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BUREAU OF AIR REGULATION

**APPLICATION TO REVISE BOILER NO. 4
SCRUBBER PARAMETERS
UNITED STATES SUGAR CORPORATION
CLEWISTON, FLORIDA**

**Prepared For:
United States Sugar Corporation
111 Ponce de Leon Avenue
Clewiston, Florida 33440**

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

April 2007

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4 Copies – FDEP

2 Copies – United States Sugar Corporation

1 Copy – Golder Associates Inc.

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: United States Sugar Corporation	
2. Site Name: Clewiston Mill	
3. Facility Identification Number: 0510003	
4. Facility Location...: Street Address or Other Locator: W.C. Owens Ave. and S.R. 832 City: Clewiston County: Hendry Zip Code: 33440	
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: Neil Smith, Vice President and General Manager, Sugar Manufacturing	
2. Application Contact Mailing Address... Organization/Firm: United States Sugar Corporation Street Address: 111 Ponce de Leon Avenue City: Clewiston State: FL Zip Code: 33440	
3. Application Contact Telephone Numbers... Telephone: (863) 902-2703 ext. Fax: (863) 902-2729	
4. Application Contact Email Address: nsmith@ussugar.com	

Application Processing Information (DEP Use)

1. Date of Receipt of Application: 4-13-07	3. PSD Number (if applicable):
2. Project Number(s): 0510003-042-AE	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

Application to revise the permitted control equipment operating parameters for Boiler No. 4, which are specified in the current Title V permit (Permit No. 0510003-017-AV) and the most recent Boiler No. 4 construction permit (Permit No. 0510003-010-AC/PSD-FL-272A). These parameters include pressure drop across the wet scrubber, water supply pressure to the scrubber spray nozzles, and water flow rate to the scrubber spray nozzles. These parameters are being revised to reflect actual operation (i.e., lower operating conditions), as demonstrated during the December 1, 2006, compliance test.

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Proc. Fee
009	Boiler No. 4		

Application Processing Fee

Check one: Attached - Amount: \$ _____ Not Applicable

APPLICATION INFORMATION

Owner/Authorized Representative Statement

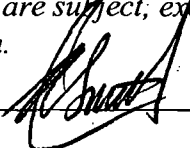
Complete if applying for an air construction permit or an initial FESOP.

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/revise/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: Neil Smith, Vice President and General Manager, Sugar Manufacturing
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: United States Sugar Corporation Street Address: 111 Ponce de Leon Avenue City: Clewiston State: FL Zip Code: 33440
4. Application Responsible Official Telephone Numbers... Telephone: (863) 902-2703 ext. Fax: (863) 902-2729
5. Application Responsible Official Email Address: nsmith@ussugar.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>4/9/07</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> (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> (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> (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> (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 checked="" 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> (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 type="checkbox"/> if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.</i> Signature: <u>David A. Buff</u> Date: <u>4/11/07</u> Professional Engineer Seal (partially visible)

* Attach any exception to certification statement.
Board of Professional Engineers Certificate of Authorization #00001670

FACILITY INFORMATION

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates...		2. Facility Latitude/Longitude...	
Zone 17	East (km) 506.1 North (km) 2956.9	Latitude (DD/MM/SS) 26/44/06	Longitude (DD/MM/SS) 80/56/19
3. Governmental Facility Code: 0	4. Facility Status Code: A	5. Facility Major Group SIC Code: 20	6. Facility SIC(s): 2061 2062
7. Facility Comment :			

Facility Contact

1. Facility Contact Name: Neil Smith, Vice President and General Manager, Sugar Manufacturing
2. Facility Contact Mailing Address... Organization/Firm: United States Sugar Corporation Street Address: 111 Ponce de Leon Avenue City: Clewiston State: FL Zip Code: 33440
3. Facility Contact Telephone Numbers: Telephone: (863) 902-2703 ext. Fax: (863) 902-2729
4. Facility Contact Email Address: nsmith@ussugar.com

Facility Primary Responsible Official

Complete if an "application responsible official" is identified in Section I. that is not the facility "primary responsible official."

1. Facility Primary Responsible Official Name:
2. Facility Primary Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Facility Primary Responsible Official Telephone Numbers... Telephone: () - ext. Fax: () -
4. Facility Primary Responsible Official Email Address:

FACILITY INFORMATION

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 checked="" 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: One or more emission units potentially subject to NESHAP for asbestos removal in the event that the facility may wish to perform asbestos removal in the future.	

FACILITY INFORMATION

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
Particulate Matter Total – PM	A	N
Particulate Matter – PM ₁₀	A	N
Sulfur Dioxide – SO ₂	A	N
Nitrogen Oxides – NO _x	A	N
Carbon Monoxide – CO	A	N
Sulfuric Acid Mist – SAM	A	N
Total Hazardous Air Pollutants – HAP	A	N
Volatile Organic Compounds – VOC	A	N
Acetaldehyde – H001	A	N
Acrolein – H006	A	N
Benzene – H017	A	N
Chlorine – H038	A	N
P-Cresol – H052	A	N
Formaldehyde – H095	A	N
Hydrogen Chloride – H106	A	N
Manganese Compounds – H113	A	N
Mercury – H114	B	N
Naphthalene – H132	A	N
Phenol – H144	A	N
Polycyclic Organic Matter – H151	A	N
Styrene – H163	A	N
Toluene – H169	A	N
Dibenzofuran – H058	A	N
Ammonia – NH ₃	B	N

FACILITY INFORMATION

B. EMISSIONS CAPS

Facility-Wide or Multi-Unit Emissions Caps

1. Pollutant Subject to Emissions Cap	2. Facility Wide Cap [Y or N]? (all units)	3. Emissions Unit ID No.s Under Cap (if not all units)	4. Hourly Cap (lb/hr)	5. Annual Cap (ton/yr)	6. Basis for Emissions Cap

7. Facility-Wide or Multi-Unit Emissions Cap Comment:

FACILITY INFORMATION

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 checked="" type="checkbox"/> Attached, Document ID: USS-FI-C1 <input type="checkbox"/> Previously Submitted, Date: _____
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: May 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: May 2005

Additional Requirements for Air Construction Permit Applications

1. Area Map Showing Facility Location: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable (existing permitted facility)
2. Description of Proposed Construction, Modification, or Plantwide Applicability Limit (PAL): <input checked="" type="checkbox"/> Attached, Document ID: Attachment A
3. Rule Applicability Analysis: <input checked="" type="checkbox"/> Attached, Document ID: Attachment A
4. List of Exempt Emissions Units (Rule 62-210.300(3), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable (no exempt units at facility)
5. Fugitive Emissions Identification: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
6. Air Quality Analysis (Rule 62-212.400(7), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
7. Source Impact Analysis (Rule 62-212.400(5), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" 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 checked="" 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 checked="" type="checkbox"/> Not Applicable
10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

FACILITY INFORMATION

Additional Requirements for FESOP Applications

1. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable (no exempt units at facility)
--

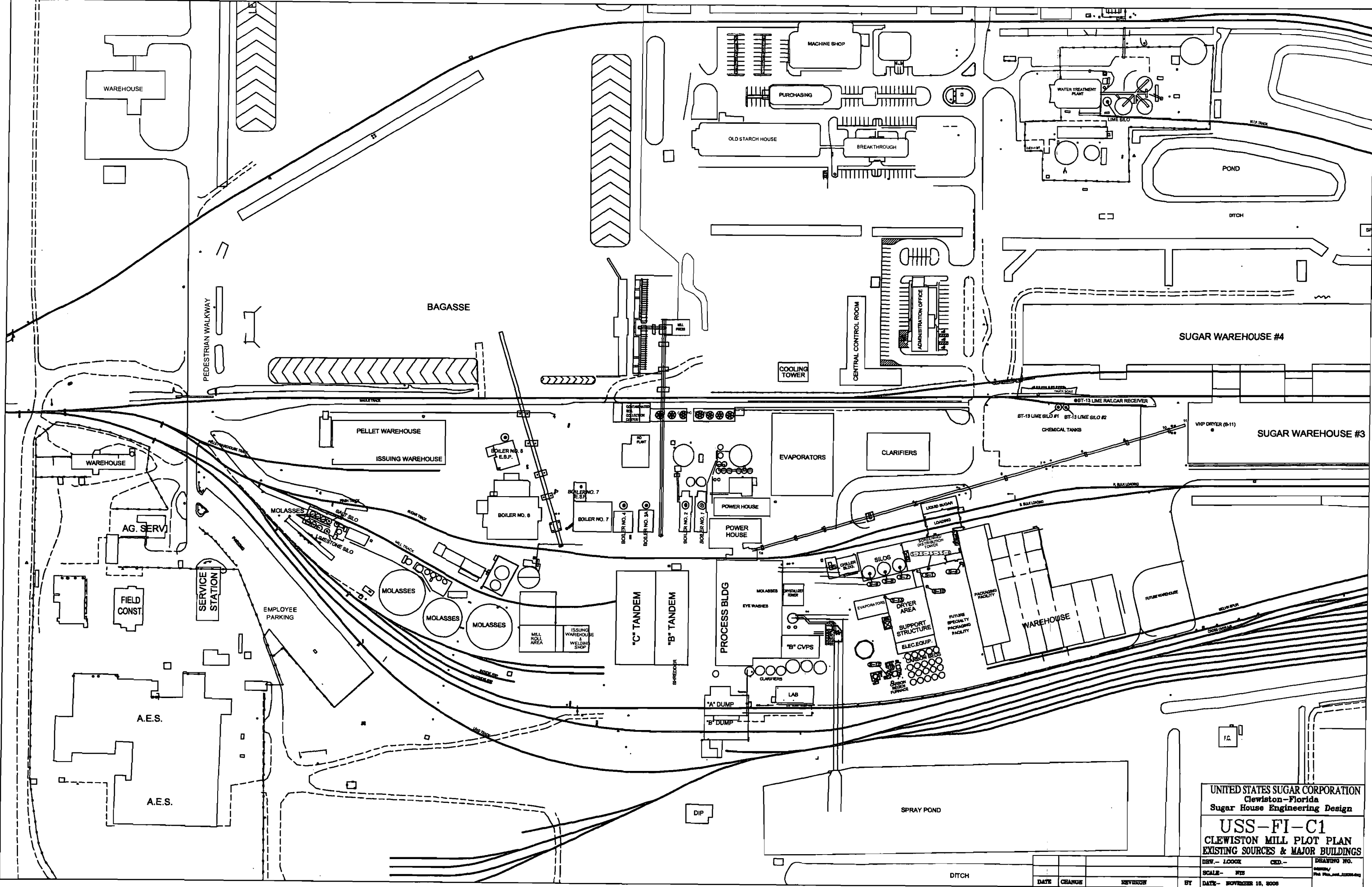
Additional Requirements for Title V Air Operation Permit Applications

1. List of Insignificant Activities (Required for initial/renewal applications only): <input type="checkbox"/> Attached, Document ID: _____ <input checked="checked" type="checkbox"/> 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): <input type="checkbox"/> Attached, Document ID: _____ <input checked="checked" type="checkbox"/> Not Applicable (revision application with no change in applicable requirements)
3. Compliance Report and Plan (Required for all initial/revision/renewal applications): <input type="checkbox"/> Attached, Document ID: <u>USS-F1-CV3</u> 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): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Equipment/Activities On site but Not Required to be Individually Listed <input checked="checked" type="checkbox"/> Not Applicable
5. Verification of Risk Management Plan Submission to EPA (If applicable, required for initial/renewal applications only) : <input type="checkbox"/> Attached, Document ID: _____ <input checked="checked" type="checkbox"/> Not Applicable
6. Requested Changes to Current Title V Air Operation Permit: <input type="checkbox"/> Attached, Document ID: _____ <input checked="checked" type="checkbox"/> Not Applicable

Additional Requirements Comment

ATTACHMENT USS-FI-C1

FACILITY PLOT PLAN



UNITED STATES SUGAR CORPORATION
 Clewiston-Florida
 Sugar House Engineering Design
USS-FI-C1
 CLEWISTON MILL PLOT PLAN
 EXISTING SOURCES & MAJOR BUILDINGS
 DERV. - LOOKER CRO. - DRAWING NO.
 SCALE - 1/8" = 1'-0" NO. 101
 DATE - NOVEMBER 15, 2006 BY

DATE	CHANGE	REVISION	BY

ATTACHMENT USS-FI-CV3

COMPLIANCE REPORT AND PLAN

ATTACHMENT USS-FI-CV3

COMPLIANCE REPORT AND PLAN

United States Sugar Corporation certifies that the Clewiston Mill and the Bryant Mill, as of the date of this application, are in compliance with each applicable requirement addressed in this Title V air permit revision application.

I, the undersigned, am responsible official as defined in Chapter 62-213, 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.

Compliance statements for this facility will be submitted on an annual basis to FDEP, before March 1st of each year.

Signature, Responsible Official

Date

EMISSIONS UNIT INFORMATION

Section [1]

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 [1]

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: **009**

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?
 Yes
 No

9. Package Unit:

Manufacturer:

Model Number:

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:

Traveling grate boiler fired by carbonaceous fuel and fuel oil with a maximum sulfur content of 0.05 percent by weight. Fuel oil can include facility-generated, on-specification used oil.

EMISSIONS UNIT INFORMATION

Section [1]

Boiler No. 4

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

Joy Turbulaire Impingement Scrubber, Size 200, Type D

2. Control Device or Method Code(s): **001**

EMISSIONS UNIT INFORMATION

Section [1]

Boiler No. 4

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:		
2. Maximum Production Rate: 300,000 lb/hr steam		
3. Maximum Heat Input Rate: 633 million Btu/hr		
4. Maximum Incineration Rate: pounds/hr tons/day		
5. Requested Maximum Operating Schedule:		
24 hours/day		7 days/week
52 weeks/year		8,760 hours/year
6. Operating Capacity/Schedule Comment:		
<p>Maximum heat input rate based on 1-hour maximum steam rate of 300,000 lb/hr for carbonaceous fuel firing. The maximum permitted 24-hour average heat input rate for firing carbonaceous fuel is 600 MMBtu/hr, and the maximum permitted 1-hour average heat input rate for firing No. 2 fuel oil is 326 MMBtu/hr (Permit Nos. 0510003-018-AC and 0510003-039-AC). Maximum annual heat input is limited to 2,880,000 MMBtu/yr (Permit No. 0510003-010/PSD-FL-272A).</p>		

EMISSIONS UNIT INFORMATION

Section [1]

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: 150 feet	7. Exit Diameter: 8.2 feet	
8. Exit Temperature: 160 °F	9. Actual Volumetric Flow Rate: 281,000 acfm	10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Stack parameters based on test data.			

EMISSIONS UNIT INFORMATION

Section [1]

Boiler No. 4

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type): External combustion boilers; Industrial; Bagasse; All boiler sizes		
2. Source Classification Code (SCC): 1-02-011-01		3. SCC Units: Tons Burned
4. Maximum Hourly Rate: 87.92	5. Maximum Annual Rate: 400,000	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.24 (dry)	8. Maximum % Ash: 8.4 (dry basis)	9. Million Btu per SCC Unit: 7.2
10. Segment Comment: Based on 633 MMBtu/hr and 3,600 Btu/lb wet bagasse. Annual rate is maximum allowable from Permit No. 0510003-010-AC/PSD-FL-272A, equivalent to 2,880,000 MMBtu/yr at 3,600 Btu/lb for wet bagasse. Bagasse may include incidental amounts of on-specification used oil.		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type): External combustion boilers; Industrial; Distillate Oil; Grades 1 and 2		
2. Source Classification Code (SCC): 1-02-005-01		3. SCC Units: 1,000 Gallons Burned
4. Maximum Hourly Rate: 2.417	5. Maximum Annual Rate: 6,000	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.05	8. Maximum % Ash:	9. Million Btu per SCC Unit: 135
10. Segment Comment: Maximum hourly and annual rates based on 326 MMBtu/hr and 6,000,000 gallons of fuel oil per year (Permit Nos. 0510003-018-AC and 0510003-039-AC). Includes combustion of facility-generated, on-specification used oil. Annual rate represents cap for Boiler Nos. 1, 2, and 4 combined.		

EMISSIONS UNIT INFORMATION

Section [1]

Boiler No. 4

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	001		EL
PM ₁₀	001		NS
SO ₂	001		EL
NO _x			EL
CO			EL
VOC			EL
SAM			NS
HAPs	001		NS
Chlorine - H038			NS
Hydrogen Chloride - H106			NS

EMISSIONS UNIT INFORMATION

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Boiler No. 4

POLLUTANT DETAIL INFORMATION

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Particulate Matter Total - PM

**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: PM		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 95 lb/hour 216 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: 0.15 lb/MMBtu Reference: Permit No. 0510003-017-AV		7. Emissions Method Code: 0	
8.a. Baseline Actual Emission (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: <p>Bagasse: 633 MMBtu/hr x 0.15 lb/MMBtu = 95 lb/hr</p> <p>Annual emissions based on heat input rate of 2,880,000 MMBtu during consecutive any 12 months.</p> <p>2,880,000 MMBtu/yr x 0.15 lb/MMBtu x 1 ton/2,000 lb = 216 ton/yr</p> <p>Fuel Oil:</p> <p>326 MMBtu/hr x 0.1 lb/MMBtu = 32.6 lb/hr</p> <p>6,000,000 gal/yr x 139,000 Btu/gal = 834,000 MMBtu/yr</p> <p>834,000 MMBtu/yr x 0.1 lb/MMBtu x 1 ton/2,000 lb = 41.7 ton/yr</p>			
9. Pollutant Potential/Estimated Fugitive Emissions Comment: Maximum emissions representative of bagasse firing.			

EMISSIONS UNIT INFORMATION

Section [1]
Boiler No. 4

POLLUTANT DETAIL INFORMATION

Page [1] of [5]
Particulate Matter Total - PM

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

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

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.15 lb/MMBtu	4. Equivalent Allowable Emissions: 95 lb/hour 216 tons/year
5. Method of Compliance: EPA Method 5 or 17	
6. Allowable Emissions Comment (Description of Operating Method): Permit No. 0510003-017-AV. Emissions representative of bagasse firing only.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.10 lb/MMBtu	4. Equivalent Allowable Emissions: 32.6 lb/hour 41.7 tons/year
5. Method of Compliance: EPA Method 5 or 17	
6. Allowable Emissions Comment (Description of Operating Method): Rule 62-296.406, F.A.C. Emissions representative of fuel oil firing. Annual emissions based on 6,000,000 gallons per any consecutive 12 months.	

Allowable Emissions Allowable Emissions of

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

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1]
Boiler No. 4

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Sulfur Dioxide - SO₂

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

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

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

1. Pollutant Emitted: SO₂		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 38.0 lb/hour 86.4 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: 0.06 lb/MMBtu for bagasse Reference: Permit No. 0510003-017-AV		7. Emissions Method Code: 0	
8.a. Baseline Actual Emission (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: <p>Hourly: Bagasse – 633 MMBtu/hr x 0.06 lb/MMBtu = 38.0 lb/hr Fuel Oil -- 326 MMBtu/hr x 0.0533 lb/MMBtu = 17.4 lb/hr</p> <p>Annual: Bagasse – 2,880,000 MMBtu/hr x 0.06 lb/MMBtu ÷ 2,000 lb/ton = 86.4 TPY Fuel Oil -- 6,000,000 gal/yr x 139,000 Btu/gal = 834,000 MMBtu/yr 834,000 MMBtu/yr x 0.0533 lb/MMBtu ÷ 2,000 lb/ton = 22.2 TPY</p>			
11. Pollutant Potential/Estimated Fugitive Emissions Comment: Factors based on carbonaceous fuel firing. Fuel oil sulfur content limited to 0.05 percent: 7.2 lb/gal x 0.05/100 lb S/lb oil x 2 lb SO₂/lb S ÷ 135,000 Btu/gal = 0.0533 lb SO₂/MMBtu.			

EMISSIONS UNIT INFORMATION

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Boiler No. 4

POLLUTANT DETAIL INFORMATION

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Sulfur Dioxide - SO₂

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

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

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.06 lb/MMBtu	4. Equivalent Allowable Emissions: 38 lb/hour 86.4 tons/year
5. Method of Compliance: EPA Method 6, 6c, or 8.	
6. Allowable Emissions Comment (Description of Operating Method): Permit No. 0510003-017-AV. Emissions representative of bagasse firing only. Based on carbonaceous fuel and maximum heat input of 2,880,000 MMBtu during any consecutive 12 months.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.05% S oil	4. Equivalent Allowable Emissions: 17.4 lb/hour 22.2 tons/year
5. Method of Compliance: Fuel oil analysis	
6. Allowable Emissions Comment (Description of Operating Method): Emissions representative of fuel oil firing. Hourly emissions based on firing 2,417 gal/hr. Annual emissions based on 6,000,000 gallons per any consecutive 12 months.	

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

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Boiler No. 4

Page [3] of [5]
Nitrogen Oxides - NO_x

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

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

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

1. Pollutant Emitted: NO_x		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 126.6 lb/hour 288 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.20 lb/MMBtu Reference: Permit Nos. 0510003-017-AV and 0510003-018-AC.		7. Emissions Method Code: 0	
8.a. Baseline Actual Emission (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: <p>Bagasse: 633 MMBtu/hr x 0.20 lb/MMBtu = 126.6 lb/hr</p> <p>Annual emissions based on heat input rate of 2,880,000 MMBtu during any consecutive 12 months.</p> <p>2,880,000 MMBtu/yr x 0.20 lb/MMBtu x 1 ton/2,000 lb = 288.0 TPY</p> <p>Fuel Oil:</p> <p>130 MMBtu/hr x 0.20 lb/MMBtu = 26.0 lb/hr</p> <p>834,000 MMBtu/yr x 0.20 lb/MMBtu x 1 ton/2,000 lb = 83.4 TPY</p>			
11. Pollutant Potential/Estimated Fugitive Emissions Comment: Maximum emissions representative of bagasse firing only.			

EMISSIONS UNIT INFORMATION

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Boiler No. 4

POLLUTANT DETAIL INFORMATION

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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 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.20 lb/MMBtu	4. Equivalent Allowable Emissions: 126.6 lb/hour 288 tons/year
5. Method of Compliance: EPA Method 7 or 7E	
6. Allowable Emissions Comment (Description of Operating Method): Permit No. 0510003-017-AV. Based on carbonaceous fuel firing and maximum heat input of 2,880,000 MMBtu during any consecutive 12 months.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.20 lb/MMBtu	4. Equivalent Allowable Emissions: 26.0 lb/hour 83.4 tons/year
5. Method of Compliance: EPA Method 7E	
6. Allowable Emissions Comment (Description of Operating Method): Permit No. 0510003-018-AC. Based on firing of No. 2 distillate fuel oil.	

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

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Boiler No. 4

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Carbon Monoxide - CO

**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: CO		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 4,114.5 lb/hour 9,360.0 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: 6.5 lb/MMBtu Reference: Permit No. 0510003-017-AV		7. Emissions Method Code: 0	
8.a. Baseline Actual Emission (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: 633 MMBtu/hr x 6.5 lb/MMBtu = 4,114.5 lb/hr Annual emissions based on heat input rate of 2,880,000 MMBtu during any consecutive 12 months. 2,880,000 MMBtu/yr x 6.5 lb/MMBtu x 1 ton/2,000 lb = 9,360 TPY			
11. Pollutant Potential/Estimated Fugitive Emissions Comment: Maximum emissions representative of bagasse firing only.			

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

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Boiler No. 4

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Carbon Monoxide - CO

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

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

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 6.5 lb/MMBtu	4. Equivalent Allowable Emissions: 4,114.5 lb/hour 9,360.0 tons/year
5. Method of Compliance: EPA Method 10	
6. Allowable Emissions Comment (Description of Operating Method): Permit No. 0510003-017-AV. Emissions representative of bagasse firing only.	

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

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Boiler No. 4

POLLUTANT DETAIL INFORMATION

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Volatile Organic Compounds - VOC

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

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

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

1. Pollutant Emitted: VOC		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 316.5 lb/hour 720 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: 0.50 lb/MMBtu Reference: Permit No. 0510003-017-AV		7. Emissions Method Code: 0	
8.a. Baseline Actual Emission (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: 633 MMBtu/hr x 0.50 lb/MMBtu = 316.5 lb/hr Annual emissions based on heat input rate of 2,880,000 MMBtu during any consecutive 12 months. 2,880,000 MMBtu/yr x 0.50 lb/MMBtu x 1 ton/2,000 lb = 720 TPY			
11. Pollutant Potential/Estimated Fugitive Emissions Comment: Maximum emissions representative of bagasse firing only.			

EMISSIONS UNIT INFORMATION

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Boiler No. 4

POLLUTANT DETAIL INFORMATION

Page [5] of [5]
Volatile Organic Compounds - VOC

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

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

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.50 lb/MMBtu	4. Equivalent Allowable Emissions: 316.5 lb/hour 720 tons/year
5. Method of Compliance: EPA Method 18 and 25A	
6. Allowable Emissions Comment (Description of Operating Method): Permit No. 0510003-017-AV. Emissions representative of bagasse firing only.	

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. 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 2

1. Visible Emissions Subtype: VE20	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 20 % Exceptional Conditions: 40 % Maximum Period of Excess Opacity Allowed: 2 min/hour	
4. Method of Compliance: DEP Method 9	
5. Visible Emissions Comment: Applies to carbonaceous fuel burning only. Permit 0510003-017-AV.	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: VE20	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 20 % Exceptional Conditions: 27 % Maximum Period of Excess Opacity Allowed: 6 min/hour	
4. Method of Compliance: DEP Method 9	
5. Visible Emissions Comment: Applies to fuel oil burning only. Permit No. 0510003-018-AC.	

EMISSIONS UNIT INFORMATION

Section [1]

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 8

1. Parameter Code: PRS	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information... Manufacturer: Custom Design Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Monitors pressure drop across wet scrubber. Monitored to ensure proper operation of scrubber. Permit No. 0510003-017-AV. Pressure drop across the wet scrubber will be maintained above 5.8 inches H₂O.	

Continuous Monitoring System: Continuous Monitor 2 of 8

1. Parameter Code: FLOW	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information... Manufacturer: Rosemount, Inc., or equivalent Model Number: 8711/8712 Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Monitors wet scrubber liquid flow rate. Permit No. 0510003-017-AV. Flow rate to the wet scrubber will be maintained above 220 gpm, based on a 3-hour block average.	

EMISSIONS UNIT INFORMATION

Section [1]

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 8

1. Parameter Code: Steam TEMP	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Preferred Instruments or equivalent Model Number: PCC-III Controller Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Monitors steam temperature. Permit No. 0510003-017-AV.	

Continuous Monitoring System: Continuous Monitor 4 of 8

1. Parameter Code: Steam PRESSURE	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information... Manufacturer: ABB-Kent Taylor or equivalent Model Number: 621G Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Monitors steam pressure. Permit No. 0510003-017-AV.	

EMISSIONS UNIT INFORMATION

Section [1]

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 5 of 8

1. Parameter Code: FLOW	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: ABB-Kent Taylor or equivalent Model Number: 621D Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Monitors steam flow rate. Permit No. 0510003-017-AV.	

Continuous Monitoring System: Continuous Monitor 6 of 8

1. Parameter Code: O₂	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information... Manufacturer: Rosemount Analytical, Inc., or equivalent Model Number: 3000 Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Monitors flue gas oxygen content. Permit No. 0510003-017-AV.	

EMISSIONS UNIT INFORMATION

Section [1]
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 7 of 8

1. Parameter Code: CO	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Thermo Environmental Instruments, Inc., or equivalent Model Number: 48C Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Monitors flue gas carbon monoxide content. Permit No. 0510003-017-AV.	

Continuous Monitoring System: Continuous Monitor 8 of 8

1. Parameter Code: FLOW	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information... Manufacturer: ITT Barton or equivalent Model Number: Flowco F500 Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Monitors fuel oil flow to Boiler No. 4. No serial number or installation date provided because monitors are routinely replaced to ensure optimum performance. Permit No. 0510003-017-AV.	

EMISSIONS UNIT INFORMATION

Section [1]
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 checked="" type="checkbox"/> Attached, Document ID: <u>USS-EU1-11</u> <input type="checkbox"/> Previously Submitted, Date _____
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 checked="" type="checkbox"/> Attached, Document ID: <u>USS-EU1-12</u> <input type="checkbox"/> Previously Submitted, Date _____
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 checked="" type="checkbox"/> Attached, Document ID: <u>USS-EU1-13</u> <input type="checkbox"/> Previously Submitted, Date _____
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 type="checkbox"/> Previously Submitted, Date _____ <input checked="" 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) 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 type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [1]

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 checked="" 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 checked="" 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 checked="" type="checkbox"/> Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input checked="" type="checkbox"/> Attached, Document ID: <u>USS-EU1-IV2</u> <input type="checkbox"/> Not Applicable
3. Alternative Methods of Operation <input checked="" type="checkbox"/> Attached, Document ID: <u>USS-EU1-IV3</u> <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]

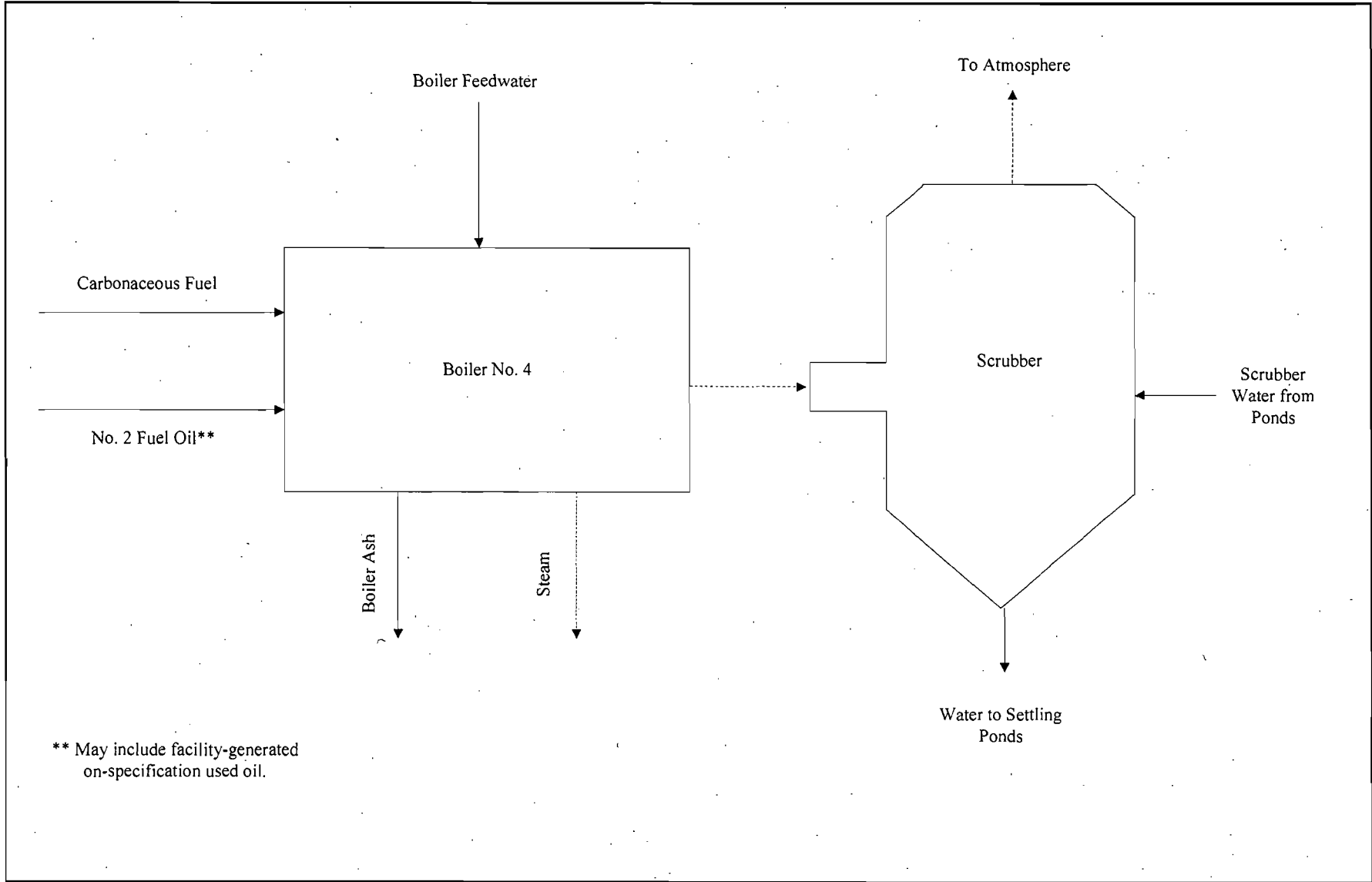
Boiler No. 4

Additional Requirements Comment

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ATTACHMENT USS-EU1-I1

PROCESS FLOW DIAGRAM



Attachment USS-EU 1-11
Process Flow Diagram
U.S. Sugar Corporation
Boiler No. 4

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

USS-EU1-11.VSD

Date: 04/12/07



ATTACHMENT USS-EU1-I2

FUEL ANALYSIS OR SPECIFICATION

**ATTACHMENT USS-EU1-I2
BOILER NO. 4 FUEL ANALYSIS**

Parameter	Fuel	
	Carbonaceous Fuel ^a	No. 2 Fuel Oil (0.05% S max)
Density (lb/gal)	--	6.83 ^c
Approximate Heating Value (Btu/	3,600 ^b	19,910 ^c
Approximate Heating Value (Btu/	--	135,000 ^c
<u>Ultimate Analysis (dry basis):</u>		
Carbon	48.1%	84.7% ^d
Hydrogen	5.9%	15.3% ^d
Nitrogen	0.35%	0.18% ^d
Oxygen	40.9%	0.38% ^d
Sulfur	0.08% - 0.24%	0.05% ^e
Ash/Inorganic	0.87% - 8.4%	0.06% ^c
Moisture	49% - 55%	0.51% ^c

Footnotes:

^a Source: Clewiston Mill fuel analysis averages.

^b Wet basis for bagasse. Represents normal minimum.

^c Source: Perry's Chemical Engineer's Handbook. Sixth Edition, 1984. Represents average fuel characteristics.

^d Source: fuel analysis from Coastal Fuels Marketing, Inc. (9/21/00).

^e Proposed maximum.

ATTACHMENT USS-EU1-I3

DETAILED DESCRIPTION OF CONTROL EQUIPMENT

ATTACHMENT USS-EU1-I3

U.S. SUGAR CLEWISTON MILL

BOILER NO. 4

SCRUBBER EQUIPMENT DESIGN PARAMETERS

Scrubber Type	Impingement Scrubber
Scrubber Model	Joy Turbulaire
Scrubbant	Water
Packing Material	Type D, Size 200
Outlet Gas Temp (°F)	160
Outlet Gas Flow Rate (acfm)	281,000
Differential Pressure Drop (in H ₂ O)	5.8 minimum
Scrubbant Flow Rate (gpm)	220 minimum ^a
Scrubbant Pressure (psi)	40 minimum

^a Based on a 3-hour block average.

ATTACHMENT USS-EU1-IV2

REVISED CAM PLAN FOR BOILER NO. 4

ATTACHMENT USS-EU1-IV2
REVISED CAM PLAN FOR BOILER NO. 4

4.0 PARTICULATE MATTER EMISSIONS FROM CLEWISTON BOILER NO. 4

4.1 Emissions Unit Identification

Clewiston Boiler No. 4—EU ID 009

4.2 Applicable Regulations, Emissions Limits, and Monitoring Requirements

Boiler No. 4 has a PM emission limit of 0.15 lb/MMBtu for carbonaceous fuel (Permit No. 0510003-017-AV), plus 0.1 lb/MMBtu for distillate oil [Rule 62-296.406, F.A.C. and Permit No. 0510003-018-AC]. Distillate fuel oil burning is limited to 6,000,000 gallons per year. The equivalent potential emissions are 95.0 lb/hr and 216.0 TPY for carbonaceous fuel and 32.6 lb/hr and 41.7 TPY for distillate oil. The current VE limit is 20-percent opacity, with an exception of up to 40-percent opacity for 2 minutes per hour for carbonaceous fuel (Permit No. 0510003-017-AV), and 20-percent opacity, with an exception of up to 27-percent opacity for 6 minutes per hour for fuel burning (Permit No. 0510003-018-AC).

PM and VE compliance testing are required annually on Boiler No. 4. In addition, the total pressure drop across the scrubber, the scrubber water inlet pressure, and the scrubber water flow rate must be monitored and recorded at least once per 8-hour shift during each day of operation. The monitors must be properly maintained and functional at all times, except during instrument breakdown, calibration, or repair (Permit No. 0510003-017-AV).

4.3 Control Technology Description

PM emissions from Boiler No. 4 are controlled by a Joy Turbulaire Impingement Scrubber, Size 200, Type D. The operating pressure drop across the scrubber is 6 to 23 inches H₂O. The operating scrubber water inlet pressure is 40 to 80 psig. The effectiveness of the wet scrubber is evaluated with an annual compliance test and VE measurements. A detailed description of the control equipment is included in the Title V renewal application (Attachment USS-EU3-I3).

4.4 Monitoring Approach

The monitoring approach is based on monitoring scrubber pressure drop and scrubber water flow rate. The monitoring approach is summarized in the table below:

Boiler No. 4	Indicator No. 1	Indicator No. 2
Indicator	Pressure drop across the scrubber.	Total water flow rate to the scrubber.
Measurement Approach	Pressure drop is monitored with a manometer or equivalent.	The scrubber water flow rate is measured using a flow meter.
Indicator Range	An excursion is defined as any pressure drop below 5.8 inches H ₂ O. Excursions trigger an inspection, corrective action, and a recordkeeping and reporting requirement.	An excursion is defined as any water flow rate below 220 gpm. Excursions trigger an inspection, corrective action, and a recordkeeping and reporting requirement.
Data Representativeness	The monitoring system consists of a manometer which measures the pressure drop across the scrubber. The minimum accuracy of the device is ± 0.5 inches of water gauge pressure.	The scrubber water flow meter is located on the scrubber liquid supply line. The minimum accuracy of the device is ± 5 percent of total water flow.
Verification of Operational Status	NA	NA
QA/QC Practices and Criteria	The manometer is maintained in accordance with the manufacturer's recommendations.	The flow meter is maintained in accordance with the manufacturer's recommendations.
Monitoring Frequency	Pressure drop is monitored continuously.	Scrubber water flow rate is monitored continuously.
Data Collection Procedures	Reading taken once every 8 hours and recorded in log.	Reading taken once every 8 hours and recorded in log.
Averaging Period	NA	NA

4.5 Justification

Both pressure drop across the scrubber and water flow rate to the scrubber are recognized parameters for controlling PM emissions with wet scrubbers. The pressure drop is a measure of the energy imparted to the gas stream and, therefore, the efficiency of the scrubbing process. The water flow rate is a measure of sufficient fresh scrubbing liquid being supplied to the scrubber.

Water delivery pressure is currently monitored, which provides an indication of plugging of the spray nozzles in the scrubber. However, scrubber water flow rate provides a more direct indicator of

adequate water supply to the scrubber. Therefore, water delivery pressure is not proposed as a parameter for CAM purposes.

U.S. Sugar has historic test data to establish indicator values for pressure drop and water flow rate to the Boiler No. 4 wet scrubber. The test data correlating the parameters to the PM emission levels is presented in Figures 4-1 and 4-2. Supporting information is contained in Appendix B.

The proposed parameter minimum values are based on 90 percent of the minimum parameter values recorded during the test runs, using the historic test data, when compliance was demonstrated with the PM limit. The calculations of the minimum parameter values are provided below:

Pressure Drop:	Minimum test run value = 6.4 inches H ₂ O
	Minimum parameter value = 6.4 x 0.9 = 5.8 inches H ₂ O
Water Flow Rate:	Minimum test run value = 245 gpm
	Minimum parameter value = 245 x 0.9 = 220 gpm

Wet scrubber operating parameter values below these minimum parameter values are indicative of abnormal operation of the wet scrubber. This methodology is consistent with the establishment of wet scrubber operating limits under 40 CFR 63, Subpart DDDDD, which are the Industrial Boiler/Process Heater MACT standards. Boiler No. 4 will be subject to these standards beginning in September 2007.

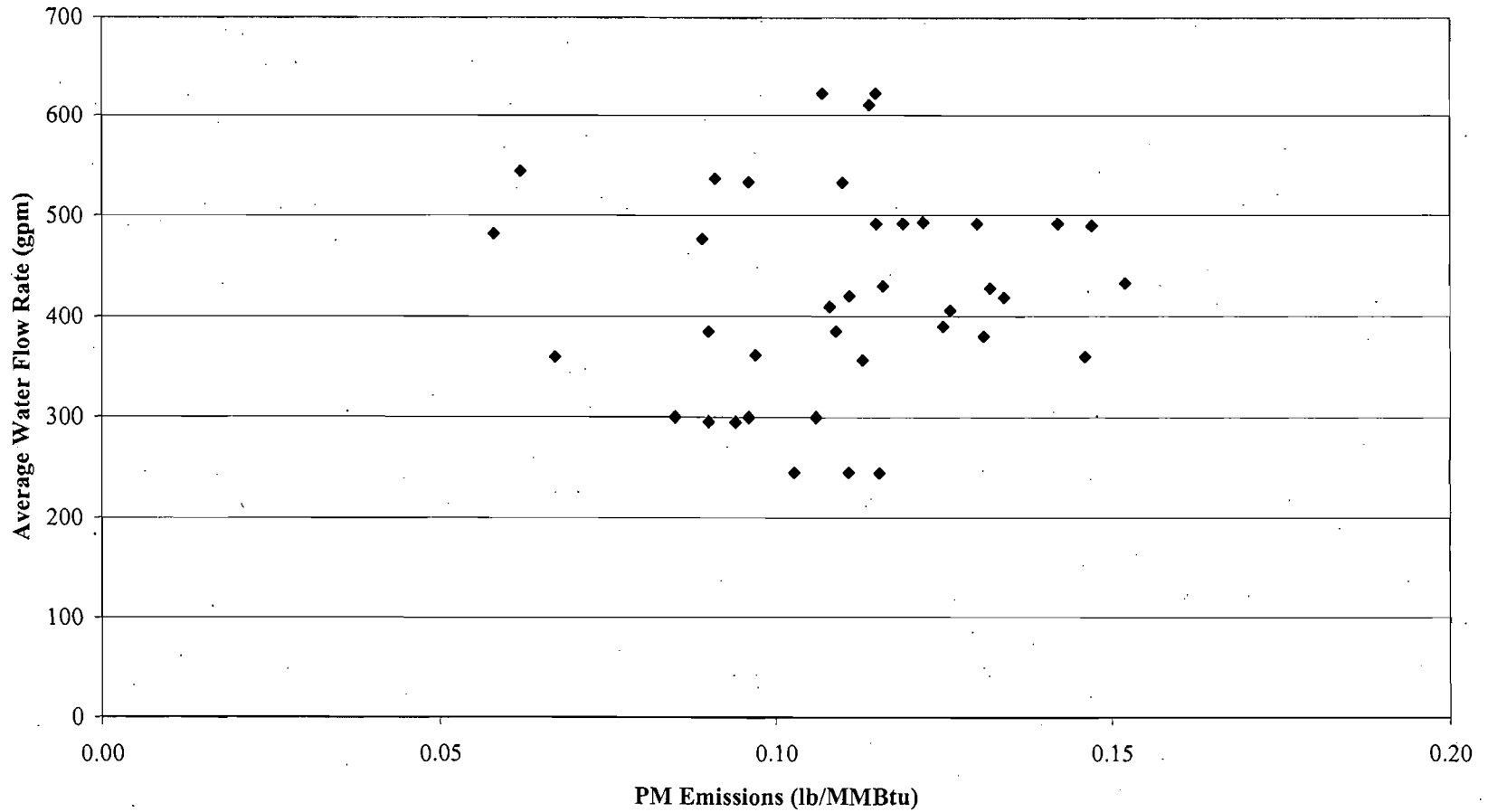
The CAM regulations generally require that pollutant-specific emissions units with the potential to emit greater than 100 TPY collect monitoring data at least four (4) times per hour. However, 40 CFR 64.3(b)(4)(ii) allows the permitting authority to approve a reduced data collection frequency, if appropriate, based on the data collection mechanisms available for a particular parameter.

According to the current Title V permit conditions, scrubber parameters should be recorded once every 3 hours. Because the actual emissions have been under the allowable emission rates since 1994 and the boiler data has been within the range of acceptable values for inlet pressure, pressure drop, and water flow rate, a recording frequency of once per 8-hour shift is proposed.

Based on collecting data once per 8-hour shift, an excursion will occur whenever any individual reading is below the minimum parameter value. When an excursion occurs, corrective action will be

initiated, beginning with an evaluation of the occurrence, to determine the action required (if any) to correct the situation. All excursions will be documented and reported on a semi-annual basis.

**FIGURE 4-1
PM VS. WATER FLOW
CLEWISTON BOILER NO. 4**



**FIGURE 4-2
PM VS. PRESSURE DROP
CLEWISTON BOILER NO. 4**

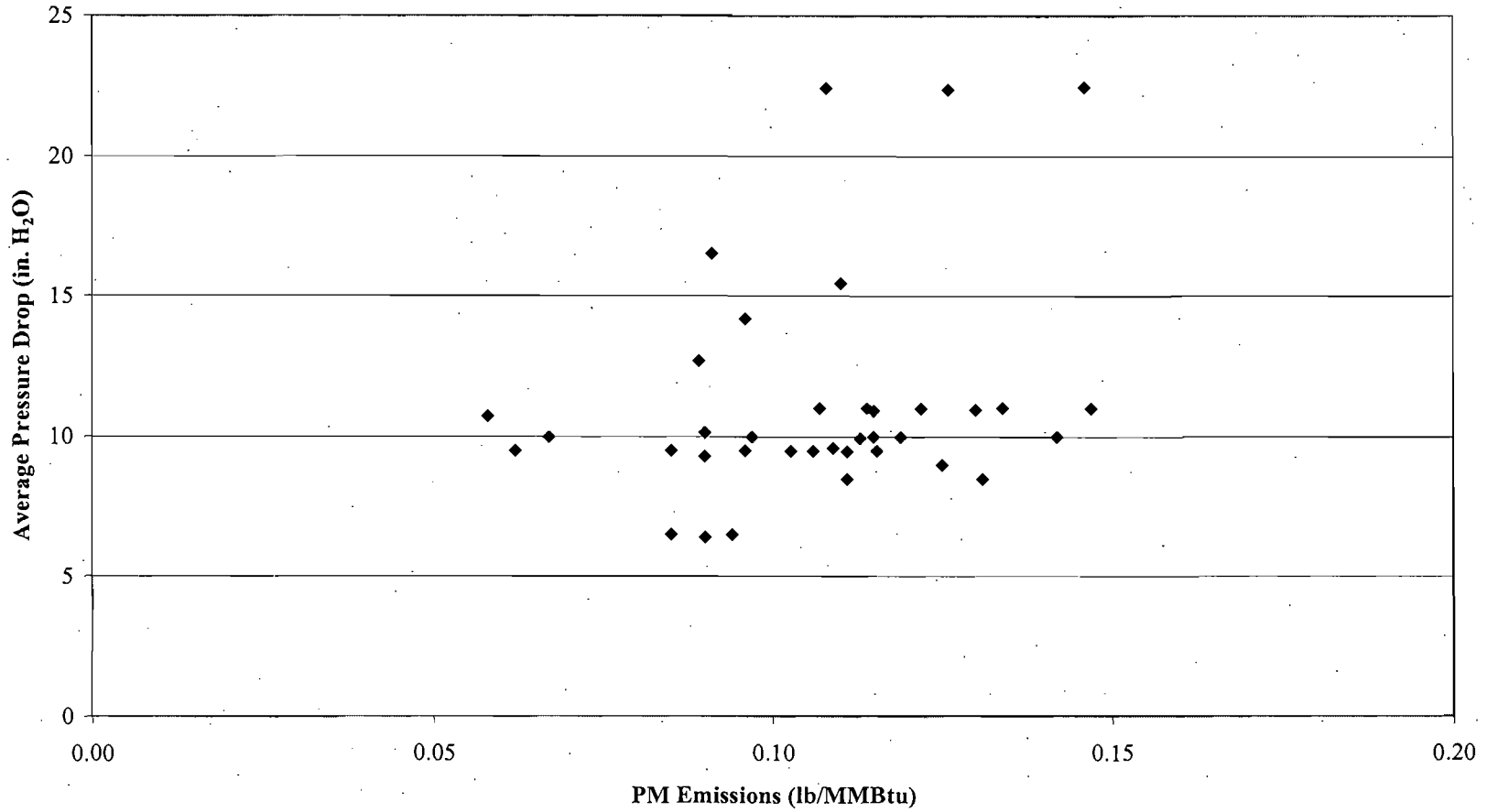


TABLE B-1
BOILER NO. 4, HISTORICAL PM EMISSION TESTS, U.S. SUGAR, CLEWISTON MILL

Unit	Run Number	Boiler Type	Test Date	Stack Gas Flow Rate (dscfm)	Stack Gas Flow Rate (acfm)	Steam Rate (lb/hr)	Heat Input Rate (MMBtu/hr)	Bagasse Burning Rate ¹ (TPH)	Allowable PM Emissions (EPA Method 5)		Actual PM Emissions (EPA Method 5)		Avg. Liquid Liquid (psig)	Avg. Water Flow (gpm)	Avg. Pressure Drop (in. H ₂ O)
									lb/hr	lb/MMBtu	lb/hr	lb/MMBtu			
Boiler 4	1	Traveling Grate	02/23/94	134,590	215,068	283,043	616.9	85.68	92.54	0.150	81.72	0.132	40.5	428	
Boiler 4	2	Traveling Grate	02/23/94	136,057	218,507	290,769	633.1	87.94	94.97	0.150	73.42	0.116	40.6	430	
Boiler 4	3	Traveling Grate	02/23/94	132,839	216,547	284,308	618.0	85.83	92.70	0.150	93.94	0.152	41.2	433	
Boiler 4	1	Traveling Grate	12/30/94	152,950	222,172	288,750	626.8	87.06	94.02	0.150	88.74	0.142	50.0	492	10.0
Boiler 4	2	Traveling Grate	12/30/94	142,730	220,121	280,986	609.4	84.64	91.41	0.150	70.23	0.115	50.0	492	10.0
Boiler 4	3	Traveling Grate	12/30/94	144,948	225,530	281,918	614.3	85.32	92.15	0.150	73.08	0.119	50.0	492	10.0
Boiler 4	1	Traveling Grate	12/22/95	147,476	227,747	290,548	617.5	85.76	92.62	0.150	59.28	0.096	53.0	300	9.5
Boiler 4	2	Traveling Grate	12/22/95	143,821	222,383	280,946	597.7	83.01	89.65	0.150	63.06	0.106	54.0	300	9.5
Boiler 4	3	Traveling Grate	12/22/95	145,645	221,056	291,200	617.4	85.75	92.61	0.150	52.29	0.085	55.0	300	9.5
Boiler 4	1	Traveling Grate	12/17/96	154,554	236,304	289,909	608.8	84.56	91.32	0.150	67.58	0.111	48.0	245	9.5
Boiler 4	2	Traveling Grate	12/17/96	159,316	241,659	291,818	610.9	84.85	91.64	0.150	70.56	0.116	48.0	245	9.5
Boiler 4	3	Traveling Grate	12/17/96	156,697	239,434	286,462	601.1	83.49	90.17	0.150	61.82	0.103	48.0	245	9.5
Boiler 4	1	Traveling Grate	01/05/00	136,759	210,179	238,378	509.0	70.69	73.93	0.145	66.45	0.131		380	8.5
Boiler 4	2	Traveling Grate	01/05/00	136,322	209,218	241,644	514.5	71.46	75.28	0.146	64.16	0.125		390	9.0
Boiler 4	3	Traveling Grate	01/05/00	135,432	208,934	236,800	504.8	70.11	73.99	0.147	55.95	0.111		420	8.5
Boiler 4	1	Traveling Grate	11/17/00	161,372	248,028	258,400	558.2	77.53	83.72	0.150	50.40	0.090	66.4	384	10.2
Boiler 4	2	Traveling Grate	11/17/00	160,074	248,560	256,667	554.7	77.04	83.21	0.150	60.47	0.109	66.4	385	9.6
Boiler 4	3	Traveling Grate	11/17/00	161,936	249,043	262,192	566.9	78.74	85.03	0.150	51.23	0.090			9.3
Boiler 4	1	Traveling Grate	01/23/02	158,108	238,305	255,882	549.8	76.37	82.48	0.150	48.91	0.089	52.0	477	12.7
Boiler 4	2	Traveling Grate	01/23/02	151,705	231,241	257,647	555.6	77.17	83.34	0.150	32.17	0.058	53.0	482	10.7
Boiler 4	3	Traveling Grate	01/23/02	155,993	236,906	260,294	561.3	77.96	84.20	0.150	34.81	0.062	67.0	544	9.5
Boiler 4	1	Traveling Grate	12/18/02	167,367	250,551	272,000	600.4	83.39	90.06	0.150	66.32	0.110	64.0	533	15.5
Boiler 4	2	Traveling Grate	12/18/02	164,949	247,408	272,000	599.9	83.32	89.98	0.150	57.41	0.096	62.2	534	14.2
Boiler 4	3	Traveling Grate	12/18/02	161,294	241,460	274,783	601.7	83.57	90.26	0.150	54.65	0.091	62.8	537	16.5
Boiler 4	4	Traveling Grate	12/19/02	163,340	245,494	284,250	627.4	87.13					64.5	491	13.2
Boiler 4	1	Traveling Grate	11/21/03	184,631	280,071	265,479	579.9	80.54	86.98	0.150	84.74	0.146	51.0	359	22.5
Boiler 4	2	Traveling Grate	11/21/03	187,732	272,428	264,167	576.9	80.12	86.53	0.150	72.85	0.126	45.8	406	22.4
Boiler 4	3	Traveling Grate	11/21/03	179,768	261,129	260,000	567.1	78.77	85.07	0.150	61.34	0.108	55.4	409	22.4
Boiler 4	1	Traveling Grate	11/24/04	164,581	254,686	267,115	588.5	81.73	88.27	0.150	71.68	0.122	72.9	493	11.0
Boiler 4	2	Traveling Grate	11/24/04	165,619	262,011	259,737	572.2	79.47	85.83	0.150	74.10	0.130	71.7	492	11.0
Boiler 4	3	Traveling Grate	11/24/04	165,111	263,455	246,923	542.8	75.39	81.42	0.150	79.60	0.147	72.4	490	11.0
Boiler 4	4	Traveling Grate	11/24/04	166,378	265,717	254,526	558.2	77.53	83.73	0.150	74.71	0.134	70.7	419	11.0
Boiler 4	1	Traveling Grate	02/10/05	156,977	228,241	237,600	515.1	71.54	77.26	0.150	58.57	0.114	78.6	611	11.0
Boiler 4	2	Traveling Grate	02/10/05	158,258	233,152	239,178	516.5	71.73	77.47	0.150	59.15	0.115	80.2	623	10.9
Boiler 4	3	Traveling Grate	02/10/05	161,994	235,662	230,649	500.5	69.52	75.08	0.150	53.51	0.107	78.6	623	11.0
Boiler 4	1	Traveling Grate	01/13/06	127,859	203,260	229,014	478.3	66.43	71.75	0.150	53.96	0.113	50.0	356	9.9
Boiler 4	2	Traveling Grate	01/13/06	123,326	198,482	244,225	510.4	70.88	76.55	0.150	34.27	0.067	51.0	360	10.0
Boiler 4	3	Traveling Grate	01/13/06	122,129	196,063	236,522	498.0	69.16	74.70	0.150	48.24	0.097	51.4	361	10.0
Boiler 4	1	Traveling Grate	12/01/06	153,199	228,528	242,466	532.0	73.89	76.24	0.143	44.97	0.085	53.0	300	6.5
Boiler 4	2	Traveling Grate	12/01/06	151,842	225,833	245,070	520.0	72.22	73.65	0.142	46.86	0.090	52.8	296	6.4
Boiler 4	3	Traveling Grate	12/01/06	146,862	225,359	255,000	554.0	76.94	78.81	0.142	52.31	0.094	53.2	295	6.5

Notes: *LS*
 lb/hr = pounds per hour.
 lb/MMBtu = pounds per million British thermal units.
 lb/ton = pounds per ton.
 MMBtu/hr = million British thermal units per hour.
 TPH = tons per hour.

Footnotes:
¹ Assumed 3,600 Btu/lb average heat content for wet bagasse, except where noted.

ATTACHMENT USS-EU1-IV3

ALTERNATIVE METHODS OF OPERATION

ATTACHMENT USS-EU1-IV3**ALTERNATIVE METHODS OF OPERATION**

Boiler No. 4 is permitted to operate while combusting carbonaceous fuel alone at a heat input rate of 633 MMBtu/hr (maximum 1-hour average) and 600 MMBtu/hr (maximum 24-hour average); No. 2 fuel oil alone at a maximum fuel oil heat input rate of 326 MMBtu/hr, which corresponds to 2,417 gallons per hour (gph); or a combination of carbonaceous fuel and No. 2 fuel oil at a combined maximum heat input of 633 MMBtu/hr (maximum 1-hour average). Carbonaceous fuel may include facility-generated on-specification used oil.

No more than 6,000,000 gallons of distillate oil can be fired during any consecutive 12-month period in Boiler Nos. 1, 2, and 4 combined. The maximum sulfur content of No. 2 fuel oil is 0.05 percent by weight. No. 2 fuel oil may include facility-generated, on-specification used oil. The hours of operation for this unit are not restricted (8,760 hours per year).

ATTACHMENT A

SUPPLEMENTAL INFORMATION FOR

PERMIT APPLICATION

ATTACHMENT A

SUPPLEMENTAL INFORMATION FOR CONSTRUCTION PERMIT APPLICATION

1.0 INTRODUCTION

United States Sugar Corporation (U.S. Sugar) owns and operates a sugar mill and refinery located in Clewiston, Hendry County, Florida. The mill and refinery currently operate under Title V Operating Permit No. 0510003-017-AV, issued October 18, 2004. A Title V permit renewal application was submitted in May 2005, and a response to a request for additional information was submitted in September 2006.

U.S. Sugar operates five sugar mill boilers at the Clewiston Mill. The five boilers provide steam to the sugar mill as well as to the sugar refinery. Boiler Nos. 1, 2, and 4 operate primarily during the crop season, which is typically November through May, to provide steam to the sugar mill and refinery. Boiler Nos. 7 and 8 can operate year-round to provide steam to the sugar mill during the crop season and steam to the sugar refinery during the off-crop season. Boiler Nos. 1, 2, and 4 can operate as backup units during the off-season when Boiler No. 7 is down for maintenance, repair, or during periods of unusually low steam demand.

2.0 PROJECT DESCRIPTION

Boiler No. 4 is a traveling-grate boiler manufactured by Foster Wheeler that is fired by carbonaceous fuel and No. 2 fuel oil with a maximum sulfur content of 0.05 percent by weight. Boiler No. 4 has a maximum capacity of 300,000 pounds per hour (lb/hr) steam (1-hour maximum) and 285,000 lb/hr steam (24-hour average). The maximum heat input when firing bagasse alone is 633 million British thermal units per hour (MMBtu/hr) (1-hour maximum) and 600 MMBtu/hr (24-hour average).

Boiler No. 4 has federally enforceable emission limits for particulate matter (PM), sulfur dioxide (SO₂), nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic compounds (VOCs). Boiler No. 4 utilizes a Joy Turbulaire Impingement Scrubber, Size 200, Type D to control PM emissions. The unit has two multi-stage combustion low-nitrogen oxide (NO_x) fuel oil burners. The maximum heat input due to No. 2 fuel oil firing is 326 MMBtu/hr, corresponding to 2,417 gallons per

hour (gph) of distillate oil. No more than 6,000,000 gallons of distillate oil can be fired during any consecutive 12-month period in Boiler Nos. 1, 2 and 4 combined. The maximum sulfur content of the fuel oil is 0.05 percent.

U.S. Sugar was issued Permit No. 0510003-010-AC/PSD-FL-272A dated March 8, 2001, for increased operation of Boiler No. 4. In this permit and in the current Title V permit (Permit No. 0510003-017-AV), control equipment operating parameters for the wet scrubber are defined. These parameters include the following:

- Pressure drop across the wet scrubber between 8 and 11 inches of water (in. H₂O),
- Water supply pressure to the scrubber nozzles between 40 and 55 pounds per square inch (psi), and
- Water flow rate to the scrubber spray nozzles above 375 gallons per minute (gpm), based on a 3-hour block average.

U.S. Sugar must maintain these control parameters at all times. If the monitored parameters fall outside of the specified ranges, U.S. Sugar must take corrective action. Recent stack testing results have demonstrated that the wet scrubber can operate at levels lower than those defined in the permit and still demonstrate compliance. The purpose of this air construction permit application is to revise the control equipment operating parameters for Boiler No. 4 based on recent stack test data.

2.1 Reduced Wet Scrubber Pressure Drop

U.S. Sugar is proposing to revise the wet scrubber pressure drop condition in the permit to include a lower operating limit. The current permit requires U.S. Sugar to maintain a pressure drop across the wet scrubber between 8 and 11 in. H₂O. Based on recent stack testing conducted December 1, 2006, the scrubber pressure drop averaged approximately 6.5 in. H₂O. A summary of the December 1, 2006 compliance test results and operating parameters for Boiler No. 4 is presented in Table 1.

U.S. Sugar is requesting that the pressure drop range be changed to a minimum pressure drop limit of 5.8 in. H₂O, which is based on 90 percent of the minimum parameter value. The minimum parameter value during the December 1, 2006, testing was 6.4 in. H₂O. The lower pressure drop limit reflects current operation. In addition, the boiler is capable of demonstrating compliance with the enforceable emission limits while operating at a lower pressure drop.

A revised Compliance Assurance Monitoring (CAM) plan is attached, which updates the plan submitted with the Title V renewal application. Additional justification for the parameter values is presented in the revised CAM plan.

2.2 Reduced Wet Scrubber Pressure

The current permit requires U.S. Sugar to maintain a pressure to the scrubber nozzles between 40 and 55 psi. Based on recent stack testing conducted December 1, 2006, the scrubber pressure averaged approximately 53 psi, which is within the required range. U.S. Sugar is requesting that the pressure range be eliminated. Additional justification for the parameter elimination is presented in the revised CAM plan.

2.3 Reduced Wet Scrubber Water Flow Rate

U.S. Sugar is proposing to revise the wet scrubber water flow rate condition in the permit to include a lower minimum flow rate. The current permit requires U.S. Sugar to maintain a water flow rate to the scrubber above 375 gallons per minute (gpm), based on a 3-hour block average. Based on recent compliance testing conducted December 1, 2006, the scrubber flow rate averaged approximately 297 gpm. However, a test conducted December 17, 1996, demonstrated that the scrubber can operate at much lower levels and still show compliance. During this test, the scrubber flow averaged approximately 245 gpm. A minimum parameter value of 220 gpm, based on 90 percent of the value during the 1996 tests, is requested. This also agrees with the CAM limits submitted as part of the Title V application renewal. Therefore, U.S. Sugar is requesting that the scrubber flow rate range be changed to a minimum flow rate limit of 220 gpm.

A summary of the December 1, 2006 compliance test results and operating parameters is presented in Table 1. A summary of all historical compliance tests conducted on Boiler No. 4, including the December 17, 1996 test, is included in the revised CAM plan..

TABLE 1
SUMMARY OF DECEMBER 1, 2006 COMPLIANCE TEST RESULTS FOR BOILER NO. 4, U.S. SUGAR CLEWISTON

Parameter	Source of Data	C-1 12/1/2006 1019-1125	C-2 12/1/2006 1256-1402	C-3 12/1/2006 1446-1551	C-1 thru C-3 Average	Permit or Subpart DDDDD Limit
Fuel Type		Bagasse + oil	Bagasse + oil	Bagasse + oil		
Steam Production (lb/hr)	Stack Test	242,466	245,070	255,000	247,512	300,000
Heat Input (MMBtu/hr) (55% eff.) ^a	Stack Test	532	520	554	535	633
Stack Flow (acfm)	Stack Test	228,528	225,833	225,359	226,573	--
Stack Flow (dscfm)	Stack Test	153,199	151,842	146,862	150,634	--
Oxygen (%) - dry basis	Stack Test	9.80	7.60	8.00	8.47	--
Particulate Matter (lb/hr) - Actual	Stack Test	44.97	46.86	52.31	48.05	--
Particulate Matter (lb/MMBtu) - Actual	Stack Test	0.085	0.090	0.094	0.090	0.15 ^c
Particulate Matter (lb/hr) - Allowable	Stack Test	76.24	73.65	78.81	76.23	--
Particulate Matter (lb/MMBtu) - Allowable	Stack Test	0.143	0.142	0.142	0.142	--
Carbon Monoxide (lb/hr)	Stack Test	3,357.2	1,592.3	1,769.7	2,239.7	--
Carbon Monoxide (lb/MMBtu)	Stack Test	6.31	3.06	3.19	4.19	6.5
Nitrogen Oxides (lb/hr)	Stack Test	48.14	44.07	41.78	44.66	--
Nitrogen Oxides (lb/MMBtu)	Stack Test	0.090	0.085	0.075	0.083	0.20
Volatile Organic Compounds (lb/hr) ^b	Stack Test	217.24	64.98	51.32	111.18	--
Volatile Organic Compounds (lb/MMBtu) ^b	Stack Test	0.408	0.125	0.093	0.209	0.50
						Proposed Minimum Operating Limits
Scrubber Pressure (psi)	Stack Test	53	53	53	53	40
Scrubber Water Flow (gpm)	Stack Test	300	296	295	297	220 ^d
Scrubber Pressure Drop (in. H ₂ O)	DAHS	6.5	6.4	6.5	6.5	5.8

^a Calculated using steam parameters and 55% thermal efficiency.

^b VOC as propane.

^c Based on carbonaceous fuel firing only. The PM emission limit for fuel oil firing is 0.1 lb/MMBtu.

^d Based on a 3-hour block average.