	Client ID	Spike Recovery		% RSD	
		% MS	% MSD	Control Limits	% RSD Control Limit
241645	USSC-B-0324	57	60	44 TO 152	3.63 32.69

References

Reference ID	Target	Found	% Recovery	Control Limits
4S2710	32.6	31.7	97	90 TO 110

NICKEL IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

NO DUPLICATE QC DATA FOUND

Spikes

PPB Number	Client ID	Spike Recovery		% RSD	
		% MS	% MSD	Control Limits	% RSD Control Limit
241648	SCGC-0324	81	---	80 TO 120	----

References

Reference ID	Target	Found	% Recovery	Control Limits
[CV	2000	1960	98	77 TO 122
[CV	2000	2030	102	78 TO 122

SELENIUM IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

NO DUPLICATE QC DATA FOUND



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LABORATORIES, INC.**

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QC REPORT FOR Golder Associates Inc. 05/13/03 PAGE 6

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
241648	SCGC-0324	94	---	80 TO 120	----	----
241648	SCGC-0324	95	---	80 TO 120	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1970	98	90 TO 110



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DATE, TIME, ANALYST REPORT

ANALYSIS	METHOD	PREP		ANALYSIS			MATRIX
		DATE	BY	DATE	TIME	BY	
%SOLIDS	EPA 160.3	/	/	03/26/03	1000	JTM	VG
%SOLIDS	EPA 160.3	/	/	04/01/03	1424	CM	VG
%SOLIDS	EPA 160.3	/	/	04/10/03	1222	CM	VG
AS/V/ICP	EPA 6010	03/31/03	ECS	04/01/03	0132	KTB	VG
BE/V/ICP	EPA 6010	03/31/03	ECS	04/01/03	0132	KTB	VG
CD/V/ICP	EPA 6010	03/31/03	ECS	04/01/03	0132	KTB	VG
CR/V/ICP	EPA 6010	03/31/03	ECS	04/01/03	0132	KTB	VG
HG/V/CVAA	EPA 7471	/	/	03/28/03	1713	ECS	VG
MN/V/ICP	EPA 6010	03/19/03	ECS	03/31/03	1247	KTB	VG
MN/V/ICP	EPA 6010	03/31/03	ECS	04/01/03	0132	KTB	VG
MN/V/ICP	EPA 6010	04/10/03	ECS	04/12/03	1759	KTB	VG
NI/V/ICP	EPA 6010	03/31/03	ECS	04/01/03	0132	KTB	VG
PB/V/ICP	EPA 6010	03/31/03	ECS	04/01/03	0132	KTB	VG
SE/V/ICP	EPA 6010	03/31/03	ECS	04/01/03	0132	KTB	VG

2/17/03 – 2/23/03



Hazen Research, Inc.
 4601 Indiana St.
 Golden, CO 80403 USA
 Tel: (303) 279-4501
 Fax: (303) 278-1528

Date March 7 2003
 HRI Project 009-555
 HRI Series No. B376/03-4
 Date Rec'd. 02/27/03
 Cust. P.O.#

Golder Associates, Inc.
 Fawn Bergen
 6241 NW 23rd Street, Suite 500
 Gainesville, FL 32653

Sample Identification
 SCGC-0224

Reporting Basis >	As Rec'd	Dry	Air Dry
Proximate (%)			
Moisture	54.14	0.00	1.26
Ash	0.78	1.69	1.67
Volatile	39.80	86.78	85.69
Fixed C	5.28	11.53	11.38
Total	100.00	100.00	100.00
Sulfur	0.04	0.08	0.08
Btu/lb (HHV)	3745	8166	8063
MMF Btu/lb	3776	8318	
MAF Btu/lb		8306	
Air Dry Loss (%)		53.55	
Ultimate (%)			
Moisture	54.14	0.00	1.26
Carbon	24.10	52.54	51.88
Hydrogen	2.90	6.33	6.25
Nitrogen	0.14	0.30	0.30
Sulfur	0.04	0.08	0.08
Ash	0.78	1.69	1.67
Oxygen*	17.90	39.06	38.56
Total	100.00	100.00	100.00

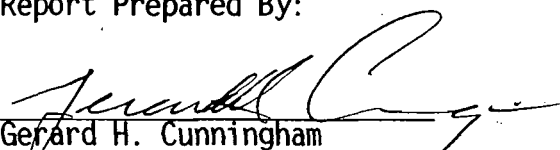
Chlorine**

Forms of Sulfur (as S,%)

Sulfate		
Pyritic		
Organic		
Total	0.04	0.08

Lb. Alkali/MM Btu=
 Lb. Ash/MM Btu= 2.07
 Lb. SO2/MM Btu= 0.20
 HGI= @ % Moisture
 As Rec'd. Sp.Gr.=
 Free Swelling Index=

Report Prepared By:


 Gerard H. Cunningham
 Fuels Laboratory Supervisor

* Oxygen by Difference.

** Not usually reported as part of the ultimate analysis.

NGS Analytical Laboratory

P.O. Box 2010
West Springfield, MA 01090-2010
Phone (413) 787-9064 Fax (413) 787-9056

Mass Certification - MA-00071
Conn Certification - PH-0520

GOLDER ASSOCIATES INC.

MAR 10 2003

GAINESVILLE



2/24
Northeast
Generation Services

The Northeast Utilities System

March 6, 2003

Report Date

Customer	Contact	Laboratory Supervisor	eMail
Golder Associates, Inc.	F. Bergen	Madhu Shah	shahmp@nu.com
Sample Description Analysis of Sugar Cane for Chlorine			

Samples Analyzed

Enclosed are Report No(s):1158 to 1161

Vist our web site at www.ngs-nu.com

Thank you for your business

Madhu Shah, NGS Laboratory Supervisor

3/6/03

Date

Sample Analysis

Sample Description	Source	Taken	Received	Work Order
1158 USSC-C-0224	Golder Associates, Inc.	2/25/03	2/27/03	03-0323
Parameter	Results	MDL Method		Analyzed
Chlorine	558.86 mg/Kg	100.00 ASTM D-4208		3/6/03

Sample Description	Source	Taken	Received	Work Order
1159 USSC-B-0224	Golder Associates, Inc.	2/25/03	2/27/03	03-0323
Parameter	Results	MDL Method		Analyzed
Chlorine	493.66 mg/Kg	100.00 ASTM D-4208		3/6/03

Sample Description	Source	Taken	Received	Work Order
1160 ASA-0224	Golder Associates, Inc.	2/25/03	2/27/03	03-0323
Parameter	Results	MDL Method		Analyzed
Chlorine	338.00 mg/Kg	100.00 ASTM D-4208		3/6/03

Sample Description	Source	Taken	Received	Work Order
1161 SCGC-0224	Golder Associates, Inc.	2/25/03	2/27/03	03-0323
Parameter	Results	MDL Method		Analyzed
Chlorine	382.50 mg/Kg	100.00 ASTM D-4208		3/6/03



**PPB ENVIRONMENTAL
LABORATORIES, INC.**

6821 SW Archer Road, Gainesville, FL 32608 Ph: (352) 377-2349 Fax: (352) 395-6639 E-mail: ppb@ppb-envlabs.com NELAP Certified—FDH # E82001

April 1, 2003

Ms. Fawn Bergen
Golder Associates, Inc.
6241 NW 23 St., Suite 500
Gainesville, FL 32653-1500

Dear Ms. Bergen:

Enclosed are the analytical results for the samples received February 10 and 24, 2003.

All data were determined in accordance with published procedures (EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, December 1996, 3rd Edition incl. Updates I-III; and Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992). Our laboratory is certified by Florida Department of Health (FDH No. E82001) and our CompQAP is approved by FDEP (#870017G).

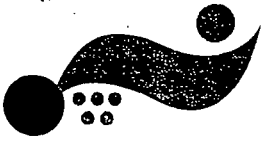
If you have any questions concerning this report, please contact me.

Sincerely,

A handwritten signature in black ink that reads "Paul Berman". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Paul Berman
Project Manager

Enclosures



**PPB ENVIRONMENTAL
LABORATORIES, INC.**

6821 SW Archer Road, Gainesville, FL 32608 Ph: (352)377-2349 Fax: (352)395-6639 E-mail: ppb@ppb-envlabs.com NELAP Certified—FDH # E82001

REPORT OF ANALYSES (SN-00002827)

Golder Associates Inc.
6241 NW 23rd St
Suite 500
Gainesville, FL 32653-1500
Attn: Ms. Fawn Bergen

DATE: 04/01/03
FDH # E82001
DEP CQAP # 870017G

Samples received 2/10 and 2/24/03 (Page 1 of 2)

CLIENT STATION ID	LAB NUMBER	%SOLIDS %	AS/V/ICP mg/kg	BE/V/ICP mg/kg	CD/V/ICP mg/kg	CR/V/ICP mg/kg	PB/V/ICP mg/kg
USSC-C-0210	239940	50.7	N.R.	N.R.	N.R.	N.R.	N.R.
USSC-B-0210	239941	48.1	N.R.	N.R.	N.R.	N.R.	N.R.
USSC-B-0210-DUP	239942	48.4	N.R.	N.R.	N.R.	N.R.	N.R.
ASA-0210	239943	49.0	N.R.	N.R.	N.R.	N.R.	N.R.
SCGC-0210	239944	49.2	N.R.	N.R.	N.R.	N.R.	N.R.
USSC-C-0224	240531	50.6	0.5	0.2 U	0.4 U	0.3	0.3
USSC-B-0224	240532	48.2	0.3	0.2 U	0.4 U	0.2	0.3 U
SCGC-0224	240533	47.8	0.4	0.2 U	0.4 U	0.2 U	0.3 U
SCGC-0224-DUP	240534	49.1	0.3	0.2 U	0.4 U	0.2	0.3 U
ASA-0224	240535	50.0	0.4	0.2 U	0.4 U	0.2 U	0.3 U

U = Result below detection limit

NOTE: N. R. = ANALYSIS NOT REQUIRED

PROJECT MANAGER





**PPB ENVIRONMENTAL
LABORATORIES, INC.**

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REPORT OF ANALYSES (SN-00002827)

Golder Associates Inc.
6241 NW 23rd St
Suite 500
Gainesville, FL 32653-1500
Attn: Ms. Fawn Bergen

DATE: 04/01/03
FDH # E82001
DEP CQAP # 870017G

Samples received 2/10 and 2/24/03 (Page 2 of 2)

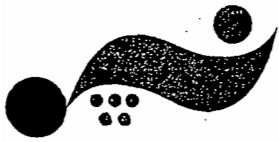
CLIENT STATION ID	LAB NUMBER	MN/V/ICP mg/kg	HG/V/CVAA mg/kg	NI/V/ICP mg/kg	SE/V/ICP mg/kg
USSC-C-0210	239940	8.0	N.R.	N.R.	N.R.
USSC-B-0210	239941	12.5	N.R.	N.R.	N.R.
USSC-B-0210-DUP	239942	14.7	N.R.	N.R.	N.R.
ASA-0210	239943	13.1	N.R.	N.R.	N.R.
SCGC-0210	239944	9.5	N.R.	N.R.	N.R.
USSC-C-0224	240531	6.3	0.01 U	0.2	0.7
USSC-B-0224	240532	9.3	0.01 U	0.2	0.8
SCGC-0224	240533	9.4	0.01 U	0.1	0.8
SCGC-0224-DUP	240534	8.4	0.01 U	0.2	0.8
ASA-0224	240535	6.6	0.01 U	0.2	0.8

U = Result below detection limit

NOTE: N. R. = ANALYSIS NOT REQUIRED

PROJECT MANAGER





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LABORATORIES, INC.**

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QC REPORT FOR Golder Associates Inc. 04/01/03 PAGE 1

TOTAL SOLIDS % VG Method: EPA 160.3 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
239941	USSC-B-0210	48.1	47.5	0.60	0.89	5.94
240531	USSC-C-0224	50.6	52.3	1.7	2.34	7.86

ARSENIC IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
240531	USSC-C-0224	0.5	0.4	0.10	15.7	20.0

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	Control Limit
240532	USSC-B-0224	98	---	61 TO 146	----	----
240532	USSC-B-0224	103	---	61 TO 146	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1920	96	58 TO 152

BERYLLIUM IN SED. mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
240531	USSC-C-0224	<0.2	<0.2	0.10	0.0	20.0



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QC REPORT FOR Golder Associates Inc. 04/01/03 PAGE 2

BERYLLIUM IN SED. mg/kg VG Method: EPA 6010 Alt. Method: None

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
240532	USSC-B-0224	97	---	71 TO 125	----	----
240532	USSC-B-0224	100	---	71 TO 125	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1990	99	59 TO 149

CADMIUM IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
240531	USSC-C-0224	<0.4	<0.4	0.20	0.0	20.0

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
240532	USSC-B-0224	96	---	72 TO 125	----	----
240532	USSC-B-0224	101	---	72 TO 125	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1970	98	54 TO 158



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QC REPORT FOR Golder Associates Inc. 04/01/03 PAGE 3

CHROMIUM IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates		Value 1	Value 2	Range	% RSD	QC Control Limit
PPB Number	Client ID					
240531	USSC-C-0224	0.3	0.2	0.10	28.2	---

Spikes		Spike Recovery		% RSD
PPB Number	Client ID	% MS	% MSD Control Limits	% RSD Control Limit
240532	USSC-B-0224	93	75 TO 118	----
240532	USSC-B-0224	95	75 TO 118	----

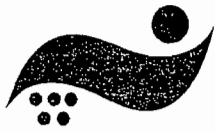
References				
Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1960	98	46 TO 151

LEAD IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates		Value 1	Value 2	Range	% RSD	QC Control Limit
PPB Number	Client ID					
240531	USSC-C-0224	0.3	0.2	0.10	28.2	---

Spikes		Spike Recovery		% RSD
PPB Number	Client ID	% MS	% MSD Control Limits	% RSD Control Limit
240532	USSC-B-0224	100	63 TO 133	----
240532	USSC-B-0224	107	63 TO 133	----

References				
Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1960	98	44 TO 172



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QC REPORT FOR Golder Associates Inc. 04/01/03 PAGE 4

MANGANESE IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
240531	USSC-C-0224	6.3	6.7	0.40	4.34	13.43

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	Control Limit
240532	USSC-B-0224	100	---	54 TO 138	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
SLCS1-8857	468	471	101	92 TO 104
ICV	2000	2020	101	92 TO 104



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LABORATORIES, INC.**

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QC REPORT FOR Golder Associates Inc. 04/01/03 PAGE 5

MERCURY IN SEDIMENT mg/kg VG Method: EPA 7471 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
240532	USSC-B-0224	<0.01	<0.01	0	0.00	4.48

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
240531	USSC-C-0224	77	70	58 TO 136	6.73	NO DATA

References

Reference ID	Target	Found	% Recovery	Control Limits
MS2710	32.6	31.7	97	37 TO 154

NICKEL IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

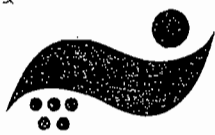
PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
240531	USSC-C-0224	0.2	0.2	0.10	0.00	---

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
240532	USSC-B-0224	93	---	69 TO 119	----	----
240532	USSC-B-0224	95	---	69 TO 119	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1970	99	69 TO 137



**PPB ENVIRONMENTAL
LABORATORIES, INC.**

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QC REPORT FOR Golder Associates Inc. 04/01/03 PAGE 6

SELENIUM IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

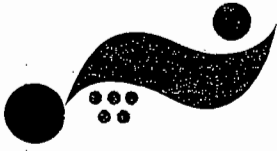
PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
240531	USSC-C-0224	0.7	0.8	0.10	9.4	20.0

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	Control Limit
240532	USSC-B-0224	103	---	79 TO 141	----	----
240532	USSC-B-0224	111	---	79 TO 141	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1940	97	62 TO 154



**PPB ENVIRONMENTAL
LABORATORIES, INC.**

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DATE, TIME, ANALYST REPORT

ANALYSIS	METHOD	PREP		ANALYSIS			MATRIX
		DATE	BY	DATE	TIME	BY	
%SOLIDS	EPA 160.3	/	/	02/14/03	1436	OHM	VG
%SOLIDS	EPA 160.3	/	/	02/26/03	1605	OHM	VG
AS/V/ICP	EPA 6010	02/27/03	ECS	03/21/03	0403	DAL	VG
BE/V/ICP	EPA 6010	02/27/03	ECS	03/19/03	0403	DAL	VG
BE/V/ICP	EPA 6010	02/27/03	ECS	03/21/03	0424	DAL	VG
CD/V/ICP	EPA 6010	02/27/03	ECS	03/19/03	0403	DAL	VG
CD/V/ICP	EPA 6010	02/27/03	ECS	03/21/03	0424	DAL	VG
CR/V/ICP	EPA 6010	02/27/03	ECS	03/19/03	0606	DAL	VG
CR/V/ICP	EPA 6010	02/27/03	ECS	03/21/03	0403	DAL	VG
HG/V/CVAA	EPA 7471	/	/	03/13/03	1539	ECS	VG
MN/V/ICP	EPA 6010	02/13/03	ECS	03/06/03	1315	KTB	VG
MN/V/ICP	EPA 6010	02/13/03	ECS	03/10/03	0330	KTB	VG
MN/V/ICP	EPA 6010	02/27/03	ECS	03/21/03	0403	DAL	VG
NI/V/ICP	EPA 6010	02/27/03	ECS	03/21/03	0403	DAL	VG
PB/V/ICP	EPA 6010	02/27/03	ECS	03/19/03	0424	DAL	VG
PB/V/ICP	EPA 6010	02/27/03	ECS	03/21/03	0403	DAL	VG
SE/V/ICP	EPA 6010	02/27/03	ECS	03/21/03	0403	DAL	VG

2/3/03 – 2/9/03



Hazen Research, Inc.
 4601 Indiana St.
 Golden, CO 80403 USA
 Tel: (303) 279-4501
 Fax: (303) 278-1528

Date February 18 2003
 HRI Project 009-555
 HRI Series No. B149/03-4
 Date Rec'd. 02/12/03
 Cust. P.O.#

Golder Associates, Inc.
 Fawn Bergen
 6241 NW 23rd Street, Suite 500
 Gainesville, FL 32653

Sample Identification
 SCGC-0210

Reporting Basis >	As Rec'd	Dry	Air Dry
-------------------	----------	-----	---------

Proximate (%)

Moisture	53.15	0.00	1.66
Ash	0.57	1.22	1.20
Volatile	40.78	87.06	85.61
Fixed C	5.50	11.72	11.53
Total	100.00	100.00	100.00

Sulfur	0.03	0.06	0.06
Btu/lb (HHV)	3869	8259	8122
MMF Btu/lb	3892	8369	
MAF Btu/lb		8361	
Air Dry Loss (%)		52.36	

Ultimate (%)

Moisture	53.15	0.00	1.66
Carbon	24.51	52.32	51.45
Hydrogen	2.79	5.95	5.85
Nitrogen	0.14	0.29	0.29
Sulfur	0.03	0.06	0.06
Ash	0.57	1.22	1.20
Oxygen*	18.81	40.16	39.49
Total	100.00	100.00	100.00

Chlorine**

Forms of Sulfur (as S,%)

Sulfate		
Pyritic		
Organic		
Total	0.03	0.06

Lb. Alkali/MM Btu=
 Lb. Ash/MM Btu= 1.48
 Lb. SO2/MM Btu= 0.15
 HGI= @ % Moisture
 As Rec'd. Sp.Gr.=
 Free Swelling Index=

Report Prepared By:

Gerard H. Cunningham
 Fuels Laboratory Supervisor

Water Soluble Alkalies (%)

Na2O
 K2O

* Oxygen by Difference.

** Not usually reported as part of the ultimate analysis.

NGS Analytical Laboratory

P.O. Box 2010

West Springfield, MA 01090-2010

Phone (413) 787-9064 Fax (413) 787-9056

Mass Certification - MA-00071

Conn Certification - PH-0520

GOLDER ASSOCIATES INC.

FEB 24 2003

GAINESVILLE



**Northeast
Generation Services**

The Northeast Utilities System

February 18, 2003

Report Date

Customer	Contact	Laboratory Supervisor	eMail
Golder Associates, Inc.	F. Bergen	Madhu Shah	shahmp@nu.com
Sample Description Analysis of Sugar Cane for Chlorine			

Samples Analyzed

Enclosed are Report No(s): 0916 to 0919

Visit our web site at www.ngs-nu.com

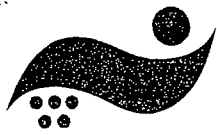
Thank you for your business

Madhu Shah, NGS Laboratory Supervisor

Date

Sample Analysis

Sample Description	Source	Taken	Received	Work Order
0916 USSC-C-0210	Golder Associates, Inc.	2/10/03	2/12/03	03-0236
Parameter	Results	MDL Method		Analyzed
Chlorine	663.94 mg/Kg	100.00 ASTM D-4208		2/18/03
Sample Description	Source	Taken	Received	Work Order
0917 USSC-B-0210	Golder Associates, Inc.	2/10/03	2/12/03	03-0236
Parameter	Results	MDL Method		Analyzed
Chlorine	653.41 mg/Kg	100.00 ASTM D-4208		2/18/03
Sample Description	Source	Taken	Received	Work Order
0918 ASA-0210	Golder Associates, Inc.	2/10/03	2/12/03	03-0236
Parameter	Results	MDL Method		Analyzed
Chlorine	484.82 mg/Kg	100.00 ASTM D-4208		2/18/03
Sample Description	Source	Taken	Received	Work Order
0919 SCGC-0210	Golder Associates, Inc.	2/10/03	2/12/03	03-0236
Parameter	Results	MDL Method		Analyzed
Chlorine	401.80 mg/Kg	100.00 ASTM D-4208		2/18/03



**PPB ENVIRONMENTAL
LABORATORIES, INC.**

6821 SW Archer Road, Gainesville, FL 32608 Ph: (352) 377-2349 Fax: (352) 395-6639 E-mail: ppb@ppb-envlabs.com NELAP Certified—FDH # E82001

April 1, 2003

Ms. Fawn Bergen
Golder Associates, Inc.
6241 NW 23 St., Suite 500
Gainesville, FL 32653-1500

Dear Ms. Bergen:

Enclosed are the analytical results for the samples received February 10 and 24, 2003.

All data were determined in accordance with published procedures (EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, December 1996, 3rd Edition incl. Updates I-III; and Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992). Our laboratory is certified by Florida Department of Health (FDH No. E82001) and our CompQAP is approved by FDEP (#870017G).

If you have any questions concerning this report, please contact me.

Sincerely,

Paul Berman
Project Manager

Enclosures



**PPB ENVIRONMENTAL
LABORATORIES, INC.**

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REPORT OF ANALYSES (SN-00002827)

Golder Associates Inc.
6241 NW 23rd St
Suite 500
Gainesville, FL 32653-1500
Attn: Ms. Fawn Bergen

DATE: 04/01/03
FDH # E82001
DEP CQAP # 870017G

Samples received 2/10 and 2/24/03 (Page 1 of 2)

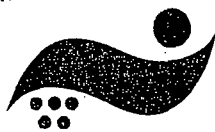
CLIENT STATION ID	LAB NUMBER	%SOLIDS %	AS/V/ICP mg/kg	BE/V/ICP mg/kg	CD/V/ICP mg/kg	CR/V/ICP mg/kg	PB/V/ICP mg/kg
USSC-C-0210	239940	50.7	N.R.	N.R.	N.R.	N.R.	N.R.
USSC-B-0210	239941	48.1	N.R.	N.R.	N.R.	N.R.	N.R.
USSC-B-0210-DUP	239942	48.4	N.R.	N.R.	N.R.	N.R.	N.R.
ASA-0210	239943	49.0	N.R.	N.R.	N.R.	N.R.	N.R.
SCGC-0210	239944	49.2	N.R.	N.R.	N.R.	N.R.	N.R.
USSC-C-0224	240531	50.6	0.5	0.2 U	0.4 U	0.3	0.3
USSC-B-0224	240532	48.2	0.3	0.2 U	0.4 U	0.2	0.3 U
SCGC-0224	240533	47.8	0.4	0.2 U	0.4 U	0.2 U	0.3 U
SCGC-0224-DUP	240534	49.1	0.3	0.2 U	0.4 U	0.2	0.3 U
ASA-0224	240535	50.0	0.4	0.2 U	0.4 U	0.2 U	0.3 U

U = Result below detection limit

NOTE: N. R. = ANALYSIS NOT REQUIRED

PROJECT MANAGER

Paul Bertram



**PPB ENVIRONMENTAL
LABORATORIES, INC.**

6821 SW Archer Road, Gainesville, FL 32608 Ph: (352)377-2349 Fax: (352)395-6639 E-mail: ppb@ppb-envlabs.com NELAP Certified—FDH # E82001

REPORT OF ANALYSES (SN-00002827)

Golder Associates Inc.
6241 NW 23rd St
Suite 500
Gainesville, FL 32653-1500
Attn: Ms. Fawn Bergen

DATE: 04/01/03
FDH # E82001
DEP CQAP # 870017G

Samples received 2/10 and 2/24/03 (Page 2 of 2)

CLIENT STATION ID	LAB NUMBER	MN/V/ICP mg/kg	HG/V/CVAA mg/kg	NI/V/ICP mg/kg	SE/V/ICP mg/kg
USSC-C-0210	239940	8.0	N.R.	N.R.	N.R.
USSC-B-0210	239941	12.5	N.R.	N.R.	N.R.
USSC-B-0210-DUP	239942	14.7	N.R.	N.R.	N.R.
ASA-0210	239943	13.1	N.R.	N.R.	N.R.
SCGC-0210	239944	9.5	N.R.	N.R.	N.R.
USSC-C-0224	240531	6.3	0.01 U	0.2	0.7
USSC-B-0224	240532	9.3	0.01 U	0.2	0.8
SCGC-0224	240533	9.4	0.01 U	0.1	0.8
SCGC-0224-DUP	240534	8.4	0.01 U	0.2	0.8
ASA-0224	240535	6.6	0.01 U	0.2	0.8

U = Result below detection limit

NOTE: N. R. = ANALYSIS NOT REQUIRED

PROJECT MANAGER

Paul Bertram



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LABORATORIES, INC.**

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QC REPORT FOR Golder Associates Inc. 04/01/03 PAGE 1

TOTAL SOLIDS % VG Method: EPA 160.3 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
239941	USSC-B-0210	48.1	47.5	0.60	0.89	5.94
240531	USSC-C-0224	50.6	52.3	1.7	2.34	7.86

ARSENIC IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
240531	USSC-C-0224	0.5	0.4	0.10	15.7	20.0

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	Control Limit
240532	USSC-B-0224	98	---	61 TO 146	----	----
240532	USSC-B-0224	103	---	61 TO 146	----	----

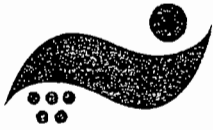
References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1920	96	58 TO 152

BERYLLIUM IN SED. mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
240531	USSC-C-0224	<0.2	<0.2	0.10	0.0	20.0



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QC REPORT FOR Golder Associates Inc. 04/01/03 PAGE 2

BERYLLIUM IN SED. mg/kg VG Method: EPA 6010 Alt. Method: None

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
240532	USSC-B-0224	97	---	71 TO 125	----	----
240532	USSC-B-0224	100	---	71 TO 125	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1990	99	59 TO 149

CADMIUM IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
240531	USSC-C-0224	<0.4	<0.4	0.20	0.0	20.0

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
240532	USSC-B-0224	96	---	72 TO 125	----	----
240532	USSC-B-0224	101	---	72 TO 125	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1970	98	54 TO 158



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QC REPORT FOR Golder Associates Inc. 04/01/03 PAGE 3

CHROMIUM IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates		Value 1	Value 2	Range	% RSD	QC Control Limit
PPB Number	Client ID					
240531	USSC-C-0224	0.3	0.2	0.10	28.2	---

Spikes		Spike Recovery		% RSD
PPB Number	Client ID	% MS	% MSD Control Limits	% RSD Control Limit
240532	USSC-B-0224	93	75 TO 118	----
240532	USSC-B-0224	95	75 TO 118	----

References				
Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1960	98	46 TO 151

LEAD IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates		Value 1	Value 2	Range	% RSD	QC Control Limit
PPB Number	Client ID					
240531	USSC-C-0224	0.3	0.2	0.10	28.2	---

Spikes		Spike Recovery		% RSD
PPB Number	Client ID	% MS	% MSD Control Limits	% RSD Control Limit
240532	USSC-B-0224	100	63 TO 133	----
240532	USSC-B-0224	107	63 TO 133	----

References				
Reference ID	Target	Found	% Recovery	Control Limits
	2000	1960	98	44 TO 172



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LABORATORIES, INC.**

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QC REPORT FOR Golder Associates Inc. 04/01/03 PAGE 4

MANGANESE IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
240531	USSC-C-0224	6.3	6.7	0.40	4.34	13.43

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
240532	USSC-B-0224	100	---	54 TO 138	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
SLCS1-8857	468	471	101	92 TO 104
ICV	2000	2020	101	92 TO 104



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QC REPORT FOR Golder Associates Inc. 04/01/03 PAGE 5

MERCURY IN SEDIMENT mg/kg VG Method: EPA 7471 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
240532	USSC-B-0224	<0.01	<0.01	0	0.00	4.48

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	RSD Control Limit
240531	USSC-C-0224	77	70	58 TO 136	6.73	NO DATA

References

Reference ID	Target	Found	% Recovery	Control Limits
MS2710	32.6	31.7	97	37 TO 154

NICKEL IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

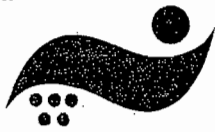
PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
240531	USSC-C-0224	0.2	0.2	0.10	0.00	---

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	RSD Control Limit
240532	USSC-B-0224	93	---	69 TO 119	----	----
240532	USSC-B-0224	95	---	69 TO 119	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1970	99	69 TO 137



**PPB ENVIRONMENTAL
LABORATORIES, INC.**

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QC REPORT FOR Golder Associates Inc. 04/01/03 PAGE 6

SELENIUM IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
240531	USSC-C-0224	0.7	0.8	0.10	9.4	20.0

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	Control Limit
240532	USSC-B-0224	103	---	79 TO 141	----	----
240532	USSC-B-0224	111	---	79 TO 141	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1940	97	62 TO 154



**PPB ENVIRONMENTAL
LABORATORIES, INC.**

6821 SW Archer Road, Gainesville, FL 32608 Ph: (352) 377-2349 Fax: (352) 395-6639 E-mail: ppb@ppb-envlabs.com NELAP Certified—FDH # E82001

DATE, TIME, ANALYST REPORT

ANALYSIS	METHOD	PREP		ANALYSIS			MATRIX
		DATE	BY	DATE	TIME	BY	
%SOLIDS	EPA 160.3	/	/	02/14/03	1436	OHM	VG
%SOLIDS	EPA 160.3	/	/	02/26/03	1605	OHM	VG
AS/V/ICP	EPA 6010	02/27/03	ECS	03/21/03	0403	DAL	VG
BE/V/ICP	EPA 6010	02/27/03	ECS	03/19/03	0403	DAL	VG
BE/V/ICP	EPA 6010	02/27/03	ECS	03/21/03	0424	DAL	VG
CD/V/ICP	EPA 6010	02/27/03	ECS	03/19/03	0403	DAL	VG
CD/V/ICP	EPA 6010	02/27/03	ECS	03/21/03	0424	DAL	VG
CR/V/ICP	EPA 6010	02/27/03	ECS	03/19/03	0606	DAL	VG
CR/V/ICP	EPA 6010	02/27/03	ECS	03/21/03	0403	DAL	VG
HG/V/CVAA	EPA 7471	/	/	03/13/03	1539	ECS	VG
MN/V/ICP	EPA 6010	02/13/03	ECS	03/06/03	1315	KTB	VG
MN/V/ICP	EPA 6010	02/13/03	ECS	03/10/03	0330	KTB	VG
MN/V/ICP	EPA 6010	02/27/03	ECS	03/21/03	0403	DAL	VG
NI/V/ICP	EPA 6010	02/27/03	ECS	03/21/03	0403	DAL	VG
PB/V/ICP	EPA 6010	02/27/03	ECS	03/19/03	0424	DAL	VG
PB/V/ICP	EPA 6010	02/27/03	ECS	03/21/03	0403	DAL	VG
SE/V/ICP	EPA 6010	02/27/03	ECS	03/21/03	0403	DAL	VG

1/20/03 – 1/26/03



Hazen Research, Inc.
 4601 Indiana St.
 Golden, CO 80403 USA
 Tel: (303) 279-4501
 Fax: (303) 278-1528

Date January 31 2003
 HRI Project 009-555
 HRI Series No. A287/03-4
 Date Rec'd. 01/29/03
 Cust. P.O.#

Golder Associates, Inc.
 Fawn Howard
 6241 NW 23rd Street, Suite 500
 Gainesville, FL 32653

Sample Identification
 SCGC-0127

Reporting Basis > As Rec'd Dry Air Dry

Proximate (%)

Moisture	55.31	0.00	1.56
Ash	0.92	2.05	2.02
Volatile	38.56	86.29	84.94
Fixed C	5.21	11.66	11.48
Total	100.00	100.00	100.00

Sulfur	0.04	0.08	0.08
Btu/lb (HHV)	3653	8174	8046
MMF Btu/lb	3688	8359	
MAF Btu/lb		8345	
Air Dry Loss (%)		54.60	

Ultimate (%)

Moisture	55.31	0.00	1.56
Carbon	23.33	52.20	51.39
Hydrogen	2.88	6.45	6.35
Nitrogen	0.16	0.36	0.35
Sulfur	0.04	0.08	0.08
Ash	0.92	2.05	2.02
Oxygen*	17.36	38.86	38.25
Total	100.00	100.00	100.00

Chlorine**

Forms of Sulfur (as S,%)

Sulfate		
Pyritic		
Organic		
Total	0.04	0.08

Lb. Alkali/MM Btu=
 Lb. Ash/MM Btu= 2.51
 Lb. SO2/MM Btu= 0.20
 HGI= @ % Moisture
 As Rec'd. Sp.Gr.=
 Free Swelling Index=

Report Prepared By:

Gerard H. Cunningham
 Fuels Laboratory Supervisor

Water Soluble Alkalies (%)

Na2O
 K2O

* Oxygen by Difference.

** Not usually reported as part of the ultimate analysis.

NGS Analytical Laboratory

P.O. Box 2010

West Springfield, MA 01090-2010

Phone (413) 787-9064 Fax (413) 787-9056

Mass Certification - MA-00071

Conn Certification - PH-0520

GOLDER ASSOCIATES INC.

FEB 24 2003

GAINESVILLE



1/27
**Northeast
Generation Services**

The Northeast Utilities System

February 13, 2003

Report Date

Customer	Contact	Laboratory Supervisor	eMail
Golder Associates, Inc.	F. Bergen	Madhu Shah	shahmp@nu.com
Sample Description Analysis of Sugar Cane for Chlorine			

Samples Analyzed

Enclosed are Report No(s): 0644 to 0647

Visit our web site at www.ngs-nu.com

Thank you for your business

Madhu Shah, NGS Laboratory Supervisor

Date

Sample Analysis

Sample	Description	Source	Taken	Received	Work Order
0644	USSC-C-0127	Golder Associates, Inc.	1/28/03	1/29/03	03-0146
Parameter	Results	MDL	Method	Analyzed	
Chlorine	365.22 mg/Kg	100.00	ASTM D-4208	2/11/03	

Sample	Description	Source	Taken	Received	Work Order
0645	USSC-3-0127	Golder Associates, Inc.	1/28/03	1/29/03	03-0146
Parameter	Results	MDL	Method	Analyzed	
Chlorine	391.10 mg/Kg	100.00	ASTM D-4208	2/11/03	

Sample	Description	Source	Taken	Received	Work Order
0646	ASA-0127	Golder Associates, Inc.	1/28/03	1/29/03	03-0146
Parameter	Results	MDL	Method	Analyzed	
Chlorine	316.29 mg/Kg	100.00	ASTM D-4208	2/11/03	

Sample	Description	Source	Taken	Received	Work Order
0647	SCGC-0127	Golder Associates, Inc.	1/28/03	1/29/03	03-0146
Parameter	Results	MDL	Method	Analyzed	
Chlorine	291.90 mg/Kg	100.00	ASTM D-4208	2/11/03	



**PPB ENVIRONMENTAL
LABORATORIES, INC.**

GOLDER ASSOCIATES INC.

MAR 19 2003

GAINESVILLE

6821 SW Archer Road, Gainesville, FL 32608 Ph: (352)377-2349 Fax: (352)395-6639 E-mail: ppb@ppb-envlabs.com NELAP Certified—FDH # E82001

March 13, 2003

Ms. Fawn Bergen
Golder Associates, Inc.
6241 NW 23 St., Suite 500
Gainesville, FL 32653-1500

Dear Ms. Bergen:

Enclosed are the analytical results for the samples received January 14 and 28, 2003.

All data were determined in accordance with published procedures (EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, December 1996, 3rd Edition incl. Updates I-III; and Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992). Our laboratory is certified by Florida Department of Health (FDH No. E82001) and our CompQAP is approved by FDEP (#870017G).

If you have any questions concerning this report, please contact me.

Sincerely,

Paul Berman
Project Manager

Enclosures



**PPB ENVIRONMENTAL
LABORATORIES, INC.**

6821 SW Archer Road, Gainesville, FL 32608 Ph: (352) 377-2349 Fax: (352) 395-6639 E-mail: ppb@ppb-envlabs.com NELAP Certified—FDH # E82001

REPORT OF ANALYSES (SN-00002729)

Golder Associates, Inc.
6241 NW 23rd St
Suite 500
Gainesville, FL 32653-1500
Attn: Ms. Fawn Bergen

DATE: 03/13/03
FDH # E82001
DEP CQAP # 870017G

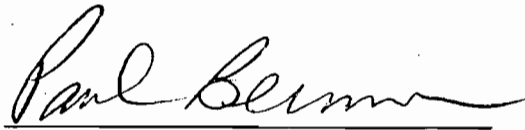
Samples received 1/14 and 1/28/03 (Page 1 of 2)

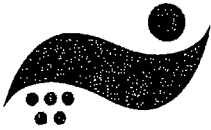
CLIENT STATION ID	LAB NUMBER	%SOLIDS %	AS/V/ICP mg/kg	BE/V/ICP mg/kg	CD/V/ICP mg/kg	CR/V/ICP mg/kg	PB/V/ICP mg/kg
USSC-B-0114	237420	48.5	N.R.	N.R.	N.R.	N.R.	N.R.
USSC-C-0114	237421	45.4	N.R.	N.R.	N.R.	N.R.	N.R.
ASA-0114	237422	46.7	N.R.	N.R.	N.R.	N.R.	N.R.
SCGC-0114	237423	48.2	N.R.	N.R.	N.R.	N.R.	N.R.
SCGC-0114-DUP	237424	47.0	N.R.	N.R.	N.R.	N.R.	N.R.
USSC-C-0127	239373	52.6	1.8 U	0.2 U	0.3 U	0.6	1.8 U
USSC-B-0127	239374	51.4	1.3 U	0.1 U	0.2 U	0.2 U	1.3 U
SCGC-0127	239375	49.7	1.3 U	0.1 U	0.2 U	0.3 U	1.2 U
ASA-0127	239377	54.7	1.3 U	0.1 U	0.2 U	0.3 U	1.2 U
ASA-0127-DUP	239378	55.5	1.1 U	0.1 U	0.2 U	0.2 U	1.1 U

I = Result between detection limit and practical quantitation limit
U = Result below detection limit

NOTE: N. R. = ANALYSIS NOT REQUIRED

PROJECT MANAGER





**PPB ENVIRONMENTAL
LABORATORIES, INC.**

6821 SW Archer Road, Gainesville, FL 32608 Ph: (352)377-2349 Fax: (352)395-6639 E-mail: ppb@ppb-envlabs.com NELAP Certified—FDH # E82001

REPORT OF ANALYSES (SN-00002729)

Golder Associates, Inc.
6241 NW 23rd St
Suite 500
Gainesville, FL 32653-1500
Attn: Ms. Fawn Bergen

DATE: 03/13/03
FDH # E82001
DEP CQAP # 870017G

Samples received 1/14 and 1/28/03 (Page 2 of 2)

CLIENT STATION ID	LAB NUMBER	MN/V/ICP mg/kg	HG/V/CVAA mg/kg	NI/V/ICP mg/kg	SE/V/ICP mg/kg
USSC-B-0114	237420	9.5	N.R.	N.R.	N.R.
USSC-C-0114	237421	10.2	N.R.	N.R.	N.R.
ASA-0114	237422	9.1	N.R.	N.R.	N.R.
SCGC-0114	237423	8.9	N.R.	N.R.	N.R.
SCGC-0114-DUP	237424	8.7	N.R.	N.R.	N.R.
USSC-C-0127	239373	7.7	0.02 U	1.5 U	1.5 U
USSC-B-0127	239374	11.0	0.03	1.1 U	1.1 U
SCGC-0127	239375	7.5	0.02 U	1.0 U	1.0 U
ASA-0127	239377	9.2	0.01 U	1.0 U	1.0
ASA-0127-DUP	239378	8.4	0.01 U	0.9 U	0.9 U

I = Result between detection limit and practical quantitation limit
U = Result below detection limit

NOTE: N. R. = ANALYSIS NOT REQUIRED

PROJECT MANAGER

1/6/03 – 1/12/03



Hazen Research, Inc.
 4601 Indiana St.
 Golden, CO 80403 USA
 Tel: (303) 279-4501
 Fax: (303) 278-1528

Date January 22 2003
 HRI Project 009-555
 HRI Series No. A96/03-4
 Date Rec'd. 01/15/03
 Cust. P.O.#

Golder Associates, Inc.
 Fawn Howard
 6241 NW 23rd Street, Suite 500
 Gainesville, FL 32653

Sample Identification
 SCGC-0115

Reporting Basis > As Rec'd Dry Air Dry

Proximate (%)

Moisture	53.87	0.00	1.44
Ash	1.03	2.23	2.20
Volatile	40.26	87.29	86.03
Fixed C	4.84	10.48	10.33
Total	100.00	100.00	100.00

Sulfur	0.03	0.06	0.06
Btu/lb (HHV)	3705	8032	7917
MMF Btu/lb	3746	8230	
MAF Btu/lb		8216	
Air Dry Loss (%)	53.20		

Ultimate (%)

Moisture	53.87	0.00	1.44
Carbon	22.44	48.65	47.95
Hydrogen	2.33	5.05	4.98
Nitrogen	0.15	0.31	0.31
Sulfur	0.03	0.06	0.06
Ash	1.03	2.23	2.20
Oxygen*	20.15	43.70	43.06
Total	100.00	100.00	100.00

Chlorine**

Forms of Sulfur (as S,%)

Sulfate		
Pyritic		
Organic		
Total	0.03	0.06

Lb. Alkali/MM Btu=
 Lb. Ash/MM Btu= 2.78
 Lb. SO2/MM Btu= 0.15
 HGI= @ % Moisture
 As Rec'd. Sp.Gr.=
 Free Swelling Index=

Report Prepared By:

Gerard H. Cunningham
 Fuels Laboratory Supervisor

Water Soluble Alkalies (%)

Na2O
 K2O

* Oxygen by Difference.

** Not usually reported as part of the ultimate analysis.

NGS Analytical Laboratory

P.O. Box 2010

West Springfield, MA 01090-2010

Phone (413) 787-9064 Fax (413) 787-9056

Mass Certification - MA-00071

Conn Certification - PH-0520

GOLDER ASSOCIATES INC



1/14
Northeast
Generation Services

The Northeast Utilities System

FEB 10 2003

GAINESVILLE

January 29, 2003

Report Date

Customer	Contact	Laboratory Supervisor	eMail
Golder Associates, Inc.	F. Howard	Madhu Shah	shahmp@nu.com
Sample Description Analysis of Sugar Cane for Chlorine			

Samples Analyzed

Enclosed are Report No(s): 0239 to 0242

Vist our web site at www.ngs-nu.com

Thank you for your business

Madhu Shah, NGS Laboratory Supervisor

1/29/03
Date

Sample Analysis

Sample Description	Source	Taken	Received	Work Order
0239 USSC-B-0114	Golder Associates, Inc.	1/14/03	1/15/03	03-0057
Parameter	Results	MDL	Method	Analyzed
Chlorine	497.17 mg/Kg	75.00	ASTM D-4208	1/29/03

Sample Description	Source	Taken	Received	Work Order
0240 USSC-C-0114	Golder Associates, Inc.	1/14/03	1/15/03	03-0057
Parameter	Results	MDL	Method	Analyzed
Chlorine	534.44 mg/Kg	75.00	ASTM D-4208	1/29/03

Sample Description	Source	Taken	Received	Work Order
0241 ASA-0114	Golder Associates, Inc.	1/14/03	1/15/03	03-0057
Parameter	Results	MDL	Method	Analyzed
Chlorine	837.10 mg/Kg	75.00	ASTM D-4208	1/29/03

Sample Description	Source	Taken	Received	Work Order
0242 SCGC-0114	Golder Associates, Inc.	1/14/03	1/15/03	03-0057
Parameter	Results	MDL	Method	Analyzed
Chlorine	348.90 mg/Kg	75.00	ASTM D-4208	1/29/03



**PPB ENVIRONMENTAL
LABORATORIES, INC.**

GOLDER ASSOCIATES INC.

MAR 19 2003

GAINESVILLE

6821 SW Archer Road, Gainesville, FL 32608 Ph: (352)377-2349 Fax: (352)395-6639 E-mail: ppb@ppb-envlabs.com NELAP Certified—FDH # E82001

March 13, 2003

Ms. Fawn Bergen
Golder Associates, Inc.
6241 NW 23 St., Suite 500
Gainesville, FL 32653-1500

Dear Ms. Bergen:

Enclosed are the analytical results for the samples received January 14 and 28, 2003.

All data were determined in accordance with published procedures (EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, December 1996, 3rd Edition incl. Updates I-III; and Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992). Our laboratory is certified by Florida Department of Health (FDH No. E82001) and our CompQAP is approved by FDEP (#870017G).

If you have any questions concerning this report, please contact me.

Sincerely,

Paul Berman
Project Manager

Enclosures



**PPB ENVIRONMENTAL
LABORATORIES, INC.**

6821 SW Archer Road, Gainesville, FL 32608 Ph: (352)377-2349 Fax: (352)395-6639 E-mail: ppb@ppb-envlabs.com NELAP Certified—FDH # E82001

REPORT OF ANALYSES (SN-00002729)

Golder Associates, Inc.
6241 NW 23rd St
Suite 500
Gainesville, FL 32653-1500
Attn: Ms. Fawn Bergen

DATE: 03/13/03
FDH # E82001
DEP CQAP # 870017G

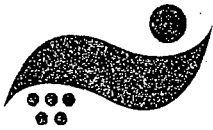
Samples received 1/14 and 1/28/03 (Page 1 of 2)

CLIENT STATION ID	LAB NUMBER	%SOLIDS %	AS/V/ICP mg/kg	BE/V/ICP mg/kg	CD/V/ICP mg/kg	CR/V/ICP mg/kg	PB/V/ICP mg/kg
USSC-B-0114	237420	48.5	N.R.	N.R.	N.R.	N.R.	N.R.
USSC-C-0114	237421	45.4	N.R.	N.R.	N.R.	N.R.	N.R.
ASA-0114	237422	46.7	N.R.	N.R.	N.R.	N.R.	N.R.
SCGC-0114	237423	48.2	N.R.	N.R.	N.R.	N.R.	N.R.
SCGC-0114-DUP	237424	47.0	N.R.	N.R.	N.R.	N.R.	N.R.
USSC-C-0127	239373	52.6	1.8 U	0.2 U	0.3 U	0.6	1.8 U
USSC-B-0127	239374	51.4	1.3 U	0.1 U	0.2 U	0.2 U	1.3 U
SCGC-0127	239375	49.7	1.3 U	0.1 U	0.2 U	0.3 U	1.2 U
ASA-0127	239377	54.7	1.3 U	0.1 U	0.2 U	0.3 U	1.2 U
ASA-0127-DUP	239378	55.5	1.1 U	0.1 U	0.2 U	0.2 U	1.1 U

I = Result between detection limit and practical quantitation limit
U = Result below detection limit

NOTE: N. R. = ANALYSIS NOT REQUIRED

PROJECT MANAGER



**PPB ENVIRONMENTAL
LABORATORIES, INC.**

6821 SW Archer Road, Gainesville, FL 32608 Ph: (352)377-2349 Fax: (352)395-6639 E-mail: ppb@ppb-envlabs.com NELAP Certified—FDH # E82001

REPORT OF ANALYSES (SN-00002729)

Golder Associates, Inc.
6241 NW 23rd St
Suite 500
Gainesville, FL 32653-1500
Attn: Ms. Fawn Bergen

DATE: 03/13/03
FDH # E82001
DEP CQAP # 870017G

Samples received 1/14 and 1/28/03 (Page 2 of 2)

CLIENT STATION ID	LAB NUMBER	MN/V/ICP mg/kg	HG/V/CVAA mg/kg	NI/V/ICP mg/kg	SE/V/ICP mg/kg
USSC-B-0114	237420	9.5	N.R.	N.R.	N.R.
USSC-C-0114	237421	10.2	N.R.	N.R.	N.R.
ASA-0114	237422	9.1	N.R.	N.R.	N.R.
SCGC-0114	237423	8.9	N.R.	N.R.	N.R.
SCGC-0114-DUP	237424	8.7	N.R.	N.R.	N.R.
USSC-C-0127	239373	7.7	0.02 U	1.5 U	1.5 U
USSC-B-0127	239374	11.0	0.03	1.1 U	1.1 U
SCGC-0127	239375	7.5	0.02 U	1.0 U	1.0 U
ASA-0127	239377	9.2	0.01 U	1.0 U	1.0
ASA-0127-DUP	239378	8.4	0.01 U	0.9 U	0.9 U

I = Result between detection limit and practical quantitation limit
U = Result below detection limit

NOTE: N. R. = ANALYSIS NOT REQUIRED

PROJECT MANAGER

12/23/02 – 12/29/02



Hazen Research, Inc.
 4601 Indiana St.
 Golden, CO 80403 USA
 Tel: (303) 279-4501
 Fax: (303) 278-1528

Date January 13 2003
 HRI Project 009-555
 HRI Series No. L375/02-3
 Date Rec'd. 01/03/03
 Cust. P.O.#

Golder Associates, Inc.
 Fawn Howard
 6241 NW 23rd Street, Suite 500
 Gainesville, FL 32653

Sample Identification
 SCGC-1231

Reporting Basis >	As Rec'd	Dry	Air Dry
-------------------	----------	-----	---------

Proximate (%)

Moisture	54.60	0.00	3.17
Ash	0.55	1.22	1.18
Volatile	39.14	86.20	83.47
Fixed C	5.71	12.58	12.18
Total	100.00	100.00	100.00

Sulfur	0.03	0.07	0.07
Btu/lb (HHV)	3807	8385	8119
MMF Btu/lb	3829	8497	
MAF Btu/lb		8489	
Air Dry Loss (%)	53.11		

Ultimate (%)

Moisture	54.60	0.00	3.17
Carbon	22.46	49.48	47.91
Hydrogen	2.53	5.57	5.40
Nitrogen	0.15	0.33	0.32
Sulfur	0.03	0.07	0.07
Ash	0.55	1.22	1.18
Oxygen*	19.68	43.33	41.95
Total	100.00	100.00	100.00

Chlorine**

Forms of Sulfur (as S,%)

Sulfate		
Pyritic		
Organic		
Total	0.03	0.07

Lb. Alkali/MM Btu=
 Lb. Ash/MM Btu= 1.45
 Lb. SO2/MM Btu= 0.17
 HGI= @ % Moisture
 As Rec'd. Sp.Gr.=
 Free Swelling Index=

Report Prepared By:

Gerard H. Cunningham
 Fuels Laboratory Supervisor

Water Soluble Alkalies (%)

Na2O
 K2O

* Oxygen by Difference.

** Not usually reported as part of the ultimate analysis.

12/31

NGS Analytical Laboratory

P.O. Box 2010
West Springfield, MA 01090-2010
Phone (413) 787-9064 Fax (413) 787-9056
Mass Certification - MA-00071
Conn Certification - PH-0520



Northeast Generation Services

The Northeast Utilities System

January 7, 2003
Report Date

Customer	Contact	Laboratory Supervisor	eMail
Golder Associates, Inc.	F. Howard	Madhu Shah	shahmp@nu.com
Sample Description Analysis of Sugar Cane for Chlorine			

Samples Analyzed

Enclosed are Report No(s): 8086 to 8088

Visit our web site at www.ngs-nu.com

Thank you for your business

Madhu Shah, NGS Laboratory Supervisor

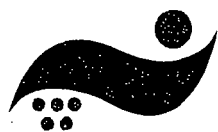
Date

Sample Analysis

Sample Description	Source	Taken	Received	Work Order
8086 USSC-C-1231	Golder Associates, Inc.	12/31/02	1/3/03	02-2382
Parameter	Results	MDL	Method	Analyzed
Chlorine	376.65 mg/Kg	100.00	ASTM D-4208	1/7/03

Sample Description	Source	Taken	Received	Work Order
8087 ASA-1231	Golder Associates, Inc.	12/31/02	1/3/03	02-2382
Parameter	Results	MDL	Method	Analyzed
Chlorine	374.41 mg/Kg	100.00	ASTM D-4208	1/7/03

Sample Description	Source	Taken	Received	Work Order
8088 SCGC-1231	Golder Associates, Inc.	12/31/02	1/3/03	02-2382
Parameter	Results	MDL	Method	Analyzed
Chlorine	371.76 mg/Kg	100.00	ASTM D-4208	1/7/03



**PPB ENVIRONMENTAL
LABORATORIES, INC.**

GOLDER ASSOCIATES INC.

MAR - 3 2003

GAINESVILLE

6821 SW Archer Road, Gainesville, FL 32608 Ph: (352) 377-2349 Fax: (352) 395-6639 E-mail: ppb@ppb-envlab.com NEAP Certified FDH # E82001

February 25, 2003

Ms. Fawn Howard
Golder Associates, Inc.
6241 NW 23 St., Suite 500
Gainesville, FL 32653-1500

Dear Ms. Howard:

Enclosed are the analytical results for the samples received December 31, 2002.

All data were determined in accordance with published procedures (EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, December 1996, 3rd Edition incl. Updates I-III; and Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992). Our laboratory is certified by Florida Department of Health (FDH No. E82001) and our CompQAP is approved by FDEP (#870017G).

If you have any questions concerning this report, please contact me.

Sincerely,

Paul Berman
Project Manager

Enclosures



**PPB ENVIRONMENTAL
LABORATORIES, INC.**

6821 SW Archer Road, Gainesville, FL 32608 Ph: (352) 377-2349 Fax: (352) 395-6639 E-mail: ppb@ppb-envlabs.com NELAP Certified—FDH # E82001

REPORT OF ANALYSES (SN-00002670)

Golder Associates, Inc.
6241 NW 23rd St
Suite 500
Gainesville, FL 32653-1500
Attn: Ms. Fawn Howard

PROJECT NAME: GOLDER ICCR
DATE: 02/24/03
FDH # E82001
DEP CQAP # 870017G

Samples received 12/31/02 (Page 1 of 2)

PRELIMINARY RESULTS

CLIENT STATION ID	LAB NUMBER	% SOLIDS %	AS/V/ICP mg/kg	BE/V/ICP mg/kg	CD/V/ICP mg/kg	CR/V/ICP mg/kg	PB/V/ICP mg/kg
USSC-C-1231	236838	51.5	0.3	0.1 U	0.1 U	0.5	0.4
USSC-C-1231-DUP	236839	48.4	0.5	0.1 U	0.1 U	0.6	0.4
ASA-1231	236840	49.0	0.4	0.1 U	0.1 U	0.1	0.1 U
SCGC-1231	236841	46.3	0.3	0.1 U	0.1 U	0.1	0.3

U = Result below detection limit

PROJECT MANAGER Paul Bertram



**PPB ENVIRONMENTAL
LABORATORIES, INC.**

6821 SW Archer Road, Gainesville, FL 32608 Ph: (352) 377-2349 Fax: (352) 395-6639 E-mail: ppb@ppb-envlabs.com NELAP Certified—FDH # E82001

REPORT OF ANALYSES (SN-00002670)

Golder Associates, Inc.
6241 NW 23rd St
Suite 500
Gainesville, FL 32653-1500
Attn: Ms. Fawn Howard

PROJECT NAME: GOLDER ICCR
DATE: 02/24/03
FDH # E82001
DEP CQAP # 870017G

Samples received 12/31/02 (Page 2 of 2)

PRELIMINARY RESULTS					
CLIENT STATION ID	LAB NUMBER	MN/V/ICP mg/kg	HG/V/CVAA mg/kg	NI/V/ICP mg/kg	SE/V/ICP mg/kg
USSC-C-1231	236838	7.8	0.19 U	0.5	1.2
USSC-C-1231-DUP	236839	9.6	0.19 U	0.6	1.1
ASA-1231	236840	7.4	0.21 U	0.3	1.2
SCGC-1231	236841	8.5	0.20 U	0.2	1.2

U = Result below detection limit

PROJECT MANAGER



12/9/02 – 12/15/02



Hazen Research, Inc.
 4601 Indiana St.
 Golden, CO 80403 USA
 Tel: (303) 279-4501
 Fax: (303) 278-1528

Date December 27 2002
 HRI Project 002-BH9
 HRI Series No. L214/02-3
 Date Rec'd. 12/18/02
 Cust. P.O.#

Golder Associates Inc.
 Fawn Howard
 6241 NW 23rd St., Suite 500
 Gainesville, Florida 32653

Sample Identification
 SCGC-1216

Reporting Basis >	As Rec'd	Dry	Air Dry
Proximate (%)			
Moisture	56.01	0.00	1.14
Ash	0.53	1.21	1.20
Volatile	38.15	86.73	85.74
Fixed C	5.31	12.06	11.92
Total	100.00	100.00	100.00
Sulfur	0.03	0.06	0.06
Btu/lb (HHV)	3656	8311	8217
MMF Btu/lb	3677	8422	
MAF Btu/lb		8413	
Air Dry Loss (%)		55.50	

Ultimate (%)			
Moisture	56.01	0.00	1.14
Carbon	21.91	49.81	49.24
Hydrogen	2.27	5.15	5.09
Nitrogen	0.13	0.30	0.30
Sulfur	0.03	0.06	0.06
Ash	0.53	1.21	1.20
Oxygen*	19.12	43.47	42.97
Total	100.00	100.00	100.00

Chlorine**

Forms of Sulfur (as S,%)

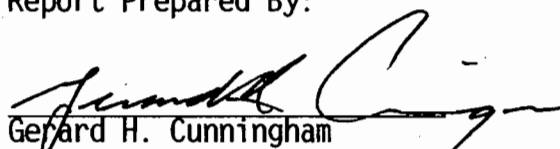
Sulfate		
Pyritic		
Organic		
Total	0.03	0.06

Lb. Alkali/MM Btu=
 Lb. Ash/MM Btu= 1.46
 Lb. SO2/MM Btu= 0.15
 HGI= @ % Moisture
 As Rec'd. Sp.Gr.=
 Free Swelling Index=

Report Prepared By:

Water Soluble Alkalies (%)

Na2O
 K2O


 Gerard H. Cunningham
 Fuels Laboratory Supervisor

* Oxygen by Difference.

** Not usually reported as part of the ultimate analysis.

NGS Analytical Laboratory

P.O. Box 2010

West Springfield, MA 01090-2010

Phone (413) 787-9064 Fax (413) 787-9056

Mass Certification - MA-00071

Conn Certification - PH-0520

GOLDER ASSOCIATES INC



Northeast
Generation Services

The Northeast Utilities System

12/16

JAN 13 2003

GAINESVILLE

January 7, 2003

Report Date

Customer	Contact	Laboratory Supervisor	eMail
Golder Associates, Inc.	F. Howard	Madhu Shah	shahmp@nu.com
Sample Description Analysis of Sugar Cane for Chlorine			

Samples Analyzed

Enclosed are Report No(s): 7758 to 7761

Vist our web site at www.ngs-nu.com

Thank you for your business

Madhu Shah, NGS Laboratory Supervisor

Date

Sample Analysis

Sample Description	Source	Taken	Received	Work Order
7758 USSC-B-1216	Golder Associates, Inc.	12/17/02	12/18/02	02-2305
Parameter	Results	MDL Method		Analyzed
Chlorine	414.79 mg/Kg	100.00 ASTM D-4208		1/7/03

Sample Description	Source	Taken	Received	Work Order
7759 ASA-1216	Golder Associates, Inc.	12/17/02	12/18/02	02-2305
Parameter	Results	MDL Method		Analyzed
Chlorine	475.46 mg/Kg	100.00 ASTM D-4208		1/7/03

Sample Description	Source	Taken	Received	Work Order
7760 SCGC-1216	Golder Associates, Inc.	12/17/02	12/18/02	02-2305
Parameter	Results	MDL Method		Analyzed
Chlorine	268.67 mg/Kg	100.00 ASTM D-4208		1/7/03

Sample Description	Source	Taken	Received	Work Order
7761 USSC-C-1216	Golder Associates, Inc.	12/17/02	12/18/02	02-2305
Parameter	Results	MDL Method		Analyzed
Chlorine	441.91 mg/kg	100.00 ASTM D-4208		1/7/03



**PPB ENVIRONMENTAL
LABORATORIES, INC.**

GOLDER ASSOCIATES INC.

JAN 31 2003

6821 SW Archer Road, Gainesville, FL 32608 Ph: (352) 377-2349 Fax: (352) 395-6639 E-mail: ppb@ppb-envlabs.com
GAINESVILLE

January 23, 2003

Ms. Fawn Howard
Golder Associates, Inc.
6241 NW 23 St., Suite 500
Gainesville, FL 32653-1500

Dear Ms. Howard:

Enclosed are the analytical results for the samples received December 17, 2002.

All data were determined in accordance with published procedures (EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, December 1996, 3rd Edition incl. Updates I-III; and Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992). Our laboratory is certified by Florida Department of Health (FDH No. E82001) and our CompQAP is approved by FDEP (#870017G).

If you have any questions concerning this report, please contact me.

Sincerely,

Paul Berman
Project Manager

Enclosures



**PPB ENVIRONMENTAL
LABORATORIES, INC.**

6821 SW Archer Road, Gainesville, FL 32608 Ph: (352) 377-2349 Fax: (352) 395-6639 E-mail: ppb@ppb-envlabs.com NELAP Certified—FDH # E82001

REPORT OF ANALYSES (SN-00002579)

GOLDER ASSOCIATES, INC.
6241 NW 23RD STREET
SUITE 500
GAINESVILLE, FL 32653-1500
Attn: Ms. Fawn Howard

PROJECT NAME: GOLDER ICCR
DATE: 01/23/03
FDH # E82001
DEP CQAP # 870017G

Samples received 12/17/02 (Page 1 of 1)

LAB No.	SAMPLE			SAMPLER	DELIVERY TO LAB		
	DATE	TIME			DATE	TIME	MATRIX
236197	12/17/02	----		MILL PERSONNEL	12/17/02	1525	VG
236198	12/17/02	----		MILL PERSONNEL	12/17/02	1525	VG
236199	12/17/02	----		MILL PERSONNEL	12/17/02	1525	VG
236200	12/17/02	----		MILL PERSONNEL	12/17/02	1525	VG
236201	12/17/02	----		MILL PERSONNEL	12/17/02	1525	VG

CLIENT STATION ID	LAB NUMBER	TOTAL SOLIDS %	MANGANESE IN VEGETATION mg/kg
USSC-B-1216	236197	50.5	8.4
USSC-B-1216-DUP	236198	50.3	9.8
ASA-1216	236199	47.8	9.2
SCGC-1216	236200	46.7	9.6
USSC-C-1216	236201	50.7	9.9

PROJECT MANAGER

Paul Bevin

DATE, TIME, ANALYST REPORT

ANALYSIS	METHOD	PREP		ANALYSIS			MATRIX
		DATE	BY	DATE	TIME	BY	
%SOLIDS	EPA 160.3	/	/	12/18/02	1103	AJS	VG
MN/S/ICP	EPA 6010	12/18/02	ECS	01/08/03	1402	SLS	VG

11/25/02 – 12/1/02



Hazen Research, Inc.
 4601 Indiana St.
 Golden, CO 80403 USA
 Tel: (303) 279-4501
 Fax: (303) 278-1528

Date December 12 2002
 HRI Project 002-BD7
 HRI Series No. L37/02-4
 Date Rec'd. 12/05/02
 Cust. P.O.# 003-7556

Golder Associates Inc.
 Fawn Howard
 6241 NW 23rd St., Suite 500
 Gainesville, Florida 32653

Sample Identification
 SCGC-1202

Reporting Basis > As Rec'd Dry Air Dry

Proximate (%)

Moisture	57.44	0.00	1.37
Ash	0.60	1.41	1.39
Volatile	37.16	87.32	86.12
Fixed C	4.80	11.27	11.12
Total	100.00	100.00	100.00

Sulfur	0.03	0.06	0.06
Btu/lb (HHV)	3545	8330	8216
MMF Btu/lb	3567	8458	
MAF Btu/lb		8449	
Air Dry Loss (%)		56.85	

Ultimate (%)

Moisture	57.44	0.00	1.37
Carbon	21.23	49.89	49.21
Hydrogen	2.24	5.26	5.19
Nitrogen	0.12	0.28	0.28
Sulfur	0.03	0.06	0.06
Ash	0.60	1.41	1.39
Oxygen*	18.34	43.10	42.50
Total	100.00	100.00	100.00

Chlorine**	42.72	100.38	99.00
------------	-------	--------	-------

Forms of Sulfur (as S,%)

Sulfate		
Pyritic		
Organic		
Total	0.03	0.06

Lb. Alkali/MM Btu=
 Lb. Ash/MM Btu= 1.69
 Lb. SO2/MM Btu= 0.15
 HGI= @ % Moisture
 As Rec'd. Sp.Gr.=
 Free Swelling Index=

Report Prepared By:

Gerard H. Cunningham
 Fuels Laboratory Supervisor

Water Soluble Alkalies (%)

Na2O
 K2O

* Oxygen by Difference.

** Not usually reported as part of the ultimate analysis.

NGS Analytical Laboratory

P.O. Box 2010
West Springfield, MA 01090-2010
Phone (413) 787-9064 Fax (413) 787-9056
Mass Certification - MA-00071
Conn Certification - PH-0520

GOLDER ASSOCIATES INC.

DEC 16 2002
GAINESVILLE



12/2
Northeast
Generation Services

The Northeast Utilities System

December 6, 2002
Report Date

Customer	Contact	Laboratory Supervisor	eMail
Golder Associates, Inc.	F. Howard	Madhu Shah	shahmp@nu.com
Sample Description Analysis of Samples for Chlorine			

Samples Analyzed

Enclosed are Report No(s): 7583 to 7586

Visit our web site at www.ngs-nu.com

Thank you for your business

Madhu Shah, NGS Laboratory Supervisor

Date

Sample Analysis

Sample	Description	Source	Taken	Received	Work Order
7583	Project # 023-7623 AS-1202 Atlantic Sugar	Golder Associates, Inc.	12/3/02	12/5/02	02-2231
Parameter	Results	MDL	Method	Analyzed	
Chlorine	627.72 mg/Kg	100.00	ASTM D-4208	12/6/02	

Sample	Description	Source	Taken	Received	Work Order
7584	Project # 023-7623 USSC -B-1202 US Sugar	Golder Associates, Inc.	12/3/02	12/5/02	02-2231
Parameter	Results	MDL	Method	Analyzed	
Chlorine	369.18 mg/Kg	100.00	ASTM D-4208	12/6/02	

Sample	Description	Source	Taken	Received	Work Order
7585	Project # 023-7623 USSC -C-1202 US Sugar	Golder Associates, Inc.	12/3/02	12/5/02	02-2231
Parameter	Results	MDL	Method	Analyzed	
Chlorine	394.45 mg/Kg	100.00	ASTM D-4208	12/6/02	

Sample	Description	Source	Taken	Received	Work Order
7586	Project # 023-7623 SCGC-1202 Sugar Cane	Golder Associates, Inc.	12/3/02	12/5/02	02-2231
Parameter	Results	MDL	Method	Analyzed	
Chlorine	323.25 mg/Kg	100.00	ASTM D-4208	12/6/02	

GOLDER ASSOCIATES INC.

JAN 24 2003

GAINESVILLE



6821 SW Archer Road, Gainesville, FL 32608 Ph: (352) 377-2349 Fax: (352) 395-6639 E-mail: ppb@ppb-envlabs.com NELAP Certified—FDH # E82001
January 22, 2003

Ms. Fawn Howard
Golder Associates, Inc.
6241 NW 23 St., Suite 500
Gainesville, FL 32653-1500

Dear Ms. Howard:

Enclosed are the analytical results for the samples received December 3, 2002.

All data were determined in accordance with published procedures (*EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, SW-846, December 1996, 3rd Edition incl. Updates I–III; and *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992). Our laboratory is certified by Florida Department of Health (FDH No. E82001) and our CompQAP is approved by FDEP (#870017G).

Due to instrument failure, mercury analyses were performed by US Biosystems (FDH # E86240) in Boca Raton, FL.

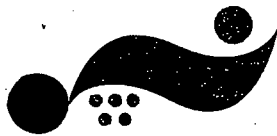
If you have any questions concerning this report, please contact me.

Sincerely,



Paul Berman
Project Manager

Enclosures



**PPB ENVIRONMENTAL
LABORATORIES, INC.**

6821 SW Archer Road, Gainesville, FL 32608 Ph: (352) 377-2349 Fax: (352) 395-6639 E-mail: ppb@ppb-envlabs.com NELAP Certified—FDH # E82001

REPORT OF ANALYSES (SN-00002557)

GOLDER ASSOCIATES, INC.
6241 NW 23RD STREET
SUITE 500
GAINESVILLE, FL 32653-1500
Attn: Ms. Fawn Howard

PROJECT NAME: GOLDER ICCR
DATE: 01/15/03
FDH # E82001
DEP CQAP # 870017G

Samples received 12/3/02 (Page 1 of 2)

LAB No.	SAMPLE			DELIVERY TO LAB	
	DATE	TIME	SAMPLER	DATE	TIME MATRIX
235334	12/03/02	----	MILL PERSONNEL	12/03/02	1330 VG
235335	12/03/02	----	MILL PERSONNEL	12/03/02	1330 VG
235336	12/03/02	----	MILL PERSONNEL	12/03/02	1330 VG

CLIENT STATION ID:	ASA 1202	ASA 1202 DUP	USSC-C 1202
LAB #:	235334	235335	235336

ANALYSIS	UNITS	METHOD	ASA 1202	ASA 1202 DUP	USSC-C 1202
%SOLIDS	%	EPA 160.3/	46.1	48.3	48.2
AS/V/ICP	mg/kg	EPA 6010/	0.5	0.2	0.4
BE/V/ICP	mg/kg	EPA 6010/	0.1 U	0.1 U	0.1 U
CD/V/ICP	mg/kg	EPA 6010/	0.1 U	0.1 U	0.1 U
CR/V/ICP	mg/kg	EPA 6010/	0.6	0.1	0.8
PB/V/ICP	mg/kg	EPA 6010/	0.2 U	0.2 U	0.2 U
MN/V/ICP	mg/kg	EPA 6010/	11.4	6.3	9.5
HG/S/CVAA	mg/kg	EPA 7471/	0.2 U	0.2 U	0.2 U
NI/V/ICP	mg/kg	EPA 6010/	0.6	0.2	0.4
SE/V/ICP	mg/kg	EPA 6010/	1.0	0.7	0.9

U = Result below detection limit

PROJECT MANAGER



**PPB ENVIRONMENTAL
LABORATORIES, INC.**

6821 SW Archer Road, Gainesville, FL 32608 Ph: (352) 377-2349 Fax: (352) 395-6639 E-mail: ppb@ppb-envlabs.com NELAP Certified—FDH # E82001

REPORT OF ANALYSES (SN-00002557)

GOLDER ASSOCIATES, INC.
6241 NW 23RD STREET
SUITE 500
GAINESVILLE, FL 32653-1500
Attn: Ms. Fawn Howard

PROJECT NAME: GOLDER ICCR
DATE: 01/15/03
FDH # E82001
DEP CQAP # 870017G

Samples received 12/3/02 (Page 2 of 2)

LAB No.	SAMPLE			DELIVERY TO LAB	
	DATE	TIME	SAMPLER	DATE	TIME MATRIX
235337	12/03/02	----	MILL PERSONNEL	12/03/02	1330 VG
235338	12/03/02	----	MILL PERSONNEL	12/03/02	1330 VG

CLIENT STATION ID: USSC-C-B 1202 SCGC 1202
LAB #: 235337 235338

ANALYSIS	UNITS	METHOD		
%SOLIDS	%	EPA 160.3/	49.5	44.7
AS/V/ICP	mg/kg	EPA 6010/	0.6	0.7
BE/V/ICP	mg/kg	EPA 6010/	0.1 U	0.1 U
CD/V/ICP	mg/kg	EPA 6010/	0.1 U	0.1 U
CR/V/ICP	mg/kg	EPA 6010/	0.4	0.2
PB/V/ICP	mg/kg	EPA 6010/	0.3	0.3
MN/V/ICP	mg/kg	EPA 6010/	8.8	10.3
HG/S/CVAA	mg/kg	EPA 7471/	0.2 U	0.2 U
NI/V/ICP	mg/kg	EPA 6010/	0.2	0.2
SE/V/ICP	mg/kg	EPA 6010/	0.9	1.0

U = Result below detection limit

PROJECT MANAGER Paul Bennett

3/25/02 – 3/31/02



Hazen Research, Inc.
 4601 Indiana St.
 Golden, CO 80403 USA
 Tel: (303) 279-4501
 Fax: (303) 278-1528

Date April 9 2002
 HRI Project 002-9IV
 HRI Series No. D3/02-3
 Date Rec'd. 04/03/02
 Cust. P.O.# 003-7556

Golder Associates Inc.
 Fawn Howard
 6241 NW 23rd St., Suite 500
 Gainesville, Florida 32653

Sample Identification
 SCG 41

Reporting Basis >	As Rec'd	Dry	Air Dry
Proximate (%)			
Moisture	52.75	0.00	1.15
Ash	1.09	2.31	2.28
Volatile	42.04	88.98	87.96
Fixed C	4.12	8.71	8.61
Total	100.00	100.00	100.00
Sulfur	0.04	0.08	0.08
Btu/lb (HHV)	3830	8105	8012
MMF Btu/lb	3874	8312	
MAF Btu/lb		8297	
Air Dry Loss (%)		52.20	
Ultimate (%)			
Moisture	52.75	0.00	1.15
Carbon	22.93	48.54	47.98
Hydrogen	3.11	6.59	6.51
Nitrogen	0.20	0.42	0.42
Sulfur	0.04	0.08	0.08
Ash	1.09	2.31	2.28
Oxygen*	19.88	42.06	41.58
Total	100.00	100.00	100.00

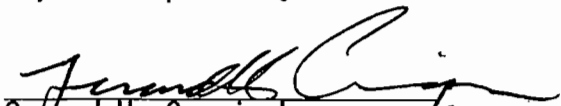
Chlorine**

Forms of Sulfur (as S,%)		
Sulfate		
Pyritic		
Organic		
Total	0.04	0.08

Lb. Alkali/MM Btu=
 Lb. Ash/MM Btu= 2.85
 Lb. SO2/MM Btu= 0.20
 HGI= @ % Moisture
 As Rec'd. Sp.Gr.=
 Free Swelling Index=

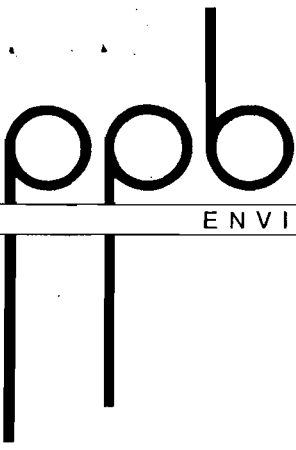
Report Prepared By:

Water Soluble Alkalies (%)
Na2O
K2O


 Gerard H. Cunningham
 Fuels Laboratory Supervisor

* Oxygen by Difference.

** Not usually reported as part of the ultimate analysis.



May 23, 2002

Ms. Fawn Howard
Golder Associates
6241 NW 23rd Street
Suite 500
Gainesville, FL 32653-1500

Dear Ms. Howard:

Enclosed are the analytical results for the Sugar Cane bagasse samples received March 25 and April 2, 2002.

All data were determined in accordance with published procedures (*EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, SW-846, December 1996, 3rd Edition incl. Updates I-III; and/or *Standard Methods for the Examination of Water and Wastewater*, 18th edition, revised 1992). Our laboratory is NELAP-certified by the Florida Department of Health (FDH No. E82001) and our CompQAP is approved by FDEP (No. 870017G).

If you have any questions concerning this report, please contact me.

Sincerely,

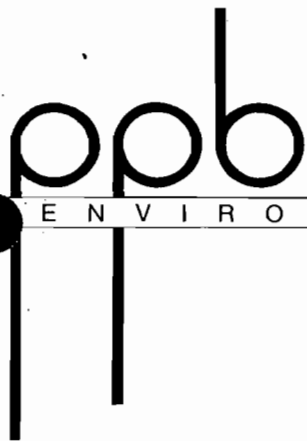
A handwritten signature in black ink that reads 'Paul Berman'.

Paul Berman
Project Manager

/cms

Enclosures

MAY 28 2002



REPORT OF ANALYSES (SN-00001636)

GOLDER ASSOCIATES, INC.
6241 NW 23RD STREET
SUITE 500
GAINESVILLE, FL 32653-1500
Attn: Ms. Fawn Howard

DATE: 05/23/02
FDH # E82001
DEP CQAP # 870017G

SAMPLES RECEIVED 3/26 AND 4/2/02 (Page 1 of 2)

CLIENT STATION ID	LAB NUMBER	% SOLIDS %	AS/V/ICP mg/kg	BE/V/ICP mg/kg	CD/V/ICP mg/kg	CR/V/ICP mg/kg	PB/V/ICP mg/kg
CLEW 325	221301	47.9	0.4	0.1 U	0.1 U	0.3	0.3 U
BRY 325	221302	46.2	0.3	0.1 U	0.1 U	0.2	0.3 U
SCG 325A	221303	46.9	0.3	0.1 U	0.1 U	0.1 U	0.3 U
SCG 325B DUP	221304	49.7	0.3	0.1 U	0.1 U	0.1	0.3 U
CLEW41A	221774	51.6	0.3	0.1 U	0.1 U	0.2	0.3 U
BRY41	221775	46.5	0.5	0.1 U	0.1 U	0.3	0.3 U
CLEW41B	221776	50.5	0.4	0.1 U	0.1 U	0.2	0.3 U
SCG41	221777	48.0	0.2	0.1 U	0.1 U	0.1	0.3 U

U = Result below detection limit

PROJECT MANAGER *Paul Bertram*



REPORT OF ANALYSES (SN-00001636)

GOLDER ASSOCIATES, INC.
6241 NW 23RD STREET
SUITE 500
GAINESVILLE, FL 32653-1500
Attn: Ms. Fawn Howard

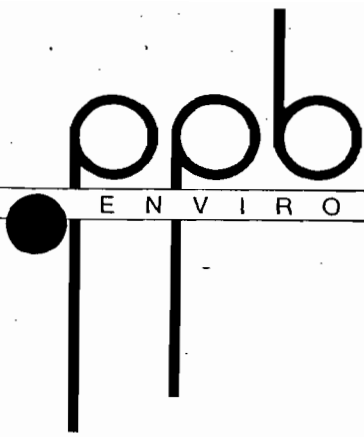
DATE: 05/23/02
FDH # E82001
DEP CQAP # 870017G

SAMPLES RECEIVED 3/26 AND 4/2/02 (Page 2 of 2)

CLIENT STATION ID	LAB NUMBER	MN/V/ICP mg/kg	HG/V/CVAA mg/kg	NI/V/ICP mg/kg	SE/V/ICP mg/kg
CLEW 325	221301	6.3	0.02 U	0.2 U	0.7
BRY 325	221302	10.8	0.02 U	0.2	0.6
SCG 325A	221303	8.4	0.02 U	0.2	0.7
SCG 325B DUP	221304	7.7	0.02 U	0.2 U	0.8
CLEW41A	221774	10.9	0.02 U	0.2	0.7
BRY41	221775	11.0	0.02 U	0.2	1.0
CLEW41B	221776	11.8	0.02 U	0.3	0.7
SCG41	221777	7.3	0.02 U	0.2	0.7

U = Result below detection limit

PROJECT MANAGER



QC REPORT FOR GOLDER ASSOCIATES, INC. 05/23/02 PAGE 1

TOTAL SOLIDS % VG Method: EPA 160.3 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
221304	SCG 325B DUP	50.6	48.8	1.8	2.56	8.10
221777	SCG41	48.9	47.1	1.8	2.65	NO DATA

ARSENIC IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
221302	BRY 325	0.4	0.2	0.20	47.14	60.18

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
221775	BRY41	72	76	74 TO 121	3.82	NO DATA
221775	BRY41	96	---	74 TO 121	----	----

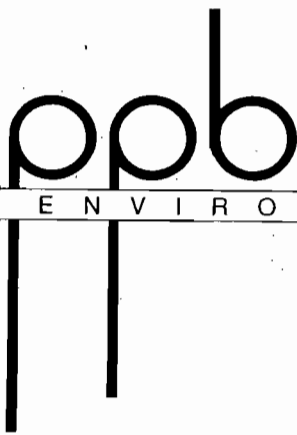
References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	2060	103	64 TO 152
SLCS4-8071	132	106	80	65 TO 149

BERYLLIUM IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
221302	BRY 325	<0.1	<0.1	0	0.00	NO DATA



QC REPORT FOR GOLDER ASSOCIATES, INC. 05/23/02 PAGE 2

BERYLLIUM IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
221775	BRY41	80	78	NO DATA	1.79	NO DATA
221775	BRY41	98	---	NO DATA	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	2070	104	62 TO 150
SLCS4-8071	90.1	73.0	81	65 TO 147

CADMIUM IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

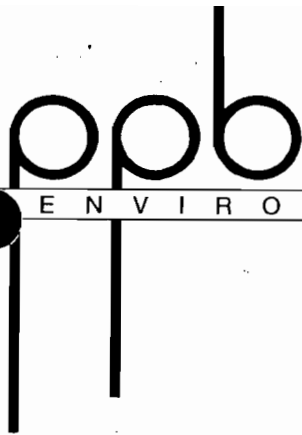
PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
221302	BRY 325	<0.1	<0.1	0	0.00	43.03

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
221775	BRY41	80	80	NO DATA	0.00	NO DATA
221775	BRY41	96	---	NO DATA	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	2070	104	58 TO 160
SLCS4-8071	51.5	42.1	82	60 TO 157



QC REPORT FOR GOLDER ASSOCIATES, INC. 05/23/02 PAGE 3

CHROMIUM IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
221302	BRY 325	0.2	0.2	0	0.00	86.05

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
221775	BRY41	78	76	75 TO 96	1.84	NO DATA
221775	BRY41	97	---	75 TO 96	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	2040	102	46 TO 154
SLCS4-8071	142	112	79	48 TO 152

LEAD IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

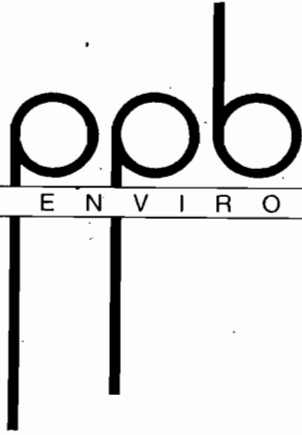
PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
221302	BRY 325	<0.3	<0.3	0	0.00	35.74

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
221775	BRY41	93	92	NO DATA	0.76	NO DATA
221775	BRY41	96	---	NO DATA	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	2070	104	43 TO 177
SLCS4-8071	52.9	46.6	88	46 TO 174



QC REPORT FOR GOLDER ASSOCIATES, INC. 05/23/02 PAGE 4

MANGANESE IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
221302	BRY 325	10.7	11.0	0.30	1.96	45.38

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
221775	BRY41	106	---	NO DATA	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	2030	102	63 TO 135
ICV	2000	2000	100	65 TO 133
SLCS-8089	468	473	101	66 TO 132

MERCURY IN VEGETATION mg/kg VG Method: EPA 7471 Alt. Method: None

Duplicates

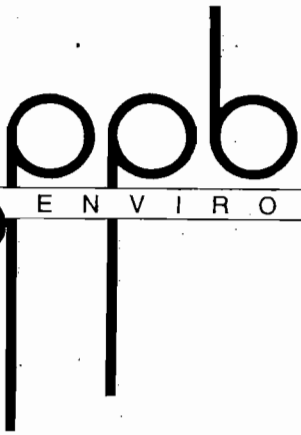
PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
221302	BRY 325	<0.02	<0.02	0	0.00	4.61

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
221775	BRY41	82	---	69 TO 137	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
MS2710	32.6	33.0	101	35 TO 156



QC REPORT FOR GOLDER ASSOCIATES, INC. 05/23/02 PAGE 5

NICKEL IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
221302	BRY 325	0.2	0.3	0.10	28.28	70.05

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
221775	BRY41	94	96	NO DATA	1.49	NO DATA
221775	BRY41	102	---	NO DATA	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	2050	102	64 TO 143
ICV	2000	1990	100	66 TO 140
SLCS-8089	55.4	57.0	103	67 TO 138

SELENIUM IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
221302	BRY 325	0.7	0.6	0.10	10.88	38.08

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
221775	BRY41	66	75	NO DATA	9.03	NO DATA
221775	BRY41	99	---	NO DATA	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	2060	103	62 TO 158
SLCS4-8071	60.9	56.5	93	63 TO 156



DATE, TIME, ANALYST REPORT

ANALYSIS	METHOD	PREP		ANALYSIS			
		DATE	BY	DATE	TIME	BY	MATRIX
%SOLIDS	EPA 160.3	/	/	04/01/02	1800	AJS	VG
AS/V/ICP	EPA 6010	04/09/02	ECS	04/11/02	1442	ECS	VG
BE/V/ICP	EPA 6010	04/09/02	ECS	04/11/02	1442	ECS	VG
CD/V/ICP	EPA 6010	04/09/02	ECS	04/11/02	1442	ECS	VG
CR/V/ICP	EPA 6010	04/09/02	ECS	04/11/02	1442	ECS	VG
HG/V/CVAA	EPA 7471	/	/	04/05/02	2218	MNR	VG
MN/V/ICP	EPA 6010	04/17/02	ECS	04/29/02	1446	SLS	VG
NI/V/ICP	EPA 6010	04/17/02	ECS	04/29/02	1446	SLS	VG
PB/V/ICP	EPA 6010	04/09/02	ECS	04/11/02	1442	ECS	VG
SE/V/ICP	EPA 6010	04/09/02	ECS	04/11/02	1442	ECS	VG

3/18/02 – 3/24/02



Hazen Research, Inc.
 4601 Indiana St.
 Golden, CO 80403 USA
 Tel: (303) 279-4501
 Fax: (303) 278-1528

Date March 29 2002
 HRI Project 002-9IV
 HRI Series No. C307/02-3
 Date Rec'd. 03/26/02
 Cust. P.O.# 003-7556

Golder Associates Inc.
 Fawn Howard
 6241 NW 23rd St., Suite 500
 Gainesville, Florida 32653

Sample Identification
 SCG 325

Reporting Basis >	As Rec'd	Dry	Air Dry
-------------------	----------	-----	---------

Proximate (%)

Moisture	53.20	0.00	1.96
Ash	0.89	1.90	1.86
Volatile	41.13	87.88	86.16
Fixed C	4.78	10.22	10.02
Total	100.00	100.00	100.00

Sulfur	0.03	0.07	0.07
Btu/lb (HHV)	3816	8152	7992
MMF Btu/lb	3852	8322	
MAF Btu/lb		8310	
Air Dry Loss (%)		52.26	

Ultimate (%)

Moisture	53.20	0.00	1.96
Carbon	23.12	49.39	48.42
Hydrogen	2.96	6.32	6.20
Nitrogen	0.18	0.39	0.38
Sulfur	0.03	0.07	0.07
Ash	0.89	1.90	1.86
Oxygen*	19.62	41.93	41.11
Total	100.00	100.00	100.00

Chlorine**

Forms of Sulfur (as S,%)

Sulfate		
Pyritic		
Organic		
Total	0.03	0.07

Lb. Alkali/MM Btu=
 Lb. Ash/MM Btu= 2.33
 Lb. SO2/MM Btu= 0.18
 HGI= @ % Moisture
 As Rec'd. Sp.Gr.=
 Free Swelling Index=

Report Prepared By:

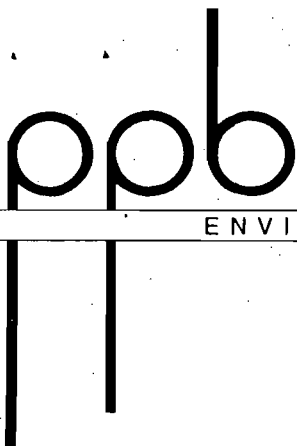
Gerard H. Cunningham
 Fuels Laboratory Supervisor

Water Soluble Alkalies (%)

Na2O
 K2O

* Oxygen by Difference.

** Not usually reported as part of the ultimate analysis.



May 23, 2002

Ms. Fawn Howard
Golder Associates
6241 NW 23rd Street
Suite 500
Gainesville, FL 32653-1500

Dear Ms. Howard:

Enclosed are the analytical results for the Sugar Cane bagasse samples received March 25 and April 2, 2002.

All data were determined in accordance with published procedures (*EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, SW-846, December 1996, 3rd Edition incl. Updates I-III; and/or *Standard Methods for the Examination of Water and Wastewater*, 18th edition, revised 1992). Our laboratory is NELAP-certified by the Florida Department of Health (FDH No. E82001) and our CompQAP is approved by FDEP (No. 870017G).

If you have any questions concerning this report, please contact me.

Sincerely,

A handwritten signature in black ink that reads 'Paul Berman'.

Paul Berman
Project Manager

/cms

Enclosures

MAY 28 2002



REPORT OF ANALYSES (SN-00001636)

GOLDER ASSOCIATES, INC.
6241 NW 23RD STREET
SUITE 500
GAINESVILLE, FL 32653-1500
Attn: Ms. Fawn Howard

DATE: 05/23/02
FDH # E82001
DEP CQAP # 870017G

SAMPLES RECEIVED 3/26 AND 4/2/02 (Page 1 of 2)

Table with 8 columns: CLIENT STATION ID, LAB NUMBER, %SOLIDS %, AS/V/ICP mg/kg, BE/V/ICP mg/kg, CD/V/ICP mg/kg, CR/V/ICP mg/kg, PB/V/ICP mg/kg. Rows include samples like CLEW 325, BRY 325, SCG 325A, etc.

U = Result below detection limit

PROJECT MANAGER

Handwritten signature of Paul Bernin



REPORT OF ANALYSES (SN-00001636)

GOLDER ASSOCIATES, INC.
6241 NW 23RD STREET
SUITE 500
GAINESVILLE, FL 32653-1500
Attn: Ms. Fawn Howard

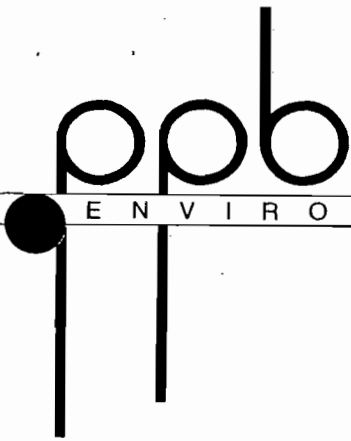
DATE: 05/23/02
FDH # E82001
DEP CQAP # 870017G

SAMPLES RECEIVED 3/26 AND 4/2/02 (Page 2 of 2)

CLIENT STATION ID	LAB NUMBER	MN/V/ICP mg/kg	HG/V/CVAA mg/kg	NI/V/ICP mg/kg	SE/V/ICP mg/kg
CLEW 325	221301	6.3	0.02 U	0.2 U	0.7
BRY 325	221302	10.8	0.02 U	0.2	0.6
SCG 325A	221303	8.4	0.02 U	0.2	0.7
SCG 325B DUP	221304	7.7	0.02 U	0.2 U	0.8
CLEW41A	221774	10.9	0.02 U	0.2	0.7
BRY41	221775	11.0	0.02 U	0.2	1.0
CLEW41B	221776	11.8	0.02 U	0.3	0.7
SCG41	221777	7.3	0.02 U	0.2	0.7

U = Result below detection limit

PROJECT MANAGER



QC REPORT FOR GOLDER ASSOCIATES, INC. 05/23/02 PAGE 1

TOTAL SOLIDS % VG Method: EPA 160.3 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
221304	SCG 325B DUP	50.6	48.8	1.8	2.56	8.10
221777	SCG41	48.9	47.1	1.8	2.65	NO DATA

ARSENIC IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
221302	BRY 325	0.4	0.2	0.20	47.14	60.18

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery		% RSD	
				Control Limits	% RSD	Control Limit	
221775	BRY41	72	76	74 TO 121	3.82	NO DATA	
221775	BRY41	96	---	74 TO 121	----	----	

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	2060	103	64 TO 152
SLCS4-8071	132	106	80	65 TO 149

BERYLLIUM IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
221302	BRY 325	<0.1	<0.1	0	0.00	NO DATA



QC REPORT FOR GOLDER ASSOCIATES, INC. 05/23/02 PAGE 2

BERYLLIUM IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
221775	BRY41	80	78	NO DATA	1.79	NO DATA
221775	BRY41	98	---	NO DATA	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	2070	104	62 TO 150
SLCS4-8071	90.1	73.0	81	65 TO 147

CADMIUM IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

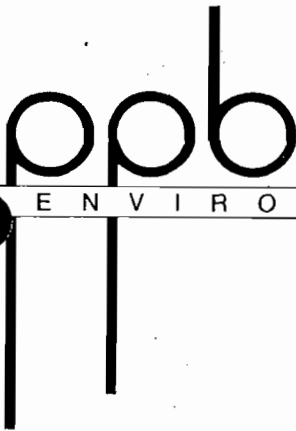
PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
221302	BRY 325	<0.1	<0.1	0	0.00	43.03

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
221775	BRY41	80	80	NO DATA	0.00	NO DATA
221775	BRY41	96	---	NO DATA	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	2070	104	58 TO 160
SLCS4-8071	51.5	42.1	82	60 TO 157



QC REPORT FOR GOLDER ASSOCIATES, INC. 05/23/02 PAGE 3

CHROMIUM IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates table with columns: PPB Number, Client ID, Value 1, Value 2, Range, % RSD, QC Control Limit. Row: 221302 BRY 325 0.2 0.2 0 0.00 86.05

Spikes table with columns: PPB Number, Client ID, % MS, % MSD, Spike Recovery Control Limits, % RSD, Control Limit. Rows: 221775 BRY41 78 76 75 TO 96 1.84 NO DATA; 221775 BRY41 97 --- 75 TO 96 --- ---

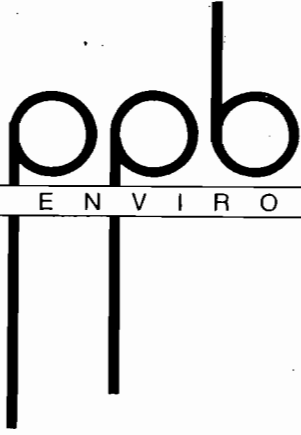
References table with columns: Reference ID, Target, Found, % Recovery, Control Limits. Rows: ICV 2000 2040 102 46 TO 154; SLCS4-8071 142 112 79 48 TO 152

LEAD IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates table with columns: PPB Number, Client ID, Value 1, Value 2, Range, % RSD, QC Control Limit. Row: 221302 BRY 325 <0.3 <0.3 0 0.00 35.74

Spikes table with columns: PPB Number, Client ID, % MS, % MSD, Spike Recovery Control Limits, % RSD, Control Limit. Rows: 221775 BRY41 93 92 NO DATA 0.76 NO DATA; 221775 BRY41 96 --- NO DATA --- ---

References table with columns: Reference ID, Target, Found, % Recovery, Control Limits. Rows: 2000 2070 104 43 TO 177; SLCS4-8071 52.9 46.6 88 46 TO 174



QC REPORT FOR GOLDER ASSOCIATES, INC. 05/23/02 PAGE 4

MANGANESE IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

Table with columns: PPB Number, Client ID, Value 1, Value 2, Range, % RSD, QC Control Limit. Row: 221302 BRY 325 10.7 11.0 0.30 1.96 45.38

Spikes

Table with columns: PPB Number, Client ID, % MS, % MSD, Spike Recovery Control Limits, % RSD Control Limit. Row: 221775 BRY41 106 --- NO DATA ----

References

Table with columns: Reference ID, Target, Found, % Recovery, Control Limits. Rows: ICV 2000 2030 102 63 TO 135; ICV 2000 2000 100 65 TO 133; SLCS-8089 468 473 101 66 TO 132

MERCURY IN VEGETATION mg/kg VG Method: EPA 7471 Alt. Method: None

Duplicates

Table with columns: PPB Number, Client ID, Value 1, Value 2, Range, % RSD, QC Control Limit. Row: 221302 BRY 325 <0.02 <0.02 0 0.00 4.61

Spikes

Table with columns: PPB Number, Client ID, % MS, % MSD, Spike Recovery Control Limits, % RSD Control Limit. Row: 221775 BRY41 82 --- 69 TO 137 ----

References

Table with columns: Reference ID, Target, Found, % Recovery, Control Limits. Row: MS2710 32.6 33.0 101 35 TO 156



QC REPORT FOR GOLDER ASSOCIATES, INC. 05/23/02 PAGE 5

NICKEL IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
221302	BRY 325	0.2	0.3	0.10	28.28	70.05

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
221775	BRY41	94	96	NO DATA	1.49	NO DATA
221775	BRY41	102	---	NO DATA	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	2050	102	64 TO 143
ICV	2000	1990	100	66 TO 140
SLCS-8089	55.4	57.0	103	67 TO 138

SELENIUM IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
221302	BRY 325	0.7	0.6	0.10	10.88	38.08

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
221775	BRY41	66	75	NO DATA	9.03	NO DATA
221775	BRY41	99	---	NO DATA	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	2060	103	62 TO 158
SLCS4-8071	60.9	56.5	93	63 TO 156



DATE, TIME, ANALYST REPORT

ANALYSIS	METHOD	PREP		ANALYSIS			MATRIX
		DATE	BY	DATE	TIME	BY	
%SOLIDS	EPA 160.3	/	/	04/01/02	1800	AJS	VG
AS/V/ICP	EPA 6010	04/09/02	ECS	04/11/02	1442	ECS	VG
BE/V/ICP	EPA 6010	04/09/02	ECS	04/11/02	1442	ECS	VG
CD/V/ICP	EPA 6010	04/09/02	ECS	04/11/02	1442	ECS	VG
CR/V/ICP	EPA 6010	04/09/02	ECS	04/11/02	1442	ECS	VG
HG/V/CVAA	EPA 7471	/	/	04/05/02	2218	MNR	VG
MN/V/ICP	EPA 6010	04/17/02	ECS	04/29/02	1446	SLS	VG
NI/V/ICP	EPA 6010	04/17/02	ECS	04/29/02	1446	SLS	VG
PB/V/ICP	EPA 6010	04/09/02	ECS	04/11/02	1442	ECS	VG
SE/V/ICP	EPA 6010	04/09/02	ECS	04/11/02	1442	ECS	VG

3/11/02 – 3/17/02



Hazen Research, Inc.
 4601 Indiana St.
 Golden, CO 80403 USA
 Tel: (303) 279-4501
 Fax: (303) 278-1528

Date March 26 2002
 HRI Project 002-9IV
 HRI Series No. C230/02-3
 Date Rec'd. 03/20/02
 Cust. P.O.# 003-7556

Golder Associates Inc.
 Fawn Howard
 6241 NW 23rd St., Suite 500
 Gainesville, Florida 32653

Sample Identification
 SCG 319

Reporting Basis >	As Rec'd	Dry	Air Dry
Proximate (%)			
Moisture	52.47	0.00	2.76
Ash	1.09	2.28	2.22
Volatile	41.62	87.57	85.15
Fixed C	4.82	10.15	9.87
Total	100.00	100.00	100.00
Sulfur	0.03	0.06	0.06
Btu/lb (HHV)	3874	8151	7926
MMF Btu/lb	3919	8356	
MAF Btu/lb		8341	
Air Dry Loss (%)		51.12	
Ultimate (%)			
Moisture	52.47	0.00	2.76
Carbon	23.09	48.57	47.23
Hydrogen	2.82	5.92	5.76
Nitrogen	0.17	0.36	0.35
Sulfur	0.03	0.06	0.06
Ash	1.09	2.28	2.22
Oxygen*	20.33	42.81	41.62
Total	100.00	100.00	100.00

Chlorine**

Forms of Sulfur (as S,%)

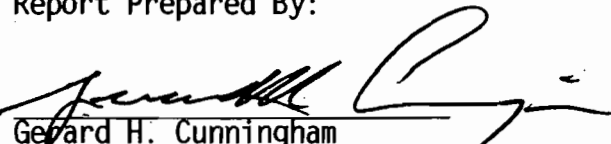
Sulfate		
Pyritic		
Organic		
Total	0.03	0.06

Lb. Alkali/MM Btu=
 Lb. Ash/MM Btu= 2.80
 Lb. SO₂/MM Btu= 0.15
 HGI= @ % Moisture
 As Rec'd. Sp.Gr.=
 Free Swelling Index=

Report Prepared By:

Water Soluble Alkalies (%)

Na₂O
 K₂O


 Gerard H. Cunningham
 Fuels Laboratory Supervisor

* Oxygen by Difference.

** Not usually reported as part of the ultimate analysis.



Best Available Copy

ENVIRONMENTAL LABORATORIES, INC.

NELAP Certified — FDH # E82001

MAY - 7 2002

May 6, 2002

Ms. Fawn Howard
Golder Associates
6241 NW 23rd Street
Suite 500
Gainesville, FL 32653-1500

Dear Ms. Howard:

Enclosed are the analytical results for the Sugar Cane bagasse samples received March 11 and 19, 2002.

All data were determined in accordance with published procedures (*EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, SW-846, December 1996, 3rd Edition incl. Updates I-III; and/or *Standard Methods for the Examination of Water and Wastewater*, 18th edition, revised 1992). Our laboratory is NELAP-certified by the Florida Department of Health (FDH No. E82001) and our CompQAP is approved by FDEP (No. 870017G).

If you have any questions concerning this report, please contact me.

Sincerely,

Paul Berman
Project Manager

/cms

Enclosures



REPORT OF ANALYSES (SN-00001512)

GOLDER ASSOCIATES, INC.
6241 NW 23RD STREET
SUITE 500
GAINESVILLE, FL 32653-1500
Attn: Ms. Fawn Howard

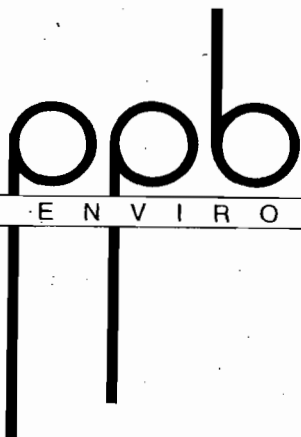
DATE: 05/02/02
FDH # E82001
DEP CQAP # 870017G

SAMPLES RECEIVED 3/11 AND 3/19/02 (Page 1 of 2)

Table with 8 columns: CLIENT STATION ID, LAB NUMBER, %SOLIDS %, AS/V/ICP mg/kg, BE/V/ICP mg/kg, CD/V/ICP mg/kg, CR/V/ICP mg/kg, PB/V/ICP mg/kg. Rows include samples like CLEW312A, BRY312, SCG312, etc.

U = Result below detection limit
All results reported on a dry weight basis

PROJECT MANAGER Paul Bertram



REPORT OF ANALYSES (SN-00001512)

GOLDER ASSOCIATES, INC.
6241 NW 23RD STREET
SUITE 500
GAINESVILLE, FL 32653-1500
Attn: Ms. Fawn Howard

DATE: 05/02/02
FDH # E82001
DEP CQAP # 870017G

SAMPLES RECEIVED 3/11 AND 3/19/02 (Page 2 of 2)

CLIENT STATION ID	LAB NUMBER	MN/V/ICP mg/kg	HG/V/CVAA mg/kg	NI/V/ICP mg/kg	SE/V/ICP mg/kg
CLEW312A	220097	8.0	0.20 U	0.3	0.8
CLEW312B DUP	220098	8.9	0.20 U	0.2	0.9
BRY312	220099	10.6	0.22 U	0.2 U	1.0
SCG312	220100	10.3	0.21 U	0.2	1.0
CLEW319	220514	5.8	0.22 U	0.2 U	0.6
BRY319A	220515	9.0	0.19 U	0.2 U	0.5
BRY319B	220516	9.2	0.22 U	0.2 U	0.6
SCG319	220517	6.9	0.22 U	0.2 U	0.6

U = Result below detection limit
All results reported on a dry weight basis

PROJECT MANAGER



QC REPORT FOR GOLDER ASSOCIATES, INC. 05/02/02 PAGE 2

BERYLLIUM IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
220099	BRY312	<0.1	<0.1	0	0.00	NO DATA
220514	CLEW319	<0.1	<0.1	0	0.00	NO DATA

Spikes

PPB Number	Client ID	Spike Recovery		% RSD	
		% MS	% MSD	Control Limits	% RSD Control Limit
220100	SCG312	95	94	69 TO 127	0.75 16.11
220100	SCG312	106	---	69 TO 127	----
220517	SCG319	103	---	71 TO 125	----

References

Reference ID	Target	Found	% Recovery	Control Limits
SLCS-7994	34.7	47.1	136	73 TO 132

CADMIUM IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
220099	BRY312	<0.1	<0.1	0	0.00	47.07
220514	CLEW319	<0.1	<0.1	0	0.00	44.92

Spikes

PPB Number	Client ID	Spike Recovery		% RSD	
		% MS	% MSD	Control Limits	% RSD Control Limit
220100	SCG312	98	100	70 TO 127	1.43 16.34
220100	SCG312	104	---	70 TO 127	----
220517	SCG319	102	---	71 TO 126	----



QC REPORT FOR GOLDER ASSOCIATES, INC. 05/02/02 PAGE 3

References

Reference ID	Target	Found	% Recovery	Control Limits
SLCS-7994	46.9	67.2	143	66 TO 144

CHROMIUM IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
220099	BRY312	0.3	0.6	0.30	47.14	80.11
220514	CLEW319	0.1	0.2	0.10	47.14	83.61

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
220100	SCG312	91	92	74 TO 119	0.77	13.93
220100	SCG312	104	---	74 TO 119	----	----
220517	SCG319	102	---	74 TO 118	----	----

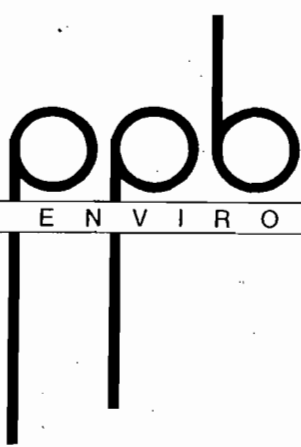
References

Reference ID	Target	Found	% Recovery	Control Limits
SLCS-7994	115	156	136	53 TO 140

LEAD IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
220099	BRY312	<0.3	<0.3	0	0.00	38.62
220514	CLEW319	<0.3	<0.3	0	0.00	37.11



QC REPORT FOR GOLDER ASSOCIATES, INC. 05/02/02 PAGE 4

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
220100	SCG312	81	85	66 TO 134	3.41	12.41
220100	SCG312	103	---	66 TO 134	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
SLCS-7994	52.4	73.0	139	43 TO 171

MANGANESE IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
220099	BRY312	9.5	11.8	2.3	15.27	45.97
220514	CLEW319	4.8	6.8	2.0	24.38	44.18

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
220100	SCG312	87	85	51 TO 142	1.64	49.83
220100	SCG312	101	---	51 TO 142	----	----
220514	CLEW319	100	---	53 TO 139	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
SLCS-7994	151	187	124	70 TO 122



QC REPORT FOR GOLDER ASSOCIATES, INC. 05/02/02 PAGE 5

MERCURY IN VEGETATION mg/kg VG Method: EPA 7471 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
220097	CLEW312A	<0.20	<0.20	0	0.00	4.14
220516	BRY319B	<0.22	<0.23	0.0050	3.14	4.02

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
220098	CLEW312B DUP	93	---	56 TO 139	----	----
220517	SCG319	93	---	57 TO 137	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
0.3 FISHER	0.30	0.28	93	30 TO 159
MS2710	32.6	36.5	112	32 TO 156

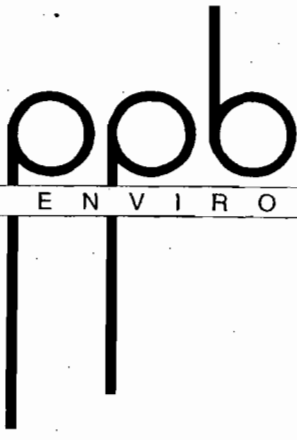
NICKEL IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
220099	BRY312	<0.2	<0.2	0	0.00	76.67
220514	CLEW319	<0.2	<0.2	0	0.00	73.17

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
220100	SCG312	91	92	68 TO 119	0.77	14.56
220100	SCG312	104	---	68 TO 119	----	----
220517	SCG319	104	---	69 TO 119	----	----



QC REPORT FOR GOLDER ASSOCIATES, INC. 05/02/02 PAGE 6

References

Reference ID	Target	Found	% Recovery	Control Limits
SLCS-7994	89.7	117	130	73 TO 127

SELENIUM IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
220099	BRY312	0.9	1.0	0.10	7.44	40.27
220514	CLEW319	0.6	0.6	0	0.00	38.54

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
220100	SCG312	100	104	78 TO 143	2.77	12.88
220100	SCG312	117	---	78 TO 143	----	----
220517	SCG319	108	---	79 TO 141	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
SLCS-7994	185	251	136	65 TO 149



DATE, TIME, ANALYST REPORT

ANALYSIS	METHOD	PREP.		ANALYSIS			MATRIX
		DATE	BY	DATE	TIME	BY	
%SOLIDS	EPA 160.3	/	/	03/18/02	1500	AJS	VG
%SOLIDS	EPA 160.3	/	/	03/22/02	1500	AJS	VG
AS/V/ICP	EPA 6010	03/15/02	ECS	03/25/02	1040	ECS	VG
BE/V/ICP	EPA 6010	03/15/02	ECS	03/25/02	1040	ECS	VG
CD/V/ICP	EPA 6010	03/15/02	ECS	03/25/02	1040	ECS	VG
CR/V/ICP	EPA 6010	03/15/02	ECS	03/25/02	1040	ECS	VG
HG/V/CVAA	EPA 7471	/	/	03/21/02	0900	AMW	VG
MN/V/ICP	EPA 6010	03/15/02	ECS	03/25/02	1040	ECS	VG
NI/V/ICP	EPA 6010	03/15/02	ECS	03/25/02	1040	ECS	VG
PB/V/ICP	EPA 6010	03/15/02	ECS	03/25/02	1040	ECS	VG
SE/V/ICP	EPA 6010	03/15/02	ECS	03/25/02	1040	ECS	VG

3/4/02 – 3/10/02



Hazen Research, Inc.
 4601 Indiana St. • Golden, CO 80403
 Tel: (303) 279-4501
 Fax: (303) 278-1528

Date March 19 2002
 HRI Project 002-3IP
 HRI Series No. C131/02-3
 Date Rec'd. 03/13/02
 Cust. P.O.# 003-7556

Golder Associates Inc.
 Fawn Howard
 6241 NW 23rd St., Suite 500
 Gainesville, Florida 32653

Sample Identification
 SCG 312

Reporting Basis > As Rec'd Dry Air Dry

Proximate (%)

Moisture	54.24	0.00	2.45
Ash	0.92	2.01	1.96
Volatile	39.34	85.97	83.86
Fixed C	5.50	12.02	11.73
Total	100.00	100.00	100.00

Sulfur	0.02	0.05	0.05
Btu/lb (HHV)	3736	8165	7965
MMF Btu/lb	3773	8346	
MAF Btu/lb		8332	
Air Dry Loss (%)		53.09	

Ultimate (%)

Moisture	54.24	0.00	2.45
Carbon	22.13	48.36	47.18
Hydrogen	2.89	6.31	6.16
Nitrogen	0.17	0.38	0.37
Sulfur	0.02	0.05	0.05
Ash	0.92	2.01	1.96
Oxygen*	19.63	42.89	41.83
Total	100.00	100.00	100.00

Chlorine**

Forms of Sulfur (as S,%)

Sulfate		
Pyritic		
Organic		
Total	0.02	0.05

Lb. Alkali/MM Btu=
 Lb. Ash/MM Btu= 2.46
 Lb. SO2/MM Btu= 0.13
 HGI= @ % Moisture
 As Rec'd. Sp.Gr.=
 Free Swelling Index=

Report Prepared By:

Gerard H. Cunningham
 Fuels Laboratory Supervisor

Water Soluble Alkalies (%)

Na2O
 K2O

* Oxygen by Difference.

** Not usually reported as part of the ultimate analysis.



MAY - 7 2002

May 6, 2002

Ms. Fawn Howard
Golder Associates
6241 NW 23rd Street
Suite 500
Gainesville, FL 32653-1500

Dear Ms. Howard:

Enclosed are the analytical results for the Sugar Cane bagasse samples received March 11 and 19, 2002.

All data were determined in accordance with published procedures (*EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, SW-846, December 1996, 3rd Edition incl. Updates I-III; and/or *Standard Methods for the Examination of Water and Wastewater*, 18th edition, revised 1992). Our laboratory is NELAP-certified by the Florida Department of Health (FDH No. E82001) and our CompQAP is approved by FDEP (No. 870017G).

If you have any questions concerning this report, please contact me.

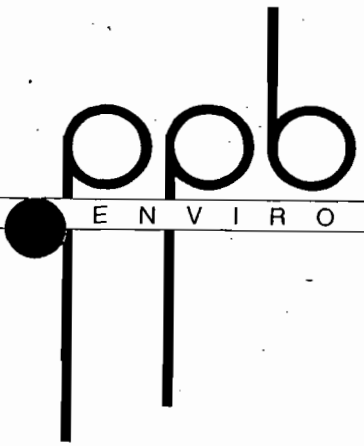
Sincerely,

A handwritten signature in cursive script that reads "Paul Berman".

Paul Berman
Project Manager

/cms

Enclosures



REPORT OF ANALYSES (SN-00001512)

GOLDER ASSOCIATES, INC.
6241 NW 23RD STREET
SUITE 500
GAINESVILLE, FL 32653-1500
Attn: Ms. Fawn Howard

DATE: 05/02/02
FDH # E82001
DEP CQAP # 870017G

SAMPLES RECEIVED 3/11 AND 3/19/02 (Page 1 of 2)

CLIENT STATION ID	LAB NUMBER	%SOLIDS %	AS/V/ICP mg/kg	BE/V/ICP mg/kg	CD/V/ICP mg/kg	CR/V/ICP mg/kg	PB/V/ICP mg/kg
CLEW312A	220097	54.0	0.4	0.1 U	0.1 U	0.5	0.3 U
CLEW312B DUP	220098	49.9	0.4	0.1 U	0.1 U	0.8	0.3
BRY312	220099	45.7	0.4	0.1 U	0.1 U	0.4	0.3 U
SCG312	220100	51.1	0.4	0.1 U	0.1 U	0.4	0.3
CLEW319	220514	50.4	0.3 U	0.1 U	0.1 U	0.2	0.3 U
BRY319A	220515	48.1	0.2	0.1 U	0.1 U	0.2	0.3 U
BRY319B	220516	46.4	0.3 U	0.1 U	0.1 U	0.2	0.3 U
SCG319	220517	48.6	0.4	0.1 U	0.1 U	0.2	0.3 U

U = Result below detection limit
All results reported on a dry weight basis

PROJECT MANAGER



REPORT OF ANALYSES (SN-00001512)

GOLDER ASSOCIATES, INC.
6241 NW 23RD STREET
SUITE 500
GAINESVILLE, FL 32653-1500
Attn: Ms. Fawn Howard

DATE: 05/02/02
FDH # E82001
DEP CQAP # 870017G

SAMPLES RECEIVED 3/11 AND 3/19/02 (Page 2 of 2)

CLIENT STATION ID	LAB NUMBER	MN/V/ICP mg/kg	HG/V/CVAA mg/kg	NI/V/ICP mg/kg	SE/V/ICP mg/kg
CLEW312A	220097	8.0	0.20 U	0.3	0.8
CLEW312B DUP	220098	8.9	0.20 U	0.2	0.9
BRY312	220099	10.6	0.22 U	0.2 U	1.0
SCG312	220100	10.3	0.21 U	0.2	1.0
CLEW319	220514	5.8	0.22 U	0.2 U	0.6
BRY319A	220515	9.0	0.19 U	0.2 U	0.5
BRY319B	220516	9.2	0.22 U	0.2 U	0.6
SCG319	220517	6.9	0.22 U	0.2 U	0.6

U = Result below detection limit
All results reported on a dry weight basis

PROJECT MANAGER



QC REPORT FOR GOLDER ASSOCIATES, INC. 05/02/02 PAGE 2

BERYLLIUM IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

Table with columns: PPB Number, Client ID, Value 1, Value 2, Range, % RSD, QC Control Limit. Rows for BRY312 and CLEW319.

Spikes

Table with columns: PPB Number, Client ID, % MS, % MSD, Spike Recovery Control Limits, % RSD, % RSD Control Limit. Rows for SCG312 and SCG319.

References

Table with columns: Reference ID, Target, Found, % Recovery, Control Limits. Row for SLCS-7994.

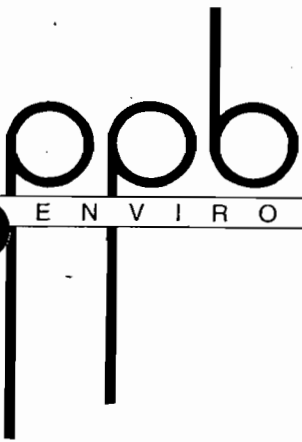
CADMIUM IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

Table with columns: PPB Number, Client ID, Value 1, Value 2, Range, % RSD, QC Control Limit. Rows for BRY312 and CLEW319.

Spikes

Table with columns: PPB Number, Client ID, % MS, % MSD, Spike Recovery Control Limits, % RSD, % RSD Control Limit. Rows for SCG312 and SCG319.



QC REPORT FOR GOLDER ASSOCIATES, INC. 05/02/02 PAGE 3

References

Reference ID	Target	Found	% Recovery	Control Limits
SLCS-7994	46.9	67.2	143	66 TO 144

CHROMIUM IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
220099	BRY312	0.3	0.6	0.30	47.14	80.11
220514	CLEW319	0.1	0.2	0.10	47.14	83.61

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
220100	SCG312	91	92	74 TO 119	0.77	13.93
220100	SCG312	104	---	74 TO 119	----	----
220517	SCG319	102	---	74 TO 118	----	----

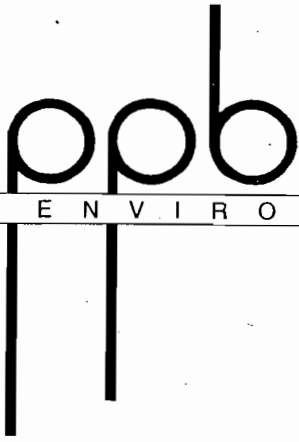
References

Reference ID	Target	Found	% Recovery	Control Limits
SLCS-7994	115	156	136	53 TO 140

LEAD IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
220099	BRY312	<0.3	<0.3	0	0.00	38.62
220514	CLEW319	<0.3	<0.3	0	0.00	37.11



QC REPORT FOR GOLDER ASSOCIATES, INC. 05/02/02 PAGE 4

Spikes

PPB Number	Client ID	Spike Recovery			% RSD	
		% MS	% MSD	Control Limits	% RSD	Control Limit
220100	SCG312	81	85	66 TO 134	3.41	12.41
220100	SCG312	103	---	66 TO 134	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
SLCS-7994	52.4	73.0	139	43 TO 171

MANGANESE IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

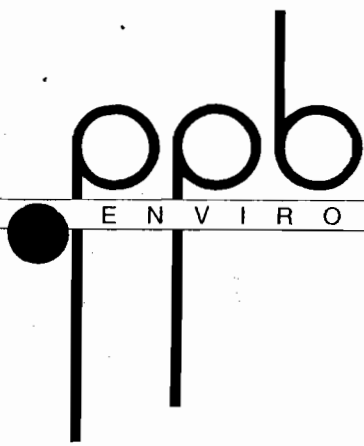
PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
220099	BRY312	9.5	11.8	2.3	15.27	45.97
220514	CLEW319	4.8	6.8	2.0	24.38	44.18

Spikes

PPB Number	Client ID	Spike Recovery			% RSD	
		% MS	% MSD	Control Limits	% RSD	Control Limit
220100	SCG312	87	85	51 TO 142	1.64	49.83
220100	SCG312	101	---	51 TO 142	----	----
220514	CLEW319	100	---	53 TO 139	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
SLCS-7994	151	187	124	70 TO 122



QC REPORT FOR GOLDER ASSOCIATES, INC. 05/02/02 PAGE 5

MERCURY IN VEGETATION mg/kg VG Method: EPA 7471 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
220097	CLEW312A	<0.20	<0.20	0	0.00	4.14
220516	BRY319B	<0.22	<0.23	0.0050	3.14	4.02

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
220098	CLEW312B DUP	93	---	56 TO 139	----	----
220517	SCG319	93	---	57 TO 137	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
0.3 FISHER	0.30	0.28	93	30 TO 159
MS2710	32.6	36.5	112	32 TO 156

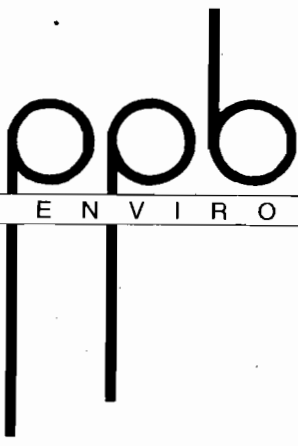
NICKEL IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
220099	BRY312	<0.2	<0.2	0	0.00	76.67
220514	CLEW319	<0.2	<0.2	0	0.00	73.17

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
220100	SCG312	91	92	68 TO 119	0.77	14.56
220100	SCG312	104	---	68 TO 119	----	----
220517	SCG319	104	---	69 TO 119	----	----



QC REPORT FOR GOLDER ASSOCIATES, INC. 05/02/02 PAGE 6

References

Reference ID	Target	Found	% Recovery	Control Limits
SLCS-7994	89.7	117	130	73 TO 127

SELENIUM IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
220099	BRY312	0.9	1.0	0.10	7.44	40.27
220514	CLEW319	0.6	0.6	0	0.00	38.54

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
220100	SCG312	100	104	78 TO 143	2.77	12.88
220100	SCG312	117	---	78 TO 143	----	----
220517	SCG319	108	---	79 TO 141	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
SLCS-7994	185	251	136	65 TO 149



DATE, TIME, ANALYST REPORT

ANALYSIS	METHOD	PREP		ANALYSIS			MATRIX
		DATE	BY	DATE	TIME	BY	
%SOLIDS	EPA 160.3	/ /		03/18/02	1500	AJS	VG
%SOLIDS	EPA 160.3	/ /		03/22/02	1500	AJS	VG
AS/V/ICP	EPA 6010	03/15/02	ECS	03/25/02	1040	ECS	VG
BE/V/ICP	EPA 6010	03/15/02	ECS	03/25/02	1040	ECS	VG
CD/V/ICP	EPA 6010	03/15/02	ECS	03/25/02	1040	ECS	VG
CR/V/ICP	EPA 6010	03/15/02	ECS	03/25/02	1040	ECS	VG
HG/V/CVAA	EPA 7471	/ /		03/21/02	0900	AMW	VG
MN/V/ICP	EPA 6010	03/15/02	ECS	03/25/02	1040	ECS	VG
NI/V/ICP	EPA 6010	03/15/02	ECS	03/25/02	1040	ECS	VG
PB/V/ICP	EPA 6010	03/15/02	ECS	03/25/02	1040	ECS	VG
SE/V/ICP	EPA 6010	03/15/02	ECS	03/25/02	1040	ECS	VG

2/25/02 – 3/3/02



Hazen Research, Inc.
 4601 Indiana St.
 Golden, CO 80403 USA
 Tel: (303) 279-4501
 Fax: (303) 278-1528

Date March 14 2002
 HRI Project 002-3IP
 HRI Series No. C62/02-3
 Date Rec'd. 03/06/02
 Cust. P.O.# 003-7556

Golder Associates Inc.
 Fawn Howard
 6241 NW 23rd St., Suite 500
 Gainesville, Florida 32653

Sample Identification
 SCG 35

Reporting Basis > As Rec'd Dry Air Dry

Proximate (%)

Moisture	54.55	0.00	1.92
Ash	0.82	1.81	1.78
Volatile	39.58	87.09	85.42
Fixed C	5.05	11.10	10.88
Total	100.00	100.00	100.00
Sulfur	0.02	0.05	0.05
Btu/lb (HHV)	3690	8120	7964
MMF Btu/lb	3723	8282	
MAF Btu/lb		8270	
Air Dry Loss (%)		53.66	

Ultimate (%)

Moisture	54.55	0.00	1.92
Carbon	22.21	48.87	47.93
Hydrogen	2.80	6.16	6.05
Nitrogen	0.18	0.40	0.39
Sulfur	0.02	0.05	0.05
Ash	0.82	1.81	1.78
Oxygen*	19.42	42.71	41.88
Total	100.00	100.00	100.00

Chlorine**

Forms of Sulfur (as S,%)

Sulfate		
Pyritic		
Organic		
Total	0.02	0.05

Lb. Alkali/MM Btu=
 Lb. Ash/MM Btu= 2.24
 Lb. SO2/MM Btu= 0.13
 HGI= @ % Moisture
 As Rec'd. Sp.Gr.=
 Free Swelling Index=

Report Prepared By:

Gerard H. Cunningham
 Fuels Laboratory Supervisor

Water Soluble Alkalies (%)

Na2O
 K2O

* Oxygen by Difference.

** Not usually reported as part of the ultimate analysis.



April 11, 2002

→ verified on dry basis - Paul Berman 4/29/02

Ms. Fawn Howard
Golder Associates
6241 NW 23rd Street
Suite 500
Gainesville, FL 32653-1500

Dear Ms. Howard:

Enclosed are the analytical results for the Sugar Cane bagasse samples received February 26 and March 4, 2002.

All data were determined in accordance with published procedures (*EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, SW-846, December 1996, 3rd Edition incl. Updates I-III; and/or *Standard Methods for the Examination of Water and Wastewater*, 18th edition, revised 1992). Our laboratory is NELAP-certified by the Florida Department of Health (FDH No. E82001) and our CompQAP is approved by FDEP (No. 870017G).

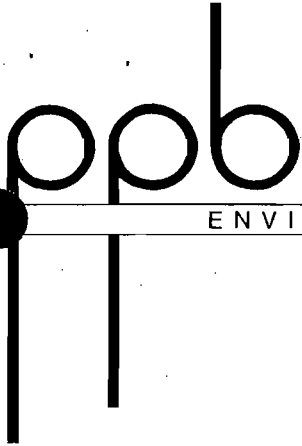
If you have any questions concerning this report, please contact me.

Sincerely,

Paul Berman
Project Manager

/cms

Enclosures



REPORT OF ANALYSES (SN-00001427)

GOLDER ASSOCIATES, INC.
6241 NW 23RD STREET
SUITE 500
GAINESVILLE, FL 32653-1500
Attn: Ms. Fawn Howard

DATE: 04/10/02
FDH # E82001
DEP CQAP # 870017G

SAMPLES RECEIVED 2/26/02 AND 3/4/02 (Page 1 of 2)

CLIENT STATION ID	LAB NUMBER	% SOLIDS %	AS/S/ICP mg/kg	BE/S/ICP mg/kg	CD/S/ICP mg/kg	CR/S/ICP mg/kg	PB/S/ICP mg/kg
CLEW226	219319	51.8	0.2	0.1 U	0.1 U	0.2	0.3 U
BRY226A	219320	49.2	0.5	0.1 U	0.1 U	0.4	0.3 U
BRY226B	219321	51.4	0.3 U	0.1 U	0.1 U	0.3	0.3 U
SCG226	219322	47.3	0.5	0.1 U	0.1 U	0.2	0.3 U
CLEW 35	219662	51.9	0.3	0.1 U	0.1 U	0.3	0.2
BRY 35	219663	47.1	0.4	0.1 U	0.1 U	0.3	0.3 U
SCG 35A	219664	46.8	0.5	0.1 U	0.1 U	0.2	0.3 U
SCG 35B	219665	48.0	0.4	0.1 U	0.1 U	0.2	0.3 U

U = Result below detection limit

PROJECT MANAGER



REPORT OF ANALYSES (SN-00001427)

GOLDER ASSOCIATES, INC.
6241 NW 23RD STREET
SUITE 500
GAINESVILLE, FL 32653-1500
Attn: Ms. Fawn Howard

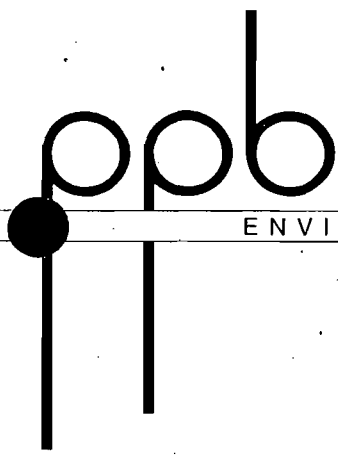
DATE: 04/10/02
FDH # E82001
DEP CQAP # 870017G

SAMPLES RECEIVED 2/26/02 AND 3/4/02 (Page 2 of 2)

CLIENT STATION ID	LAB NUMBER	MN/S/ICP mg/kg	HG/S/CVAA mg/kg	NI/S/ICP mg/kg	SE/S/ICP mg/kg
CLEW226	219319	6.2	0.10 U	0.2	0.5
BRY226A	219320	7.6	0.10 U	0.2	0.6
BRY226B	219321	7.0	0.10 U	0.2	0.6
SCG226	219322	9.0	0.10 U	0.2	0.8
CLEW 35	219662	5.6	0.10 U	0.2 U	0.7
BRY 35	219663	10.4	0.10 U	0.2 U	0.9
SCG 35A	219664	8.3	0.10 U	0.2 U	0.9
SCG 35B	219665	5.9	0.10 U	0.2 U	0.8

U = Result below detection limit

PROJECT MANAGER



QC REPORT FOR GOLDER ASSOCIATES, INC. 04/10/02 PAGE 1

TOTAL SOLIDS % VG Method: EPA 160.3 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
219319	CLEW226	52.4	51.1	1.3	1.78	9.21
219662	CLEW 35	51.5	52.3	0.80	1.09	8.90

NO SPIKE QC DATA FOUND

NO REFERENCE QC DATA FOUND

ARSENIC IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
219663	BRY 35	0.3	0.4	0.10	20.20	63.71

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
219320	BRY226A	100	99	58 TO 151	0.71	27.03
219664	SCG 35A	97	---	59 TO 150	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1990	100	61 TO 144
SLCS-7970	75.2	87.2	116	64 TO 141
SLCS-7986	75.2	85.6	114	65 TO 142



QC REPORT FOR GOLDER ASSOCIATES, INC. 04/10/02 PAGE 2

BERYLLIUM IN SED. mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
219663	BRY 35	<0.1	<0.1	0	0.00	NO DATA

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
219320	BRY226A	104	106	67 TO 128	1.35	17.14
219664	SCG 35A	97	---	68 TO 128	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1990	100	76 TO 119
SLCS-7970	52.2	62.4	120	79 TO 118
SLCS-7986	52.2	57.1	109	71 TO 132

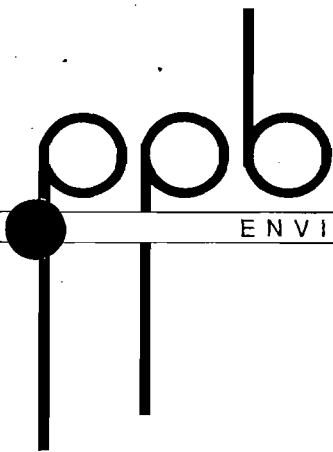
CADMIUM IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
219663	BRY 35	<0.1	<0.1	0	0.00	49.58

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
219320	BRY226A	102	104	68 TO 129	1.37	17.36
219664	SCG 35A	93	---	69 TO 128	----	----



QC REPORT FOR GOLDER ASSOCIATES, INC. 04/10/02 PAGE 3

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1990	100	60 TO 144
SLCS-7970	181	216	119	63 TO 140
SLCS-7986	181	206	114	64 TO 144

CHROMIUM IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
219663	BRY 35	0.3	0.3	0	0.00	81.25

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
219320	BRY226A	100	102	72 TO 119	1.40	14.72
219664	SCG 35A	95	---	73 TO 119	----	----

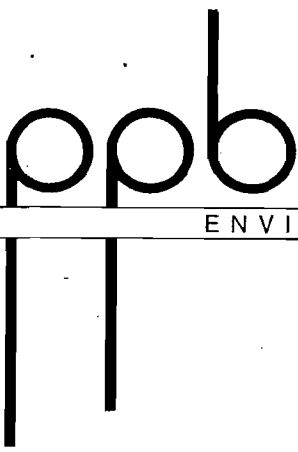
References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1980	99	46 TO 141
SLCS-7970	66.1	72.8	110	49 TO 139
SLCS-7986	66.1	70.2	106	51 TO 140

LEAD IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
219663	BRY 35	<0.3	<0.3	0	0.00	40.30



QC REPORT FOR GOLDER ASSOCIATES, INC. 04/10/02 PAGE 4

Spikes

PPB Number	Client ID	Spike Recovery		% RSD		
		% MS	% MSD	Control Limits	% RSD	Control Limit
219320	BRY226A	106	109	63 TO 135	1.97	13.08
219664	SCG 35A	94	---	65 TO 135	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV PB	2000	2010	100	30 TO 182
SLCS-7970	56.8	68.2	120	35 TO 176
SLCS-7986	56.8	64.2	113	39 TO 174

MANGANESE IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

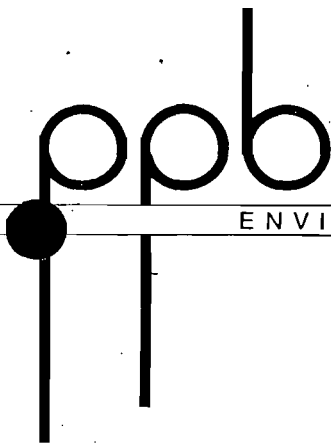
PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
219663	BRY 35	11.6	9.3	2.3	15.56	48.10

Spikes

PPB Number	Client ID	Spike Recovery		% RSD		
		% MS	% MSD	Control Limits	% RSD	Control Limit
219320	BRY226A	89	119	50 TO 143	20.40	52.51
219320	BRY226A	101	---	50 TO 143	----	----
219664	SCG 35A	80	---	53 TO 143	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1970	98	65 TO 123
SLCS-7970	157	167	106	68 TO 121
SLCS-7986	157	149	95	68 TO 124



QC REPORT FOR GOLDER ASSOCIATES, INC. 04/10/02 PAGE 5

MERCURY IN VEGETATION mg/kg VG Method: EPA 7471 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
219320	BRY226A	<0.10	<0.10	0	0.00	4.33

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
219321	BRY226B	90	---	55 TO 140	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
FISHER	0.200	0.211	106	22 TO 164
MS2710	32.6	30.8	94	26 TO 162

NICKEL IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

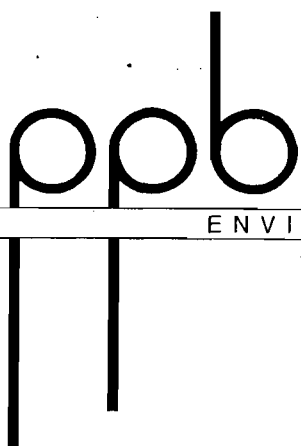
PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
219663	BRY 35	<0.2	<0.2	0	0.00	80.61

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
219320	BRY226A	97	100	66 TO 120	2.15	15.31
219664	SCG 35A	94	---	67 TO 120	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1960	98	75 TO 117
MS-7970	101	118	117	78 TO 115



QC REPORT FOR GOLDER ASSOCIATES, INC. 04/10/02 PAGE 6

References

Reference ID	Target	Found	% Recovery	Control Limits
--------------	--------	-------	------------	----------------

SLCS-7986	101	106	105	70 TO 128
-----------	-----	-----	-----	-----------

SELENIUM IN VEGETATION		mg/kg	VG	Method: EPA 6010	Alt. Method: None
------------------------	--	-------	----	------------------	-------------------

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
------------	-----------	---------	---------	-------	-------	------------------

219663	BRY 35	0.9	0.9	0	0.00	40.21
--------	--------	-----	-----	---	------	-------

Spikes

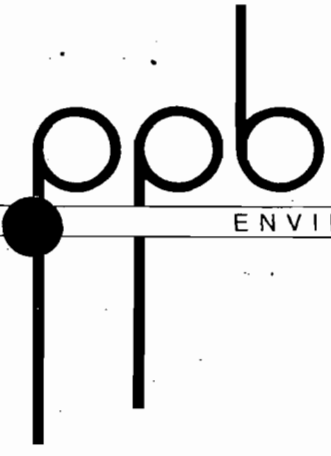
PPB Number	Client ID	Spike Recovery			% RSD	
		% MS	% MSD	Control Limits	% RSD	Control Limit

219320	BRY226A	130	118	77 TO 141	6.84	12.34
219320	BRY226A	116	---	77 TO 141	----	----
219664	SCG 35A	104	---	78 TO 144	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
--------------	--------	-------	------------	----------------

ICV	2000	2000	100	60 TO 148
SLCS-7970	62.5	78.4	125	63 TO 144
SLCS-7986	62.5	72.1	115	62 TO 150



DATE, TIME, ANALYST REPORT

ANALYSIS	METHOD	PREP		ANALYSIS			MATRIX
		DATE	BY	DATE	TIME	BY	
%SOLIDS	EPA 160.3	/	/	03/01/02	0900	AMW	VG
%SOLIDS	EPA 160.3	/	/	03/07/02	0900	AJS	VG
AS/S/ICP	EPA 6010	03/01/02	SEK	03/04/02	0929	ECS	VG
AS/S/ICP	EPA 6010	03/08/02	ECS	03/14/02	1026	ECS	VG
BE/S/ICP	EPA 6010	03/01/02	SEK	03/04/02	0929	ECS	VG
BE/S/ICP	EPA 6010	03/08/02	ECS	03/14/02	1026	ECS	VG
CD/S/ICP	EPA 6010	03/01/02	SEK	03/04/02	0929	ECS	VG
CD/S/ICP	EPA 6010	03/08/02	ECS	03/14/02	1026	ECS	VG
CR/S/ICP	EPA 6010	03/01/02	SEK	03/04/02	0929	ECS	VG
CR/S/ICP	EPA 6010	03/08/02	ECS	03/14/02	1026	ECS	VG
HG/S/CVAA	EPA 7471	/	/	03/08/02	0800	AMW	VG
MN/S/ICP	EPA 6010	03/01/02	SEK	03/04/02	0929	ECS	VG
MN/S/ICP	EPA 6010	03/08/02	ECS	03/14/02	1026	ECS	VG
NI/S/ICP	EPA 6010	03/01/02	SEK	03/04/02	0929	ECS	VG
NI/S/ICP	EPA 6010	03/08/02	ECS	03/14/02	1026	ECS	VG
PB/S/ICP	EPA 6010	03/01/02	SEK	03/04/02	0929	ECS	VG
PB/S/ICP	EPA 6010	03/08/02	ECS	03/14/02	1026	ECS	VG
SE/S/ICP	EPA 6010	03/01/02	SEK	03/04/02	0929	ECS	VG
SE/S/ICP	EPA 6010	03/08/02	ECS	03/14/02	1026	ECS	VG

2/18/02 – 2/24/02



Hazen Research, Inc.
 4601 Indiana St.
 Golden, CO 80403 USA
 Tel: (303) 279-4501
 Fax: (303) 278-1528

Date March 1 2002
 HRI Project 002-3IP
 HRI Series No. B323/02-3
 Date Rec'd. 02/27/02
 Cust. P.O.# 003-7556

Golder Associates Inc.
 Fawn Howard
 6241 NW 23rd St., Suite 500
 Gainesville, Florida 32653

Sample Identification
 SCG 226

Reporting Basis >	As Rec'd	Dry	Air Dry
Proximate (%)			
Moisture	55.07	0.00	1.18
Ash	0.75	1.66	1.64
Volatile	39.68	88.30	87.26
Fixed C	4.50	10.04	9.92
Total	100.00	100.00	100.00

Sulfur	0.03	0.06	0.06
Btu/lb (HHV)	3667	8161	8065
MMF Btu/lb	3696	8310	
MAF Btu/lb		8299	
Air Dry Loss (%)		54.53	

Ultimate (%)			
Moisture	55.07	0.00	1.18
Carbon	22.05	49.08	48.50
Hydrogen	2.66	5.93	5.86
Nitrogen	0.19	0.43	0.42
Sulfur	0.03	0.06	0.06
Ash	0.75	1.66	1.64
Oxygen*	19.25	42.84	42.34
Total	100.00	100.00	100.00

Chlorine**

Forms of Sulfur (as S,%)

Sulfate		
Pyritic		
Organic		
Total	0.03	0.06

Lb. Alkali/MM Btu=
 Lb. Ash/MM Btu= 2.03
 Lb. SO2/MM Btu= 0.15
 HGI= @ % Moisture
 As Rec'd. Sp.Gr.=
 Free Swelling Index=

Report Prepared By:

Gerard H. Cunningham
 Fuels Laboratory Supervisor

Water Soluble Alkalies (%)

Na2O
 K2O

* Oxygen by Difference.

** Not usually reported as part of the ultimate analysis.



April 11, 2002

→ verified on dry basis - Paul Berman 4/29/02

Ms. Fawn Howard
Golder Associates
6241 NW 23rd Street
Suite 500
Gainesville, FL 32653-1500

Dear Ms. Howard:

Enclosed are the analytical results for the Sugar Cane bagasse samples received February 26 and March 4, 2002.

All data were determined in accordance with published procedures (*EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, SW-846, December 1996, 3rd Edition incl. Updates I-III; and/or *Standard Methods for the Examination of Water and Wastewater*, 18th edition, revised 1992). Our laboratory is NELAP-certified by the Florida Department of Health (FDH No. E82001) and our CompQAP is approved by FDEP (No. 870017G).

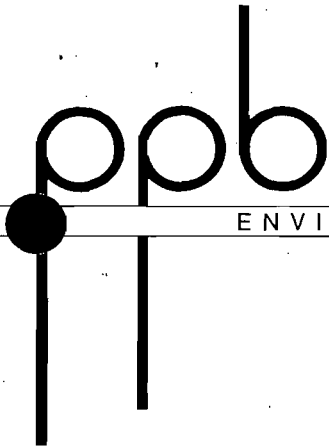
If you have any questions concerning this report, please contact me.

Sincerely,

Paul Berman
Project Manager

/cms

Enclosures



REPORT OF ANALYSES (SN-00001427)

GOLDER ASSOCIATES, INC.
6241 NW 23RD STREET
SUITE 500
GAINESVILLE, FL 32653-1500
Attn: Ms. Fawn Howard

DATE: 04/10/02
FDH # E82001
DEP CQAP # 870017G

SAMPLES RECEIVED 2/26/02 AND 3/4/02 (Page 1 of 2)

Table with 8 columns: CLIENT STATION ID, LAB NUMBER, %SOLIDS %, AS/S/ICP mg/kg, BE/S/ICP mg/kg, CD/S/ICP mg/kg, CR/S/ICP mg/kg, PB/S/ICP mg/kg. Rows include samples like CLEW226, BRY226A, BRY226B, SCG226, CLEW 35, BRY 35, SCG 35A, and SCG 35B.

U = Result below detection limit

PROJECT MANAGER

Handwritten signature of Paul Bern...



REPORT OF ANALYSES (SN-00001427)

GOLDER ASSOCIATES, INC.
6241 NW 23RD STREET
SUITE 500
GAINESVILLE, FL 32653-1500
Attn: Ms. Fawn Howard

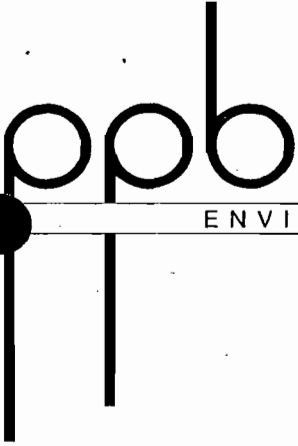
DATE: 04/10/02
FDH # E82001
DEP CQAP # 870017G

SAMPLES RECEIVED 2/26/02 AND 3/4/02 (Page 2 of 2)

CLIENT STATION ID	LAB NUMBER	MN/S/ICP mg/kg	HG/S/CVAA mg/kg	NI/S/ICP mg/kg	SE/S/ICP mg/kg
CLEW226	219319	6.2	0.10 U	0.2	0.5
BRY226A	219320	7.6	0.10 U	0.2	0.6
BRY226B	219321	7.0	0.10 U	0.2	0.6
SCG226	219322	9.0	0.10 U	0.2	0.8
CLEW 35	219662	5.6	0.10 U	0.2 U	0.7
BRY 35	219663	10.4	0.10 U	0.2 U	0.9
SCG 35A	219664	8.3	0.10 U	0.2 U	0.9
SCG 35B	219665	5.9	0.10 U	0.2 U	0.8

U = Result below detection limit

PROJECT MANAGER



QC REPORT FOR GOLDER ASSOCIATES, INC. 04/10/02 PAGE 1

TOTAL SOLIDS % VG Method: EPA 160.3 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
219319	CLEW226	52.4	51.1	1.3	1.78	9.21
219662	CLEW 35	51.5	52.3	0.80	1.09	8.90

NO SPIKE QC DATA FOUND

NO REFERENCE QC DATA FOUND

ARSENIC IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
219663	BRY 35	0.3	0.4	0.10	20.20	63.71

Spikes

PPB Number	Client ID	Spike Recovery		% RSD	
		% MS	% MSD	Control Limits	% RSD Control Limit
219320	BRY226A	100	99	58 TO 151	0.71 27.03
219664	SCG 35A	97	---	59 TO 150	-----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1990	100	61 TO 144
SLCS-7970	75.2	87.2	116	64 TO 141
SLCS-7986	75.2	85.6	114	65 TO 142



QC REPORT FOR GOLDER ASSOCIATES, INC. 04/10/02 PAGE 2

BERYLLIUM IN SED. mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
219663	BRY 35	<0.1	<0.1	0	0.00	NO DATA

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	QC Control Limit
219320	BRY226A	104	106	67 TO 128	1.35	17.14
219664	SCG 35A	97	---	68 TO 128	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1990	100	76 TO 119
SLCS-7970	52.2	62.4	120	79 TO 118
SLCS-7986	52.2	57.1	109	71 TO 132

CADMIUM IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
219663	BRY 35	<0.1	<0.1	0	0.00	49.58

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	QC Control Limit
219320	BRY226A	102	104	68 TO 129	1.37	17.36
219664	SCG 35A	93	---	69 TO 128	----	----

QC REPORT FOR GOLDER ASSOCIATES, INC. 04/10/02 PAGE 3

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1990	100	60 TO 144
SLCS-7970	181	216	119	63 TO 140
SLCS-7986	181	206	114	64 TO 144

CHROMIUM IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
219663	BRY 35	0.3	0.3	0	0.00	81.25

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
219320	BRY226A	100	102	72 TO 119	1.40	14.72
219664	SCG 35A	95	---	73 TO 119	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1980	99	46 TO 141
SLCS-7970	66.1	72.8	110	49 TO 139
SLCS-7986	66.1	70.2	106	51 TO 140

LEAD IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
219663	BRY 35	<0.3	<0.3	0	0.00	40.30



QC REPORT FOR GOLDER ASSOCIATES, INC. 04/10/02 PAGE 4

Spikes

PPB Number	Client ID	Spike Recovery		% RSD		
		% MS	% MSD Control Limits	% RSD	Control Limit	
219320	BRY226A	106	109	63 TO 135	1.97	13.08
219664	SCG 35A	94	---	65 TO 135	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV PB	2000	2010	100	30 TO 182
SLCS-7970	56.8	68.2	120	35 TO 176
SLCS-7986	56.8	64.2	113	39 TO 174

MANGANESE IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

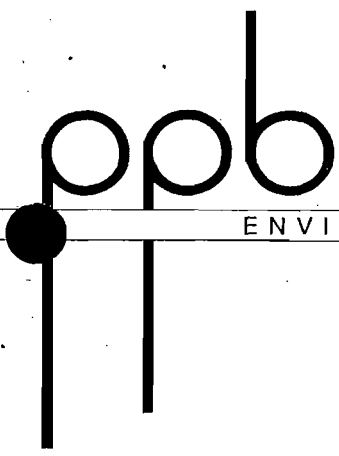
PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
219663	BRY 35	11.6	9.3	2.3	15.56	48.10

Spikes

PPB Number	Client ID	Spike Recovery		% RSD		
		% MS	% MSD Control Limits	% RSD	Control Limit	
219320	BRY226A	89	119	50 TO 143	20.40	52.51
219320	BRY226A	101	---	50 TO 143	----	----
219664	SCG 35A	80	---	53 TO 143	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1970	98	65 TO 123
SLCS-7970	157	167	106	68 TO 121
SLCS-7986	157	149	95	68 TO 124



QC REPORT FOR GOLDER ASSOCIATES, INC. 04/10/02 PAGE 5

MERCURY IN VEGETATION mg/kg VG Method: EPA 7471 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
------------	-----------	---------	---------	-------	-------	------------------

219320	BRY226A	<0.10	<0.10	0	0.00	4.33
--------	---------	-------	-------	---	------	------

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
------------	-----------	------	-------	-------------------------------	-------	---------------------

219321	BRY226B	90	---	55 TO 140	----	----
--------	---------	----	-----	-----------	------	------

References

Reference ID	Target	Found	% Recovery	Control Limits
--------------	--------	-------	------------	----------------

FISHER	0.200	0.211	106	22 TO 164
MS2710	32.6	30.8	94	26 TO 162

NICKEL IN VEGETATION mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
------------	-----------	---------	---------	-------	-------	------------------

219663	BRY 35	<0.2	<0.2	0	0.00	80.61
--------	--------	------	------	---	------	-------

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
------------	-----------	------	-------	-------------------------------	-------	---------------------

219320	BRY226A	97	100	66 TO 120	2.15	15.31
219664	SCG 35A	94	---	67 TO 120	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
--------------	--------	-------	------------	----------------

ICV	2000	1960	98	75 TO 117
MS-7970	101	118	117	78 TO 115



QC REPORT FOR GOLDER ASSOCIATES, INC. 04/10/02 PAGE 6

References

Reference ID	Target	Found	% Recovery	Control Limits
--------------	--------	-------	------------	----------------

SLCS-7986	101	106	105	70 TO 128
-----------	-----	-----	-----	-----------

SELENIUM IN VEGETATION

mg/kg

VG

Method: EPA 6010

Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
------------	-----------	---------	---------	-------	-------	------------------

219663	BRY 35	0.9	0.9	0	0.00	40.21
--------	--------	-----	-----	---	------	-------

Spikes

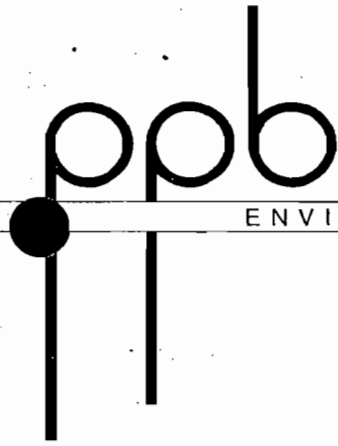
PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
------------	-----------	------	-------	-------------------------------	-------	---------------------

219320	BRY226A	130	118	77 TO 141	6.84	12.34
219320	BRY226A	116	---	77 TO 141	----	----
219664	SCG 35A	104	---	78 TO 144	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
--------------	--------	-------	------------	----------------

ICV	2000	2000	100	60 TO 148
SLCS-7970	62.5	78.4	125	63 TO 144
SLCS-7986	62.5	72.1	115	62 TO 150



DATE, TIME, ANALYST REPORT

ANALYSIS	METHOD	PREP		ANALYSIS			MATRIX
		DATE	BY	DATE	TIME	BY	
%SOLIDS	EPA 160.3	/	/	03/01/02	0900	AMW	VG
%SOLIDS	EPA 160.3	/	/	03/07/02	0900	AJS	VG
AS/S/ICP	EPA 6010	03/01/02	SEK	03/04/02	0929	ECS	VG
AS/S/ICP	EPA 6010	03/08/02	ECS	03/14/02	1026	ECS	VG
BE/S/ICP	EPA 6010	03/01/02	SEK	03/04/02	0929	ECS	VG
BE/S/ICP	EPA 6010	03/08/02	ECS	03/14/02	1026	ECS	VG
CD/S/ICP	EPA 6010	03/01/02	SEK	03/04/02	0929	ECS	VG
CD/S/ICP	EPA 6010	03/08/02	ECS	03/14/02	1026	ECS	VG
CR/S/ICP	EPA 6010	03/01/02	SEK	03/04/02	0929	ECS	VG
CR/S/ICP	EPA 6010	03/08/02	ECS	03/14/02	1026	ECS	VG
HG/S/CVAA	EPA 7471	/	/	03/08/02	0800	AMW	VG
MN/S/ICP	EPA 6010	03/01/02	SEK	03/04/02	0929	ECS	VG
MN/S/ICP	EPA 6010	03/08/02	ECS	03/14/02	1026	ECS	VG
NI/S/ICP	EPA 6010	03/01/02	SEK	03/04/02	0929	ECS	VG
NI/S/ICP	EPA 6010	03/08/02	ECS	03/14/02	1026	ECS	VG
PB/S/ICP	EPA 6010	03/01/02	SEK	03/04/02	0929	ECS	VG
PB/S/ICP	EPA 6010	03/08/02	ECS	03/14/02	1026	ECS	VG
SE/S/ICP	EPA 6010	03/01/02	SEK	03/04/02	0929	ECS	VG
SE/S/ICP	EPA 6010	03/08/02	ECS	03/14/02	1026	ECS	VG

2/11/02 – 2/17/02



Hazen Research, Inc.
 4601 Indiana St.
 Golden, CO 80403 USA
 Tel: (303) 279-4501
 Fax: (303) 278-1528

Date February 27 2002
 HRI Project 002-3IP
 HRI Series No. B277/02-3
 Date Rec'd. 02/20/02
 Cust. P.O.# 003-7556

Golder Associates Inc.
 Fawn Howard
 6241 NW 23rd St., Suite 500
 Gainesville, Florida 32653

Sample Identification
 SCG 219

Reporting Basis > As Rec'd Dry Air Dry

Proximate (%)

Moisture	55.63	0.00	1.06
Ash	1.13	2.55	2.52
Volatile	38.10	85.87	84.96
Fixed C	5.14	11.58	11.46
Total	100.00	100.00	100.00
Sulfur	0.04	0.08	0.08
Btu/lb (HHV)	3593	8097	8011
MMF Btu/lb	3636	8326	
MAF Btu/lb		8309	
Air Dry Loss (%)		55.15	

Ultimate (%)

Moisture	55.63	0.00	1.06
Carbon	21.35	48.12	47.61
Hydrogen	2.64	5.95	5.89
Nitrogen	0.17	0.38	0.38
Sulfur	0.04	0.08	0.08
Ash	1.13	2.55	2.52
Oxygen*	19.04	42.92	42.46
Total	100.00	100.00	100.00

Chlorine**

Forms of Sulfur (as S,%)

Sulfate		
Pyritic		
Organic		
Total	0.04	0.08

Lb. Alkali/MM Btu=
 Lb. Ash/MM Btu= 3.15
 Lb. SO2/MM Btu= 0.20
 HGI= @ % Moisture
 As Rec'd. Sp.Gr.=
 Free Swelling Index=

Report Prepared By:

Gerard H. Cunningham
 Fuels Laboratory Supervisor

Water Soluble Alkalies (%)

Na2O
 K2O

* Oxygen by Difference.

** Not usually reported as part of the ultimate analysis.



March 29, 2002

Ms. Fawn Howard
Golder Associates
6241 NW 23rd Street
Suite 500
Gainesville, FL 32653-1500

Dear Ms. Howard:

Enclosed are the analytical results for the Sugar Cane bagasse samples received February 12 and 19, 2002.

All data were determined in accordance with published procedures (*EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, December 1996, 3rd Edition incl. Updates I-III; and/or Standard Methods for the Examination of Water and Wastewater, 18th edition, revised 1992*). Our laboratory is NELAP-certified by the Florida Department of Health (FDH No. E82001) and our CompQAP is approved by FDEP (No. 870017G).

If you have any questions concerning this report, please contact me.

Sincerely,

Paul Berman
Project Manager

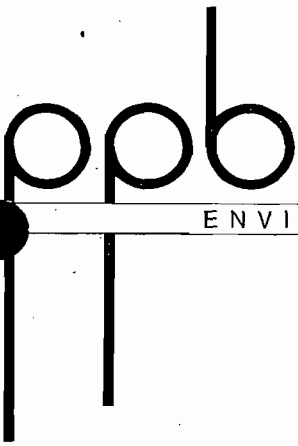
/cms

Enclosures

GOLDER ASSOCIATES, INC.

APR - 2 2002

GAINESVILLE



REPORT OF ANALYSES (SN-00001377)

GOLDER ASSOCIATES, INC.
6241 NW 23RD STREET
SUITE 500
GAINESVILLE, FL 32653-1500
Attn: Ms. Fawn Howard

DATE: 03/29/02
FDH # E82001
DEP CQAP # 870017G

SAMPLES RECEIVED 2/12 AND 2/19/02 (Page 1 of 2)

Table with 8 columns: CLIENT STATION ID, LAB NUMBER, %SOLIDS %, AS/S/ICP mg/kg, BE/S/ICP mg/kg, CD/S/ICP mg/kg, CR/S/ICP mg/kg, PB/S/ICP mg/kg. Rows include CLEW 212, BRY 212A, BRY 212B, ASA 212, SCGC 212, US SUGAR CLEWIS, BRY 219, and SCG 219.

U = Result below detection limit

PROJECT MANAGER

Handwritten signature of Paul Bern



REPORT OF ANALYSES (SN-00001377)

GOLDER ASSOCIATES, INC.
6241 NW 23RD STREET
SUITE 500
GAINESVILLE, FL 32653-1500
Attn: Ms. Fawn Howard

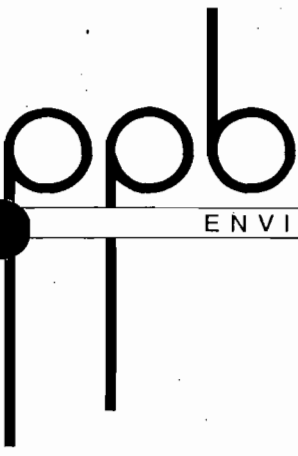
DATE: 03/29/02
FDH # E82001
DEP CQAP # 870017G

SAMPLES RECEIVED 2/12 AND 2/19/02 (Page 2 of 2)

CLIENT STATION ID	LAB NUMBER	MN/S/ICP mg/kg	HG/S/CVAA mg/kg	NI/S/ICP mg/kg	SE/S/ICP mg/kg
CLEW 212	218743	7.4	0.22 U	0.5	0.4
BRY 212A	218744	10.2	0.21 U	0.4	0.4
BRY 212B	218745	9.6	0.22 U	0.4	0.5
ASA 212	218746	10.8	0.20 U	0.4	0.3
SCGC 212	218747	10.4	0.19 U	0.3 U	0.3 U
US SUGAR CLEWIS	219158	8.2	0.20 U	0.2	0.5
US SUGAR CLEWIS	219159	8.0	0.17 U	0.2 U	0.7
BRY 219	219160	9.4	0.24 U	0.4	0.7
SCG 219	219161	5.3	0.22 U	0.3	0.7

U = Result below detection limit

PROJECT MANAGER



QC REPORT FOR GOLDER ASSOCIATES, INC. 03/29/02 PAGE 1

TOTAL SOLIDS % VG Method: EPA 160.3 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
218747	SCGC 212	46.5	47.1	0.60	0.91	9.44
219161	SCG 219	42.3	44.7	2.4	3.90	9.67

NO SPIKE QC DATA FOUND

NO REFERENCE QC DATA FOUND

ARSENIC IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
218743	CLEW 212	<0.4	<0.4	0	0.00	64.95
219159	US SUGAR CLEWISTON DUPE	0.2	0.3	0.10	28.28	63.44

Spikes

PPB Number	Client ID	Spike Recovery		% RSD	
		% MS	% MSD	Control Limits	% RSD Control Limit
218744	BRY 212A	120	119	56 TO 151	0.59 27.38
218744	BRY 212A	110	---	56 TO 151	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	2020	101	56 TO 150
ICV	2000	1990	100	61 TO 144
SLCS-7970	75.2	87.2	116	64 TO 141



QC REPORT FOR GOLDER ASSOCIATES, INC. 03/29/02 PAGE 2

BERYLLIUM IN SED. mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
218743	CLEW 212	<0.1	<0.1	0	0.00	NO DATA
219159	US SUGAR CLEWISTON DUPE	<0.1	<0.1	0	0.00	NO DATA

Spikes

PPB Number	Client ID	Spike Recovery		% RSD	
		% MS	% MSD	Control Limits	% RSD Control Limit
218744	BRY 212A	110	114	68 TO 119	2.53 18.68
218744	BRY 212A	106	---	68 TO 119	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	2040	102	73 TO 120
ICV	2000	1990	100	76 TO 119
SLCS-7970	52.2	62.4	120	79 TO 118

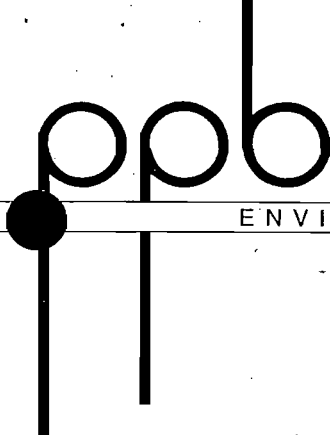
CADMIUM IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
218743	CLEW 212	<0.1	<0.1	0	0.00	55.96
219159	US SUGAR CLEWISTON DUPE	<0.1	<0.1	0	0.00	52.49

Spikes

PPB Number	Client ID	Spike Recovery		% RSD	
		% MS	% MSD	Control Limits	% RSD Control Limit
218744	BRY 212A	110	116	68 TO 124	3.75 18.99
218744	BRY 212A	104	---	68 TO 124	----



QC REPORT FOR GOLDER ASSOCIATES, INC. 03/29/02 PAGE 3

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	2020	101	56 TO 149
ICV	2000	1990	100	60 TO 144
SLCS-7970	181	216	119	63 TO 140

CHROMIUM IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
218743	CLEW 212	0.7	0.5	0.20	23.57	79.54
219159	US SUGAR CLEWISTON DUPE	0.6	0.3	0.30	47.14	76.56

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
218743	CLEW 212	106	108	72 TO 117	1.32	15.64
218744	BRY 212A	102	---	72 TO 119	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	2020	101	42 TO 142
ICV	2000	1980	99	46 TO 141
SLCS-7970	66.1	72.8	110	49 TO 139

LEAD IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None



QC REPORT FOR GOLDR ASSOCIATES, INC. 03/29/02 PAGE 4

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
218743	CLEW 212	<0.4	<0.4	0	0.00	44.19
219159	US SUGAR CLEWISTON DUPE	<0.3	<0.3	0	0.00	42.13

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	QC Control Limit
218744	BRY 212A	116	118	64 TO 129	1.21	13.26
218744	BRY 212A	104	---	64 TO 129	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	2020	101	24 TO 189
ICV PB	2000	2010	100	30 TO 182
SLCS-7970	56.8	68.2	120	35 TO 176

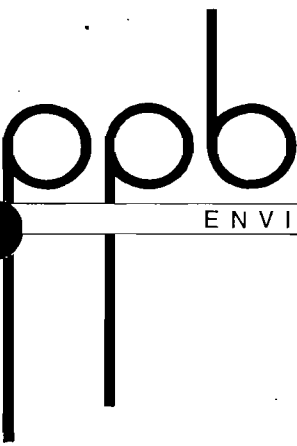
MANGANESE IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
218743	CLEW 212	7.8	7.0	0.80	7.64	32.12
219159	US SUGAR CLEWISTON DUPE	10.0	6.0	4.0	35.36	29.53

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	QC Control Limit
218744	BRY 212A	93	109	44 TO 146	11.20	61.68
218744	BRY 212A	103	---	44 TO 146	----	----



QC REPORT FOR GOLDER ASSOCIATES, INC. 03/29/02 PAGE 5

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	2010	100	62 TO 123
ICV	2000	1970	98	65 TO 123
SLCS-7970	157	167	106	68 TO 121

MERCURY IN SEDIMENT mg/kg VG Method: EPA 7471 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
218744	BRY 212A	<0.21	<0.21	0	0.00	4.49

Spike

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
218745	BRY 212B	92	---	54 TO 142	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
MS2710	32.6	38.8	119	20 TO 159

NICKEL IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
218743	CLEW 212	0.6	0.4	0.20	28.28	65.46
219159	US SUGAR CLEWISTON DUPE	0.2	<0.2	0.10	47.14	68.00



QC REPORT FOR GOLDER ASSOCIATES, INC. 03/29/02 PAGE 6

Spikes

PPB Number	Client ID	Spike Recovery		% RSD	
		% MS	% MSD	Control Limits	% RSD Control Limit
218744	BRY 212A	103	108	67 TO 115	3.35 16.35
218744	BRY 212A	103	---	67 TO 115	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1980	99	72 TO 118
ICV	2000	1960	98	75 TO 117
SLCS-7970	101	118	117	78 TO 115

SELENIUM IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

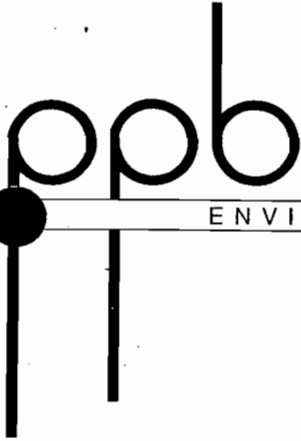
PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
218743	CLEW 212	0.5	0.4	0.10	15.71	41.59
219159	US SUGAR CLEWISTON DUPE	0.8	0.6	0.20	20.20	39.94

Spikes

PPB Number	Client ID	Spike Recovery		% RSD	
		% MS	% MSD	Control Limits	% RSD Control Limit
218744	BRY 212A	120	124	77 TO 135	2.32 13.67
218744	BRY 212A	119	---	77 TO 135	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	2000	100	56 TO 154
ICV	2000	2000	100	60 TO 148
SLCS-7970	62.5	78.4	125	63 TO 144



DATE, TIME, ANALYST REPORT

ANALYSIS	METHOD	PREP		ANALYSIS			MATRIX
		DATE	BY	DATE	TIME	BY	
%SOLIDS	EPA 160.3	/ /		02/18/02	1300	AJS	VG
%SOLIDS	EPA 160.3	/ /		02/26/02	1300	AJS	VG
AS/S/ICP	EPA 6010	02/19/02	KDS	02/22/02	1547	ECS	VG
AS/S/ICP	EPA 6010	03/01/02	SEK	03/04/02	0929	ECS	VG
BE/S/ICP	EPA 6010	02/19/02	KDS	02/22/02	1547	ECS	VG
BE/S/ICP	EPA 6010	03/01/02	SEK	03/04/02	0929	ECS	VG
CD/S/ICP	EPA 6010	02/19/02	KDS	02/22/02	1547	ECS	VG
CD/S/ICP	EPA 6010	03/01/02	SEK	03/04/02	0929	ECS	VG
CR/S/ICP	EPA 6010	02/19/02	KDS	02/22/02	1547	ECS	VG
CR/S/ICP	EPA 6010	03/01/02	SEK	03/04/02	0929	ECS	VG
HG/S/CVAA	EPA 7471	/ /		02/22/02	1214	SEK	VG
MN/S/ICP	EPA 6010	02/19/02	KDS	02/22/02	1547	ECS	VG
MN/S/ICP	EPA 6010	03/01/02	SEK	03/04/02	0929	ECS	VG
NI/S/ICP	EPA 6010	02/19/02	KDS	02/22/02	1547	ECS	VG
NI/S/ICP	EPA 6010	03/01/02	SEK	03/04/02	0929	ECS	VG
PB/S/ICP	EPA 6010	02/19/02	KDS	02/22/02	1547	ECS	VG
PB/S/ICP	EPA 6010	03/01/02	SEK	03/04/02	0929	ECS	VG
SE/S/ICP	EPA 6010	02/19/02	KDS	02/22/02	1547	ECS	VG
SE/S/ICP	EPA 6010	03/01/02	SEK	03/04/02	0929	ECS	VG

2/4/02 – 2/10/02



Hazen Research, Inc.
 4601 Indiana St.
 Golden, CO 80403 USA
 Tel: (303) 279-4501
 Fax: (303) 278-1528

Date February 20 2002
 HRI Project 002-8IH
 HRI Series No. B177/02-4
 Date Rec'd. 02/13/02
 Cust. P.O.# 003-7556

Golder Associates Inc.
 Fawn Howard
 6241 NW 23rd St., Suite 500
 Gainesville, Florida 32653

Sample Identification
 SCG 212

Reporting Basis >	As Rec'd	Dry	Air Dry
-------------------	----------	-----	---------

Proximate (%)

Moisture	53.29	0.00	2.79
Ash	0.65	1.39	1.35
Volatile	41.14	88.07	85.61
Fixed C	4.92	10.54	10.25
Total	100.00	100.00	100.00
Sulfur	0.02	0.05	0.05
Btu/lb (HHV)	3782	8098	7872
MMF Btu/lb	3808	8221	
MAF Btu/lb		8212	
Air Dry Loss (%)		51.95	

Ultimate (%)

Moisture	53.29	0.00	2.79
Carbon	22.96	49.16	47.79
Hydrogen	2.67	5.72	5.56
Nitrogen	0.16	0.35	0.34
Sulfur	0.02	0.05	0.05
Ash	0.65	1.39	1.35
Oxygen*	20.25	43.33	42.12
Total	100.00	100.00	100.00

Chlorine**

Forms of Sulfur (as S,%)

Sulfate		
Pyritic		
Organic		
Total	0.02	0.05

Lb. Alkali/MM Btu=
 Lb. Ash/MM Btu= 1.71
 Lb. SO2/MM Btu= 0.13
 HGI= @ % Moisture
 As Rec'd. Sp.Gr.=
 Free Swelling Index=

Report Prepared By:

Gerard H. Cunningham
 Fuels Laboratory Supervisor

Water Soluble Alkalies (%)

Na2O
 K2O

* Oxygen by Difference.

** Not usually reported as part of the ultimate analysis.



March 29, 2002

Ms. Fawn Howard
Golder Associates
6241 NW 23rd Street
Suite 500
Gainesville, FL 32653-1500

Dear Ms. Howard:

Enclosed are the analytical results for the Sugar Cane bagasse samples received February 12 and 19, 2002.

All data were determined in accordance with published procedures (*EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, SW-846, December 1996, 3rd Edition incl. Updates I-III; and/or *Standard Methods for the Examination of Water and Wastewater*, 18th edition, revised 1992). Our laboratory is NELAP-certified by the Florida Department of Health (FDH No. E82001) and our CompQAP is approved by FDEP (No. 870017G).

If you have any questions concerning this report, please contact me.

Sincerely,

Paul Berman
Project Manager

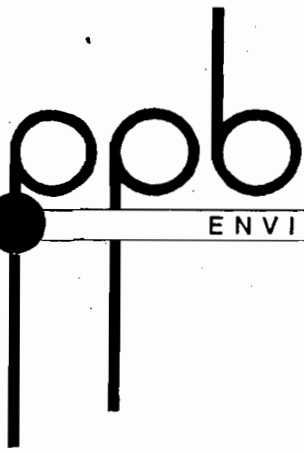
/cms

Enclosures

GOLDER ASSOCIATES INC.

APR - 2 2002

GAINESVILLE



REPORT OF ANALYSES (SN-00001377)

GOLDER ASSOCIATES, INC.
6241 NW 23RD STREET
SUITE 500
GAINESVILLE, FL 32653-1500
Attn: Ms. Fawn Howard

DATE: 03/29/02
FDH # E82001
DEP CQAP # 870017G

SAMPLES RECEIVED 2/12 AND 2/19/02 (Page 1 of 2)

Table with 8 columns: CLIENT STATION ID, LAB NUMBER, %SOLIDS %, AS/S/ICP mg/kg, BE/S/ICP mg/kg, CD/S/ICP mg/kg, CR/S/ICP mg/kg, PB/S/ICP mg/kg. Rows include samples like CLEW 212, BRY 212A, BRY 212B, ASA 212, SCGC 212, US SUGAR CLEWIS, BRY 219, and SCG 219.

U = Result below detection limit

PROJECT MANAGER [Signature]



REPORT OF ANALYSES (SN-00001377)

GOLDER ASSOCIATES, INC.
6241 NW 23RD STREET
SUITE 500
GAINESVILLE, FL 32653-1500
Attn: Ms. Fawn Howard

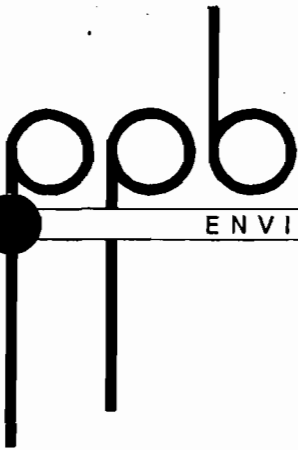
DATE: 03/29/02
FDH # E82001
DEP CQAP # 870017G

SAMPLES RECEIVED 2/12 AND 2/19/02 (Page 2 of 2)

CLIENT STATION ID	LAB NUMBER	MN/S/ICP mg/kg	HG/S/CVAA mg/kg	NI/S/ICP mg/kg	SE/S/ICP mg/kg
CLEW 212	218743	7.4	0.22 U	0.5	0.4
BRY 212A	218744	10.2	0.21 U	0.4	0.4
BRY 212B	218745	9.6	0.22 U	0.4	0.5
ASA 212	218746	10.8	0.20 U	0.4	0.3
SCGC 212	218747	10.4	0.19 U	0.3 U	0.3 U
US SUGAR CLEWIS	219158	8.2	0.20 U	0.2	0.5
US SUGAR CLEWIS	219159	8.0	0.17 U	0.2 U	0.7
BRY 219	219160	9.4	0.24 U	0.4	0.7
SCG 219	219161	5.3	0.22 U	0.3	0.7

U = Result below detection limit

PROJECT MANAGER



QC REPORT FOR GOLDER ASSOCIATES, INC. 03/29/02 PAGE 1

TOTAL SOLIDS % VG Method: EPA 160.3 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
218747	SCGC 212	46.5	47.1	0.60	0.91	9.44
219161	SCG 219	42.3	44.7	2.4	3.90	9.67

NO SPIKE QC DATA FOUND

NO REFERENCE QC DATA FOUND

ARSENIC IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
218743	CLEW 212	<0.4	<0.4	0	0.00	64.95
219159	US SUGAR CLEWISTON DUPE	0.2	0.3	0.10	28.28	63.44

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery		% RSD	
				Control Limits	% RSD	Control Limit	Control Limit
218744	BRY 212A	120	119	56 TO 151	0.59	27.38	
218744	BRY 212A	110	---	56 TO 151	----	----	

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	2020	101	56 TO 150
ICV	2000	1990	100	61 TO 144
SLCS-7970	75.2	87.2	116	64 TO 141



QC REPORT FOR GOLDER ASSOCIATES, INC. 03/29/02 PAGE 2

BERYLLIUM IN SED. mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
218743	CLEW 212	<0.1	<0.1	0	0.00	NO DATA
219159	US SUGAR CLEWISTON DUPE	<0.1	<0.1	0	0.00	NO DATA

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
218744	BRY 212A	110	114	68 TO 119	2.53	18.68
218744	BRY 212A	106	---	68 TO 119	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	2040	102	73 TO 120
ICV	2000	1990	100	76 TO 119
SLCS-7970	52.2	62.4	120	79 TO 118

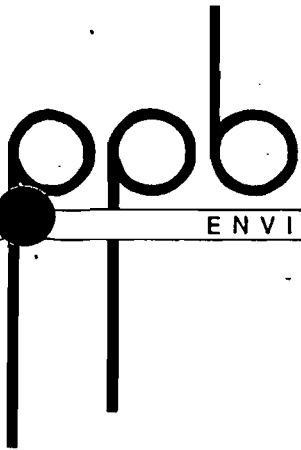
CADMIUM IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
218743	CLEW 212	<0.1	<0.1	0	0.00	55.96
219159	US SUGAR CLEWISTON DUPE	<0.1	<0.1	0	0.00	52.49

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
218744	BRY 212A	110	116	68 TO 124	3.75	18.99
218744	BRY 212A	104	---	68 TO 124	----	----



QC REPORT FOR GOLDER ASSOCIATES, INC. 03/29/02 PAGE 3

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	2020	101	56 TO 149
ICV	2000	1990	100	60 TO 144
SLCS-7970	181	216	119	63 TO 140

CHROMIUM IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
218743	CLEW 212	0.7	0.5	0.20	23.57	79.54
9159	US SUGAR CLEWISTON DUPE	0.6	0.3	0.30	47.14	76.56

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	RSD Control Limit
218743	CLEW 212	106	108	72 TO 117	1.32	15.64
218744	BRY 212A	102	---	72 TO 119	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	2020	101	42 TO 142
ICV	2000	1980	99	46 TO 141
SLCS-7970	66.1	72.8	110	49 TO 139

LEAD IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None



QC REPORT FOR GOLDER ASSOCIATES, INC. 03/29/02 PAGE 4

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
218743	CLEW 212	<0.4	<0.4	0	0.00	44.19
219159	US SUGAR CLEWISTON DUPE	<0.3	<0.3	0	0.00	42.13

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	QC Control Limit
218744	BRY 212A	116	118	64 TO 129	1.21	13.26
218744	BRY 212A	104	---	64 TO 129	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	2020	101	24 TO 189
ICV PB	2000	2010	100	30 TO 182
SLCS-7970	56.8	68.2	120	35 TO 176

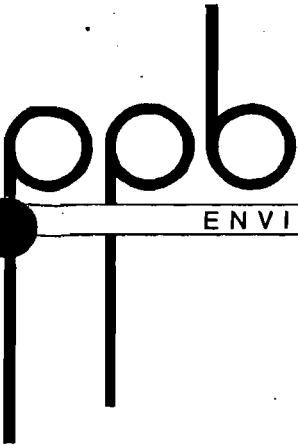
MANGANESE IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
218743	CLEW 212	7.8	7.0	0.80	7.64	32.12
219159	US SUGAR CLEWISTON DUPE	10.0	6.0	4.0	35.36	29.53

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	QC Control Limit
218744	BRY 212A	93	109	44 TO 146	11.20	61.68
218744	BRY 212A	103	---	44 TO 146	----	----



QC REPORT FOR GOLDER ASSOCIATES, INC. 03/29/02 PAGE 5

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	2010	100	62 TO 123
ICV	2000	1970	98	65 TO 123
SLCS-7970	157	167	106	68 TO 121

MERCURY IN SEDIMENT mg/kg VG Method: EPA 7471 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
218744	BRY 212A	<0.21	<0.21	0	0.00	4.49

Spike

PPB Number	Client ID	% MS	Spike Recovery % MSD Control Limits	% RSD	RSD Control Limit
218745	BRY 212B	92	54 TO 142	---	---

References

Reference ID	Target	Found	% Recovery	Control Limits
MS2710	32.6	38.8	119	20 TO 159

NICKEL IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
218743	CLEW 212	0.6	0.4	0.20	28.28	65.46
219159	US SUGAR CLEWISTON DUPE	0.2	<0.2	0.10	47.14	68.00



QC REPORT FOR GOLDER ASSOCIATES, INC. 03/29/02 PAGE 6

Spikes

PPB Number	Client ID	Spike Recovery		% RSD		
		% MS	% MSD Control Limits	% RSD	Control Limit	
218744	BRY 212A	103	108	67 TO 115	3.35	16.35
218744	BRY 212A	103	---	67 TO 115	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1980	99	72 TO 118
ICV	2000	1960	98	75 TO 117
SLCS-7970	101	118	117	78 TO 115

SELENIUM IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

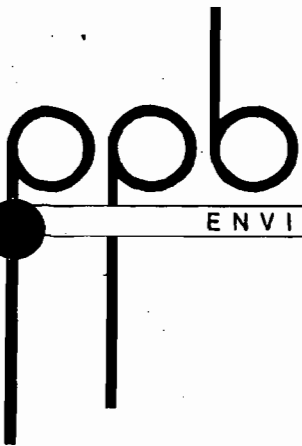
PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
218743	CLEW 212	0.5	0.4	0.10	15.71	41.59
219159	US SUGAR CLEWISTON DUPE	0.8	0.6	0.20	20.20	39.94

Spikes

PPB Number	Client ID	Spike Recovery		% RSD		
		% MS	% MSD Control Limits	% RSD	Control Limit	
218744	BRY 212A	120	124	77 TO 135	2.32	13.67
218744	BRY 212A	119	---	77 TO 135	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	2000	100	56 TO 154
ICV	2000	2000	100	60 TO 148
SLCS-7970	62.5	78.4	125	63 TO 144



DATE, TIME, ANALYST REPORT

ANALYSIS	METHOD	PREP		ANALYSIS			MATRIX
		DATE	BY	DATE	TIME	BY	
%SOLIDS	EPA 160.3	/	/	02/18/02	1300	AJS	VG
%SOLIDS	EPA 160.3	/	/	02/26/02	1300	AJS	VG
AS/S/ICP	EPA 6010	02/19/02	KDS	02/22/02	1547	ECS	VG
AS/S/ICP	EPA 6010	03/01/02	SEK	03/04/02	0929	ECS	VG
BE/S/ICP	EPA 6010	02/19/02	KDS	02/22/02	1547	ECS	VG
BE/S/ICP	EPA 6010	03/01/02	SEK	03/04/02	0929	ECS	VG
CD/S/ICP	EPA 6010	02/19/02	KDS	02/22/02	1547	ECS	VG
CD/S/ICP	EPA 6010	03/01/02	SEK	03/04/02	0929	ECS	VG
CR/S/ICP	EPA 6010	02/19/02	KDS	02/22/02	1547	ECS	VG
CR/S/ICP	EPA 6010	03/01/02	SEK	03/04/02	0929	ECS	VG
HG/S/CVAA	EPA 7471	/	/	02/22/02	1214	SEK	VG
MN/S/ICP	EPA 6010	02/19/02	KDS	02/22/02	1547	ECS	VG
MN/S/ICP	EPA 6010	03/01/02	SEK	03/04/02	0929	ECS	VG
NI/S/ICP	EPA 6010	02/19/02	KDS	02/22/02	1547	ECS	VG
NI/S/ICP	EPA 6010	03/01/02	SEK	03/04/02	0929	ECS	VG
PB/S/ICP	EPA 6010	02/19/02	KDS	02/22/02	1547	ECS	VG
PB/S/ICP	EPA 6010	03/01/02	SEK	03/04/02	0929	ECS	VG
SE/S/ICP	EPA 6010	02/19/02	KDS	02/22/02	1547	ECS	VG
SE/S/ICP	EPA 6010	03/01/02	SEK	03/04/02	0929	ECS	VG

1/28 02 – 2/3/02



Hazen Research, Inc.
 4601 Indiana St.
 Golden, CO 80403 USA
 Tel: (303) 279-4501
 Fax: (303) 278-1528

Date February 18 2002
 HRI Project 002-8IH
 HRI Series No. B48/02-1
 Date Rec'd. 02/06/02
 Cust. P.O.# 003-7556

Golder Associates Inc.
 Fawn Howard
 6241 NW 23rd St., Suite 500
 Gainesville, Florida 32653

Sample Identification
 SCG25

Reporting Basis >	As Rec'd	Dry	Air Dry
Proximate (%)			
Moisture	52.85	0.00	1.15
Ash	0.79	1.67	1.65
Volatile	40.95	86.85	85.85
Fixed C	5.41	11.48	11.35
Total	<u>100.00</u>	<u>100.00</u>	<u>100.00</u>
Sulfur	0.02	0.04	0.04
Btu/lb (HHV)	3799	8058	7965
MMF Btu/lb	3831	8205	
MAF Btu/lb		8194	
Air Dry Loss (%)		52.30	

Ultimate (%)			
Moisture	52.85	0.00	1.15
Carbon	23.01	48.79	48.23
Hydrogen	2.74	5.82	5.75
Nitrogen	0.17	0.35	0.35
Sulfur	0.02	0.04	0.04
Ash	0.79	1.67	1.65
Oxygen*	20.42	43.33	42.83
Total	<u>100.00</u>	<u>100.00</u>	<u>100.00</u>

Chlorine**

Forms of Sulfur (as S.%)		Lb. Alkali/MM Btu=	
Sulfate		Lb. Ash/MM Btu=	2.07
Pyritic		Lb. SO2/MM Btu=	0.10
Organic		HGI= @	% Moisture
Total	0.02	As Rec'd. Sp.Gr.=	
		Free Swelling Index=	
		Report Prepared By:	

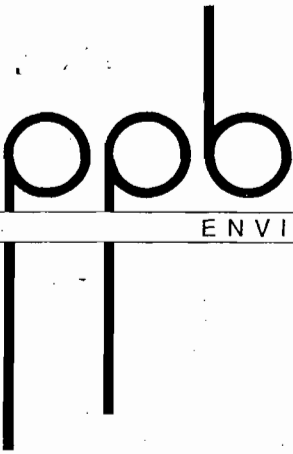
Water Soluble Alkalies (%)

Na2O
 K2O

Gerard H. Cunningham
 Gerard H. Cunningham
 Fuels Laboratory Supervisor

* Oxygen by Difference.

** Not usually reported as part of the ultimate analysis.



February 25, 2002

Ms. Fawn Howard
Golder Associates
6241 NW 23rd Street
Suite 500
Gainesville, FL 32653-1500

Dear Ms. Howard:

Enclosed are the analytical results for the Sugar Cane bagasse samples received January 9, 22, 29, and February 5, 2002.

All data were determined in accordance with published procedures (*EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, SW-846, December 1996, 3rd Edition incl. Updates I-III; and/or *Standard Methods for the Examination of Water and Wastewater*, 18th edition, revised 1992). Our laboratory is NELAP-certified by the Florida Department of Health (FDH No. E82001) and our CompQAP is approved by FDEP (No. 870017G).

If you have any questions concerning this report, please contact me.

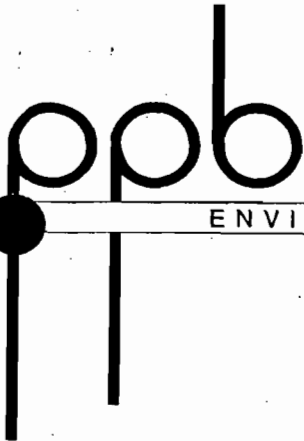
Sincerely,

Paul Berman
Project Manager

/cms

Enclosures

FEB 27 2002



REPORT OF ANALYSES (SN-00001241)

GOLDER ASSOCIATES, INC.
6241 NW 23RD STREET
SUITE 500
GAINESVILLE, FL 32653-1500
Attn: Ms. Fawn Howard

PROJECT NAME: ICCR BAGASSE
DATE: 02/22/02
FDH # E82001
DEP CQAP # 870017G

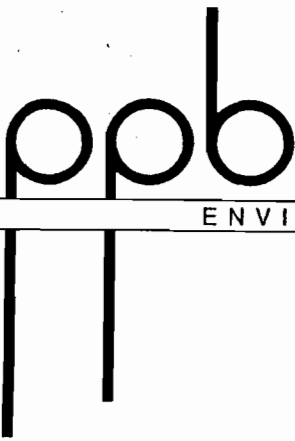
SAMPLES RECEIVED 2/5/02 (Page 1 of 2)

Table with 8 columns: CLIENT STATION ID, LAB NUMBER, %SOLIDS %, AS/S/ICP mg/kg, BE/S/ICP mg/kg, CD/S/ICP mg/kg, CR/S/ICP mg/kg, PB/S/ICP mg/kg. Rows include SCG 25 A, SCG 25 B DUPE, BRY 25, CLEW 25, and ASA 25.

U = Result below detection limit

PROJECT MANAGER

Handwritten signature of Paul Bernum



REPORT OF ANALYSES (SN-00001241)

GOLDER ASSOCIATES, INC.
6241 NW 23RD STREET
SUITE 500
GAINESVILLE, FL 32653-1500
Attn: Ms. Fawn Howard

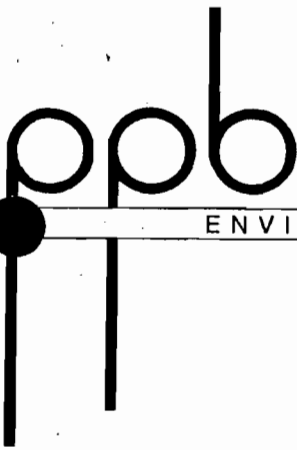
PROJECT NAME: ICCR BAGASSE
DATE: 02/22/02
FDH # E82001
DEP CQAP # 870017G

SAMPLES RECEIVED 2/5/02 (Page 2 of 2)

CLIENT STATION ID	LAB NUMBER	MN/S/ICP mg/kg	HG/S/CVAA mg/kg	NI/S/ICP mg/kg	SE/S/ICP mg/kg
SCG 25 A	218135	9.8	0.10 U	0.2	0.6
SCG 25 B DUPE	218136	8.0	0.10 U	0.2 U	0.6
BRY 25	218137	8.0	0.10 U	0.2 U	0.7
CLEW 25	218138	8.9	0.10 U	0.2 U	0.8
ASA 25	218139	10.7	0.10 U	0.2 U	0.8

U = Result below detection limit

PROJECT MANAGER Paul Bermin



QC REPORT FOR GOLDER ASSOCIATES, INC. 02/22/02 PAGE 1

TOTAL SOLIDS		%	VG Method: EPA 160.3 Alt. Method: None			
Duplicates						
PPB Number	Client ID		Value 1	Value 2	Range	% RSD QC Control Limit
218139	ASA 25		48.4	50.3	1.9	2.72 10.04

NO SPIKE QC DATA FOUND

NO REFERENCE QC DATA FOUND

ARSENIC IN SEDIMENT		mg/kg	VG Method: EPA 6010 Alt. Method: None			
Duplicates						
Number	Client ID		Value 1	Value 2	Range	% RSD QC Control Limit
218136	SCG 25 B DUPE		0.3	<0.3	0.15	47.14 53.05

Spikes

PPB Number	Client ID	Spike Recovery			% RSD	
		% MS	% MSD	Control Limits	% RSD	Control Limit
218137	BRY 25	88	70	62 TO 150	16.11	25.71
218137	BRY 25	99	---	62 TO 150	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1990	100	62 TO 158
SLCS-7916	75.2	64.2	85	66 TO 149



QC REPORT FOR GOLDER ASSOCIATES, INC. 02/22/02 PAGE 2

BERYLLIUM IN SED. mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
218136	SCG 25 B DUPE	<0.1	<0.1	0	0.00	NO DATA

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
218137	BRY 25	88	76	75 TO 117	10.35	15.28
218137	BRY 25	99	---	75 TO 117	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	2010	100	97 TO 105
SLCS-7916	44.6	52.2	85	97 TO 104

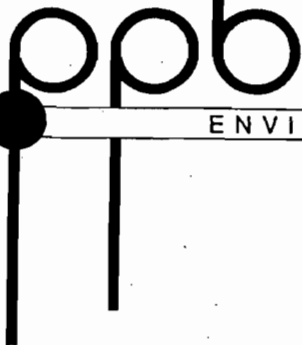
CADMIUM IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
218136	SCG 25 B DUPE	<0.1	<0.1	0	0.00	60.20

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
218137	BRY 25	91	82	69 TO 125	7.36	19.70
218137	BRY 25	98	---	69 TO 125	----	----



QC REPORT FOR GOLDER ASSOCIATES, INC. 02/22/02 PAGE 3

References

Reference ID	Target	Found	% Recovery	Control Limits
--------------	--------	-------	------------	----------------

ICV	2000	2000	100	62 TO 156
SLCS-7916	181	152	84	66 TO 148

CHROMIUM IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
------------	-----------	---------	---------	-------	-------	------------------

218136	SCG 25 B DUPE	<0.1	0.1	0.050	47.14	71.42
--------	---------------	------	-----	-------	-------	-------

Spike

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
------------	-----------	------	-------	-------------------------------	-------	---------------------

218137	BRY 25	86	74	79 TO 113	10.61	10.88
218137	BRY 25	98	---	79 TO 113	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
--------------	--------	-------	------------	----------------

ICV	2000	1990	100	39 TO 149
SLCS-7916	66.1	50.5	76	45 TO 144

LEAD IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
------------	-----------	---------	---------	-------	-------	------------------

218136	SCG 25 B DUPE	<0.3	<0.3	0	0.00	46.38
--------	---------------	------	------	---	------	-------



QC REPORT FOR GOLDER ASSOCIATES, INC. 02/22/02 PAGE 4

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
218137	BRY 25	86	77	69 TO 128	7.81	12.10
218137	BRY 25	98	---	69 TO 128	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	2010	100	21 TO 208
SLCS-7916	56.8	46.3	82	28 TO 195

MANGANESE IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
218136	SCG 25 B DUPE	7.7	8.3	0.60	5.30	35.57

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
218137	BRY 25	86	54	74 TO 130	32.32	18.55
218137	BRY 25	97	---	74 TO 130	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV	2000	1980	99	80 TO 113
SLCS-7916	157	119	76	83 TO 111



QC REPORT FOR GOLDER ASSOCIATES, INC. 02/22/02 PAGE 5

MERCURY IN SEDIMENT mg/kg VG Method: EPA 7471 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
218135	SCG 25 A	<0.022	<0.021	.00050	3.29	0.00
218138	CLEW 25	<0.021	<0.020	.00050	3.45	3.27

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
218136	SCG 25 B DUPE	100	---	51 TO 146	----	----
218139	ASA 25	90	---	54 TO 144	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
FISHER	0.50	0.54	109	5 TO 163
PP222	13.1	10.5	80	11 TO 165
PP222	13.1	14.0	107	16 TO 158

NICKEL IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
218136	SCG 25 B DUPE	<0.2	<0.2	0	0.00	72.37

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
218137	BRY 25	86	74	72 TO 112	10.61	12.59
218137	BRY 25	98	---	72 TO 112	----	----



QC REPORT FOR GOLDER ASSOCIATES, INC. 02/22/02 PAGE 6

References

Reference ID	Target	Found	% Recovery	Control Limits
--------------	--------	-------	------------	----------------

ICV	2000	1980	99	91 TO 107
SLCS-7916	101	84.7	84	93 TO 105

SELENIUM IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
------------	-----------	---------	---------	-------	-------	------------------

218136	SCG 25 B DUPE	0.7	0.5	0.20	23.57	36.46
--------	---------------	-----	-----	------	-------	-------

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
------------	-----------	------	-------	-------------------------------	-------	---------------------

218137	BRY 25	104	---	76 TO 136	----	----
--------	--------	-----	-----	-----------	------	------

References

Reference ID	Target	Found	% Recovery	Control Limits
--------------	--------	-------	------------	----------------

ICV	2000	1980	99	55 TO 168
SLCS-7916	62.5	57.1	91	59 TO 158



DATE, TIME, ANALYST REPORT

ANALYSIS	METHOD	PREP		ANALYSIS			MATRIX
		DATE	BY	DATE	TIME	BY	
%SOLIDS	EPA 160.3	/	/	02/11/02	1300	AJS	VG
AS/S/ICP	EPA 6010	02/08/02	ECS	02/11/02	1545	ECS	VG
BE/S/ICP	EPA 6010	02/08/02	ECS	02/11/02	1545	ECS	VG
CD/S/ICP	EPA 6010	02/08/02	ECS	02/11/02	1545	ECS	VG
CR/S/ICP	EPA 6010	02/08/02	ECS	02/11/02	1545	ECS	VG
HG/S/CVAA	EPA 7471	/	/	02/14/02	2050	MNR	VG
MN/S/ICP	EPA 6010	02/08/02	ECS	02/11/02	1545	ECS	VG
NI/S/ICP	EPA 6010	02/08/02	ECS	02/11/02	1545	ECS	VG
PB/S/ICP	EPA 6010	02/08/02	ECS	02/11/02	1545	ECS	VG
SE/S/ICP	EPA 6010	02/08/02	ECS	02/11/02	1545	ECS	VG

1/21/02 – 1/27/02



Hazen Research, Inc.
 4601 Indiana St. • Golden, CO 80403
 Tel: (303) 279-4501
 Fax: (303) 278-1528

Date February 11 2002
 HRI Project 002-8IH
 HRI Series No. A363/02-2
 Date Rec'd. 01/30/02
 Cust. P.O.# 003-7556

Golder Associates Inc.
 Fawn Howard
 6241 NW 23rd St., Suite 500
 Gainesville, Florida 32653

Sample Identification
 SCG129

Reporting Basis > As Rec'd Dry Air Dry

Proximate (%)

Moisture	54.22	0.00	0.99
Ash	0.57	1.25	1.24
Volatile	40.11	87.61	86.74
Fixed C	5.10	11.14	11.03
Total	100.00	100.00	100.00

Sulfur	0.02	0.04	0.04
Btu/lb (HHV)	3707	8097	8017
MMF Btu/lb	3730	8208	
MAF Btu/lb		8200	
Air Dry Loss (%)		53.76	

Ultimate (%)

Moisture	54.22	0.00	0.99
Carbon	22.27	48.65	48.17
Hydrogen	2.58	5.62	5.57
Nitrogen	0.18	0.38	0.38
Sulfur	0.02	0.04	0.04
Ash	0.57	1.25	1.24
Oxygen*	20.16	44.06	43.61
Total	100.00	100.00	100.00

Chlorine**

Forms of Sulfur (as S,%)

Sulfate		
Pyritic		
Organic		
Total	0.02	0.04

Lb. Alkali/MM Btu=
 Lb. Ash/MM Btu= 1.55
 Lb. SO2/MM Btu= 0.10
 HGI= @ % Moisture
 As Rec'd. Sp.Gr.=
 Free Swelling Index=

Report Prepared By:

Water Soluble Alkalies (%)

Na2O
 K2O

Gerard H. Cunningham
 Fuels Laboratory Supervisor

* Oxygen by Difference.

** Not usually reported as part of the ultimate analysis.



February 25, 2002

Ms. Fawn Howard
Golder Associates
6241 NW 23rd Street
Suite 500
Gainesville, FL 32653-1500

Dear Ms. Howard:

Enclosed are the analytical results for the Sugar Cane bagasse samples received January 9, 22, 29, and February 5, 2002.

All data were determined in accordance with published procedures (*EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, SW-846, December 1996, 3rd Edition incl. Updates I-III; and/or *Standard Methods for the Examination of Water and Wastewater*, 18th edition, revised 1992). Our laboratory is NELAP-certified by the Florida Department of Health (FDH No. E82001) and our CompQAP is approved by FDEP (No. 870017G).

If you have any questions concerning this report, please contact me.

Sincerely,

Paul Berman
Project Manager

/cms

Enclosures

FEB 27 2002



REPORT OF ANALYSES (SN-00001218)

GOLDER ASSOCIATES, INC.
6241 NW 23RD STREET
SUITE 500
GAINESVILLE, FL 32653-1500
Attn: MR. RICK STRANSKY

PROJECT NAME: GOLDER ICCR
DATE: 02/15/02
FDH # E82001
DEP CQAP # 870017G

SAMPLES RECEIVED 1/29/02 (Page 1 of 2)

Table with columns: LAB No., SAMPLE DATE, TIME, SAMPLER, DELIVERY TO LAB DATE, TIME MATRIX. Rows include sample numbers 217568, 217569, and 217570.

CLIENT STATION ID: CLEW129 SCG129 BRY129
LAB #: 217568 217569 217570

Table with columns: ANALYSIS, UNITS, METHOD, and values for three stations (CLEW129, SCG129, BRY129). Rows include %SOLIDS, AS/S/ICP, BE/S/ICP, CD/S/ICP, CR/S/ICP, PB/S/ICP, MN/S/ICP, HG/S/CVAA, NI/S/ICP, SE/S/ICP.

U = Result below detection limit

SAMPLES PREPPED AND ANALYZED FOLLOWING SW846 METHODS

PROJECT MANAGER [Signature]



REPORT OF ANALYSES (SN-00001218)

GOLDER ASSOCIATES, INC.
6241 NW 23RD STREET
SUITE 500
GAINESVILLE, FL 32653-1500
Attn: MR. RICK STRANSKY

PROJECT NAME: GOLDER ICCR
DATE: 02/15/02
FDH # E82001
DEP CQAP # 870017G

SAMPLES RECEIVED 1/29/02 (Page 2 of 2)

Table with columns: LAB No., SAMPLE DATE, SAMPLE TIME, SAMPLER, DELIVERY TO LAB DATE, DELIVERY TO LAB TIME MATRIX. Rows include sample numbers 217571 and 217572, dates 01/29/02, and samplers MILL PERSONNEL.

CLIENT STATION ID: ASA129a ASA129b DUPE
LAB #: 217571 217572

Table with columns: ANALYSIS, UNITS, METHOD, ASA129a, ASA129b DUPE. Lists various analyses like %SOLIDS, AS/S/ICP, BE/S/ICP, etc., with their respective units and methods, and corresponding results for the two stations.

U = Result below detection limit

SAMPLES PREPPED AND ANALYZED FOLLOWING SW846 METHODS

PROJECT MANAGER

Handwritten signature of Paul Berni



QC REPORT FOR GOLDR ASSOCIATES, INC. 02/15/02 PAGE 1

TOTAL SOLIDS	%	VG	Method: EPA 160.3	Alt. Method: None			
Duplicates							
PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control	Limit
217571	ASA129a	43.4	45.6	2.2	3.50	13.75	
NO SPIKE QC DATA FOUND							
NO REFERENCE QC DATA FOUND							

ARSENIC IN SEDIMENT	mg/kg	VG	Method: EPA 6010	Alt. Method: None			
Duplicates							
PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control	Limit
217568	CLEW129	0.5	0.5	0	0.00	54.25	
Spikes							
PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	QC Control	Limit
217569	SCG129	92	82	65 TO 150	8.13	26.90	
References							
Reference ID	Target	Found	% Recovery	Control	Limits		
ICV AS	2000	2050	102	52	TO 175		

BERYLLIUM IN SED.	mg/kg	VG	Method: EPA 6010	Alt. Method: None			
Duplicates							
PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control	Limit
217568	CLEW129	<0.1	<0.1	0	0.00	NO DATA	
Spikes							
PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	QC Control	Limit
217569	SCG129	91	80	91 TO 107	9.10	5.35	
217569	SCG129	98	---	91 TO 107	----	----	



References

Reference ID	Target	Found	% Recovery	Control Limits
ICV BE	2000	2030	102	NO DATA

CADMIUM IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Limit	Value 1	Value 2	Range	% RSD	QC Control
217568	CLEW129		<0.1	<0.1	0	0.00	65.47

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery		% RSD	
				Control Limits	% RSD	Control Limit	% RSD
217569	SCG129	92	78	76 TO 124	11.65	5.81	
217569	SCG129	94	---	76 TO 124	----	----	

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV CD	2000	2040	102	51 TO 174

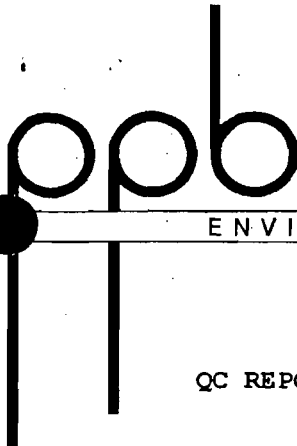
CHROMIUM IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Limit	Value 1	Value 2	Range	% RSD	QC Control
217568	CLEW129		0.2	0.3	0.10	28.28	72.26

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery		% RSD	
				Control Limits	% RSD	Control Limit	% RSD
217569	SCG129	88	79	90 TO 106	7.62	5.53	
217569	SCG129	96	---	90 TO 106	----	----	



QC REPORT FOR GOLDER ASSOCIATES, INC. 02/15/02 PAGE 3

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV CR	2000	2020	101	30 TO 154

LEAD IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
217568	CLEW129	<0.3	<0.3	0	0.00	48.57

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
217569	SCG129	90	88	71 TO 130	1.59	12.15

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV PB	2000	2040	102	8 TO 229

MANGANESE IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
217568	CLEW129	6.3	8.1	1.8	17.68	32.62

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
217569	SCG129	88	---	81 TO 127	----	----



QC REPORT FOR GOLDER ASSOCIATES, INC. 02/15/02 PAGE 4

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV MN	2000	2000	100	75 TO 114

MERCURY IN SEDIMENT mg/kg VG Method: EPA 7471 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
------------	-----------	---------	---------	-------	-------	------------------

217568	CLEW129	<0.10	<0.10	0	0.00	0.00
--------	---------	-------	-------	---	------	------

Spikes

PPB Number	Client ID	Spike Recovery		% RSD	
		% MS	% MSD Control Limits	% RSD	Control Limit
217569	SCG129	99	49 TO 149	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
MS2710	32.6	34.6	106	-2 TO 159

NICKEL IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
------------	-----------	---------	---------	-------	-------	------------------

217568	CLEW129	<0.2	<0.2	0	0.00	81.80
--------	---------	------	------	---	------	-------

Spikes

PPB Number	Client ID	Spike Recovery		% RSD	
		% MS	% MSD Control Limits	% RSD	Control Limit
217569	SCG129	85	88 TO 102	8.84	5.49
217569	SCG129	92	88 TO 102	----	----



QC REPORT FOR GOLDR ASSOCIATES, INC. 02/15/02 PAGE 5

References

Reference ID Target Found % Recovery Control Limits

ICV NI 2000 2020 101 NO DATA

SELENIUM IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number Client ID Value 1 Value 2 Range % RSD QC Control Limit

217568 CLEW129 0.7 0.7 0 0.00 37.26

Spikes

PPB Number Client ID % MS % MSD Spike Recovery Control Limits % RSD Control Limit

217569 SCG129 98 87 85 TO 134 8.41 7.33
217569 SCG129 101 --- 85 TO 134 ---- ----

References

Reference ID Target Found % Recovery Control Limits

ICV SE 2000 2050 102 44 TO 188



DATE, TIME, ANALYST REPORT

ANALYSIS	METHOD	PREP		ANALYSIS			
		DATE	BY	DATE	TIME	BY	MATRIX
%SOLIDS	EPA 160.3	/	/	02/04/02	1500	AJS	VG
AS/S/ICP	EPA 6010	02/01/02	ECS	02/05/02	2134	ECS	VG
BE/S/ICP	EPA 6010	02/01/02	ECS	02/05/02	2134	ECS	VG
CD/S/ICP	EPA 6010	02/01/02	ECS	02/05/02	2134	ECS	VG
CR/S/ICP	EPA 6010	02/01/02	ECS	02/05/02	2134	ECS	VG
HG/S/CVAA	EPA 7471	/	/	02/04/02	0930	AMW	VG
MN/S/ICP	EPA 6010	02/01/02	ECS	02/05/02	2134	ECS	VG
NI/S/ICP	EPA 6010	02/01/02	ECS	02/05/02	2134	ECS	VG
PB/S/ICP	EPA 6010	02/01/02	ECS	02/05/02	2134	ECS	VG
SE/S/ICP	EPA 6010	02/01/02	ECS	02/05/02	2134	ECS	VG

1/14/02 – 1/20/02



Hazen Research, Inc.
 4601 Indiana St. • Golden, CO 80403
 Tel: (303) 279-4501
 Fax: (303) 278-1528

Date February 4 2002
 HRI Project 002-8IH
 HRI Series No. A267/02-3
 Date Rec'd. 01/23/02
 Cust. P.O.# 003-7556

Golder Associates Inc.
 Fawn Howard
 6241 NW 23rd St., Suite 500
 Gainesville, Florida 32653

Sample Identification
 Sugar Cane Growers
 Corp 01/22/02

Reporting Basis >	As Rec'd	Dry	Air Dry
Proximate (%)			
Moisture	54.37	0.00	1.26
Ash	0.63	1.38	1.36
Volatile	39.50	86.57	85.48
Fixed C	5.50	12.05	11.90
Total	100.00	100.00	100.00
Sulfur	0.02	0.05	0.05
Btu/lb (HHV)	3704	8117	8015
MMF Btu/lb	3728	8239	
MAF Btu/lb		8230	
Air Dry Loss (%)		53.79	

Ultimate (%)			
Moisture	54.37	0.00	1.26
Carbon	22.45	49.20	48.58
Hydrogen	2.65	5.81	5.74
Nitrogen	0.17	0.36	0.36
Sulfur	0.02	0.05	0.05
Ash	0.63	1.38	1.36
Oxygen*	19.71	43.20	42.65
Total	100.00	100.00	100.00

Chlorine**

Forms of Sulfur (as S,%)

Sulfate		
Pyritic		
Organic		
Total	0.02	0.05

Lb. Alkali/MM Btu=
 Lb. Ash/MM Btu= 1.70
 Lb. SO₂/MM Btu= 0.12
 HGI= @ % Moisture
 As Rec'd. Sp.Gr.=
 Free Swelling Index=

Report Prepared By:

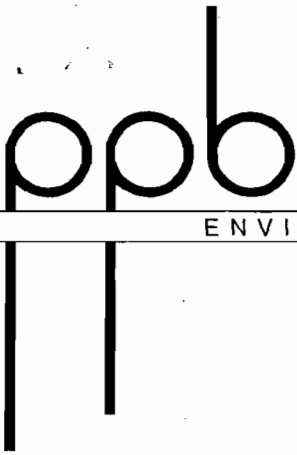
Water Soluble Alkalies (%)

Na₂O
 K₂O

Gerard H. Cunningham
 Fuels Laboratory Supervisor

* Oxygen by Difference.

** Not usually reported as part of the ultimate analysis.



February 25, 2002

Ms. Fawn Howard
Golder Associates
6241 NW 23rd Street
Suite 500
Gainesville, FL 32653-1500

Dear Ms. Howard:

Enclosed are the analytical results for the Sugar Cane bagasse samples received January 9, 22, 29, and February 5, 2002.

All data were determined in accordance with published procedures (*EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, SW-846, December 1996; 3rd Edition incl. Updates I-III; and/or *Standard Methods for the Examination of Water and Wastewater*, 18th edition, revised 1992). Our laboratory is NELAP-certified by the Florida Department of Health (FDH No. E82001) and our CompQAP is approved by FDEP (No. 870017G).

If you have any questions concerning this report, please contact me.

Sincerely,

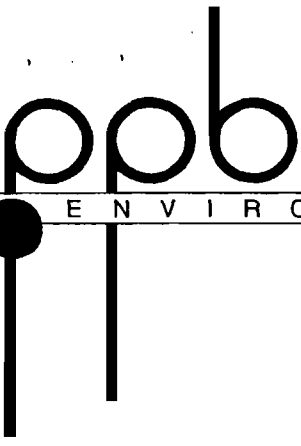
A handwritten signature in black ink that reads 'Paul Berman'. The signature is fluid and cursive, with a long horizontal stroke at the end.

Paul Berman
Project Manager

/cms

Enclosures

FEB 27 2002



REPORT OF ANALYSES (SN-00001216)

GOLDER ASSOCIATES, INC.
6241 NW 23RD STREET
SUITE 500
GAINESVILLE, FL 32653-1500
Attn.: Ms. Fawn Howard

PROJECT NAME: GOLDER 1/11/02
DATE: 02/15/02
FDH # E82001
DEP CQAP # 870017G

SAMPLE RECEIVED 1/9/02 (Page 1 of 1)

LAB No. SAMPLE DATE TIME SAMPLER DELIVERY TO LAB DATE TIME MATRIX
216807 01/04/02 CLIENT 01/09/02 1000 VG

CLIENT STATION ID: BAGASSE SAMPLE
1/4/02
LAB #: 216807

Table with 4 columns: ANALYSIS, UNITS, METHOD, and results. Rows include TOTAL SOLIDS, ARSENIC IN SEDIMENT, BERYLLIUM IN SED., CADMIUM IN SEDIMENT, CHROMIUM IN SEDIMENT, LEAD IN SEDIMENT, MANGANESE IN SEDIMENT, MERCURY IN SEDIMENT, NICKEL IN SEDIMENT, and SELENIUM IN SEDIMENT.

U = Result below detection limit
Q = Result analyzed out of holding time

SAMPLE PREPPED AND ANALYZED FOLLOWING SW846 METHODS

PROJECT MANAGER Paul Beinn



REPORT OF ANALYSES (SN-00001217)

GOLDER ASSOCIATES, INC.
6241 NW 23RD STREET
SUITE 500
GAINESVILLE, FL 32653-1500
Attn: Ms. Fawn Howard

PROJECT NAME: GOLDER 1/22/02
DATE: 02/15/02
FDH # E82001
DEP CQAP # 870017G

SAMPLES RECEIVED 1/22/02 (Page 1 of 2)

Table with columns: LAB No., SAMPLE DATE, TIME, SAMPLER, DELIVERY TO LAB DATE, TIME MATRIX. Rows include samples 217215, 217216, and 217217 from GOLDER, ATLANTIC SUGAR, and SUGAR CANE GROWERS COOP.

CLIENT STATION ID: US SUGAR BRYANT ATLANTIC SUGAR SUGAR CANE GROWERS COOP

Table with columns: ANALYSIS, UNITS, METHOD, LAB #: 217215, 217216, 217217. Lists various chemical analyses like %SOLIDS, AS/S/ICP, BE/S/ICP, etc., with their respective units and results.

U = Result below detection limit

SAMPLES PREPPED AND ANALYZED FOLLOWING SW846 METHODS

PROJECT MANAGER Paul Bern



REPORT OF ANALYSES (SN-00001217)

GOLDER ASSOCIATES, INC.
6241 NW 23RD STREET
SUITE 500
GAINESVILLE, FL 32653-1500
Attn: Ms. Fawn Howard

PROJECT NAME: GOLDER 1/22/02
DATE: 02/15/02
FDH # E82001
DEP CQAP # 870017G

SAMPLES RECEIVED 1/22/02 (Page 2 of 2)

Table with columns: LAB No., DATE, TIME, SAMPLER, DELIVERY TO LAB DATE, TIME MATRIX. Rows include 217218 and 217219 with samplers US SUGAR CLEWISTON.

CLIENT STATION ID: USS CLEWISTON USS CLEWISTON D UPE

Table with columns: ANALYSIS, UNITS, METHOD, LAB #: 217218, 217219. Rows include %SOLIDS, AS/S/ICP, BE/S/ICP, CD/S/ICP, CR/S/ICP, PB/S/ICP, MN/S/ICP, HG/S/CVAA, NI/S/ICP, SE/S/ICP.

U = Result below detection limit

SAMPLES PREPPED AND ANALYZED FOLLOWING SW846 METHODS

PROJECT MANAGER [Signature]



QC REPORT FOR GOLDER ASSOCIATES, INC. 02/15/02 PAGE 1

TOTAL SOLIDS % VG Method: EPA 160.3 Alt. Method: None

Duplicates
 PPB Number Client ID Value 1 Value 2 Range % RSD QC Control
 Limit

217218 USS CLEWISTON 50.2 48.6 1.6 2.29 NO DATA

NO SPIKE QC DATA FOUND

NO REFERENCE QC DATA FOUND

ARSENIC IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates
 PPB Number Client ID Value 1 Value 2 Range % RSD QC Control
 Limit

217215 US SUGAR BRYANT 0.9 1.1 0.20 14.14 57.05

Spikes

PPB Number Client ID % MS % MSD Spike Recovery % RSD
 Control Limits% RSD Control Limit

217217 SUGAR CANE GROWERS COOP 105 107 63 TO 152 1.33 27.72

References
 Reference ID Target Found % Recovery Control Limits

ICV AS 2000 2050 102 52 TO 175

BERYLLIUM IN SED. mg/kg VG Method: EPA 6010 Alt. Method: None

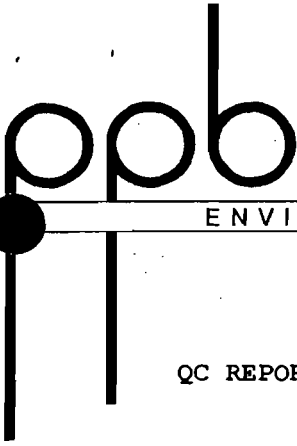
Duplicates
 PPB Number Client ID Value 1 Value 2 Range % RSD QC Control
 Limit

217215 US SUGAR BRYANT <0.1 <0.1 0 0.00 NO DATA

Spikes

PPB Number Client ID % MS % MSD Spike Recovery % RSD
 Control Limits% RSD Control Limit

217217 SUGAR CANE GROWERS COOP 101 102 90 TO 106 0.70 6.57



QC REPORT FOR GOLDER ASSOCIATES, INC. 02/15/02 PAGE 2

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV BE	2000	2030	102	NO DATA

CADMIUM IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
217215	US SUGAR BRYANT	<0.1	<0.1	0	0.00	72.34

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
217217	SUGAR CANE GROWERS COOP	100	96	74 TO 127	2.89	3.90

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV CD	2000	2040	102	51 TO 174

CHROMIUM IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
217215	US SUGAR BRYANT	0.2	0.2	0	0.00	76.17

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
217217	SUGAR CANE GROWERS COOP	99	100	89 TO 106	0.71	6.14

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV CR	2000	2020	101	30 TO 154



Q: REPORT FOR GOLDER ASSOCIATES, INC. 02/15/02 PAGE 3

LEAD IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Table with columns: Duplicates, PPB Number, Client ID, Value 1, Value 2, Range, % RSD, QC Control Limit. Row: 217215 US SUGAR BRYANT <0.5 <0.4 0.050 15.71 51.72

Spikes

Table with columns: PPB Number, Client ID, % MS, % MSD, Spike Recovery Control Limits, % RSD, Control Limit. Row: 217217 SUGAR CANE GROWERS COOP 97 106 68 TO 133 6.27 13.64

References

Table with columns: Reference ID, Target, Found, % Recovery, Control Limits. Row: ICV PB 2000 2040 102 8 TO 229

MANGANESE IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Table with columns: Duplicates, PPB Number, Client ID, Value 1, Value 2, Range, % RSD, QC Control Limit. Row: 217215 US SUGAR BRYANT 11.6 14.8 3.2 17.14 7.26

Spikes

Table with columns: PPB Number, Client ID, % MS, % MSD, Spike Recovery Control Limits, % RSD, Control Limit. Row: 217217 SUGAR CANE GROWERS COOP 92 104 88 TO 126 8.66 NO DATA

References

Table with columns: Reference ID, Target, Found, % Recovery, Control Limits. Row: ICV MN 2000 2000 100 75 TO 114

MERCURY IN SEDIMENT mg/kg VG Method: EPA 7471 Alt. Method: None

Table with columns: Duplicates, PPB Number, Client ID, Value 1, Value 2, Range, % RSD, QC Control Limit. Row: 217215 US SUGAR BRYANT <0.10 <0.10 0 0.00 0.00



QC REPORT FOR GOLDER ASSOCIATES, INC. 02/15/02 PAGE 4

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
217216	ATLANTIC SUGAR	96	---	46 TO 152	----	----

References

Reference ID	Target	Found	% Recovery	Control Limits
MS2710	32.6	34.6	106	-2 TO 159

NICKEL IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
217215	US SUGAR BRYANT	<0.4	<0.4	0	0.00	95.70

Spikes

PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
217217	SUGAR CANE GROWERS COOP	96	98	87 TO 102	1.46	5.15

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV NI	2000	2020	101	NO DATA

SELENIUM IN SEDIMENT mg/kg VG Method: EPA 6010 Alt. Method: None

Duplicates

PPB Number	Client ID	Value 1	Value 2	Range	% RSD	QC Control Limit
217215	US SUGAR BRYANT	1.3	1.1	0.20	11.79	42.95

Spikes

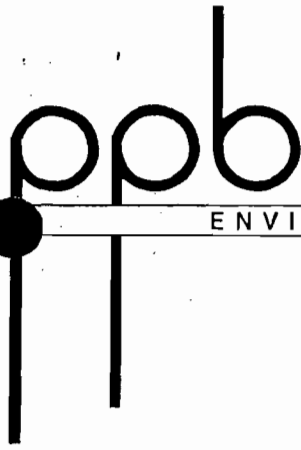
PPB Number	Client ID	% MS	% MSD	Spike Recovery Control Limits	% RSD	% RSD Control Limit
217217	SUGAR CANE GROWERS COOP	118	120	83 TO 130	1.19	7.98
217217	SUGAR CANE GROWERS COOP	110	---	83 TO 130	----	----



QC REPORT FOR GOLDER ASSOCIATES, INC. 02/15/02 PAGE 5

References

Reference ID	Target	Found	% Recovery	Control Limits
ICV SE	2000	2050	102	44 TO 188



DATE, TIME, ANALYST REPORT

ANALYSIS	METHOD	PREP		ANALYSIS			MATRIX
		DATE	BY	DATE	TIME	BY	
%SOLIDS	EPA 160.3	/	/	01/24/02	1700	AJS	VG
AS/S/ICP	EPA 6010	01/22/02	ECS	02/05/02	2134	ECS	VG
BE/S/ICP	EPA 6010	01/22/02	ECS	02/05/02	2134	ECS	VG
CD/S/ICP	EPA 6010	01/22/02	ECS	02/05/02	2134	ECS	VG
CR/S/ICP	EPA 6010	01/22/02	ECS	02/05/02	2134	ECS	VG
HG/S/CVAA	EPA 7471	/	/	02/04/02	0930	AMW	VG
MN/S/ICP	EPA 6010	01/22/02	ECS	02/05/02	2134	ECS	VG
NI/S/ICP	EPA 6010	01/22/02	ECS	02/05/02	2134	ECS	VG
PB/S/ICP	EPA 6010	01/22/02	ECS	02/05/02	2134	ECS	VG
SE/S/ICP	EPA 6010	01/22/02	ECS	02/05/02	2134	ECS	VG

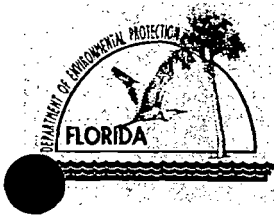
APPENDIX B

MODEL INPUT AND OUTPUT DATA

APPENDIX C

TITLE V REVISION APPLICATION PAGES

APPLICATION FOR AIR PERMIT – LONG FORM



Department of Environmental Protection

Division of Air Resource Management

APPLICATION FOR AIR PERMIT - LONG FORM

I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for an air construction permit at a facility operating under a federally enforceable state air operation permit (FESOP) or Title V air permit. Also use this form to apply for an air construction permit:

- For a proposed project subject to prevention of significant deterioration (PSD) review, nonattainment area (NAA) new source review, or maximum achievable control technology (MACT) review; or
- Where the applicant proposes to assume a restriction on the potential emissions of one or more pollutants to escape a federal program requirement such as PSD review, NAA new source review, Title V, or MACT; or
- Where the applicant proposes to establish, revise, or renew a plantwide applicability limit (PAL).

Air Operation Permit – Use this form to apply for:

- An initial federally enforceable state air operation permit (FESOP); or
- An initial/revised/renewal Title V air operation permit.

Air Construction Permit & Title V Air Operation Permit (Concurrent Processing Option) – Use this form to apply for both an air construction permit and a revised or renewal Title V air operation permit incorporating the proposed project.

To ensure accuracy, please see form instructions.

Identification of Facility

1. Facility Owner/Company Name: Sugar Cane Growers Cooperative of Florida	
2. Site Name: Glades Sugar House	
3. Facility Identification Number: 0990026	
4. Facility Location...: Street Address or Other Locator: 1500 West Sugar House Road City: Belle Glade County: Palm Beach Zip Code: 33430-0666	
5. Relocatable Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Existing Title V Permitted Facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Application Contact

1. Application Contact Name: Kathy Lockhart	
2. Application Contact Mailing Address... Organization/Firm: Sugar Cane Growers Cooperative of Florida Street Address: 1500 West Sugar House Road / P.O. Box 666 City: Belle Glade State: FL Zip Code: 33430-0666	
3. Application Contact Telephone Numbers... Telephone: (516) 996-4779 ext. Fax: (561) 996-4780	
4. Application Contact Email Address: kdlockhart@scgc.com	

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	3. PSD Number (if applicable):
2. Project Number(s):	4. Siting Number (if applicable):

APPLICATION INFORMATION

Purpose of Application

This application for air permit is submitted to obtain: (Check one)

Air Construction Permit

- Air construction permit.
- Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL).
- Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL), and separate air construction permit to authorize construction or modification of one or more emissions units covered by the PAL.

Air Operation Permit

- Initial Title V air operation permit.
- Title V air operation permit revision.
- Title V air operation permit renewal.
- Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.
- Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

**Air Construction Permit and Revised/Renewal Title V Air Operation Permit
(Concurrent Processing)**

- Air construction permit and Title V permit revision, incorporating the proposed project.
- Air construction permit and Title V permit renewal, incorporating the proposed project.

Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C. In such case, you must also check the following box:

- I hereby request that the department waive the processing time requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.

Application Comment

This application is to incorporate into the Title V permit the controlling process parameters used in the health-based compliance alternative (HBCA) under 40 CFR 63, Subpart DDDDD.

APPLICATION INFORMATION

Owner/Authorized Representative Statement

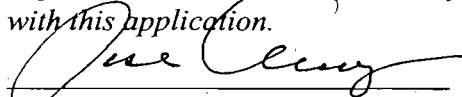
Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name :
2. Owner/Authorized Representative Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Owner/Authorized Representative Telephone Numbers... Telephone: () ext. Fax:
4. Owner/Authorized Representative Email Address:
5. Owner/Authorized Representative Statement: <i>I, the undersigned, am the owner or authorized representative of the facility addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other requirements identified in this application to which the facility is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit.</i> _____ Signature Date

APPLICATION INFORMATION

Application Responsible Official Certification

Complete if applying for an initial/revised/renewal Title V permit or concurrent processing of an air construction permit and a revised/renewal Title V permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

1. Application Responsible Official Name: Jose F. Alvarez, Senior Vice President, Planning and Operations
2. Application Responsible Official Qualification (Check one or more of the following options, as applicable): <input checked="" type="checkbox"/> For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C. <input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively. <input type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. <input type="checkbox"/> The designated representative at an Acid Rain source.
3. Application Responsible Official Mailing Address... Organization/Firm: Sugar Cane Growers Cooperative of Florida Street Address: 1500 West Sugar House Road / P.O. Box 666 City: Belle Glade State: FL Zip Code: 33430-0666
4. Application Responsible Official Telephone Numbers... Telephone: (561) 996-4759 ext. Fax: (561) 996-4747
5. Application Responsible Official Email Address: jfalvarez@scgc.com
6. Application Responsible Official Certification: <i>I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.</i>  Signature _____ Date <u>9/12/06</u>

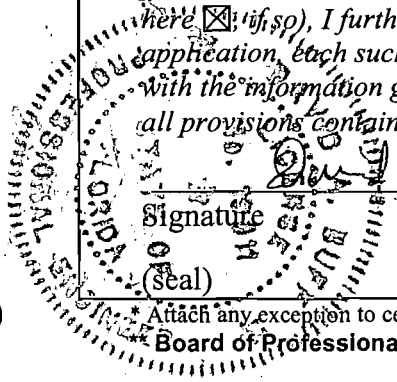
APPLICATION INFORMATION

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> <p>(1) <i>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></p> <p>(2) <i>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></p> <p>(3) <i>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></p> <p>(4) <i>If the purpose of this application is to obtain an air construction permit (check here <input 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></p> <p>(5) <i>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 checked="" 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></p>

Signature David A. Buff

Date 9/13/06



Attach any exception to certification statement.
Board of Professional Engineers Certificate of Authorization #00001670

Facility Regulatory Classifications

Check all that would apply *following* completion of all projects and implementation of all other changes proposed in this application for air permit. Refer to instructions to distinguish between a “major source” and a “synthetic minor source.”

1. <input type="checkbox"/> Small Business Stationary Source	<input type="checkbox"/> Unknown
2. <input type="checkbox"/> Synthetic Non-Title V Source	
3. <input checked="" type="checkbox"/> Title V Source	
4. <input checked="" type="checkbox"/> Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5. <input type="checkbox"/> Synthetic Minor Source of Air Pollutants, Other than HAPs	
6. <input checked="" type="checkbox"/> Major Source of Hazardous Air Pollutants (HAPs)	
7. <input type="checkbox"/> Synthetic Minor Source of HAPs	
8. <input type="checkbox"/> One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9. <input type="checkbox"/> One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10. <input checked="" type="checkbox"/> One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11. <input type="checkbox"/> Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	
12. Facility Regulatory Classifications Comment:	

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
Sulfur Dioxide (SO ₂)	A	Y
Volatile Organic Compounds (VOC)	A	N
Particulate Matter (PM)	A	N
Particulate Matter (PM ₁₀)	A	N
Carbon Monoxide (CO)	A	N
Nitrogen Oxides (NO _x)	A	N
Hydrochloric Acid (H106)	A	N
Methanol (H115)	A	N
Napthalene (H132)	A	N
Polycyclic Organic Matter (H151)	A	N
Total HAPs (HAPs)	A	N
Mercury (H114)	B	N
Manganese Compounds (H113)	A	N

C. FACILITY ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Facility Plot Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: September 2005
2. Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: September 2005
3. Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: September 2005

Additional Requirements for Air Construction Permit Applications

1. Area Map Showing Facility Location: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable (existing permitted facility)
2. Description of Proposed Construction, Modification, or Plantwide Applicability Limit (PAL): <input type="checkbox"/> Attached, Document ID: _____
3. Rule Applicability Analysis: <input type="checkbox"/> Attached, Document ID: _____
4. List of Exempt Emissions Units (Rule 62-210.300(3), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable (no exempt units at facility)
5. Fugitive Emissions Identification: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
6. Air Quality Analysis (Rule 62-212.400(7), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
7. Source Impact Analysis (Rule 62-212.400(5), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
8. Air Quality Impact since 1977 (Rule 62-212.400(4)(e), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
9. Additional Impact Analyses (Rules 62-212.400(8) and 62-212.500(4)(e), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

Additional Requirements for FESOP Applications

1. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.):
 Attached, Document ID: _____ Not Applicable (no exempt units at facility)

Additional Requirements for Title V Air Operation Permit Applications

1. List of Insignificant Activities (Required for initial/renewal applications only):
 Attached, Document ID: _____ Not Applicable (revision application)
2. Identification of Applicable Requirements (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought):
 Attached, Document ID: _____
 Not Applicable (revision application with no change in applicable requirements)
3. Compliance Report and Plan (Required for all initial/revision/renewal applications):
 Attached, Document ID: **GSH-FI-CV3**
Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing.
4. List of Equipment/Activities Regulated under Title VI (If applicable, required for initial/renewal applications only):
 Attached, Document ID: _____
 Equipment/Activities On site but Not Required to be Individually Listed
 Not Applicable
5. Verification of Risk Management Plan Submission to EPA (If applicable, required for initial/renewal applications only) :
 Attached, Document ID: _____ Not Applicable
6. Requested Changes to Current Title V Air Operation Permit:
 Attached, Document ID: _____ Not Applicable

Additional Requirements Comment

[Empty box for additional requirements comment]

ATTACHMENT GSH-FI-CV3

COMPLIANCE REPORT AND PLAN

ATTACHMENT GSH-FI-CV3

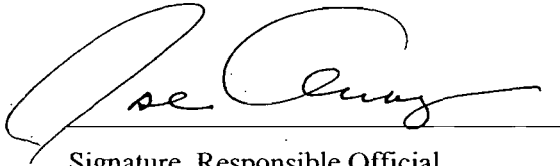
COMPLIANCE REPORT AND PLAN

Sugar Cane Growers Cooperative of Florida certifies, based on information and belief formed after reasonable inquiry, that it is in compliance with each federal, state, and local applicable requirement addressed in this Title V air permit revision application as of the date of this application.

COMPLIANCE CERTIFICATION

I, the undersigned, am the responsible official as defined in Chapter 62-210, F.A.C., of the Title V source for which this report is being submitted. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made and data contained in this report are true, accurate, and complete.

A compliance statement will be submitted with the annual operating report by March 1 of each year.



Signature, Responsible Official

9/12/06

Date

Jose F. Alvarez, Senior Vice President, Planning and Operations

Name and Title (please print)

EMISSIONS UNIT INFORMATION

Section [1]

Boiler No. 1

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application – For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application – For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an “unregulated emissions unit” does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

Section [1]

Boiler No. 1

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:

Boiler No. 1

3. Emissions Unit Identification Number: **001**

4. Emissions Unit Status Code: A	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: 20	8. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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9. Package Unit:
Manufacturer:

Model Number:

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:

This boiler has a water-cooled, pin-hole, traveling grate, and is fired by bagasse, residue, and fuel oil. This emission unit produces steam for use in the production of raw sugar cane.

EMISSIONS UNIT INFORMATION

Section [1]

Boiler No. 1

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

**Multiple Cyclone Dust Collector
Impingement Wet Scrubber**

2. Control Device or Method Code(s): **121, 002**

EMISSIONS UNIT INFORMATION

Section [1]

Boiler No. 1

C. EMISSION POINT (STACK/VENT) INFORMATION

(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: Blr 1		2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: V	6. Stack Height: 150 feet	7. Exit Diameter: 7.0 feet	
8. Exit Temperature: 156 °F	9. Actual Volumetric Flow Rate: 90,000 acfm	10. Water Vapor: 29 %	
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Stack parameters based on 2005-2006 crop season stack test.			

EMISSIONS UNIT INFORMATION

Section [1]

Boiler No. 1

D. SEGMENT (PROCESS/FUEL) INFORMATION**Segment Description and Rate: Segment 1 of 4**

1. Segment Description (Process/Fuel Type): External Combustion Boilers: Industrial: Bagasse		
2. Source Classification Code (SCC): 1-02-011-01		3. SCC Units: Tons Burned
4. Maximum Hourly Rate: 20.881	5. Maximum Annual Rate: 121,615	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.08, dry	8. Maximum % Ash: 2.6, dry	9. Million Btu per SCC Unit: 16
10. Segment Comment: Tons burned on dry basis, based on 334.1 MMBtu/hr (1-hr average) and a heating value of 8,000 Btu/lb (dry) for bagasse. Maximum annual rate based on 266.7 MMBtu/hr. (24 hr. average).		

Segment Description and Rate: Segment 2 of 4

1. Segment Description (Process/Fuel Type): External Combustion Boilers: Industrial: Solid Waste: Residue		
2. Source Classification Code (SCC): 1-02-012-01		3. SCC Units: Tons Burned
4. Maximum Hourly Rate: 16.517	5. Maximum Annual Rate: 96,201	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.6, dry	8. Maximum % Ash: 8.0, dry	9. Million Btu per SCC Unit: 17.8
10. Segment Comment: Tons burned on dry basis, based on 294.0 MMBtu/hr (1-hr average) and a heating value of 8,900 Btu/lb (dry) for bagasse residue. Maximum annual rate based on 234.7 MMBtu/hr. (24-hr. average)		

EMISSIONS UNIT INFORMATION

Section [1]

Boiler No. 1

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

1. Segment Description (Process/Fuel Type): External Combustion Boilers: Industrial: Residual Oil: Grade 6 Oil		
2. Source Classification Code (SCC): 1-02-004-01		3. SCC Units: 1000 Gallons Burned
4. Maximum Hourly Rate: 1.521	5. Maximum Annual Rate: 11,100	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 2.40	8. Maximum % Ash:	9. Million Btu per SCC Unit: 151
10. Segment Comment: Based on 229.7 MMBtu/hr (24-hr average) and heating value of 151,000 Btu/gal for No. 6 fuel oil.		

Segment Description and Rate: Segment 4 of 4

1. Segment Description (Process/Fuel Type): External Combustion Boilers: Industrial: Liquid Waste: Waste Oil		
2. Source Classification Code (SCC): 1-02-013-02		3. SCC Units: 1000 Gallons Burned
4. Maximum Hourly Rate: 0.04	5. Maximum Annual Rate: 75.00	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 151
10. Segment Comment: The used oil is generated solely by the facility, mostly during the repair season. The on-specification used oil is properly stored and burned in the boilers for energy recovery. The amount generated ranges between 50,000 and 75,000 gallons per year.		

**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: Manganese Compounds (H113)		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 0.43 lb/hour 1.26 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: 0.0013 lb/MMBtu for bagasse Reference: Fuel Analysis		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Carbonaceous Fuel Burning: 334.1 MMBtu/hr (1-hr. average) x 0.0013 lb/MMBtu = 0.43 lb/hr 266.7 MMBtu/hr. (24-hr. average) x 0.0013 lb/MMBtu x 7,296 hr/yr ÷ 2,000 lb/ton = 1.26 TPY			
11. Pollutant Potential/Estimated Fugitive Emissions Comment: Emission factor based on 90 percent confidence level of fuel analysis data.			

**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: 9/13/07
3. Allowable Emissions and Units: 0.0013 lb/MMBtu	4. Equivalent Allowable Emissions: 0.43 lb/hour 1.26 tons/year
5. Method of Compliance: Fuel Analysis	
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]
Boiler No. 1

POLLUTANT DETAIL INFORMATION

Page [2] of [3]
Hydrochloric Acid - HCl

**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: HCl (H106)		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 30.1 lb/hour 87.6 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: 0.09 lb/MMBtu Reference: 40 CFR 63 Subpart DDDDD		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Bagasse Firing: 334.1 MMBtu/hr (1-hr. average) x 0.09 lb/MMBtu = 30.1 lb/hr 266.7 MMBtu/hr (24-hr average) x 0.09 lb/MMBtu x 7,296 hr/yr ÷ 2,000 lb/ton = 87.6 TPY			
11. Pollutant Potential/Estimated Fugitive Emissions Comment: Emission factor and potential emissions based on maximum heat input for residue firing.			

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1]
Boiler No. 1

Page [2] of [3]
Hydrochloric Acid - HCl

**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: RULE	2. Future Effective Date of Allowable Emissions: 9/13/07
3. Allowable Emissions and Units: 0.09 lb/MMBtu	4. Equivalent Allowable Emissions: 30.1 lb/hour 87.6 tons/year
5. Method of Compliance: EPA Method 26 or 26A	
6. Allowable Emissions Comment (Description of Operating Method): 40 CFR 63 Subpart DDDDD.	

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: Hg (H114)		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 0.0030 lb/hour 0.00876 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: 9 x 10⁻⁶ lb/MMBtu Reference: 40 CFR 63 Subpart DDDDD		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: 334.1 MMBtu/hr (1-hr average) x 9 x 10⁻⁶ lb/MMBtu = 0.0030 lb/hr 266.7 MMBtu/hr (24-hr average) x 9 x 10⁻⁶ lb/MMBtu x 7,296 hr/yr ÷ 2,000 lb/ton = 0.00876 TPY			
11. Pollutant Potential/Estimated Fugitive Emissions Comment: Based on bagasse firing only.			

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1]
Boiler No. 1

Page [3] of [3]
Mercury - Hg

**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: RULE	2. Future Effective Date of Allowable Emissions: 9/13/07
3. Allowable Emissions and Units: 9 x 10⁻⁶ lb/MMBtu	4. Equivalent Allowable Emissions: 0.0030 lb/hour 0.00876 tons/year
5. Method of Compliance: Fuel Analysis	
6. Allowable Emissions Comment (Description of Operating Method): 40 CFR 63 Subpart DDDDD	

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]

Boiler No. 1

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

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

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: _____ % Exceptional Conditions: _____ % Maximum Period of Excess Opacity Allowed: _____ min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

EMISSIONS UNIT INFORMATION

Section [1]

Boiler No. 1

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor **1** of **3**

1. Parameter Code: PRS	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information... Manufacturer: Foxboro Model Number: 863DP-M2D1SS-AM Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Measures total pressure drop across wet scrubber.	

Continuous Monitoring System: Continuous Monitor **2** of **3**

1. Parameter Code: Water Pressure	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Measures inlet water pressure to the wet scrubber.	

EMISSIONS UNIT INFORMATION

Section [1]

Boiler No. 1

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 3 of 3

1. Parameter Code: FLOW	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information... Manufacturer: Rosemount Model Number: 1151DP4S22M1B1 Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Measures steam flow on Boiler No. 1.	

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

Section [1]

Boiler No. 1

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date September 2005
2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date September 2005
3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date September 2005
4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date September 2005 <input type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> Not Applicable Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7. Other Information Required by Rule or Statute <input checked="" type="checkbox"/> Attached, Document ID: HBCA Report <input type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [1]

Boiler No. 1

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements <input checked="" type="checkbox"/> Attached, Document ID: GSH-EU1-IV1 <input type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation <input checked="" type="checkbox"/> Attached, Document ID: GSH-EU1-IV3 <input type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
5. Acid Rain Part Application <input type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input type="checkbox"/> Copy Attached, Document ID: _____ <input type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [1]

Boiler No. 1

Additional Requirements Comment

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ATTACHMENT GSH-EU1-B6

CALCULATION OF HEAT INPUT

ATTACHMENT GSH-EU1-B6a
MAXIMUM 1-HOUR FUEL USAGE AND HEAT INPUT RATES FOR BOILER NO. 1, SCGCF

Fuel	Heat Input To Boiler	Heat Transfer Efficiency (%)	Heat Output To Steam	Fuel Firing Rate	
Maximum Short-Term					
	(MMBtu/hr)		(MMBtu/hr)		
Bagasse	334.1	55.0	183.8	41,763	lb/hr ^a
Residue	294.0	62.5	183.8	33,034	lb/hr ^b
No. 6 Fuel Oil	229.7	62.5	143.6	1,521	gal/hr
MAX FUEL FIRING + BAGASSE					
Bagasse	73.1	55.0	40.2	9,135	lb/hr ^a
Residue	0	62.5	0	0	lb/hr ^b
No. 6 Fuel Oil	229.7	62.5	143.6	1,521	gal/hr
TOTAL	302.8		183.8		
MAX FUEL FIRING + RESIDUE					
Bagasse	0	55.0	0	0	lb/hr ^a
Residue	64.3	62.5	40.2	7,225	lb/hr ^b
No. 6 Fuel Oil	229.7	62.5	143.6	1,521	gal/hr
TOTAL	294.0		183.8		

^a Based on bagasse firing.

^b Based on residue firing.

Note:

Total steam production required = 175,000 lb/hr

Net steam enthalpy = 1,050 Btu/lb

Total heat output to steam = 175,000 lb/hr steam x 1,050 Btu/lb = 183.8 MMBtu/hr

Fuels may be burned in combination, not to exceed total heat outputs.

Based on fuel heating values as follows:

Bagasse, dry - 8,000 Btu/lb

Residue, dry - 8,900 Btu/lb

No. 6 Fuel Oil - 151,000 Btu/gal

ATTACHMENT GSH-EU1-B6b
MAXIMUM 24-HOUR FUEL USAGE AND HEAT INPUT RATES FOR BOILER NO. 1, SCGCF

Fuel	Heat Input to Boiler	Heat Transfer Efficiency (%)	Heat Output to Steam	Fuel Firing Rate
Maximum Short-Term				
	(MMBtu/hr)		(MMBtu/hr)	
Bagasse	266.7	55.0	146.7	33,338 lb/hr ^a
Residue	234.7	62.5	146.7	26,371 lb/hr ^b
No. 6 Fuel Oil	229.7	62.5	143.6	1,521 gal/hr
MAX FUEL FIRING + BAGASSE				
Bagasse	5.6	55.0	3.1	700 lb/hr ^a
Residue	0	62.5	0	0 lb/hr ^b
No. 6 Fuel Oil	229.7	62.5	143.6	1,521 gal/hr
TOTAL	235.3		146.7	
MAX FUEL FIRING + RESIDUE				
Bagasse	0	55.0	0	0 lb/hr ^a
Residue	5.0	62.5	3.1	562 lb/hr ^b
No. 6 Fuel Oil	229.7	62.5	143.6	1,521 gal/hr
TOTAL	234.7		146.7	

^a Based on bagasse firing.

^b Based on residue firing.

Notes:

Total steam production required = 139,700 lb/hr

Net steam enthalpy = 1,050 Btu/lb

Total heat output to steam = 139,700 lb/hr steam x 1,050 Btu/lb = 146.7 MMBtu/hr

Fuels may be burned in combination, not to exceed total heat outputs.

Based on fuel heating values as follows:

Bagasse, dry - 8,000 Btu/lb

Residue, dry - 8,900 Btu/lb

No. 6 Fuel Oil - 151,000 Btu/gal

ATTACHMENT GSH-EU1-IV1

**IDENTIFICATION OF
APPLICABLE REQUIREMENTS**

ATTACHMENT GSH-EU1-IV1
Rule Applicability for Sugar Cane Growers Cooperative of Florida
Glade Sugar House Boiler No. 1

APPLICABLE	RULE DESCRIP	RULE NUMBER	RULE TITLE	RATIONALE FOR NON APPLICABILITY
APPLICABLE	62-210	62-210	STATIONARY SOURCES - GENERAL REQUIREMENTS	
APPLICABLE	62-210	62-210.700	EXCESS EMISSIONS	
APPLICABLE	62-210	62-210.700(1)	EXCESS EMISSIONS	
APPLICABLE	62-210	62-210.700(4)	EXCESS EMISSIONS	
APPLICABLE	62-210	62-210.700(5)	EXCESS EMISSIONS	
APPLICABLE	62-210	62-210.700(6)	EXCESS EMISSIONS	
APPLICABLE	62-296	62-296	STATIONARY SOURCES - EMISSION STANDARDS	
APPLICABLE	62-296	62-296.320	General Pollutant Emission Limiting Standards.	
APPLICABLE	62-296	62-296.410	Carbonaceous Fuel Burning Equipment.	
APPLICABLE	62-296	62-296.410(1)(b)	Carbonaceous Fuel Burning Equipment.	
APPLICABLE	62-296	62-296.410(3)	Test Methods and Procedures.	
APPLICABLE	62-296	62-296.500	Reasonable Available Control Technology (RACT) - Volatile Organic Compounds (VOC) and Nitrogen Oxide (NOx)	
APPLICABLE	62-296	62-296.500(1)(b)	RACT for VOC and NOx.	
APPLICABLE	62-296	62-296.500(2)(a)	RACT for VOC and NOx.	
APPLICABLE	62-296	62-296.500(2)(c)	RACT for VOC and NOx.	
APPLICABLE	62-296	62-296.500(6)	RACT for VOC and NOx.	
APPLICABLE	62-296	62-296.570	RACT - Requirements for Major VOC- and NOx- Emitting Facility.	
APPLICABLE	62-296	62-296.570(1)	Applicability	
APPLICABLE	62-296	62-296.570(1)(a)		
APPLICABLE	62-296	62-296.570(2)	Compliance Requirements.	
APPLICABLE	62-296	62-296.570(3)	Operation Permit Requirements.	
APPLICABLE	62-296	62-296.570(4)	Operation Permit Requirements.	
APPLICABLE	62-296	62-296.570(4)(a)	Operation Permit Requirements.	
APPLICABLE	62-296	62-296.570(4)(b)6.	Operation Permit Requirements.	
APPLICABLE	62-296	62-296.570(4)(c)	Operation Permit Requirements.	
APPLICABLE	62-297	62-297	STATIONARY SOURCES - EMISSIONS MONITORING	
APPLICABLE	62-297	62-297.310	General Compliance Test Requirements.	
APPLICABLE	62-297	62-297.310(1)	Required Number of Test Runs.	
APPLICABLE	62-297	62-297.310(2)(b)	Operating Rate During Testing.	
APPLICABLE	62-297	62-297.310(3)	Calculation of Emission Rate.	
APPLICABLE	62-297	62-297.310(4)	Applicable Test Procedures.	
APPLICABLE	62-297	62-297.310(5)	Determination of Process Variables.	
APPLICABLE	62-297	62-297.310(6)	Required Stack Sampling Facilities.	
APPLICABLE	62-297	62-297.310(7)	Frequency of Compliance Tests.	
APPLICABLE	62-297	62-297.310(7)(a)3.	General Compliance Testing.	
APPLICABLE	62-297	62-297.310(7)(a)4.	General Compliance Testing.	
APPLICABLE	62-297	62-297.310(7)(a)5.	General Compliance Testing.	
APPLICABLE	62-297	62-297.310(7)(a)9.	General Compliance Testing.	
APPLICABLE	62-297	62-297.310(8)	Test Reports.	
APPLICABLE	62-297	62-297.401	Compliance Test Methods.	
APPLICABLE	62-297	62-297.401(1)	EPA Method 1 - Sample and Velocity Traverses for Stationary Sources - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(2)	EPA Method 2 - Determination of Stack Gas Velocity and Volumetric Flow Rate - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(3)	EPA Method 3 - Gas Analysis for Carbon Dioxide, Oxygen, Excess Air, and Dry Molecular Weight - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(4)	EPA Method 4 - Determination of Moisture Content in Stack Gases - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(5)	EPA Method 5 - Determination of Particulate Emissions from Stationary Sources - 40 CFR 60 Appendix A	
APPLICABLE	62-297	62-297.401(7)	EPA Method 7 - Determination of Nitrogen Oxide Emissions from Stationary Sources - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(7)(c)	EPA Method 7E - Determination of Nitrogen Oxide Emissions from Stationary Sources - 40 CFR 60 Appendix A.	

**ATTACHMENT GSH-EUI-IV1
Rule Applicability for Sugar Cane Growers Cooperative of Florida
Glade Sugar House Boiler No. 1**

APPLIC/STAT	RULE DESCRIP	RULE NUMBER	RULE TITLE	RATIONALE FOR NON-APPLICABILITY
APPLICABLE	62-297	62-297.401(9)	EPA Test Method 9 - Visual Determination of the Opacity of Emissions from Stationary Sources - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(18)	EPA Method 18 - Measurement of Gaseous Organic Compound Emissions by Gas Chromatography - 40 CFR 60	
APPLICABLE	62-297	62-297.401(25)	EPA Method 25 - Determination of Total Gaseous Nonmethane Organic Emissions as Carbon - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(25)(a)	EPA Method 25 A - Determination of Total Gaseous Organic Emissions Using a Flame Ionization Detector - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.440(1)(b)	Supplementary Test Procedures.	
APPLICABLE	62-297	62-297.620	Exceptions and Approval of Alternate Procedures and Requirements.	
APPLICABLE	Subpart A	40 CFR 63.1	General Provisions	Boiler No. 1 is subject to the notification requirements of Subpart DDDDD.
APPLICABLE	Subpart DDDDD	40 CFR 63.7485	Applicability	Boiler No. 1 is an industrial boiler of size > 10 MMBtu/hr located at a major source of HAPs.
APPLICABLE	Subpart DDDDD	40 CFR 63.7490	Applicability	Boiler No. 1 is subject to the requirements of Subpart DDDDD for existing boilers.
APPLICABLE	Subpart DDDDD	40 CFR 63.7495	Compliance Dates	Boiler No. 1 must meet notification requirements and comply by September 13, 2007.
APPLICABLE	Subpart DDDDD	40 CFR 63.7499	Subcategories	Boiler No. 1 is in the large solid fuel subcategory.
APPLICABLE	Subpart DDDDD	40 CFR 63.7506	Limited Requirements	Boiler No. 1 must only meet the notification requirements of 63.9(b) at this time.
APPLICABLE	Subpart DDDDD	40 CFR 63.7545	Notifications	Notification due by March 12, 2005.
APPLICABLE	Subpart DDDDD	Appendix A	Health-Based Compliance Alternative	Must submit demonstration by September 13, 2007.
NON-APPLICABLE	60 Subpart A	40CFR60.1	Subpart A -- General Provisions	Boiler No. 1 is not subject to NSPS.
NON-APPLICABLE	60 Subpart D	40CFR60.40	SubPart D -- Applicability and designation of affected facility	Boiler No. 1 was constructed prior to August 17, 1971, and has not been modified or reconstructed after this date.
NON-APPLICABLE	60 Subpart Db	40CFR60.40b	Subpart Db -- Applicability and delegation of authority	Boiler No. 1 was constructed prior to June 19, 1984, and has not been modified or reconstructed after this date.
NON-APPLICABLE	60 Subpart Dc	40CFR60.40c	Subpart Dc -- Small Industrial - Commercial - Institutional Steam Generating Units -- Applicability	Boiler No. 1 was constructed prior to June 9, 1989, and has not been modified or reconstructed after this date. In addition, Boiler No. 1 has a heat input of greater than 100 MMBtu/hr.
NON-APPLICABLE	62-210	62-210.700(2)	EXCESS EMISSIONS	Boiler No. 1 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-210	62-210.700(3)	EXCESS EMISSIONS	Boiler No. 1 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-296	62-296.320(4)(b)	General Pollutant Emission Limiting Standards.	A visible emission standard set forth elsewhere in Rule 62-296 applies to Boiler No. 1.
NON-APPLICABLE	62-296	62-296.405	Fossil Fuel Steam Generators with more than 250 million Btu per Hour Heat Input.	Boiler No. 1 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-296	62-296.406	Fossil Fuel Steam Generators with less than 250 million Btu per Hour Heat Input.	Boiler No. 1 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-296	62-296.410(1)(a)	Carbonaceous Fuel Burning Equipment.	Boiler No. 1 has a maximum heat input rate of greater than 30 MMBtu/hr.
NON-APPLICABLE	62-296	62-296.410(2)	New Emissions Units.	Boiler No. 1 was issued a valid Department operation permit prior to July 1, 1974.
NON-APPLICABLE	62-296	62-296.570(1)(b)	Operation Permit Requirements.	Boiler No. 1 is not exempt from permitting.
NON-APPLICABLE	62-296	62-296.570(4)(a)4.	Reasonably Available Control Technology (RACT) Particulate Matter.	Boiler No. 1 does not have a CEMS.
NON-APPLICABLE	62-296	62-296.700	Reasonably Available Control Technology (RACT) Particulate Matter.	The GSH is located in Palm Beach County, which is not a nonattainment or maintenance area for particulate matter.

ATTACHMENT GSH-EU1-IV1
Rule Applicability for Sugar Cane Growers Cooperative of Florida
Glade Sugar House Boiler No. 1

APPLIC STATUS	RULE DESCRIP	RULE NUMBER	RULE TITLE	RATIONALE FOR NON-APPLICABILITY
NON-APPLICABLE	62-296	62-296.702	Fossil Fuel Steam Generators	The GSH is located in Palm Beach County, which is not a nonattainment or maintenance area for particulate matter.
NON-APPLICABLE	62-296	62-296.703	Carbonaceous Fuel Burners.	The GSH Mill is located in Palm Beach County, which is not a nonattainment or maintenance area for particulate matter.
NON-APPLICABLE	62-297	62-297.310(2)(a)	Operating Rate During Testing.	Boiler No. 1 is not a combustion turbine.
NON-APPLICABLE	62-297	62-297.310(7)(a)2.	General Compliance Testing.	Boiler No. 1 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-297	62-297.310(7)(a)4.c.	General Compliance Testing.	There is no applicable standard for any NESHAP pollutant.
NON-APPLICABLE	62-297	62-297.310(7)(a)6.	General Compliance Testing.	Boiler No. 1 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-297	62-297.310(7)(a)7.	General Compliance Testing.	Boiler No. 1 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-297	62-297.310(7)(a)8.	General Compliance Testing.	Boiler No. 1 is not a combustion turbine.
NON-APPLICABLE	62-297	62-297.310(7)(a)10.	General Compliance Testing.	Boiler No. 1 is not exempt from permitting, insignificant, or permitted under the general permit provisions.

Permit No. 0990026-006-AC.

ATTACHMENT GSH-EU1-IV3

ALTERNATIVE METHODS OF OPERATION

ATTACHMENT GSH-EU1-IV3**ALTERNATIVE METHODS OF OPERATION**

Boiler No. 1 may simultaneously burn four different fuels: bagasse, residue, No. 6 residual oil, and small quantities of on-spec used oil. Heat input from bagasse shall not exceed the permitted limit of 334.1 MMBtu/hr (maximum 1-hr average) or 266.7 MMBtu/hr (maximum 24-hr average). Heat input from residue shall not exceed 294.0 MMBtu/hr (maximum 1-hr average) or 234.7 MMBtu/hr (maximum 24-hr average). Heat input from fuel oil and on-spec used oil shall not exceed 229.7 MMBtu/hr and 6.04 MMBtu/hr (40 gallons per hour), respectively.

EMISSIONS UNIT INFORMATION

Section [2]

Boiler No. 2

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application – For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application – For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an “unregulated emissions unit” does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

Section [2]

Boiler No. 2

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)
- The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
 - The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)
- This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
 - This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
 - This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
Boiler No. 2

3. Emissions Unit Identification Number: **002**

4. Emissions Unit Status Code: A	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: 20	8. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
--	--------------------------------	--------------------------	--	--

9. Package Unit:
Manufacturer: _____ Model Number: _____

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:
This boiler has a water-cooled, pin-hole, traveling grate, and is fired by bagasse, residue and fuel oil. This emission unit produces steam for use in the production of raw sugar cane.

EMISSIONS UNIT INFORMATION

Section [2]

Boiler No. 2

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

**Multiple Cyclone Dust Collector
Two Impingement Wet Scrubbers**

2. Control Device or Method Code(s): **121, 002**

EMISSIONS UNIT INFORMATION

Section [2]

Boiler No. 2

D. SEGMENT (PROCESS/FUEL) INFORMATION**Segment Description and Rate: Segment 1 of 4**

1. Segment Description (Process/Fuel Type): External Combustion Boilers: Industrial: Bagasse		
2. Source Classification Code (SCC): 1-02-011-01	3. SCC Units: Tons Burned	
4. Maximum Hourly Rate: 20.881	5. Maximum Annual Rate: 120,293	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.08, dry	8. Maximum % Ash: 2.6, dry	9. Million Btu per SCC Unit: 16
10. Segment Comment: Tons burned on dry basis, based on 334.1 MMBtu/hr (1-hr average) and a heating value of 8,000 Btu/lb (dry) for bagasse. Maximum annual rate based on 266.7 MMBtu/hr. (24 hr. average).		

Segment Description and Rate: Segment 2 of 4

1. Segment Description (Process/Fuel Type): External Combustion Boilers: Industrial: Solid Waste: Residue		
2. Source Classification Code (SCC): 1-02-012-01	3. SCC Units: Tons Burned	
4. Maximum Hourly Rate: 16.517	5. Maximum Annual Rate: 95,176	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.6, dry	8. Maximum % Ash: 8.0, dry	9. Million Btu per SCC Unit: 17.8
10. Segment Comment: Tons burned on dry basis, based on 294.0 MMBtu/hr (1-hr average) and a heating value of 8,900 Btu/lb (dry) for bagasse residue. Maximum annual rate based on 234.7 MMBtu/hr. (24-hr. average)		

EMISSIONS UNIT INFORMATION

Section [2]

Boiler No. 2

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 3 of 4

1. Segment Description (Process/Fuel Type): External Combustion Boilers: Industrial: Residual Oil: Grade 6 Oil		
2. Source Classification Code (SCC): 1-02-004-01		3. SCC Units: 1000 Gallons Burned
4. Maximum Hourly Rate: 1.521	5. Maximum Annual Rate: 11,100	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 2.40	8. Maximum % Ash:	9. Million Btu per SCC Unit: 151
10. Segment Comment: Based on 229.7 MMBtu/hr (24-hr average) and heating value of 151,000 Btu/gal for No. 6 fuel oil.		

Segment Description and Rate: Segment 4 of 4

1. Segment Description (Process/Fuel Type): External Combustion Boilers: Industrial: Liquid Waste: Waste Oil		
2. Source Classification Code (SCC): 1-02-013-02		3. SCC Units: 1000 Gallons Burned
4. Maximum Hourly Rate: 0.04	5. Maximum Annual Rate: 75.00	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 151
10. Segment Comment: The used oil is generated solely by the facility, mostly during the repair season. The on-specification used oil is properly stored and burned in the boilers for energy recovery. The amount generated ranges between 50,000 and 75,000 gallons per year.		

EMISSIONS UNIT INFORMATION

Section [2]

Boiler No. 2

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
PM ₁₀	002		NS
NO _x			EL
VOC			EL
SO ₂			EL
CO			NS
H106 (Hydrochloric Acid)			EL
H115 (Methanol)			NS
H132 (Naphthalene)			NS
H151 (Polycyclic Organic Matter)			NS
Total HAPS			NS
Mercury (H114)	002		EL
Manganese Compounds (H113)	002		EL

**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: Manganese Compounds (H113)		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 0.43 lb/hour 1.25 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: 0.0013 lb/MMBtu for bagasse Reference: Fuel Analysis		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Carbonaceous Fuel Burning: 334.1 MMBtu/hr (1-hr. average) x 0.0013 lb/MMBtu = 0.43 lb/hr 263.8 MMBtu/hr. (24-hr. average) x 0.0013 lb/MMBtu x 7,296 hr/yr ÷ 2,000 lb/ton = 1.25 TPY			
11. Pollutant Potential/Estimated Fugitive Emissions Comment: Emission factor based on 90 percent confidence level for fuel analysis data.			

EMISSIONS UNIT INFORMATION

Section [2]

Boiler No. 2

POLLUTANT DETAIL INFORMATION

Page [1] of [3]

Manganese 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: 9/13/07
3. Allowable Emissions and Units: 0.0013 lb/MMBtu	4. Equivalent Allowable Emissions: 0.43 lb/hour 1.25 tons/year
5. Method of Compliance: Fuel Analysis	
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):	

**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: HCl (H106)		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 30.1 lb/hour 86.6 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: 0.09 lb/MMBtu Reference: 40 CFR 63 Subpart DDDDD		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Bagasse Firing: 334.1 MMBtu/hr (1-hr. average) x 0.09 lb/MMBtu = 30.1 lb/hr 263.8 MMBtu/hr (24-hr average) x 0.09 lb/MMBtu x 7,296 hr/yr ÷ 2,000 lb/ton = 86.6 TPY			
11. Pollutant Potential/Estimated Fugitive Emissions Comment:			

EMISSIONS UNIT INFORMATION

Section [2]
Boiler No. 2

POLLUTANT DETAIL INFORMATION

Page [2] of [3]
Nitrogen Oxides - NO_x

**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: RULE	2. Future Effective Date of Allowable Emissions: 9/13/07
3. Allowable Emissions and Units: 0.09 lb/MMBtu	4. Equivalent Allowable Emissions: 30.1 lb/hour 86.6 tons/year
5. Method of Compliance: EPA Method 26 or 26A	
6. Allowable Emissions Comment (Description of Operating Method): 40 CFR 63 Subpart DDDDD	

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 [2]
Boiler No. 2

POLLUTANT DETAIL INFORMATION

Page [3] of [3]
Mercury - Hg

**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: Hg (H114)		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 0.0030 lb/hour 0.00866 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: 9 x 10⁻⁶ lb/MMBtu Reference: 40 CFR 63 Subpart DDDDD		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: 334.1 MMBtu/hr (1-hr average) x 9 x 10⁻⁶ lb/MMBtu = 0.0030 lb/hr 263.8 MMBtu/hr (24-hr average) x 9 x 10⁻⁶ lb/MMBtu x 7,296 hr/yr ÷ 2,000 lb/ton = 0.00866 TPY			
11. Pollutant Potential/Estimated Fugitive Emissions Comment: Based on bagasse firing only.			

EMISSIONS UNIT INFORMATION

Section [2]
Boiler No. 2

POLLUTANT DETAIL INFORMATION

Page [3] of [3]
Mercury - Hg

**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: RULE	2. Future Effective Date of Allowable Emissions: 9/13/07
3. Allowable Emissions and Units: 9 x 10⁶ lb/MMBtu	4. Equivalent Allowable Emissions: 0.0030 lb/hour 0.00866 tons/year
5. Method of Compliance: Fuel Analysis	
6. Allowable Emissions Comment (Description of Operating Method): 40 CFR 63 Subpart DDDDD	

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 [2]

Boiler No. 2

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

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

Visible Emissions Limitation: Visible Emissions Limitation ____ of ____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

EMISSIONS UNIT INFORMATION

Section [2]

Boiler No. 2

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 1 of 3

1. Parameter Code: PRS	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information... Manufacturer: Foxboro Model Number: 863DP-M2D1SS-AM Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Measures total pressure drop across wet scrubbers.	

Continuous Monitoring System: Continuous Monitor 2 of 3

1. Parameter Code: Water Pressure	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Measures inlet water pressure to the wet scrubbers.	

EMISSIONS UNIT INFORMATION

Section [2]

Boiler No. 2

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

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

1. Parameter Code: FLOW	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information... Manufacturer: Rosemount Model Number: 1151DP4S22M1B1 Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Measures steam flow on Boiler No. 2.	

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

**Section [2]
Boiler No. 2**

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date September 2005
2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date September 2005
3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date September 2005
4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date September 2005 <input type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> Not Applicable Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7. Other Information Required by Rule or Statute <input checked="" type="checkbox"/> Attached, Document ID: HBCA Report <input type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [2]
Boiler No. 2

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements <input checked="" type="checkbox"/> Attached, Document ID: GSH-EU2-IV1 <input type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation <input checked="" type="checkbox"/> Attached, Document ID: GSH-EU2-IV3 <input type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
5. Acid Rain Part Application <input type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input type="checkbox"/> Copy Attached, Document ID: _____ <input type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [2]

Boiler No. 2

Additional Requirements Comment

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ATTACHMENT GSH-EU2-B6

CALCULATION OF HEAT INPUT

ATTACHMENT GSH-EU2-B6a
MAXIMUM 1-HOUR FUEL USAGE AND HEAT INPUT RATES FOR BOILER NO. 2, SCGCF

Fuel	Heat Input To Boiler	Heat Transfer Efficiency (%)	Heat Output To Steam	Fuel Firing Rate	
<u>Maximum Short-Term</u>					
	(MMBtu/hr)		(MMBtu/hr)		
Bagasse	334.1	55.0	183.8	41,763	lb/hr ^a
Residue	294.0	62.5	183.8	33,034	lb/hr ^b
No. 6 Fuel Oil	229.7	62.5	143.6	1,521	gal/hr
<u>MAX FUEL FIRING + BAGASSE</u>					
Bagasse	73.1	55.0	40.2	9,135	lb/hr ^a
Residue	0	62.5	0	0	lb/hr ^b
No. 6 Fuel Oil	229.7	62.5	143.6	1,521	gal/hr
TOTAL	302.8		183.8		
<u>MAX FUEL FIRING + RESIDUE</u>					
Bagasse	0	55.0	0	0	lb/hr ^a
Residue	64.3	62.5	40.2	7,225	lb/hr ^b
No. 6 Fuel Oil	229.7	62.5	143.6	1,521	gal/hr
TOTAL	294.0		183.8		

^a Based on bagasse firing.

^b Based on residue firing.

Note:

Total steam production required = 175,000 lb/hr

Net steam enthalpy = 1,050 Btu/lb

Total heat output to steam = 175,000 lb/hr steam x 1,050 Btu/lb = 183.8 MMBtu/hr

Fuels may be burned in combination, not to exceed total heat outputs.

Based on fuel heating values as follows:

Bagasse, dry - 8,000 Btu/lb

Residue, dry - 8,900 Btu/lb

No. 6 Fuel Oil - 151,000 Btu/gal

ATTACHMENT GSH-EU2-B6b
MAXIMUM 24-HOUR FUEL USAGE AND HEAT INPUT RATES FOR BOILER NO. 2, SCGCF

Fuel	Heat Input to Boiler	Heat Transfer Efficiency (%)	Heat Output to Steam	Fuel Firing Rate
	Maximum Short-Term			
	(MMBtu/hr)		(MMBtu/hr)	
Bagasse	263.8	55.0	145.1	32,975 lb/hr ^a
Residue	232.2	62.5	145.1	26,090 lb/hr ^b
No. 6 Fuel Oil	229.7	62.5	143.6	1,521 gal/hr
<u>MAX FUEL FIRING + BAGASSE</u>				
Bagasse	2.7	55.0	1.5	338 lb/hr ^a
Residue	0	62.5	0	0 lb/hr ^b
No. 6 Fuel Oil	229.7	62.5	143.6	1,521 gal/hr
TOTAL	232.4		145.1	
<u>MAX FUEL FIRING + RESIDUE</u>				
Bagasse	0	55.0	0	0 lb/hr ^a
Residue	2.4	62.5	1.5	270 lb/hr ^b
No. 6 Fuel Oil	229.7	62.5	143.6	1,521 gal/hr
TOTAL	232.1		145.1	

^a Based on bagasse firing.

^b Based on residue firing.

Notes:

Total steam production required = 138,200 lb/hr

Net steam enthalpy = 1,050 Btu/lb

Total heat output to steam = 138,200 lb/hr steam x 1,050 Btu/lb = 145.1 MMBtu/hr

Fuels may be burned in combination, not to exceed total heat outputs.

Based on fuel heating values as follows:

Bagasse, dry - 8,000 Btu/lb

Residue, dry - 8,900 Btu/lb

No. 6 Fuel Oil - 151,000 Btu/gal

ATTACHMENT GSH-EU2-IV1

IDENTIFICATION OF APPLICABLE REQUIREMENTS

**ATTACHMENT GSH-EU2-IV1
 RULE APPLICABILITY FOR SUGAR CANE GROWERS COOPERATIVE OF FLORIDA
 Glade Sugar House Boiler No. 2**

APPLIC STAT	RULE DESCRIP	RULE NUMBERS	RULE TITLE	RATIONALE FOR NON-APPLICABILITY
APPLICABLE	62-210	62-210	STATIONARY SOURCES - GENERAL REQUIREMENTS	
APPLICABLE	62-210	62-210.700	EXCESS EMISSIONS	
APPLICABLE	62-210	62-210.700(1)	EXCESS EMISSIONS	
APPLICABLE	62-210	62-210.700(4)	EXCESS EMISSIONS	
APPLICABLE	62-210	62-210.700(5)	EXCESS EMISSIONS	
APPLICABLE	62-210	62-210.700(6)	EXCESS EMISSIONS	
APPLICABLE	62-296	62-296	STATIONARY SOURCES - EMISSION STANDARDS	
APPLICABLE	62-296	62-296.320	General Pollutant Emission Limiting Standards.	
APPLICABLE	62-296	62-296.410	Carbonaceous Fuel Burning Equipment.	
APPLICABLE	62-296	62-296.410(1)(b)	Carbonaceous Fuel Burning Equipment.	
APPLICABLE	62-296	62-296.410(3)	Test Methods and Procedures.	
APPLICABLE	62-296	62-296.500	Reasonable Available Control Technology (RACT) - Volatile Organic Compounds (VOC) and Nitrogen Oxide (NOx)	
APPLICABLE	62-296	62-296.500(1)(b)	RACT for VOC and NOx.	
APPLICABLE	62-296	62-296.500(2)(a)	RACT for VOC and NOx.	
APPLICABLE	62-296	62-296.500(2)(c)	RACT for VOC and NOx.	
APPLICABLE	62-296	62-296.500(6)	RACT for VOC and NOx.	
APPLICABLE	62-296	62-296.570	RACT - Requirements for Major VOC- and NOx- Emitting Facility	
APPLICABLE	62-296	62-296.570(1)	Applicability	
APPLICABLE	62-296	62-296.570(1)(a)		
APPLICABLE	62-296	62-296.570(2)	Compliance Requirements.	
APPLICABLE	62-296	62-296.570(3)	Operation Permit Requirements.	
APPLICABLE	62-296	62-296.570(4)	Operation Permit Requirements.	
APPLICABLE	62-296	62-296.570(4)(a)	Operation Permit Requirements.	
APPLICABLE	62-296	62-296.570(4)(b)6.	Operation Permit Requirements.	
APPLICABLE	62-296	62-296.570(4)(c)	Operation Permit Requirements.	
APPLICABLE	62-297	62-297	STATIONARY SOURCES - EMISSIONS MONITORING	
APPLICABLE	62-297	62-297.310	General Compliance Test Requirements.	
APPLICABLE	62-297	62-297.310(1)	Required Number of Test Runs.	
APPLICABLE	62-297	62-297.310(2)(b)	Operating Rate During Testing.	
APPLICABLE	62-297	62-297.310(3)	Calculation of Emission Rate.	
APPLICABLE	62-297	62-297.310(4)	Applicable Test Procedures.	
APPLICABLE	62-297	62-297.310(5)	Determination of Process Variables.	
APPLICABLE	62-297	62-297.310(6)	Required Stack Sampling Facilities.	
APPLICABLE	62-297	62-297.310(7)	Frequency of Compliance Tests.	
APPLICABLE	62-297	62-297.310(7)(a)3.	General Compliance Testing.	
APPLICABLE	62-297	62-297.310(7)(a)4.	General Compliance Testing.	
APPLICABLE	62-297	62-297.310(7)(a)5.	General Compliance Testing.	
APPLICABLE	62-297	62-297.310(7)(a)9.	General Compliance Testing.	
APPLICABLE	62-297	62-297.310(8)	Test Reports.	
APPLICABLE	62-297	62-297.401	Compliance Test Methods.	
APPLICABLE	62-297	62-297.401(1)	EPA Method 1 - Sample and Velocity Traverses for Stationary Sources - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(2)	EPA Method 2 - Determination of Stack Gas Velocity and Volumetric Flow Rate - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(3)	EPA Method 3 - Gas Analysis for Carbon Dioxide, Oxygen, Excess Air, and Dry Molecular Weight - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(4)	EPA Method 4 - Determination of Moisture Content in Stack Gases - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(5)	EPA Method 5 - Determination of Particulate Emissions from Stationary Sources - 40 CFR 60 Appendix A	
APPLICABLE	62-297	62-297.401(7)	EPA Method 7 - Determination of Nitrogen Oxide Emissions from Stationary Sources - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(7)(e)	EPA Method 7E - Determination of Nitrogen Oxide Emissions from Stationary Sources - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(9)	EPA Test Method 9 - Visual Determination of the Opacity of Emissions from Stationary Sources - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(18)	EPA Method 18 - Measurement of Gaseous Organic Compound Emissions by Gas Chromatography - 40 CFR 60	

**ATTACHMENT GSH-EU2-IV1
RULE APPLICABILITY FOR SUGAR CANE GROWERS COOPERATIVE OF FLORIDA
Glade Sugar House Boiler No. 2**

APPLICABILITY	RULE DESCRIP.	RULE NUMBER	RULE TITLE	RATIONALE FOR NON-APPLICABILITY
APPLICABLE	62-297	62-297.401(25)	EPA Method 25 - Determination of Total Gaseous Nonmethane Organic Emissions as Carbon - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(25)(a)	EPA Method 25 A - Determination of Total Gaseous Organic Emissions Using a Flame Ionization Detector - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.440(1)(b)	Supplementary Test Procedures.	
APPLICABLE	62-297	62-297.620	Exceptions and Approval of Alternate Procedures and Requirements.	
APPLICABLE	Subpart A	40 CFR 63.1	General Provisions	Boiler No. 2 is subject to the notification requirements of Subpart DDDDD.
APPLICABLE	Subpart DDDDD	40 CFR 63.7485	Applicability	Boiler No. 2 is an industrial boiler of size > 10 MMBtu/hr located at a major source of HAPs.
APPLICABLE	Subpart DDDDD	40 CFR 63.7490	Applicability	Boiler No. 2 is subject to the requirements of Subpart DDDDD for existing boilers.
APPLICABLE	Subpart DDDDD	40 CFR 63.7495	Compliance Dates	Boiler No. 2 must meet notification requirements and comply by September 13, 2007.
APPLICABLE	Subpart DDDDD	40 CFR 63.7499	Subcategories	Boiler No. 2 is in the large solid fuel subcategory.
APPLICABLE	Subpart DDDDD	40 CFR 63.7506	Limited Requirements	Boiler No. 2 must only meet the notification requirements of 63.9(b) at this time.
APPLICABLE	Subpart DDDDD	40 CFR 63.7545	Notifications	Notification due by March 12, 2005.
APPLICABLE	Subpart DDDDD	Appendix A	Health-Based Compliance Alternative	Must submit demonstration by September 13, 2007.
NON-APPLICABLE	60 Subpart A	40CFR60.1	Subpart A -- General Provisions	Boiler No. 2 is not subject to NSPS.
NON-APPLICABLE	60 Subpart D	40CFR60.40	SubPart D -- Applicability and designation of affected facility	Boiler No. 2 was constructed prior to August 17, 1971, and has not been modified or reconstructed after this date.
NON-APPLICABLE	60 Subpart Db	40CFR60.40b	Subpart Db -- Applicability and delegation of authority	Boiler No. 2 was constructed prior to June 19, 1984, and has not been modified or reconstructed after this date.
NON-APPLICABLE	60 Subpart Dc	40CFR60.40c	Subpart Dc -- Small Industrial - Commercial - Institutional Steam Generating Units -- Applicability	Boiler No. 2 was constructed prior to June 9, 1989, and has not been modified or reconstructed after this date. In addition, Boiler No. 2 has a heat input of greater than 100 MMBtu/hr.
NON-APPLICABLE	62-210	62-210.700(2)	EXCESS EMISSIONS	Boiler No. 2 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-210	62-210.700(3)	EXCESS EMISSIONS	Boiler No. 2 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-296	62-296.320(4)(b)	General Pollutant Emission Limiting Standards.	A visible emission standard set forth elsewhere in Rule 62-296 applies to Boiler No. 2.
NON-APPLICABLE	62-296	62-296.405	Fossil Fuel Steam Generators with more than 250 million Btu per Hour Heat Input.	Boiler No. 2 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-296	62-296.406	Fossil Fuel Steam Generators with less than 250 million Btu per Hour Heat Input.	Boiler No. 2 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-296	62-296.410(1)(a)	Carbonaceous Fuel Burning Equipment.	Boiler No. 2 has a maximum heat input rate of greater than 30 MMBtu/hr.
NON-APPLICABLE	62-296	62-296.410(2)	New Emissions Units.	Boiler No. 2 was issued a valid Department operation permit prior to July 1, 1974.
NON-APPLICABLE	62-296	62-296.570(1)(b)		Boiler No. 2 is not exempt from permitting.
NON-APPLICABLE	62-296	62-296.570(4)(a)4.	Operation Permit Requirements.	Boiler No. 2 does not have a CEMS.
NON-APPLICABLE	62-296	62-296.700	Reasonably Available Control Technology (RACT) Particulate Matter.	The GSH is located in Palm Beach County, which is not a nonattainment or maintenance area for particulate matter.
NON-APPLICABLE	62-296	62-296.702	Fossil Fuel Steam Generators	The GSH is located in Palm Beach County, which is not a nonattainment or maintenance area for particulate matter.
NON-APPLICABLE	62-296	62-296.703	Carbonaceous Fuel Burners.	The GSH Mill is located in Palm Beach County, which is not a nonattainment or maintenance area for particulate matter.
NON-APPLICABLE	62-297	62-297.310(2)(a)	Operating Rate During Testing.	Boiler No. 2 is not a combustion turbine.
NON-APPLICABLE	62-297	62-297.310(7)(a)2.	General Compliance Testing.	Boiler No. 2 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.

**ATTACHMENT GSH-EU2-IV1
 RULE APPLICABILITY FOR SUGAR CANE GROWERS COOPERATIVE OF FLORIDA
 Glade Sugar House Boiler No. 2**

APPLIC STATE	RULE DESCRIP	RULE NUMBER	RULE TITLE	RATIONALE FOR NON-APPLICABILITY
NON-APPLICABLE	62-297	62-297.310(7)(a)4.c.	General Compliance Testing.	There is no applicable standard for any NESHAP pollutant.
NON-APPLICABLE	62-297	62-297.310(7)(a)6.	General Compliance Testing.	Boiler No. 2 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-297	62-297.310(7)(a)7.	General Compliance Testing.	Boiler No. 2 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-297	62-297.310(7)(a)8.	General Compliance Testing.	Boiler No. 2 is not a combustion turbine.
NON-APPLICABLE	62-297	62-297.310(7)(a)10.	General Compliance Testing.	Boiler No. 2 is not exempt from permitting, insignificant, or permitted under the general permit provisions.

*Also see Permit No. 0990026-005-AC and -006-AC and RACT amendment letter dated 1/27/97.

ATTACHMENT GSH-EU2-IV3

ALTERNATIVE METHODS OF OPERATION

ATTACHMENT GSH-EU2-IV3**ALTERNATIVE METHODS OF OPERATION**

Boiler No. 2 may simultaneously burn four different fuels: bagasse, residue, No. 6 residual oil, and small quantities of on-spec used oil. Heat input from bagasse shall not exceed the permitted limit of 334.1 MMBtu/hr (maximum 1-hr average) or 263.8 MMBtu/hr (maximum 24-hr average). Heat input from residue shall not exceed 294.0 MMBtu/hr (maximum 1-hr average) or 232.2 MMBtu/hr (maximum 24-hr average). Heat input from fuel oil and on-spec used oil shall not exceed 229.7 MMBtu/hr and 6.04 MMBtu/hr (40 gallons per hour), respectively.

EMISSIONS UNIT INFORMATION

Section [3]

Boiler No. 3

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application – For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application – For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an “unregulated emissions unit” does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

Section [3]

Boiler No. 3

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:

Boiler No. 3

3. Emissions Unit Identification Number: **003**

4. Emissions Unit Status Code: A	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: 20	8. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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9. Package Unit:

Manufacturer:

Model Number:

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:

This boiler has a water-cooled, pin-hole grate, and is fired by bagasse, residue, and fuel oil. This emission unit produces steam for use in the production of raw sugar cane.

EMISSIONS UNIT INFORMATION

Section [3]

Boiler No. 3

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

Impingement Wet Scrubber

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

EMISSIONS UNIT INFORMATION

Section [3]

Boiler No. 3

C. EMISSION POINT (STACK/VENT) INFORMATION

(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: Blr 3		2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: V	6. Stack Height: 180 feet	7. Exit Diameter: 5.3 feet	
8. Exit Temperature: 156 °F	9. Actual Volumetric Flow Rate: 54,000 acfm	10. Water Vapor: 28 %	
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Stack parameters based on 2005 – 2006 crop season stack test.			

EMISSIONS UNIT INFORMATION

Section [3]

Boiler No. 3

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 4

1. Segment Description (Process/Fuel Type): External Combustion Boilers: Industrial: Bagasse		
2. Source Classification Code (SCC): 1-02-011-01		3. SCC Units: Tons Burned
4. Maximum Hourly Rate: 14.319	5. Maximum Annual Rate: 104,470	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.08, dry	8. Maximum % Ash: 2.6, dry	9. Million Btu per SCC Unit: 16
10. Segment Comment: Tons burned on dry basis, based on 229.1 MMBtu/hr (1-hr block average) and a heating value of 8,000 Btu/lb (dry) for bagasse.		

Segment Description and Rate: Segment 2 of 4

1. Segment Description (Process/Fuel Type): External Combustion Boilers: Industrial: Solid Waste: Residue		
2. Source Classification Code (SCC): 1-02-012-01		3. SCC Units: Tons Burned
4. Maximum Hourly Rate: 11.326	5. Maximum Annual Rate: 82,633	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.6, dry	8. Maximum % Ash: 8.0, dry	9. Million Btu per SCC Unit: 17.8
10. Segment Comment: Tons burned on a dry basis, based on 201.6 MMBtu/hr (24-hr block average) and a heating value of 8,900 Btu/lb (dry) for bagasse residue.		

EMISSIONS UNIT INFORMATION

Section [3]

Boiler No. 3

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 3 of 4

1. Segment Description (Process/Fuel Type): External Combustion Boilers: Industrial: Residual Oil: Grade 6 Oil		
2. Source Classification Code (SCC): 1-02-004-01		3. SCC Units: 1000 Gallons Burned
4. Maximum Hourly Rate: 1.041	5. Maximum Annual Rate: 7,596	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 2.40	8. Maximum % Ash:	9. Million Btu per SCC Unit: 151
10. Segment Comment: Based on 157.2 MMBtu/hr (24-hr block average) and heating value of 151,000 Btu/gal for No. 6 fuel oil.		

Segment Description and Rate: Segment 4 of 4

1. Segment Description (Process/Fuel Type): External Combustion Boilers: Industrial: Liquid Waste: Waste Oil		
2. Source Classification Code (SCC): 1-02-013-02		3. SCC Units: 1000 Gallons Burned
4. Maximum Hourly Rate: 0.04	5. Maximum Annual Rate: 75.00	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 151
10. Segment Comment: The used oil is generated solely by the facility, mostly during the repair season. The on-specification used oil is properly stored and burned in the boilers for energy recovery. The amount generated ranges between 50,000 and 75,000 gallons per year.		

**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: Manganese Compounds (H113)		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 0.30 lb/hour 1.09 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: 0.0013 lb/MMBtu for bagasse Reference: Fuel Analysis		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Hourly Emissions: Bagasse: 229.1 MMBtu/hr x 0.0013 lb/MMBtu = 0.30 lb/hr Annual Emissions: Bagasse: 0.30 lb/hr x 7,296 hr/yr ÷ 2,000 lb/ton = 1.09 TPY			
11. Pollutant Potential/Estimated Fugitive Emissions Comment: Emission factor based on 90 percent confidence level for fuel analysis data.			

EMISSIONS UNIT INFORMATION

Section [3]
Boiler No. 3

POLLUTANT DETAIL INFORMATION

Page [1] of [3]
Manganese 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: 9/13/07
3. Allowable Emissions and Units: 0.0013 lb/MMBtu	4. Equivalent Allowable Emissions: 0.30 lb/hour 1.09 tons/year
5. Method of Compliance: Fuel Analysis	
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):	

**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: HCl (H106)		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 20.62 lb/hour 75.2 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: 0.09 lb/MMBtu Reference: 40 CFR 63 Subpart DDDDD		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Hourly Emissions: Bagasse: 229.1 MMBtu/hr x 0.09 lb/MMBtu = 20.62 lb/hr Annual Emissions: Bagasse: 20.62 lb/hr x 7,296 hr/yr ÷ 2,000 lb/ton = 75.2 TPY			
11. Pollutant Potential/Estimated Fugitive Emissions Comment:			

EMISSIONS UNIT INFORMATION

Section [3]
Boiler No. 3

POLLUTANT DETAIL INFORMATION

Page [2] of [3]
Hydrochloric Acid - HCl

**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: RULE	2. Future Effective Date of Allowable Emissions: 9/13/07
3. Allowable Emissions and Units: 0.09 lb/MMBtu	4. Equivalent Allowable Emissions: 20.62 lb/hour 75.2 tons/year
5. Method of Compliance: EPA Method 26 or 26A	
6. Allowable Emissions Comment (Description of Operating Method): 40 CFR 63 Subpart DDDDD	

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 [3]
Boiler No. 3

Page [3] of [3]
Mercury - Hg

**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: Hg (H114)		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 0.00206 lb/hour 0.00752 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: 9 x 10⁻⁶ lb/MMBtu Reference: 40 CFR 63 Subpart DDDDD		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Hourly Emissions: Bagasse: 229.1 MMBtu/hr x 9 x 10⁻⁶ lb/MMBtu = 0.00206 lb/hr Annual Emissions: Bagasse: 0.00206 lb/hr x 7,296 hr/yr ÷ 2,000 lb/ton = 0.00752 TPY			
11. Pollutant Potential/Estimated Fugitive Emissions Comment: Based on bagasse firing only.			

**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: RULE	2. Future Effective Date of Allowable Emissions: 9/13/07
3. Allowable Emissions and Units: 9 x 10⁶ lb/MMBtu	4. Equivalent Allowable Emissions: 0.00206 lb/hour 0.00752 tons/year
5. Method of Compliance: Fuel Analysis	
6. Allowable Emissions Comment (Description of Operating Method): 40 CFR 63 Subpart DDDDD	

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 [3]

Boiler No. 3

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

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

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

Visible Emissions Limitation: Visible Emissions Limitation ___ of ___

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

EMISSIONS UNIT INFORMATION

Section [3]

Boiler No. 3

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 1 of 3

1. Parameter Code: PRS	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information... Manufacturer: Dwyer Model Number: CAPSUHELIC 4015 C Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Measures total pressure drop across wet scrubber.	

Continuous Monitoring System: Continuous Monitor 2 of 3

1. Parameter Code: Water Pressure	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Measures inlet water pressure to the wet scrubber.	

EMISSIONS UNIT INFORMATION

Section [3]

Boiler No. 3

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 3 of 3

1. Parameter Code: FLOW	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information... Manufacturer: Rosemount Model Number: 1151DP4S22M1B1 Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Measures steam flow on Boiler No. 3.	

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

Section [3]
Boiler No. 3

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date September 2005
2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date September 2005
3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date September 2005
4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date September 2005 <input type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> Not Applicable Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7. Other Information Required by Rule or Statute <input checked="" type="checkbox"/> Attached, Document ID: HBCA Report <input type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [3]

Boiler No. 3

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements <input checked="" type="checkbox"/> Attached, Document ID: GSH-EU3-IV1 <input type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation <input checked="" type="checkbox"/> Attached, Document ID: GSH-EU3-IV3 <input type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
5. Acid Rain Part Application <input type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input type="checkbox"/> Copy Attached, Document ID: _____ <input type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [3]

Boiler No. 3

Additional Requirements Comment

[Empty rectangular box for Additional Requirements Comment]

ATTACHMENT GSH-EU3-B6

CALCULATION OF HEAT INPUT

**ATTACHMENT GSH-EU3-B6a
MAXIMUM HOURLY FUEL USAGE AND HEAT INPUT RATES FOR BOILER NO. 3, SCGCF**

Fuel	Heat Input (MMBtu/hr)	Heat Transfer Efficiency (%)	Heat Output (MMBtu/hr)	Fuel Firing Rate
Bagasse	229.1	55.0	126.0	28,638 lb/hr ^a
Residue	201.6	62.5	126.0	22,652 lb/hr ^b
No. 6 Fuel Oil	157.2	62.5	98.3	1,041 gal/hr
MAX FUEL FIRING + BAGASSE				
Bagasse	50.4	55.0	27.7	6,300 lb/hr ^a
Residue	0	62.5	0	0 lb/hr ^b
No. 6 Fuel Oil	157.2	62.5	98.3	1,041 gal/hr
TOTAL	207.6		126.0	
MAX FUEL FIRING + RESIDUE				
Bagasse	0	55.0	0	0 lb/hr ^a
Residue	44.3	62.5	27.7	4,978 lb/hr ^b
No. 6 Fuel Oil	157.2	62.5	98.3	1,041 gal/hr
TOTAL	201.5		126.0	

^a Based on bagasse firing.

^b Based on residue firing.

Notes:

Total steam production required = 120,000 lb/hr
 Net steam enthalpy = 1,050 Btu/lb
 Total heat output to steam = 120,000 lb/hr steam x 1,050 Btu/lb = 126.0 MMBtu/hr
 Fuels may be burned in combination, not to exceed total heat outputs.
 Based on fuel heating values as follows:
 Bagasse, dry - 8,000 Btu/lb
 Residue, dry - 8,900 Btu/lb
 No. 6 Fuel Oil - 151,000 Btu/gal

**ATTACHMENT GSH-EU3-B6b
MAXIMUM ANNUAL FUEL USAGE AND HEAT INPUT RATES FOR BOILER NO. 3, SCGCF**

Fuel	Heat Input	Heat Transfer Efficiency (%)	Heat Output	Fuel Firing Rate
	(MMBtu/hr)		(MMBtu/hr)	
Bagasse	210.0	55.0	115.5	26,250 lb/hr ^a
Residue	184.8	62.5	115.5	20,764 lb/hr ^b
No. 6 Fuel Oil	157.2	62.5	98.3	1,041 gal/hr
MAX FUEL FIRING + BAGASSE				
Bagasse	31.3	55.0	17.2	3,913 lb/hr ^a
Residue	0	62.5	0	0 lb/hr ^b
No. 6 Fuel Oil	157.2	62.5	98.3	1,041 gal/hr
TOTAL	188.5		115.5	
MAX FUEL FIRING + RESIDUE				
Bagasse	0	55.0	0	0 lb/hr ^a
Residue	27.5	62.5	17.2	3,090 lb/hr ^b
No. 6 Fuel Oil	157.2	62.5	98.3	1,041 gal/hr
TOTAL	184.7		115.5	

^a Based on bagasse firing.

^b Based on residue firing.

Notes:

Total steam production required = 110,000 lb/hr
 Net steam enthalpy = 1,050 Btu/lb
 Total heat output to steam = 110,000 lb/hr steam x 1,050 Btu/lb = 115.5 MMBtu/hr

Fuels may be burned in combination, not to exceed total heat outputs.

Based on fuel heating values as follows:

- Bagasse, dry - 8,000 Btu/lb
- Residue, dry - 8,900 Btu/lb
- No. 6 Fuel Oil - 151,000 Btu/gal

ATTACHMENT GSH-EU3-IV1

**IDENTIFICATION OF
APPLICABLE REQUIREMENTS**

**ATTACHMENT GSH-EU3-IV1
RULE APPLICABILITY FOR SUGAR CANE GROWERS COOPERATIVE OF FLORIDA
Glade Sugar House Boiler No. 3**

APPLIC STAT	RULE DESCRIP	RULE NUMBER	RULE TITLE	RATIONALE FOR NON APPLICABILITY
APPLICABLE	62-210	62-210	STATIONARY SOURCES - GENERAL REQUIREMENTS	
APPLICABLE	62-210	62-210.700	EXCESS EMISSIONS	
APPLICABLE	62-210	62-210.700(1)	EXCESS EMISSIONS	
APPLICABLE	62-210	62-210.700(4)	EXCESS EMISSIONS	
APPLICABLE	62-210	62-210.700(5)	EXCESS EMISSIONS	
APPLICABLE	62-210	62-210.700(6)	EXCESS EMISSIONS	
APPLICABLE	62-296	62-296	STATIONARY SOURCES - EMISSION STANDARDS	
APPLICABLE	62-296	62-296.320	General Pollutant Emission Limiting Standards.	
APPLICABLE	62-296	62-296.410	Carbonaceous Fuel Burning Equipment.	
APPLICABLE	62-296	62-296.410(1)(b)	Carbonaceous Fuel Burning Equipment.	
APPLICABLE	62-296	62-296.410(3)	Test Methods and Procedures.	
APPLICABLE	62-296	62-296.500	Reasonable Available Control Technology (RACT) - Volatile Organic Compounds	
APPLICABLE	62-296	62-296.500(1)(b)	RACT for VOC and NOx.	
APPLICABLE	62-296	62-296.500(2)(a)	RACT for VOC and NOx.	
APPLICABLE	62-296	62-296.500(2)(c)	RACT for VOC and NOx.	
APPLICABLE	62-296	62-296.500(6)	RACT for VOC and NOx.	
APPLICABLE	62-296	62-296.570	RACT - Requirements for Major VOC- and NOx- Emitting Facility	
APPLICABLE	62-296	62-296.570(1)	Applicability	
APPLICABLE	62-296	62-296.570(1)(a)		
APPLICABLE	62-296	62-296.570(2)	Compliance Requirements.	
APPLICABLE	62-296	62-296.570(3)	Operation Permit Requirements.	
APPLICABLE	62-296	62-296.570(4)	Operation Permit Requirements.	
APPLICABLE	62-296	62-296.570(4)(a)	Operation Permit Requirements.	
APPLICABLE	62-296	62-296.570(4)(b)6.	Operation Permit Requirements.	
APPLICABLE	62-296	62-296.570(4)(c)	Operation Permit Requirements.	
APPLICABLE	62-297	62-297	STATIONARY SOURCES - EMISSIONS MONITORING	
APPLICABLE	62-297	62-297.310	General Compliance Test Requirements.	
APPLICABLE	62-297	62-297.310(1)	Required Number of Test Runs.	
APPLICABLE	62-297	62-297.310(2)(b)	Operating Rate During Testing.	
APPLICABLE	62-297	62-297.310(3)	Calculation of Emission Rate.	
APPLICABLE	62-297	62-297.310(4)	Applicable Test Procedures.	
APPLICABLE	62-297	62-297.310(5)	Determination of Process Variables.	
APPLICABLE	62-297	62-297.310(6)	Required Stack Sampling Facilities.	
APPLICABLE	62-297	62-297.310(7)	Frequency of Compliance Tests.	
APPLICABLE	62-297	62-297.310(7)(a)3.	General Compliance Testing.	
APPLICABLE	62-297	62-297.310(7)(a)4.	General Compliance Testing.	
APPLICABLE	62-297	62-297.310(7)(a)5.	General Compliance Testing.	
APPLICABLE	62-297	62-297.310(7)(a)9.	General Compliance Testing.	
APPLICABLE	62-297	62-297.310(8)	Test Reports.	
APPLICABLE	62-297	62-297.401	Compliance Test Methods.	
APPLICABLE	62-297	62-297.401(1)	EPA Method 1 - Sample and Velocity Traverses for Stationary Sources - 40 CFR	
APPLICABLE	62-297	62-297.401(2)	EPA Method 2 - Determination of Stack Gas Velocity and Volumetric Flow Rate - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(3)	EPA Method 3 - Gas Analysis for Carbon Dioxide, Oxygen, Excess Air, and Dry Molecular Weight - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(4)	EPA Method 4 - Determination of Moisture Content in Stack Gases - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(5)	EPA Method 5 - Determination of Particulate Emissions from Stationary Sources - 40 CFR 60 Appendix A	
APPLICABLE	62-297	62-297.401(7)	EPA Method 7 - Determination of Nitrogen Oxide Emissions from Stationary	
APPLICABLE	62-297	62-297.401(7)(e)	EPA Method 7E - Determination of Nitrogen Oxide Emissions from Stationary	
APPLICABLE	62-297	62-297.401(9)	EPA Test Method 9	
APPLICABLE	62-297	62-297.401(18)	EPA Method 18 - Measurement of Gaseous Organic Compound Emissions by Gas	
APPLICABLE	62-297	62-297.401(25)	EPA Method 25 - Determination of Total Gaseous Nonmethane Organic Emissions	
APPLICABLE	62-297	62-297.401(25)(a)	EPA Method 25 A - Determination of Total Gaseous Organic Emissions Using a	
APPLICABLE	62-297	62-297.440(1)(b)	Supplementary Test Procedures.	
APPLICABLE	62-297	62-297.620	Exceptions and Approval of Alternate Procedures and Requirements.	
APPLICABLE	Subpart A	40 CFR 63.1	General Provisions	Boiler No. 3 is subject to the notification requirements of Subpart DDDDD.
APPLICABLE	Subpart DDDDD	40 CFR 63.7485	Applicability	Boiler No. 3 is an industrial boiler of size > 10 MMBtu/hr located at a major source of HAPs.

**ATTACHMENT GSH-EU3-IV1
RULE APPLICABILITY FOR SUGAR CANE GROWERS COOPERATIVE OF FLORIDA
Glade Sugar House Boiler No. 3**

APPLIC. STAT.	RULE DESCRIBE	RULE NUMBER	RULE TITLE	RATIONALE FOR NON-APPLICABILITY
APPLICABLE	Subpart DDDDD	40 CFR 63.7490	Applicability	Boiler No. 3 is subject to the requirements of Subpart DDDDD for existing boilers.
APPLICABLE	Subpart DDDDD	40 CFR 63.7495	Compliance Dates	Boiler No. 3 must meet notification requirements and comply by September 13, 2007.
APPLICABLE	Subpart DDDDD	40 CFR 63.7499	Subcategories	Boiler No. 3 is in the large solid fuel subcategory.
APPLICABLE	Subpart DDDDD	40 CFR 63.7506	Limited Requirements	Boiler No. 3 must only meet the notification requirements of 63.9(b) at this time.
APPLICABLE	Subpart DDDDD	40 CFR 63.7545	Notifications	Notification due by March 12, 2005.
APPLICABLE	Subpart DDDDD	Appendix A	Health-Based Compliance Alternative	Must submit demonstration by September 13, 2007.
NON-APPLICABLE	60 Subpart A	40CFR60.1	Subpart A -- General Provisions	Boiler No. 3 is not subject to NSPS.
NON-APPLICABLE	60 Subpart D	40CFR60.40	SubPart D -- Applicability and designation of affected facility	Boiler No. 3 was constructed prior to August 17, 1971, and has not been modified or reconstructed after this date.
NON-APPLICABLE	60 Subpart Db	40CFR60.40b	Subpart Db -- Applicability and delegation of authority	Boiler No. 3 was constructed prior to June 19, 1984, and has not been modified or reconstructed after this date.
NON-APPLICABLE	60 Subpart Dc	40CFR60.40c	Subpart Dc -- Small Industrial - Commercial - Institutional Steam Generating Units -- Applicability	Boiler No. 3 was constructed prior to June 9, 1989, and has not been modified or reconstructed after this date. In addition, Boiler No. 3 has a heat input of greater than 100 MMBtu/hr.
NON-APPLICABLE	62-210	62-210.700(2)	EXCESS EMISSIONS	Boiler No. 3 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-210	62-210.700(3)	EXCESS EMISSIONS	Boiler No. 3 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-296	62-296.320(4)(b)	General Pollutant Emission Limiting Standards.	A visible emission standard set forth elsewhere in Rule 62-296 applies to Boiler No. 3.
NON-APPLICABLE	62-296	62-296.405	Fossil Fuel Steam Generators with more than 250 million Btu per Hour Heat Input.	Boiler No. 3 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-296	62-296.406	Fossil Fuel Steam Generators with less than 250 million Btu per Hour Heat Input.	Boiler No. 3 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-296	62-296.410(1)(a)	Carbonaceous Fuel Burning Equipment.	Boiler No. 3 has a maximum heat input rate of greater than 30 MMBtu/hr.
NON-APPLICABLE	62-296	62-296.410(2)	New Emissions Units.	Boiler No. 3 was issued a valid Department operation permit prior to July 1, 1974.
NON-APPLICABLE	62-296	62-296.570(1)(b)		Boiler No. 3 is not exempt from permitting.
NON-APPLICABLE	62-296	62-296.570(4)(a)4.	Operation Permit Requirements.	Boiler No. 3 does not have a CEMS.
NON-APPLICABLE	62-296	62-296.700	Reasonably Available Control Technology (RACT) Particulate Matter.	The GSH is located in Palm Beach County, which is not a nonattainment or maintenance area for particulate matter.
NON-APPLICABLE	62-296	62-296.702	Fossil Fuel Steam Generators	The GSH is located in Palm Beach County, which is not a nonattainment or maintenance area for particulate matter.
NON-APPLICABLE	62-296	62-296.703	Carbonaceous Fuel Burners.	The GSH Mill is located in Palm Beach County, which is not a nonattainment or maintenance area for particulate matter.
NON-APPLICABLE	62-297	62-297.310(2)(a)	Operating Rate During Testing.	Boiler No. 3 is not a combustion turbine.
NON-APPLICABLE	62-297	62-297.310(7)(a)2.	General Compliance Testing.	Boiler No. 3 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-297	62-297.310(7)(a)4.c.	General Compliance Testing.	There is no applicable standard for any NESHAP pollutant.
NON-APPLICABLE	62-297	62-297.310(7)(a)6.	General Compliance Testing.	Boiler No. 3 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-297	62-297.310(7)(a)7.	General Compliance Testing.	Boiler No. 3 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-297	62-297.310(7)(a)8.	General Compliance Testing.	Boiler No. 3 is not a combustion turbine.
NON-APPLICABLE	62-297	62-297.310(7)(a)10.	General Compliance Testing.	Boiler No. 3 is not exempt from permitting, insignificant, or permitted under the general permit provisions.

Permit No. 0990026-003-AC.

ATTACHMENT GSH-EU3-IV3

ALTERNATIVE METHODS OF OPERATION

ATTACHMENT GSH-EU3-IV3**ALTERNATIVE METHODS OF OPERATION**

Boiler No. 3 may simultaneously burn four different fuels: bagasse, residue, No. 6 residual oil, and small quantities of on-spec used oil. Heat input from bagasse shall not exceed the permitted limit of 229.1 MMBtu/hr (maximum 1-hr block average). Heat input from residue shall not exceed 201.6 MMBtu/hr (maximum 24-hr average). Heat input from fuel oil and on-spec used oil shall not exceed 157.2 MMBtu/hr (maximum 24-hr average).

EMISSIONS UNIT INFORMATION

Section [4]

Boiler No. 4

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application – For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application – For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an “unregulated emissions unit” does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

Section [4]

Boiler No. 4

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)
- The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
 - The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)
- This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
 - This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
 - This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
Boiler No. 4

3. Emissions Unit Identification Number: **004**

4. Emissions Unit Status Code: A	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: 20	8. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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9. Package Unit:
 Manufacturer: _____ Model Number: _____

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:
This boiler has a traveling grate and is fired by bagasse, residue, and fuel oil. This emission unit produces steam for use in the production of raw sugar cane.

EMISSIONS UNIT INFORMATION

Section [4]

Boiler No. 4

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

**Low Efficiency Dust Collector
Two Impingement Wet Scrubbers**

2. Control Device or Method Code(s): **009, 002**

EMISSIONS UNIT INFORMATION

Section [4]

Boiler No. 4

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: Blr 4		2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: V	6. Stack Height: 180 feet	7. Exit Diameter: 8.92 feet	
8. Exit Temperature: 162 °F	9. Actual Volumetric Flow Rate: 180,000 acfm	10. Water Vapor: 30 %	
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Stack parameters based on 2005 – 2006 crop season stack test.			

EMISSIONS UNIT INFORMATION

Section [4]

Boiler No. 4

D. SEGMENT (PROCESS/FUEL) INFORMATION**Segment Description and Rate: Segment 1 of 4**

1. Segment Description (Process/Fuel Type): External Combustion Boilers: Industrial: Bagasse		
2. Source Classification Code (SCC): 1-02-011-01		3. SCC Units: Tons Burned
4. Maximum Hourly Rate: 35.794	5. Maximum Annual Rate: 261,151	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.08, dry	8. Maximum % Ash: 2.6, dry	9. Million Btu per SCC Unit: 16
10. Segment Comment: Tons burned on dry basis, based on 572.7 MMBtu/hr (24-hr average) and a heating value of 8,000 Btu/lb (dry) for bagasse.		

Segment Description and Rate: Segment 2 of 4

1. Segment Description (Process/Fuel Type): External Combustion Boilers: Industrial: Solid Waste: Residue		
2. Source Classification Code (SCC): 1-02-012-01		3. SCC Units: Tons Burned
4. Maximum Hourly Rate: 28.315	5. Maximum Annual Rate: 206,583	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.6, dry	8. Maximum % Ash: 8.0, dry	9. Million Btu per SCC Unit: 17.8
10. Segment Comment: Tons burned on dry basis, based on 504.0 MMBtu/hr (24-hr average) and a heating value of 8,900 Btu/lb (dry) for bagasse residue.		

EMISSIONS UNIT INFORMATION

Section [4]

Boiler No. 4

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

1. Segment Description (Process/Fuel Type): External Combustion Boilers: Industrial: Residual Oil: Grade 6 Oil		
2. Source Classification Code (SCC): 1-02-004-01		3. SCC Units: 1000 Gallons Burned
4. Maximum Hourly Rate: 2.602	5. Maximum Annual Rate: 18,984	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 2.4	8. Maximum % Ash:	9. Million Btu per SCC Unit: 151
10. Segment Comment: Based on 392.9 MMBtu/hr (24-hr average) and heating value of 151,000 Btu/gal for No. 6 fuel oil.		

Segment Description and Rate: Segment 4 of 4

1. Segment Description (Process/Fuel Type): External Combustion Boilers: Industrial: Liquid Waste: Waste Oil		
2. Source Classification Code (SCC): 1-02-013-02		3. SCC Units: 1000 Gallons Burned
4. Maximum Hourly Rate: 0.04	5. Maximum Annual Rate: 75.00	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 151
10. Segment Comment: The used oil is generated solely by the facility, mostly during the repair season. The on-specification used oil is properly stored and burned in the boilers for energy recovery. The amount generated ranges between 50,000 and 75,000 gallons per year.		

**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: Manganese Compounds (H113)		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 0.74 lb/hour 2.70 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: 0.0013 lb/MMBtu for bagasse Reference: Fuel Analysis		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: 572.7 MMBtu/hr x 0.0013 lb/MMBtu = 0.74 lb/hr 0.74 lb/hr x 7,296 hr/yr ÷ 2,000 lb/ton = 2.70 TPY			
11. Pollutant Potential/Estimated Fugitive Emissions Comment: Emission factor based on 90 percent confidence level for fuel analysis data.			

**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: 9/13/07
3. Allowable Emissions and Units: 0.0013 lb/MMBtu	4. Equivalent Allowable Emissions: 0.74 lb/hour 2.70 tons/year
5. Method of Compliance: Fuel Analysis	
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):	

**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: HCl (H106)		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 51.54 lb/hour 188.0 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: 0.09 lb/MMBtu Reference: 40 CFR 63 Subpart DDDDD		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: 572.7 MMBtu/hr x 0.09 lb/MMBtu = 51.54 lb/hr 51.54 lb/hr x 7,296 hr/yr ÷ 2,000 lb/ton = 188.0 TPY			
11. Pollutant Potential/Estimated Fugitive Emissions Comment:			

EMISSIONS UNIT INFORMATION

Section [4]
Boiler No. 4

POLLUTANT DETAIL INFORMATION

Page [2] of [3]
Hydrochloric Acid - HCl

**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: RULE	2. Future Effective Date of Allowable Emissions: 9/13/07
3. Allowable Emissions and Units: 0.09 lb/MMBtu	4. Equivalent Allowable Emissions: 51.54 lb/hour 188.0 tons/year
5. Method of Compliance: EPA Method 26 or 26A	
6. Allowable Emissions Comment (Description of Operating Method): 40 CFR 63 Subpart DDDDD	

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 [4]
Boiler No. 4

POLLUTANT DETAIL INFORMATION

Page [3] of [3]
Mercury – Hg

**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: Hg (H114)		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 0.00515 lb/hour 0.019 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: 9 x 10⁻⁶ lb/MMBtu Reference: 40 CFR 63 Subpart DDDDD			7. Emissions Method Code: 0
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: 572.7 MMBtu/hr x 9 x 10⁻⁶ lb/MMBtu = 0.00515 lb/hr 0.00515 lb/hr x 7,296 hr/yr ÷ 2,000 lb/ton = 0.019 TPY			
11. Pollutant Potential/Estimated Fugitive Emissions Comment: Based on bagasse firing only.			

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [4]
Boiler No. 4

Page [3] of [3]
Mercury - Hg

**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: RULE	2. Future Effective Date of Allowable Emissions: 9/13/07
3. Allowable Emissions and Units: 9 x 10⁻⁶ lb/MMBtu	4. Equivalent Allowable Emissions: 0.00515 lb/hour 0.019 tons/year
5. Method of Compliance: Fuel Analysis	
6. Allowable Emissions Comment (Description of Operating Method): 40 CFR 63 Subpart DDDDD	

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 [4]

Boiler No. 4

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

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

Visible Emissions Limitation: Visible Emissions Limitation ____ of ____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

EMISSIONS UNIT INFORMATION

Section [4]

Boiler No. 4

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 1 of 3

1. Parameter Code: PRS	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information... Manufacturer: Dwyer Model Number: CAPSUHELIC 4015 C Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Measures total pressure drop across the wet scrubbers.	

Continuous Monitoring System: Continuous Monitor 2 of 3

1. Parameter Code: Water Pressure	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Measures inlet water pressure to the wet scrubbers.	

EMISSIONS UNIT INFORMATION

Section [4]

Boiler No. 4

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 3 of 3

1. Parameter Code: FLOW	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information... Manufacturer: Rosemount Model Number: 1151DP4S22M1B1 Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Measures steam flow on Boiler No. 4.	

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

**Section [4]
Boiler No. 4**

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date September 2005
2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date September 2005
3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date September 2005
4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date September 2005 <input type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> Not Applicable Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7. Other Information Required by Rule or Statute <input checked="" type="checkbox"/> Attached, Document ID: HBCA Report <input type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [4]
Boiler No. 4

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements <input checked="" type="checkbox"/> Attached, Document ID: GSH-EU4-IV1 <input type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation <input checked="" type="checkbox"/> Attached, Document ID: GSH-EU4-IV3 <input type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
5. Acid Rain Part Application <input type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input type="checkbox"/> Copy Attached, Document ID: _____ <input type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [4]

Boiler No. 4

Additional Requirements Comment

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ATTACHMENT GSH-EU4-B6

CALCULATION OF HEAT INPUT

**ATTACHMENT GSH-EU4-B6
MAXIMUM FUEL USAGE AND HEAT INPUT RATES FOR BOILER NO. 4, SCGCF**

Fuel	Heat Input To Boiler	Heat Transfer Efficiency (%)	Heat Output To Steam	Fuel Firing Rate	
<u>Maximum Short-Term</u>					
	(MMBtu/hr)		(MMBtu/hr)		
Bagasse	572.7	55.0	315.0	71,588	lb/hr, dry ^a
Residue	504.0	62.5	315.0	56,629	lb/hr, dry ^b
No. 6 Fuel Oil	392.9	62.5	245.6	2,602	gal/hr
<u>MAX FUEL FIRING + BAGASSE</u>					
Bagasse	126.2	55.0	69.4	15,778	lb/hr, dry ^a
Residue	0	62.5	0	0	lb/hr, dry ^b
No. 6 Fuel Oil	392.9	62.5	245.6	2,602	gal/hr
TOTAL	519.1		315.0		
<u>MAX FUEL FIRING + RESIDUE</u>					
Bagasse	0	55.0	0	0	lb/hr, dry ^a
Residue	111.1	62.5	69.4	12,483	lb/hr, dry ^b
No. 6 Fuel Oil	392.9	62.5	245.6	2,602	gal/hr
TOTAL	504.0		315.0		

^a Based on bagasse firing.

^b Based on residue firing.

Note:

Total steam production required = 300,000 lb/hr
 Net steam enthalpy = 1,050 Btu/lb
 Total heat output to steam = 300,000 lb/hr steam x 1,050 Btu/lb = 315.0 MMBtu/hr

Fuels may be burned in combination, not to exceed total heat outputs.

Based on fuel heating values as follows:

- Bagasse, dry - 8,000 Btu/lb
- Residue, dry - 8,900 Btu/lb
- No. 6 Fuel Oil - 151,000 Btu/gal

ATTACHMENT GSH-EU4-IV1

**IDENTIFICATION OF
APPLICABLE REQUIREMENTS**

**ATTACHMENT GSH-EU4-IV1
RULE APPLICABILITY FOR SUGAR CANE GROWERS COOPERATIVE OF FLORIDA**

Glade Sugar House Boiler No. 4

APPLIC STATE	RULE DESCRIP	RULE NUMBER	RULE TITLE	RATIONALE FOR NON-APPLICABILITY
APPLICABLE	62-210	62-210	STATIONARY SOURCES - GENERAL REQUIREMENTS	
APPLICABLE	62-210	62-210.700	EXCESS EMISSIONS	
APPLICABLE	62-210	62-210.700(1)	EXCESS EMISSIONS	
APPLICABLE	62-210	62-210.700(4)	EXCESS EMISSIONS	
APPLICABLE	62-210	62-210.700(5)	EXCESS EMISSIONS	
APPLICABLE	62-210	62-210.700(6)	EXCESS EMISSIONS	
APPLICABLE	62-296	62-296	STATIONARY SOURCES - EMISSION STANDARDS	
APPLICABLE	62-296	62-296.320	General Pollutant Emission Limiting Standards.	
APPLICABLE	62-296	62-296.410	Carbonaceous Fuel Burning Equipment.	
APPLICABLE	62-296	62-296.410(1)(b)	Carbonaceous Fuel Burning Equipment.	
APPLICABLE	62-296	62-296.410(3)	Test Methods and Procedures.	
APPLICABLE	62-296	62-296.500	Reasonable Available Control Technology (RACT) - Volatile Organic Compounds	
APPLICABLE	62-296	62-296.500(1)(b)	RACT for VOC and NOx.	
APPLICABLE	62-296	62-296.500(2)(a)	RACT for VOC and NOx.	
APPLICABLE	62-296	62-296.500(2)(c)	RACT for VOC and NOx.	
APPLICABLE	62-296	62-296.500(6)	RACT for VOC and NOx.	
APPLICABLE	62-296	62-296.570	RACT - Requirements for Major VOC- and NOx- Emitting Facility	
APPLICABLE	62-296	62-296.570(1)	Applicability	
APPLICABLE	62-296	62-296.570(1)(a)		
APPLICABLE	62-296	62-296.570(2)	Compliance Requirements.	
APPLICABLE	62-296	62-296.570(3)	Operation Permit Requirements.	
APPLICABLE	62-296	62-296.570(4)	Operation Permit Requirements.	
APPLICABLE	62-296	62-296.570(4)(a)	Operation Permit Requirements.	
APPLICABLE	62-296	62-296.570(4)(b)6.	Operation Permit Requirements.	
APPLICABLE	62-296	62-296.570(4)(c)	Operation Permit Requirements.	
APPLICABLE	62-297	62-297	STATIONARY SOURCES - EMISSIONS MONITORING	
APPLICABLE	62-297	62-297.310	General Compliance Test Requirements.	
APPLICABLE	62-297	62-297.310(1)	Required Number of Test Runs.	
APPLICABLE	62-297	62-297.310(2)(b)	Operating Rate During Testing.	
APPLICABLE	62-297	62-297.310(3)	Calculation of Emission Rate.	
APPLICABLE	62-297	62-297.310(4)	Applicable Test Procedures.	
APPLICABLE	62-297	62-297.310(5)	Determination of Process Variables.	
APPLICABLE	62-297	62-297.310(6)	Required Stack Sampling Facilities.	
APPLICABLE	62-297	62-297.310(7)	Frequency of Compliance Tests.	
APPLICABLE	62-297	62-297.310(7)(a)3.	General Compliance Testing.	
APPLICABLE	62-297	62-297.310(7)(a)4.	General Compliance Testing.	
APPLICABLE	62-297	62-297.310(7)(a)5.	General Compliance Testing.	
APPLICABLE	62-297	62-297.310(7)(a)9.	General Compliance Testing.	
APPLICABLE	62-297	62-297.310(8)	Test Reports.	
APPLICABLE	62-297	62-297.401	Compliance Test Methods.	
APPLICABLE	62-297	62-297.401(1)	EPA Method 1 - Sample and Velocity Traverses for Stationary Sources - 40 CFR 60	
APPLICABLE	62-297	62-297.401(2)	EPA Method 2 - Determination of Stack Gas Velocity and Volumetric Flow Rate - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(3)	EPA Method 3 - Gas Analysis for Carbon Dioxide, Oxygen, Excess Air, and Dry Molecular Weight - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(4)	EPA Method 4 - Determination of Moisture Content in Stack Gases - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(5)	EPA Method 5 - Determination of Particulate Emissions from Stationary Sources - 40 CFR 60 Appendix A	
APPLICABLE	62-297	62-297.401(7)	EPA Method 7 - Determination of Nitrogen Oxide Emissions from Stationary Sources -	
APPLICABLE	62-297	62-297.401(7)(e)	EPA Method 7E - Determination of Nitrogen Oxide Emissions from Stationary Sources	
APPLICABLE	62-297	62-297.401(9)	EPA Test Method 9	
APPLICABLE	62-297	62-297.401(18)	EPA Method 18 - Measurement of Gaseous Organic Compound Emissions by Gas	

**ATTACHMENT GSH-EU4-IV1
RULE APPLICABILITY FOR SUGAR CANE GROWERS COOPERATIVE OF FLORIDA**

Glade Sugar House Boiler No. 4

APPLICABILITY	RULE DESCRIP	RULE NUMBER	RULE TITLE	RATIONALE FOR NON-APPLICABILITY
APPLICABLE	62-297	62-297.401(25)	EPA Method 25 - Determination of Total Gaseous Nonmethane Organic Emissions as	
APPLICABLE	62-297	62-297.401(25)(a)	EPA Method 25 A - Determination of Total Gaseous Organic Emissions Using a Flame	
APPLICABLE	62-297	62-297.440(1)(b)	Supplementary Test Procedures.	
APPLICABLE	62-297	62-297.620	Exceptions and Approval of Alternate Procedures and Requirements.	
APPLICABLE	Subpart A	40 CFR 63.1	General Provisions	Boiler No. 4 is subject to the notification requirements of Subpart DDDDD.
APPLICABLE	Subpart DDDDD	40 CFR 63.7485	Applicability	Boiler No. 4 is an industrial boiler of size > 10 MMBtu/hr located at a major source of HAPs.
APPLICABLE	Subpart DDDDD	40 CFR 63.7490	Applicability	Boiler No. 4 is subject to the requirements of Subpart DDDDD for existing boilers.
APPLICABLE	Subpart DDDDD	40 CFR 63.7495	Compliance Dates	Boiler No. 4 must meet notification requirements and comply by September 13, 2007.
APPLICABLE	Subpart DDDDD	40 CFR 63.7499	Subcategories	Boiler No. 4 is in the large solid fuel subcategory.
APPLICABLE	Subpart DDDDD	40 CFR 63.7506	Limited Requirements	Boiler No. 4 must only meet the notification requirements of 63.9(b) at this time.
APPLICABLE	Subpart DDDDD	40 CFR 63.7545	Notifications	Notification due by March 12, 2005.
APPLICABLE	Subpart DDDDD	Appendix A	Health-Based Compliance Alternative	Must submit demonstration by September 13, 2007.
NON-APPLICABLE	60 Subpart A	40CFR60.1	Subpart A -- General Provisions	Boiler No. 4 is not subject to NSPS.
NON-APPLICABLE	60 Subpart D	40CFR60.40	SubPart D -- Applicability and designation of affected facility	Boiler No. 4 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	60 Subpart Db	40CFR60.40b	Subpart Db -- Applicability and delegation of authority	Boiler No. 4 was constructed prior to June 19, 1984, and has not been modified or reconstructed after this date.
NON-APPLICABLE	60 Subpart Dc	40CFR60.40c	Subpart Dc -- Small Industrial - Commercial - Institutional Steam Generating Units -- Applicability	Boiler No. 4 was constructed prior to June 9, 1989, and has not been modified or reconstructed after this date. In addition, Boiler No. 4 has a heat input of greater than 100 MMBtu/hr.
NON-APPLICABLE	62-210	62-210.700(2)	EXCESS EMISSIONS	Boiler No. 4 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-210	62-210.700(3)	EXCESS EMISSIONS	Boiler No. 4 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-296	62-296.320(4)(b)	General Pollutant Emission Limiting Standards.	A visible emission standard set forth elsewhere in Rule 62-296 applies to Boiler No. 4.
NON-APPLICABLE	62-296	62-296.405	Fossil Fuel Steam Generators with more than 250 million Btu per Hour Heat Input.	Boiler No. 4 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-296	62-296.406	Fossil Fuel Steam Generators with less than 250 million Btu per Hour Heat Input.	Boiler No. 4 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-296	62-296.410(1)(a)	Carbonaceous Fuel Burning Equipment.	Boiler No. 4 has a maximum heat input rate of greater than 30 MMBtu/hr.
NON-APPLICABLE	62-296	62-296.410(2)	New Emissions Units.	Boiler No. 4 was issued a valid Department operation permit prior to July 1, 1974.
NON-APPLICABLE	62-296	62-296.570(1)(b)		Boiler No. 4 is not exempt from permitting.
NON-APPLICABLE	62-296	62-296.570(4)(a)4.	Operation Permit Requirements.	Boiler No. 4 does not have a CEMS.
NON-APPLICABLE	62-296	62-296.700	Reasonably Available Control Technology (RACT) Particulate Matter.	The GSH is located in Palm Beach County, which is not a nonattainment or maintenance area for particulate matter.
NON-APPLICABLE	62-296	62-296.702	Fossil Fuel Steam Generators	The GSH is located in Palm Beach County, which is not a nonattainment or maintenance area for particulate matter.
NON-APPLICABLE	62-296	62-296.703	Carbonaceous Fuel Burners.	The GSH Mill is located in Palm Beach County, which is not a nonattainment or maintenance area for particulate matter.
NON-APPLICABLE	62-297	62-297.310(2)(a)	Operating Rate During Testing.	Boiler No. 4 is not a combustion turbine.
NON-APPLICABLE	62-297	62-297.310(7)(a)2.	General Compliance Testing.	Boiler No. 4 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-297	62-297.310(7)(a)4.c.	General Compliance Testing.	There is no applicable standard for any NESHAP pollutant.
NON-APPLICABLE	62-297	62-297.310(7)(a)6.	General Compliance Testing.	Boiler No. 4 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-297	62-297.310(7)(a)7.	General Compliance Testing.	Boiler No. 4 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-297	62-297.310(7)(a)8.	General Compliance Testing.	Boiler No. 4 is not a combustion turbine.
NON-APPLICABLE	62-297	62-297.310(7)(a)10.	General Compliance Testing.	Boiler No. 4 is not exempt from permitting, insignificant, or permitted under the general permit provisions.

See also Permit No. 0990026-005-AC and RACT ammendment letter dated 1/27/97.

ATTACHMENT GSH-EU4-IV3

ALTERNATIVE METHODS OF OPERATION

ATTACHMENT GSH-EU4-IV3**ALTERNATIVE METHODS OF OPERATION**

Boiler No. 4 may simultaneously burn four different fuels: bagasse, residue, No. 6 residual oil, and small quantities of on-spec used oil. Heat input from bagasse shall not exceed the permitted limit of 572.7 MMBtu/hr (maximum 24-hr average). Heat input from residue shall not exceed 504.0 MMBtu/hr (maximum 24-hr average). Heat input from fuel oil and on-spec used oil shall not exceed 392.9 MMBtu/hr (maximum 24-hr average) and 6.04 MMBtu/hr (annual average) (40 gallons per hour), respectively.

EMISSIONS UNIT INFORMATION

Section [5]

Boiler No. 5

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application – For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application – For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an “unregulated emissions unit” does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

Section [5]

Boiler No. 5

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)
- The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
 - The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)
- This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
 - This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
 - This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
Boiler No. 5

3. Emissions Unit Identification Number: **005**

4. Emissions Unit Status Code: A	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: 20	8. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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9. Package Unit:
Manufacturer: _____ Model Number: _____

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:
This boiler has a traveling grate, and is fired by bagasse, residue, and fuel oil. This emission unit produces steam for use in the production of raw sugar cane.

EMISSIONS UNIT INFORMATION

Section [5]

Boiler No. 5

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

**Multiple-Cyclone Dust Collector
Two Impingement Wet Scrubbers**

2. Control Device or Method Code(s): **002, 121**

EMISSIONS UNIT INFORMATION

Section [5]

Boiler No. 5

**C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)**

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: Blr 5		2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: V	6. Stack Height: 150 feet	7. Exit Diameter: 7.0 feet	
8. Exit Temperature: 160 °F	9. Actual Volumetric Flow Rate: 178,000 acfm	10. Water Vapor: 29 %	
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Stack parameters based on 2005 – 2006 crop season stack test.			

EMISSIONS UNIT INFORMATION

Section [5]

Boiler No. 5

D. SEGMENT (PROCESS/FUEL) INFORMATION**Segment Description and Rate: Segment 1 of 4**

1. Segment Description (Process/Fuel Type): External Combustion Boilers: Industrial: Bagasse		
2. Source Classification Code (SCC): 1-02-011-01		3. SCC Units: Tons Burned
4. Maximum Hourly Rate: 27.444	5. Maximum Annual Rate: 200,230	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.08, dry	8. Maximum % Ash: 2.6, dry	9. Million Btu per SCC Unit: 16
10. Segment Comment: Tons burned on dry basis, based on 439.1 MMBtu/hr (24-hr average) and a heating value of 8,000 Btu/lb (dry) for bagasse.		

Segment Description and Rate: Segment 2 of 4

1. Segment Description (Process/Fuel Type): External Combustion Boilers: Industrial: Solid Waste: Residue		
2. Source Classification Code (SCC): 1-02-012-01		3. SCC Units: Tons Burned
4. Maximum Hourly Rate: 21.708	5. Maximum Annual Rate: 158,380	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.6, dry	8. Maximum % Ash: 8.0, dry	9. Million Btu per SCC Unit: 17.8
10. Segment Comment: Tons burned on dry basis, based on 386.4 MMBtu/hr (24-hr average) and a heating value of 8,900 Btu/lb (dry) for bagasse residue.		

EMISSIONS UNIT INFORMATION

Section [5]

Boiler No. 5

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 3 of 4

1. Segment Description (Process/Fuel Type): External Combustion Boilers: Industrial: Residual Oil: Grade 6 Oil		
2. Source Classification Code (SCC): 1-02-004-01		3. SCC Units: 1000 Gallons Burned
4. Maximum Hourly Rate: 1.999	5. Maximum Annual Rate: 14,587	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 2.40	8. Maximum % Ash:	9. Million Btu per SCC Unit: 151
10. Segment Comment: Based on 301.9 MMBtu/hr (24-hr average) and heating value of 151,000 Btu/gal for No. 6 fuel oil.		

Segment Description and Rate: Segment 4 of 4

1. Segment Description (Process/Fuel Type): External Combustion Boilers: Industrial: Liquid Waste: Waste Oil		
2. Source Classification Code (SCC): 1-02-013-02		3. SCC Units: 1000 Gallons Burned
4. Maximum Hourly Rate: 0.04	5. Maximum Annual Rate: 75.00	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 151
10. Segment Comment: The used oil is generated solely by the facility, mostly during the repair season. The on-specification used oil is properly stored and burned in the boilers for energy recovery. The amount generated ranges between 50,000 and 75,000 gallons per year.		

**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: Manganese Compounds (H113)		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 0.57 lb/hour 2.08 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: 0.0013 lb/MMBtu for bagasse Reference: Fuel Analysis		7. Emissions Method Code: 0	
8. Calculation of Emissions: 439.1 MMBtu/hr x 0.0013 lb/MMBtu = 0.57 lb/hr 0.57 lb/hr x 7,296 hr/yr ÷ 2,000 lb/ton = 2.08 TPY			
9. Pollutant Potential/Estimated Fugitive Emissions Comment: Emission factor based on 90 percent confidence level for fuel analysis data.			

**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: 9/13/07
3. Allowable Emissions and Units: 0.0013 lb/MMBtu	4. Equivalent Allowable Emissions: 0.57 lb/hour 2.08 tons/year
5. Method of Compliance: Fuel Analysis	
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):	

**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: HCl (H106)		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 39.5 lb/hour 144.2 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: 0.09 lb/MMBtu Reference: 40 CFR 63 Subpart DDDDD		7. Emissions Method Code: 0	
8. Calculation of Emissions: 439.1 MMBtu/hr x 0.09 lb/MMBtu = 39.5 lb/hr 39.5 lb/hr x 7,296 hr/yr ÷ 2,000 lb/ton = 144.2 TPY			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [5]
Boiler No. 5

Page [2] of [3]
Hydrochloric Acid - HCl

**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: RULE	2. Future Effective Date of Allowable Emissions: 9/13/07
3. Allowable Emissions and Units: 0.09 lb/MMBtu	4. Equivalent Allowable Emissions: 39.5 lb/hour 144.2 tons/year
5. Method of Compliance: EPA Method 26 or 26A	
6. Allowable Emissions Comment (Description of Operating Method): 40 CFR 63 Subpart DDDDD	

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: Hg (H114)	2. Total Percent Efficiency of Control:
3. Potential Emissions: 0.00395 lb/hour 0.0144 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: 9×10^{-6} lb/MMBtu Reference: 40 CFR 63 Subpart DDDDD	7. Emissions Method Code: 0
8. Calculation of Emissions: $439.1 \text{ MMBtu/hr} \times 9 \times 10^{-6} \text{ lb/MMBtu} = 0.00395 \text{ lb/hr}$ $0.00395 \text{ lb/hr} \times 7,296 \text{ hr/yr} \div 2,000 \text{ lb/ton} = 0.0144 \text{ TPY}$	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: Based on bagasse firing only.	

EMISSIONS UNIT INFORMATION

Section [5]
Boiler No. 5

POLLUTANT DETAIL INFORMATION

Page [3] of [3]
Mercury - Hg

**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: RULE	2. Future Effective Date of Allowable Emissions: 9/13/07
3. Allowable Emissions and Units: 9 x 10⁻⁶ lb/MMBtu	4. Equivalent Allowable Emissions: 0.00395 lb/hour 0.0144 tons/year
5. Method of Compliance: Fuel Analysis	
6. Allowable Emissions Comment (Description of Operating Method): 40 CFR 63 Subpart DDDDD	

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 [5]

Boiler No. 5

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

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

Visible Emissions Limitation: Visible Emissions Limitation ____ of ____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

EMISSIONS UNIT INFORMATION

Section [5]

Boiler No. 5

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor **1** of **3**

1. Parameter Code: PRS	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information... Manufacturer: Dwyer Model Number: CAPSUHELIC 4015 C Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Measures total pressure drop across the wet scrubbers.	

Continuous Monitoring System: Continuous Monitor **2** of **3**

1. Parameter Code: Water Pressure	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Measures inlet water pressure to the wet scrubbers.	

EMISSIONS UNIT INFORMATION

Section [5]

Boiler No. 5

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 3 of 3

1. Parameter Code: FLOW	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information... Manufacturer: Rosemount Model Number: 1151DP4S22M1B1 Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Measures steam flow on Boiler No. 5.	

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

**Section [5]
Boiler No. 5**

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date September 2005
2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date September 2005
3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date September 2005
4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date September 2005 <input type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> Not Applicable Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7. Other Information Required by Rule or Statute <input checked="" type="checkbox"/> Attached, Document ID: HBCA Report <input type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

**Section [5]
Boiler No. 5**

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements <input checked="" type="checkbox"/> Attached, Document ID: GSH-EU5-IV1 <input type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation <input checked="" type="checkbox"/> Attached, Document ID: GSH-EU5-IV3 <input type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
5. Acid Rain Part Application <input type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input type="checkbox"/> Copy Attached, Document ID: _____ <input type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [5]

Boiler No. 5

Additional Requirements Comment

[Empty rectangular box for comment]

ATTACHMENT GSH-EU5-B6

CALCULATION OF HEAT INPUT

**ATTACHMENT GSH-EU5-B6
MAXIMUM FUEL USAGE AND HEAT INPUT RATES FOR BOILER NO. 5, SCGCF**

Fuel	Heat Input To Boiler	Heat Transfer Efficiency (%)	Heat Output To Steam	Fuel Firing Rate	
<u>Maximum Short-Term</u>					
	(MMBtu/hr)		(MMBtu/hr)		
Bagasse	439.1	55.0	241.5	54,888	lb/hr, dry ^a
Residue	386.4	62.5	241.5	43,416	lb/hr, dry ^b
No. 6 Fuel Oil	301.9	62.5	188.7	1,999	gal/hr
<u>MAX FUEL FIRING + BAGASSE</u>					
Bagasse	96.0	55.0	52.8	12,004	lb/hr, dry ^a
Residue	0	62.5	0	0	lb/hr, dry ^b
No. 6 Fuel Oil	301.9	62.5	188.7	1,999	gal/hr
TOTAL	397.9		241.5		
<u>MAX FUEL FIRING + RESIDUE</u>					
Bagasse	0	55.0	0	0	lb/hr, dry ^a
Residue	84.5	62.5	52.8	9,494	lb/hr, dry ^b
No. 6 Fuel Oil	301.9	62.5	188.7	1,999	gal/hr
TOTAL	386.4		241.5		

^a Based on bagasse firing.

^b Based on residue firing.

Note:

Total steam production required = 230,000 lb/hr

Net steam enthalpy = 1,050 Btu/lb

Total heat output to steam = 230,000 lb/hr steam x 1,050 Btu/lb = 241.5 MMBtu/hr

Fuels may be burned in combination, not to exceed total heat outputs.

Based on fuel heating values as follows:

Bagasse, dry - 8,000 Btu/lb

Residue, dry - 8,900 Btu/lb

No. 6 Fuel Oil - 151,000 Btu/gal

ATTACHMENT GSH-EU5-IV1

**IDENTIFICATION OF
APPLICABLE REQUIREMENTS**

**ATTACHMENT GSH-EU5-IV1
 RULE APPLICABILITY FOR SUGAR CANE GROWERS COOPERATIVE OF FLORIDA
 Glade Sugar House Boiler No.5**

APPLICABLE	RULE DESCRIP	RULE NUMBER	RULE TITLE	RATIONALE FOR NON-APPLICABILITY
APPLICABLE	62-210	62-210	STATIONARY SOURCES - GENERAL REQUIREMENTS	
APPLICABLE	62-210	62-210.700	EXCESS EMISSIONS	
APPLICABLE	62-210	62-210.700(1)	EXCESS EMISSIONS	
APPLICABLE	62-210	62-210.700(4)	EXCESS EMISSIONS	
APPLICABLE	62-210	62-210.700(5)	EXCESS EMISSIONS	
APPLICABLE	62-210	62-210.700(6)	EXCESS EMISSIONS	
APPLICABLE	62-296	62-296	STATIONARY SOURCES - EMISSION STANDARDS	
APPLICABLE	62-296	62-296.320	General Pollutant Emission Limiting Standards.	
APPLICABLE	62-296	62-296.410	Carbonaceous Fuel Burning Equipment.	
APPLICABLE	62-296	62-296.410(1)(b)	Carbonaceous Fuel Burning Equipment.	
APPLICABLE	62-296	62-296.410(3)	Test Methods and Procedures.	
APPLICABLE	62-296	62-296.500	Reasonable Available Control Technology (RACT) - Volatile Organic Compounds	
APPLICABLE	62-296	62-296.500(1)(b)	RACT for VOC and NOx.	
APPLICABLE	62-296	62-296.500(2)(a)	RACT for VOC and NOx.	
APPLICABLE	62-296	62-296.500(2)(c)	RACT for VOC and NOx.	
APPLICABLE	62-296	62-296.500(6)	RACT for VOC and NOx.	
APPLICABLE	62-296	62-296.570	RACT - Requirements for Major VOC- and NOx- Emitting Facility	
APPLICABLE	62-296	62-296.570(1)	Applicability	
APPLICABLE	62-296	62-296.570(1)(a)		
APPLICABLE	62-296	62-296.570(2)	Compliance Requirements.	
APPLICABLE	62-296	62-296.570(3)	Operation Permit Requirements.	
APPLICABLE	62-296	62-296.570(4)	Operation Permit Requirements.	
APPLICABLE	62-296	62-296.570(4)(a)	Operation Permit Requirements.	
APPLICABLE	62-296	62-296.570(4)(b)6.	Operation Permit Requirements.	
APPLICABLE	62-296	62-296.570(4)(c)	Operation Permit Requirements.	
APPLICABLE	62-297	62-297	STATIONARY SOURCES - EMISSIONS MONITORING	
APPLICABLE	62-297	62-297.310	General Compliance Test Requirements.	
APPLICABLE	62-297	62-297.310(1)	Required Number of Test Runs.	
APPLICABLE	62-297	62-297.310(2)(b)	Operating Rate During Testing.	
APPLICABLE	62-297	62-297.310(3)	Calculation of Emission Rate.	
APPLICABLE	62-297	62-297.310(4)	Applicable Test Procedures.	
APPLICABLE	62-297	62-297.310(5)	Determination of Process Variables.	
APPLICABLE	62-297	62-297.310(6)	Required Stack Sampling Facilities.	
APPLICABLE	62-297	62-297.310(7)	Frequency of Compliance Tests.	
APPLICABLE	62-297	62-297.310(7)(a)3.	General Compliance Testing.	
APPLICABLE	62-297	62-297.310(7)(a)4.	General Compliance Testing.	
APPLICABLE	62-297	62-297.310(7)(a)5.	General Compliance Testing.	
APPLICABLE	62-297	62-297.310(7)(a)9.	General Compliance Testing.	
APPLICABLE	62-297	62-297.310(8)	Test Reports.	
APPLICABLE	62-297	62-297.401	Compliance Test Methods.	
APPLICABLE	62-297	62-297.401(1)	EPA Method 1 - Sample and Velocity Traverses for Stationary Sources - 40 CFR 60	
APPLICABLE	62-297	62-297.401(2)	EPA Method 2 - Determination of Stack Gas Velocity and Volumetric Flow Rate - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(3)	EPA Method 3 - Gas Analysis for Carbon Dioxide, Oxygen, Excess Air, and Dry Molecular Weight - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(4)	EPA Method 4 - Determination of Moisture Content in Stack Gases - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(5)	EPA Method 5 - Determination of Particulate Emissions from Stationary Sources - 40 CFR 60 Appendix A	
APPLICABLE	62-297	62-297.401(7)	EPA Method 7 - Determination of Nitrogen Oxide Emissions from Stationary Sources -	
APPLICABLE	62-297	62-297.401(7)(e)	EPA Method 7E - Determination of Nitrogen Oxide Emissions from Stationary Sources -	
APPLICABLE	62-297	62-297.401(9)	EPA Test Method 9	
APPLICABLE	62-297	62-297.401(18)	EPA Method 18 - Measurement of Gaseous Organic Compound Emissions by Gas	
APPLICABLE	62-297	62-297.401(25)	EPA Method 25 - Determination of Total Gaseous Nonmethane Organic Emissions as	
APPLICABLE	62-297	62-297.401(25)(a)	EPA Method 25 A - Determination of Total Gaseous Organic Emissions Using a Flame	
APPLICABLE	62-297	62-297.440(1)(b)	Supplementary Test Procedures.	
APPLICABLE	62-297	62-297.620	Exceptions and Approval of Alternate Procedures and Requirements.	

**ATTACHMENT GSH-EU5-IV1
RULE APPLICABILITY FOR SUGAR CANE GROWERS COOPERATIVE OF FLORIDA**

Glade Sugar House Boiler No.5

APPLICABILITY	RULE DESCRIPTION	RULE NUMBER	RULE TITLE	RATIONALE FOR NON-APPLICABILITY
APPLICABLE	Subpart A	40 CFR 63.1	General Provisions	Boiler No. 5 is subject to the notification requirements of Subpart DDDDD.
APPLICABLE	Subpart DDDDD	40 CFR 63.7485	Applicability	Boiler No. 5 is an industrial boiler of size > 10 MMBtu/hr located at a major source of HAPs.
APPLICABLE	Subpart DDDDD	40 CFR 63.7490	Applicability	Boiler No. 5 is subject to the requirements of Subpart DDDDD for existing boilers.
APPLICABLE	Subpart DDDDD	40 CFR 63.7495	Compliance Dates	Boiler No. 5 must meet notification requirements and comply by September 13, 2007.
APPLICABLE	Subpart DDDDD	40 CFR 63.7499	Subcategories	Boiler No. 5 is in the large solid fuel subcategory.
APPLICABLE	Subpart DDDDD	40 CFR 63.7506	Limited Requirements	Boiler No. 5 must only meet the notification requirements of 63.9(b) at this time.
APPLICABLE	Subpart DDDDD	40 CFR 63.7545	Notifications	Notification due by March 12, 2005.
APPLICABLE	Subpart DDDDD	Appendix A	Health-Based Compliance Alternative	Must submit demonstration by September 13, 2007.
NON-APPLICABLE	60 Subpart A	40CFR60.1	Subpart A -- General Provisions	Boiler No. 5 is not subject to NSPS.
NON-APPLICABLE	60 Subpart D	40CFR60.40	Subpart D -- Applicability and designation of affected facility	Boiler No. 5 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	60 Subpart Db	40CFR60.40b	Subpart Db -- Applicability and delegation of authority	Boiler No. 5 was constructed prior to June 19, 1984, and has not been modified or reconstructed after this date.
NON-APPLICABLE	60 Subpart Dc	40CFR60.40c	Subpart Dc -- Small Industrial - Commercial - Institutional Steam Generating Units -- Applicability	Boiler No. 5 was constructed prior to June 9, 1989, and has not been modified or reconstructed after this date. In addition, Boiler No. 5 has a heat input of greater than 100 MMBtu/hr.
NON-APPLICABLE	62-210	62-210.700(2)	EXCESS EMISSIONS	Boiler No. 5 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-210	62-210.700(3)	EXCESS EMISSIONS	Boiler No. 5 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-296	62-296.320(4)(b)	General Pollutant Emission Limiting Standards.	A visible emission standard set forth elsewhere in Rule 62-296 applies to Boiler No. 5.
NON-APPLICABLE	62-296	62-296.405	Fossil Fuel Steam Generators with more than 250 million Btu per Hour Heat Input.	Boiler No. 5 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-296	62-296.406	Fossil Fuel Steam Generators with less than 250 million Btu per Hour Heat Input.	Boiler No. 5 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-296	62-296.410(1)(a)	Carbonaceous Fuel Burning Equipment.	Boiler No. 5 has a maximum heat input rate of greater than 30 MMBtu/hr.
NON-APPLICABLE	62-296	62-296.410(2)	New Emissions Units.	Boiler No. 5 was issued a valid Department operation permit prior to July 1, 1974.
NON-APPLICABLE	62-296	62-296.570(1)(b)		Boiler No. 5 is not exempt from permitting.
NON-APPLICABLE	62-296	62-296.570(4)(a)4.	Operation Permit Requirements.	Boiler No. 5 does not have a CEMS.
NON-APPLICABLE	62-296	62-296.700	Reasonably Available Control Technology (RACT) Particulate Matter.	The GSH is located in Palm Beach County, which is not a nonattainment or maintenance area for particulate matter.
NON-APPLICABLE	62-296	62-296.702	Fossil Fuel Steam Generators	The GSH is located in Palm Beach County, which is not a nonattainment or maintenance area for particulate matter.
NON-APPLICABLE	62-296	62-296.703	Carbonaceous Fuel Burners.	The GSH Mill is located in Palm Beach County, which is not a nonattainment or maintenance area for particulate matter.
NON-APPLICABLE	62-297	62-297.310(2)(a)	Operating Rate During Testing.	Boiler No. 5 is not a combustion turbine.
NON-APPLICABLE	62-297	62-297.310(7)(a)2.	General Compliance Testing.	Boiler No. 5 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-297	62-297.310(7)(a)4.c.	General Compliance Testing.	There is no applicable standard for any NESHAP pollutant.
NON-APPLICABLE	62-297	62-297.310(7)(a)6.	General Compliance Testing.	Boiler No. 5 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-297	62-297.310(7)(a)7.	General Compliance Testing.	Boiler No. 5 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-297	62-297.310(7)(a)8.	General Compliance Testing.	Boiler No. 5 is not a combustion turbine.
NON-APPLICABLE	62-297	62-297.310(7)(a)10.	General Compliance Testing.	Boiler No. 5 is not exempt from permitting, insignificant, or permitted under the general permit provisions.

See also Permit No. 0990026-005-AC and RACT amendment letter dated 1/27/97.

ATTACHMENT GSH-EU5-IV3

ALTERNATIVE METHODS OF OPERATION

ATTACHMENT GSH-EU5-IV3**ALTERNATIVE METHODS OF OPERATION**

Boiler No. 5 may simultaneously burn four different fuels: bagasse, residue, No. 6 residual oil, and small quantities of on-spec used oil. Heat input from bagasse shall not exceed the permitted limit of 439.1 MMBtu/hr (maximum 24-hr average). Heat input from residue shall not exceed 386.4 MMBtu/hr (maximum 24-hr average). Heat input from fuel oil and on-spec used oil shall not exceed 301.9 MMBtu/hr (maximum 24-hr average) and 6.04 MMBtu/hr (annual average) (40 gallons per hour), respectively.

EMISSIONS UNIT INFORMATION

Section [6]

Boiler No. 8

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application – For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application – For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an “unregulated emissions unit” does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

Section [6]

Boiler No. 8

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)
- The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
 - The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)
- This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
 - This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
 - This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
Boiler No. 8

3. Emissions Unit Identification Number: **006**

4. Emissions Unit Status Code: A	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: 20	8. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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9. Package Unit:
 Manufacturer: _____ Model Number: _____

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:
This boiler has a traveling grate, and is fired by bagasse, residue, and fuel oil. This emission unit produces steam for use in the production of raw sugar cane.

EMISSIONS UNIT INFORMATION

Section [6]

Boiler No. 8

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

**Multi-Cyclone Dust Collector
Two Impingement Wet Scrubbers**

2. Control Device or Method Code(s): **121, 002**

EMISSIONS UNIT INFORMATION

Section [6]

Boiler No. 8

C. EMISSION POINT (STACK/VENT) INFORMATION

(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: Blr 8		2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: V	6. Stack Height: 155 feet	7. Exit Diameter: 9.5 feet	
8. Exit Temperature: 154 °F	9. Actual Volumetric Flow Rate: 160,000 acfm	10. Water Vapor: 27 %	
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 534.780 North (km): 2,953.630		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Stack parameters based on 2005 – 2006 crop season stack test.			

EMISSIONS UNIT INFORMATION

Section [6]

Boiler No. 8

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 4

1. Segment Description (Process/Fuel Type): External Combustion Boilers: Industrial: Bagasse		
2. Source Classification Code (SCC): 1-02-011-01		3. SCC Units: Tons Burned
4. Maximum Hourly Rate: 31.50	5. Maximum Annual Rate: 229,824	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 16
10. Segment Comment: Tons burned on dry basis, based on 504.0 MMBtu/hr (24-hr average) and a heating value of 8,000 Btu/lb (dry) for bagasse.		

Segment Description and Rate: Segment 2 of 4

1. Segment Description (Process/Fuel Type): External Combustion Boilers: Industrial: Solid Waste: Residue		
2. Source Classification Code (SCC): 1-02-012-01		3. SCC Units: Tons Burned
4. Maximum Hourly Rate: 24.916	5. Maximum Annual Rate: 181,785	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 17.8
10. Segment Comment: Tons burned on a dry basis, based on 443.5 MMBtu/hr (24-hr average) and a heating value of 8,900 Btu/lb (dry) for bagasse residue.		

EMISSIONS UNIT INFORMATION

Section [6]

Boiler No. 8

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

1. Segment Description (Process/Fuel Type): External Combustion Boilers: Industrial: Residual Oil: Grade 6 Oil		
2. Source Classification Code (SCC): 1-02-004-01		3. SCC Units: 1000 Gallons Burned
4. Maximum Hourly Rate: 1.656	5. Maximum Annual Rate: 12,079	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 2.40	8. Maximum % Ash:	9. Million Btu per SCC Unit: 151
10. Segment Comment: Based on 250.0 MMBtu/hr (24-hr average) and heating value of 151,000 Btu/gal for No. 6 fuel oil.		

Segment Description and Rate: Segment 4 of 4

1. Segment Description (Process/Fuel Type): External Combustion Boilers: Industrial: Liquid Waste: Waste Oil		
2. Source Classification Code (SCC): 1-02-013-02		3. SCC Units: 1000 Gallons Burned
4. Maximum Hourly Rate: 0.04	5. Maximum Annual Rate: 75.00	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 151
10. Segment Comment: The used oil is generated solely by the facility, mostly during the repair season. The on-specification used oil is properly stored and burned in the boilers for energy recovery. The amount generated ranges between 50,000 and 75,000 gallons per year.		

EMISSIONS UNIT INFORMATION

Section [6]

Boiler No. 8

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	121	EL
PM ₁₀	002	121	NS
NO _x			EL
VOC			EL
SO ₂			NS
CO			EL
H106 (Hydrochloric Acid)			EL
H115 (Methanol)			NS
H132 (Naphthalene)			NS
H151 (Polycyclic Organic Matter)			NS
Total HAPs			NS
Mercury (H114)	002	121	EL
Manganese Compounds (H113)	002	121	EL

**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: Manganese Compounds (H113)		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 0.66 lb/hour 2.41 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: 0.0013 lb/MMBtu for bagasse Reference: Fuel Analysis		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Carbonaceous fuel firing: 504.0 MMBtu/hr x 0.0013 lb/MMBtu = 0.66 lb/hr 0.66 lb/hr x 7,296 hr/yr ÷ 2,000 lb/ton = 2.41 TPY			
11. Pollutant Potential/Estimated Fugitive Emissions Comment: Emission factor based on 90 percent confidence interval for fuel analysis data.			

EMISSIONS UNIT INFORMATION

Section [6]

Boiler No. 8

POLLUTANT DETAIL INFORMATION

Page [1] of [3]

Manganese 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: 9/13/07
3. Allowable Emissions and Units: 0.0013 lb/MMBtu	4. Equivalent Allowable Emissions: 0.66 lb/hour 2.41 tons/year
5. Method of Compliance: Fuel Analysis	
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 [6]

Boiler No. 8

POLLUTANT DETAIL INFORMATION

Page [2] of [3]

Hydrochloric Acid - HCl

**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: HCl (H106)		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 45.36 lb/hour 165.5 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: 0.09 lb/MMBtu Reference: 40 CFR 63 Subpart DDDDD		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: 504.0 MMBtu/hr x 0.09 lb/MMBtu = 45.36 lb/hr 45.36 lb/hr x 7,296 hr/yr ÷ 2,000 lb/ton = 165.5 TPY			
11. Pollutant Potential/Estimated Fugitive Emissions Comment: Applies when firing any fuel type.			

EMISSIONS UNIT INFORMATION

Section [6]
Boiler No. 8

POLLUTANT DETAIL INFORMATION

Page [2] of [3]
Hydrochloric Acid - HCl

**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: RULE	2. Future Effective Date of Allowable Emissions: 9/13/07
3. Allowable Emissions and Units: 0.09 lb/MMBtu	4. Equivalent Allowable Emissions: 45.36 lb/hour 165.5 tons/year
5. Method of Compliance: EPA Method 26 or 26A	
6. Allowable Emissions Comment (Description of Operating Method): 40 CFR 63 Subpart DDDDD	

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: Hg (H114)		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 0.00454 lb/hour 0.0165 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: 9×10^{-6} lb/MMBtu Reference: 40 CFR 63 Subpart DDDDD		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: $504.0 \text{ MMBtu/hr} \times 9 \times 10^{-6} \text{ lb/MMBtu} = 0.00454 \text{ lb/hr}$ $0.00454 \text{ lb/hr} \times 7,296 \text{ hr/yr} \div 2,000 \text{ lb/ton} = 0.0165 \text{ TPY}$			
11. Pollutant Potential/Estimated Fugitive Emissions Comment: Applies when firing any fuel type.			

**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: RULE	2. Future Effective Date of Allowable Emissions: 9/13/07
3. Allowable Emissions and Units: 9 x 10⁻⁶ lb/MMBtu	4. Equivalent Allowable Emissions: 0.00454 lb/hour 0.0165 tons/year
5. Method of Compliance: Fuel Analysis	
6. Allowable Emissions Comment (Description of Operating Method): 40 CFR 63 Subpart DDDDD	

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 [6]

Boiler No. 8

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

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

Visible Emissions Limitation: Visible Emissions Limitation ____ of ____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

EMISSIONS UNIT INFORMATION

Section [6]

Boiler No. 8

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

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

1. Parameter Code: PRS	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information... Manufacturer: Dwyer Model Number: CAPSUHELIC 4015 C Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Measures total pressure drop across the wet scrubbers.	

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

1. Parameter Code: Water Pressure	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Measures inlet water pressure to the wet scrubbers.	

EMISSIONS UNIT INFORMATION

Section [6]

Boiler No. 8

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 3 of 4

1. Parameter Code: FLOW	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information... Manufacturer: Rosemount Model Number: 1151DP4S22M1B1 Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Measures steam flow on Boiler No. 8.	

Continuous Monitoring System: Continuous Monitor 4 of 4

1. Parameter Code: O₂	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Permit requires monitoring of boiler oxygen levels.	

EMISSIONS UNIT INFORMATION

Section [6]

Boiler No. 8

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date September 2005
2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date September 2005
3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date September 2005
4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date September 2005 <input type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date September 2005 <input type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> Not Applicable Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7. Other Information Required by Rule or Statute <input checked="" type="checkbox"/> Attached, Document ID: HBCA Report <input type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [6]

Boiler No. 8

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements <input checked="" type="checkbox"/> Attached, Document ID: GSH-EU6-IV1 <input type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation <input checked="" type="checkbox"/> Attached, Document ID: GSH-EU6-IV3 <input type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
5. Acid Rain Part Application <input type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input type="checkbox"/> Copy Attached, Document ID: _____ <input type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [6]

Boiler No. 8

Additional Requirements Comment

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ATTACHMENT GSH-EU6-B6

MAXIMUM USAGE AND HEAT INPUT RATES

**ATTACHMENT GSH-EU6-B6
MAXIMUM FUEL USAGE AND HEAT INPUT RATES FOR BOILER NO. 8, SCGCF**

Fuel	Heat Input To Boiler	Heat Transfer Efficiency (%)	Heat Output To Steam	Fuel Firing Rate	
Maximum Short-Term					
	(MMBtu/hr)		(MMBtu/hr)		
Bagasse	504.0	55.0	277.2	63,000	lb/hr, dry ^a
Residue	443.5	62.5	277.2	49,831	lb/hr, dry ^b
No. 6 Fuel Oil	250.0	62.5	156.3	1,656	gal/hr
<u>MAX FUEL FIRING + BAGASSE</u>					
Bagasse	219.9	55.0	121.0	27,489	lb/hr, dry ^a
Residue	0	62.5	0	0	lb/hr, dry ^b
No. 6 Fuel Oil	250.0	62.5	156.3	1,656	gal/hr
TOTAL	469.9		277.2		
<u>MAX FUEL FIRING + RESIDUE</u>					
Bagasse	0	55.0	0	0	lb/hr, dry ^a
Residue	193.5	62.5	120.9	21,742	lb/hr, dry ^b
No. 6 Fuel Oil	250.0	62.5	156.3	1,656	gal/hr
TOTAL	443.5		277.2		

^a Based on bagasse firing.

^b Based on residue firing.

Note:

Total steam production required = 264,000 lb/hr

Net steam enthalpy = 1,050 Btu/lb

Total heat output to steam = 264,000 lb/hr steam x 1,050 Btu/lb = 277.2 MMBtu/hr

Fuels may be burned in combination, not to exceed total heat outputs.

Based on fuel heating values as follows:

Bagasse, dry - 8,000 Btu/lb

Residue, dry - 8,900 Btu/lb

No. 6 Fuel Oil - 151,000 Btu/gal

ATTACHMENT GSH-EU6-IV1

**IDENTIFICATION OF
APPLICABLE REQUIREMENTS**

**ATTACHMENT GSH-EU6-IV1
 RULE APPLICABILITY FOR SUGAR CANE GROWERS COOPERATIVE OF FLORIDA
 Glade Sugar House Boiler No. 8**

APPLICABLE	RULE DESCRIP.	RULE NUMBER	RULE TITLE	RATIONALE FOR NON-APPLICABILITY
APPLICABLE	62-210	62-210	STATIONARY SOURCES - GENERAL REQUIREMENTS	
APPLICABLE	62-210	62-210.700	EXCESS EMISSIONS	
APPLICABLE	62-210	62-210.700(1)	EXCESS EMISSIONS	
APPLICABLE	62-210	62-210.700(4)	EXCESS EMISSIONS	
APPLICABLE	62-210	62-210.700(5)	EXCESS EMISSIONS	
APPLICABLE	62-210	62-210.700(6)	EXCESS EMISSIONS	
APPLICABLE	62-296	62-296	STATIONARY SOURCES - EMISSION STANDARDS	
APPLICABLE	62-296	62-296.320	General Pollutant Emission Limiting Standards.	
APPLICABLE	62-296	62-296.410	Carbonaceous Fuel Burning Equipment.	
APPLICABLE	62-296	62-296.410(2)(b)1.	Carbonaceous Fuel Burning Equipment.	
APPLICABLE	62-296	62-296.410(3)	Test Methods and Procedures.	
APPLICABLE	62-297	62-297	STATIONARY SOURCES - EMISSIONS MONITORING	
APPLICABLE	62-297	62-297.310	General Compliance Test Requirements.	
APPLICABLE	62-297	62-297.310(1)	Required Number of Test Runs.	
APPLICABLE	62-297	62-297.310(2)(b)	Operating Rate During Testing.	
APPLICABLE	62-297	62-297.310(3)	Calculation of Emission Rate.	
APPLICABLE	62-297	62-297.310(4)	Applicable Test Procedures.	
APPLICABLE	62-297	62-297.310(5)	Determination of Process Variables.	
APPLICABLE	62-297	62-297.310(6)	Required Stack Sampling Facilities.	
APPLICABLE	62-297	62-297.310(7)	Frequency of Compliance Tests.	
APPLICABLE	62-297	62-297.310(7)(a)3.	General Compliance Testing.	
APPLICABLE	62-297	62-297.310(7)(a)4.	General Compliance Testing.	
APPLICABLE	62-297	62-297.310(7)(a)5.	General Compliance Testing.	
APPLICABLE	62-297	62-297.310(7)(a)9.	General Compliance Testing.	
APPLICABLE	62-297	62-297.310(7)(b)	General Compliance Testing.	
APPLICABLE	62-297	62-297.310(7)(c)	General Compliance Testing.	
APPLICABLE	62-297	62-297.310(8)	Test Reports.	
APPLICABLE	62-297	62-297.400	EPA Methods Adopted by Reference.	
APPLICABLE	62-297	62-297.401	Compliance Test Methods.	
APPLICABLE	62-297	62-297.401(1)	EPA Method 1 - Sample and Velocity Traverses for Stationary Sources - 40 CFR 60	
APPLICABLE	62-297	62-297.401(2)	EPA Method 2 - Determination of Stack Gas Velocity and Volumetric Flow Rate - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(3)	EPA Method 3 - Gas Analysis for Carbon Dioxide, Oxygen, Excess Air, and Dry Molecular Weight - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(4)	EPA Method 4 - Determination of Moisture Content in Stack Gases - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(5)	EPA Method 5 - Determination of Particulate Emissions from Stationary Sources - 40 CFR 60 Appendix A	
APPLICABLE	62-297	62-297.401(7)	EPA Method 7 - Determination of Nitrogen Oxide Emissions from Stationary Sources - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(7)(e)	EPA Method 7E - Determination of Nitrogen Oxide Emissions from Stationary Sources - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(9)	EPA Test Method 9	
APPLICABLE	62-297	62-297.401(10)	EPA Method 10 - Determination of Carbon Monoxide Emissions from Stationary Sources - 40 CFR 60 Appendix A.	
APPLICABLE	62-297	62-297.401(18)	EPA Method 18 - Measurement of Gaseous Organic Compound Emissions by Gas	
APPLICABLE	62-297	62-297.401(25)	EPA Method 25 - Determination of Total Gaseous Nonmethane Organic Emissions as	
APPLICABLE	62-297	62-297.401(25)(a)	EPA Method 25 A - Determination of Total Gaseous Organic Emissions Using a Flame	
APPLICABLE	62-297	62-297.440(1)(b)	Supplementary Test Procedures.	
APPLICABLE	62-297	62-297.620	Exceptions and Approval of Alternate Procedures and Requirements.	
APPLICABLE	Subpart A	40 CFR 63.1	General Provisions	Boiler No. 8 is subject to the notification requirements of Subpart DDDDD.
APPLICABLE	Subpart DDDDD	40 CFR 63.7485	Applicability	Boiler No. 8 is an industrial boiler of size > 10 MMBtu/hr located at a major source of HAPs.

**ATTACHMENT GSH-EU6-IV1
 RULE APPLICABILITY FOR SUGAR CANE GROWERS COOPERATIVE OF FLORIDA
 Glade Sugar House Boiler No. 8**

APPLIC STATUS	RULE DESCRIP	RULE NUMBER	RULE TITLE	RATIONALE FOR NON-APPLICABILITY
APPLICABLE	Subpart DDDDD	40 CFR 63.7490	Applicability	Boiler No. 8 is subject to the requirements of Subpart DDDDD for existing boilers.
APPLICABLE	Subpart DDDDD	40 CFR 63.7495	Compliance Dates	Boiler No. 8 must meet notification requirements and comply by September 13, 2007.
APPLICABLE	Subpart DDDDD	40 CFR 63.7499	Subcategories	Boiler No. 8 is in the large solid fuel subcategory.
APPLICABLE	Subpart DDDDD	40 CFR 63.7506	Limited Requirements	Boiler No. 8 must only meet the notification requirements of 63.9(b) at this time.
APPLICABLE	Subpart DDDDD	40 CFR 63.7545	Notifications	Notification due by March 12, 2005.
APPLICABLE	Subpart DDDDD	Appendix A	Health-Based Compliance Alternative	Must submit demonstration by September 13, 2007.
NON-APPLICABLE	60 Subpart A	40CFR60.1	Subpart A -- General Provisions	Boiler No. 8 is not subject to NSPS.
NON-APPLICABLE	60 Subpart D	40CFR60.40	SubPart D -- Applicability and designation of affected facility	Boiler No. 8 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	60 Subpart Db	40CFR60.40b	Subpart Db -- Applicability and delegation of authority	Boiler No. 8 was constructed prior to June 19, 1984, and has not been modified or reconstructed after this date.
NON-APPLICABLE	60 Subpart Dc	40CFR60.40c	Subpart Dc -- Small Industrial - Commercial - Institutional Steam Generating Units -- Applicability	Boiler No. 8 was constructed prior to June 9, 1989, and has not been modified or reconstructed after this date. In addition, Boiler No. 8 has a heat input of greater than 100 MMBtu/hr.
NON-APPLICABLE	62-210	62-210.700(2)	EXCESS EMISSIONS	Boiler No. 8 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-210	62-210.700(3)	EXCESS EMISSIONS	Boiler No. 8 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-296	62-296.320(4)(b)	General Pollutant Emission Limiting Standards.	A visible emission standard set forth elsewhere in Rule 62-296 applies to Boiler No. 8.
NON-APPLICABLE	62-296	62-296.405	Fossil Fuel Steam Generators with more than 250 million Btu per Hour Heat Input.	Boiler No. 8 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-296	62-296.406	Fossil Fuel Steam Generators with less than 250 million Btu per Hour Heat Input.	Boiler No. 8 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-296	62-296.410(1)	Carbonaceous Fuel Burning Equipment.	Boiler No. 8 was not issued a valid Department operation or construction permit prior to July 1, 1974.
NON-APPLICABLE	62-296	62-296.570(1)(b)		Boiler No. 8 is not exempt from permitting.
NON-APPLICABLE	62-296	62-296.570(4)(a)4.	Operation Permit Requirements.	Boiler No. 8 does not have a CEMS.
NON-APPLICABLE	62-296	62-296.700	Reasonably Available Control Technology (RACT) Particulate Matter.	The GSH is located in Palm Beach County, which is not a nonattainment or maintenance area for particulate matter.
NON-APPLICABLE	62-296	62-296.702	Fossil Fuel Steam Generators	The GSH is located in Palm Beach County, which is not a nonattainment or maintenance area for particulate matter.
NON-APPLICABLE	62-296	62-296.703	Carbonaceous Fuel Burners.	The GSH Mill is located in Palm Beach County, which is not a nonattainment or maintenance area for particulate matter.
NON-APPLICABLE	62-297	62-297.310(2)(a)	Operating Rate During Testing.	Boiler No. 8 is not a combustion turbine.
NON-APPLICABLE	62-297	62-297.310(7)(a)2.	General Compliance Testing.	Boiler No. 8 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-297	62-297.310(7)(a)4.c.	General Compliance Testing.	There is no applicable standard for any NESHAP pollutant.
NON-APPLICABLE	62-297	62-297.310(7)(a)6.	General Compliance Testing.	Boiler No. 8 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-297	62-297.310(7)(a)7.	General Compliance Testing.	Boiler No. 8 is defined as a carbonaceous fuel-fired boiler, not a fossil fuel steam generator.
NON-APPLICABLE	62-297	62-297.310(7)(a)8.	General Compliance Testing.	Boiler No. 8 is not a combustion turbine.
NON-APPLICABLE	62-297	62-297.310(7)(a)10.	General Compliance Testing.	Boiler No. 8 is not exempt from permitting, insignificant, or permitted under the general permit provisions.

ATTACHMENT GSH-EU6-IV3

ALTERNATIVE METHODS OF OPERATION

ATTACHMENT GSH-EU6-IV3**ALTERNATIVE METHODS OF OPERATION**

Boiler No. 8 may simultaneously burn four different fuels: bagasse, residue, No. 6 residual oil, and small quantities of on-spec used oil. Heat input from bagasse shall not exceed the permitted limit of 334.1 MMBtu/hr (maximum 1-hr average) or 266.7 MMBtu/hr (maximum 24-hr average). Heat input from residue shall not exceed 294.0 MMBtu/hr (maximum 1-hr average) or 234.7 MMBtu/hr (maximum 24-hr average). Heat input from fuel oil and on-spec used oil shall not exceed 229.7 MMBtu/hr and 6.04 MMBtu/hr (40 gallons per hour), respectively.