Golder Associates Inc.

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October 23, 2009

0938-7525

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

Attention: Mr. Jeff Koerner, P.E., Air Permitting North

RE: UNITED STATES SUGAR CORPORATION CLEWISTON MILL
TITLE V RENEWAL
DRAFT PERMIT NO. 0510003-032-AV

Dear Mr. Koerner:

On behalf of the United States Sugar Corporation (U.S. Sugar), Golder Associates Inc. (Golder) is submitting the following information per our conference call regarding the draft Title V operation permit for the Clewiston Mill.

- Boiler Nos. 1 and 2 – Updated Emission Unit Capacity Information (Section B) application pages and associated enthalpy calculations to revise the maximum steam production rate based on a 24-hour average.
- Boiler No. 4 – Updated Emission Unit Capacity Information (Section B) application pages and associated enthalpy calculations to revise the maximum steam production rate based on design steam temperature of 850 degrees Fahrenheit.
- Boiler No. 7 – Updated Emission Point (Stack/Vent) Information (Section C) application pages and associated historical data to revise the exhaust gas volumetric flow rate.
- Boiler No. 8 – Updated Emission Point (Stack/Vent) Information (Section C) application pages and associated historical data to revise the exhaust gas volumetric flow rate.
- Revised Compliance Assurance Monitoring (CAM) Plan parameters, tables, and graphs based on historic stack testing results for Boiler Nos. 1, 2, 4, 7, and 8; White Sugar Dryer No. 2; Granular Carbon Regeneration Furnace; and White Sugar Processing Operations.
- Updates to Good Combustion Practices; Startup, Shutdown, and Malfunction Plans; insignificant activities; unregulated emission units; and comments on the Appendices are presented in Section 4 of Draft Title V Permit No. 0510003-032-AV.

Updated application pages for the Title V renewal application are contained in Attachment A. A markup of the Appendices to the draft Title V permit is presented in Attachment B.

It is also our understanding, based on our conference call, that the following changes will be made to the draft permit:

Section 2 – Facility-Wide Conditions

13, "Excess Emissions Allowed" – Language will be added to refer to each corresponding emission unit (EU).

Section 3 – Specific Conditions

Subsection A – Boiler Nos. 1 and 2

A.14, "Daily Operational Records" – Monthly recordkeeping requirement will be relocated to another appropriate condition.

Subsection B – Boiler No. 4

B.14, "Test Methods" – EPA Method 19 will be removed since it is not needed.

B.21, "Daily Operational Records"

a. "Boiler Operations" – Delete daily oil logging requirement.

c. "Oil Monitoring" – Move to appropriate Appendix.

Subsection C – Boiler No. 7

C.8 "CO Standards" – Consider removing ton per year (TPY) limits since not federally enforceable.

Subsection D – Boiler No. 8

D.14, "Alternate Opacity Monitoring Plan for Firing Oil" – Replace with EPA alternate monitoring plan for monitoring electrostatic precipitator (ESP) power input.

Subsection F – Granular Carbon Regenerative Furnace

F.1 "Permitted Capacity" – Request to remove design capacity from the permit.

F.4 "GCRF Afterburner" – Request to revise per draft permit markup submitted May 8, 2008.

F.5 "GCRF Wet Scrubber" – Revise per draft permit markup submitted May 8, 2008.

Subsection G – Miscellaneous Sugar Refinery Sources

Description – EU No. 019 – Only 3 silos built (remove S-13, S-14, and S-15).

Subsection J – Temporary Portable Rock Crusher

Remove Portable Rock Crusher and add Package Boiler.

In addition, U.S. Sugar is requesting construction permit modifications for the following emission units:

Lime Silo Loading/Unloading (EU 031)

U.S. Sugar is proposing to revise Specific Condition No. 4. in Section 3.A. of Construction Permit No. 0510003-031-AC. This condition currently requires U.S. Sugar to perform annual U.S. Environmental Protection Agency (EPA) Method 9 testing on each baghouse vent serving the Lime Silo loading/unloading operations [BT-13 Area (EU 031)]. The condition requires separate

tests to be conducted while unloading lime from a truck and unloading lime from a railcar. However, the lime delivered to the silos is primarily unloaded by railcar. During 2008, approximately 83 percent of the lime delivered to the silos was unloaded by railcar and 17 percent was unloaded by truck.

EPA Method 9 testing has been conducted since 2007 while unloading lime from trucks and railcars. All tests show compliance with the opacity standards for the unit and no readings above 0 percent opacity were recorded during any of the tests. Copies of the EPA Method 9 test results are presented as Attachment C.

Due to the limited amount of lime delivered by truck, it is very difficult to schedule and conduct a visible emissions (VE) test when unloading trucks. Based on the infrequency of truck unloading operations and the demonstrated compliance with the opacity standard during truck unloading, U.S. Sugar is requesting that it be required to conduct EPA Method 9 testing annually for railcar unloading operations, but only once every 5 years for truck unloading operations, upon Title V Operation Permit renewal.

Boiler No. 8 (EU 028)

U.S. Sugar is proposing to revise Specific Condition No. 14 in Section 3.A. of Construction Permit No. 0510003-037-AC/PSD-FL-333C. This condition requires U.S. Sugar to conduct annual stack testing for sulfur dioxide (SO_2) emissions. SO_2 emissions from Boiler No. 8 are limited to 0.06 pound per million British thermal units (lb/MMBtu) and 64.6 pounds per hour (lb/hr).

U.S. Sugar has conducted stack testing annually for SO_2 emissions (EPA Method 6C) from Boiler No. 8. The results of the annual stack tests are summarized in Attachment C. The results from the stack testing show emission rates well below the permitted limit, with all tests below 0.030 lb/MMBtu except for one run that had an emission rate of 0.045 lb/MMBtu.

Based on the low magnitude of SO_2 emissions compared to the allowable limit, and given there is no SO_2 control equipment on Boiler No. 8, U.S. Sugar is requesting that it be required to conduct stack testing for SO_2 once every 5 years, upon Title V Operation Permit renewal.

U.S. Sugar is also proposing to revise Specific Condition No. 17.b. in Section 3.A. of Construction Permit No. 0510003-037-AC/PSD-FL-333C. This condition currently requires U.S. Sugar to take representative samples of wood chips each calendar quarter and have them analyzed. This condition requires the sampling and analysis even if wood chips are not burned in Boiler No. 8 during the calendar quarter.

U.S. Sugar is requesting that it be required to test a representative sample of wood chips only during each calendar quarter when wood chips are actually burned as fuel in Boiler No. 8. Proposed permit condition wording is as follows:

> "A representative sample of bagasse shall be taken each calendar quarter and analyzed for the heating value (Btu/lb, as fired and dry); moisture content (percent by weight); sulfur content (percent by weight, dry); and ash content (percent by weight, dry). A representative sample of wood chips shall be taken during each calendar quarter that wood chips are burned as fuel in Boiler No. 8, and analyzed for the heating value (Btu/lb, as fired and dry); moisture content (percent by weight); sulfur content (percent by weight, dry); and ash content (percent by weight, dry). Such analysis is not required if wood chips are not burned in the boiler during the calendar quarter. Records of the results of these tests shall be maintained onsite and made available upon request."

Air Construction Permit application pages reflecting the above changes are contained in Attachment A. Supporting information is presented in Attachments B and C.

If you have any questions, please do not hesitate to call me at (352) 336-5600.

Sincerely,

GOLDER ASSOCIATES INC.

David A. Buff

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

DB/tlc

Enclosures

cc: Keith Tingberg, U.S. Sugar
Ajaya Satyal, FDEP

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ATTACHMENT A

REVISED TITLE V APPLICATION PAGES

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:

- For any required purpose at a facility operating under a federally enforceable state air operation permit (FESOP) or Title V air operation permit;
- For a proposed project subject to prevention of significant deterioration (PSD) review, nonattainment new source review, or maximum achievable control technology (MACT);
- To assume a restriction on the potential emissions of one or more pollutants to escape a requirement such as PSD review, nonattainment new source review, MACT, or Title V; or
- 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, or renewal Title V air operation permit.

To ensure accuracy, please see form instructions.

Identification of Facility

1. Facility Owner/Company Name: **United States Sugar Corporation**	
2. Site Name: **U.S. Sugar Clewiston Facility**	
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? ☐ Yes ☒ No	6. Existing Title V Permitted Facility? ☒ Yes ☐ No

Application Contact

1. Application Contact Name: **Keith Tingberg, Environmental Manager, Sugar Manufacturing**
2. Application Contact Mailing Address... Organization/Firm: **United States Sugar Corporation** Street Address: **111 Ponce De Leon Ave.** City: **Clewiston** State: **FL** Zip Code: **33440**
3. Application Contact Telephone Numbers... Telephone: **(863) 902-3186** ext. Fax: **(863) 902-3149**
4. Application Contact E-mail Address: **ktingberg@ussugar.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):

Purpose of Application

This application for air permit is being 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 being submitted to revise Specific Condition No. 4 in Section 3.A. of Construction Permit No. 0510003-031-AC. U.S. Sugar is proposing to reduce the frequency of EPA Method 9 compliance testing for truck unloading operations in the BT-13 Area (EU031).

This application is also being submitted to revise Specific Condition No. 14 of Construction Permit No. 0510003-037-AC/PSD-FL-333C. U.S. Sugar is proposing to reduce the frequency of SO2 stack testing for Boiler 8 (EU 028).

Finally, this application is being submitted to revise Specific Condition No. 17.b. of Construction Permit No. 0510003-037-AC/PSD-FL-333C. U.S. Sugar is proposing to test a representative sample of wood chips each calendar quarter only when wood chips are burned as fuel in Boiler No. 8.

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Processing Fee
001	Boiler No. 1		
002	Boiler No. 2		
009	Boiler No. 4		
014	Boiler No. 7		
028	Boiler No. 8		
031	Lime Silo Loading/Unloading Operations.		

Application Processing Fee

Check one: ☐ Attached - Amount: $_____ ☒ Not Applicable

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 E-mail Address:
5. Owner/Authorized Representative Statement: *I, the undersigned, am the owner or authorized representative of the corporation, partnership, or other legal entity submitting this air permit application. To the best of my knowledge, the statements made in this application are true, accurate and complete, and any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department.* _____ _____ Signature Date

Application Responsible Official Certification

Complete if applying for an initial, revised, or renewal Title V air operation permit or concurrent processing of an air construction permit and revised or renewal Title V air operation 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):
   - ☒ 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.
   - ☐ For a partnership or sole proprietorship, a general partner or the proprietor, respectively.
   - ☐ For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.
   - ☐ The designated representative at an Acid Rain source, CAIR source, or Hg Budget source.

3. Application Responsible Official Mailing Address...
   Organization/Firm: **United States Sugar Corporation**
   Street Address: **111 Ponce De Leon Ave.**
   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 E-mail Address: **nsmith@ussugar.com**

6. Application Responsible Official Certification:

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.

Signature _____ Date 10/19/09

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: **6026 NW 1st Place**
   City: **Gainesville** State: **FL** Zip Code: **32607**
3. Professional Engineer Telephone Numbers...
   Telephone: **(352) 336-5600** ext. **21145** Fax: **(352) 336-6603**
4. Professional Engineer E-mail Address: **dbuff@golder.com**
5. Professional Engineer Statement:

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

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

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

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

(4) If the purpose of this application is to obtain an air construction permit (check here ☐, 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 ☒, 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.

(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here ☐, 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.

David A. Buff — 10/19/09

Signature — Date

(seal)

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

BOILER NO. 1

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: **185,000 lb/hr steam (24-hour average)**	
3. Maximum Heat Input Rate: **397** 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: **Maximum 24-hour average heat input rate based on maximum 24-hour average steam rate (above) for carbonaceous fuel of 185,000 lb/hr steam. Maximum heat input for No. 2 fuel oil is 130 MMBtu/hr (Permit No. 0510003-039-AC).**	

ATTACHMENT USSC-EU1-B6
BOILER LOAD DATA
BOILER NO. 1

1. Boiler No. 1 – Steam Production Basis:

Maximum 24-hour (average): 185,000 lb/hr steam

2. Steam Enthalpy Calculation

A. Steam conditions: 600 psig, 750°F
= 615 psia, 750°F
Enthalpy = 1,379 Btu/lb

B. Feedwater condition: 985 psig, 230°F
= 1,000 psia, 230°F
Enthalpy = 200 Btu/lb

C. Net Enthalpy: 1,379 – 200 = 1,179 Btu/lb steam

3. Heat Input Calculation (based on 55 percent thermal efficiency)

A. Maximum 24-hour (average):
185,000 lb/hr steam × 1,179 Btu/lb ÷ 0.55 = 397 MMBtu/hr

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: **55.14**	5. Maximum Annual Rate: **483,017**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.09 (dry basis)**	8. Maximum % Ash: **8.4 (dry basis)**	9. Million Btu per SCC Unit: **7.2**
10. Segment Comment: **Based on 397 MMBtu/hr and 3,600 Btu/lb wet bagasse. Wet bagasse averages approximately 52-percent moisture.**		

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: **0.963**	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 rate based on 130 MMBtu/hr and 6,000,000 gallons of No. 2 fuel oil per year. Also includes facility generated on-spec used oil and up to 500 cubic yards per season of petroleum contaminated soils. Combined fuel oil usage in Boiler Nos. 1, 2, and 4 limited to 6,000,000 gal/yr. Permit No. 0510003-039-AC.**		

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 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 operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **99.3** lb/hour **434.7** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.25 lb/MMBtu** Reference: **Permit No. 0510003-017-AV**	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:
Bagasse: 397 MMBtu/hr x 0.25 lb/MMBtu = 99.25 lb/hr
99.25 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 434.7 TPY

11. Potential, Fugitive, and Actual Emissions Comment:
Maximum emissions representative of bagasse firing.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.25 lb/MMBtu**	4. Equivalent Allowable Emissions: **99.3** lb/hour **434.7** 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: **0.1 lb/MMBtu**	4. Equivalent Allowable Emissions: **13.0** lb/hour **40.5** tons/year
5. Method of Compliance: **EPA Method 5 or 17**	
6. Allowable Emissions Comment (Description of Operating Method): **Rule 62-296.410(1)(b)2, F.A.C., and Permit No. 0510003-027-AC. 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):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 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 operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **SO2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **23.8** lb/hour **104.3** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.06 lb/MMBtu and 0.05% S Oil** Reference: **Industry Test Data**	7. Emissions Method Code: **1**
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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:
Bagasse: 397 MMBtu/hr x 0.06 lb/MMBtu = 23.82 lb/hr
Fuel Oil: 130 MMBtu/hr x 0.053 lb/MMBtu = 6.9 lb/hr

Annual: 23.8 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 104.3 TPY

11. Potential, Fugitive, and Actual Emissions Comment:
Maximum emissions representative of bagasse firing.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 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: **0.05% sulfur oil**	4. Equivalent Allowable Emissions: **6.9** lb/hour **22.2** tons/year
5. Method of Compliance: **Fuel oil analysis.**	
6. Allowable Emissions Comment (Description of Operating Method): **Requested limit. 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):	

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):	

BOILER NO. 2

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: **185,000 lb/hr steam (24-hour average)**	
3. Maximum Heat Input Rate: **397** 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: **Maximum 24-hour average heat input rate based on maximum 24-hour average steam rate (above) for carbonaceous fuel of 185,000 lb/hr steam. Maximum heat input for No. 2 fuel oil is 130 MMBtu/hr (Permit No. 0510003-039-AC).**	

ATTACHMENT USSC-EU2-B6
BOILER LOAD DATA
BOILER NO. 2

1. Boiler No. 2 – Steam Production Basis:

Maximum 24-hour (average): 185,000 lb/hr steam

2. Steam Enthalpy Calculation

A. Steam conditions: 600 psig, 750°F
= 615 psia, 750°F
Enthalpy = 1,379 Btu/lb

B. Feedwater condition: 985 psig, 230°F
= 1,000 psia, 230°F
Enthalpy = 200 Btu/lb

C. Net Enthalpy: 1,379 – 200 = 1,179 Btu/lb steam

3. Heat Input Calculation (based on 55 percent thermal efficiency)

A. Maximum 24-hour (average):
185,000 lb/hr steam × 1,179 Btu/lb ÷ 0.55 = 397 MMBtu/hr

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: **55.14**	5. Maximum Annual Rate: **483,017**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.09 (dry basis)**	8. Maximum % Ash: **8.4 (dry basis)**	9. Million Btu per SCC Unit: **7.2**
10. Segment Comment: **Based on 397 MMBtu/hr and 3,600 Btu/lb wet bagasse. Wet bagasse averages approximately 52-percent moisture.**		

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: **0.963**	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 rate based on 130 MMBtu/hr and 6,000,000 gallons of No. 2 fuel oil per year. Also includes facility generated on-spec used oil and up to 500 cubic yards per season of petroleum contaminated soils. Combined fuel oil usage in Boiler Nos. 1, 2, and 4 limited to 6,000,000 gal/yr. Permit No. 0510003-039-AC.**		

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 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 operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **99.3** lb/hour **434.7** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.25 lb/MMBtu** Reference: **Permit No. 0510003-017-AV**	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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:
Bagasse: 397 MMBtu/hr x 0.25 lb/MMBtu = 99.25 lb/hr
99.25 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 434.7 TPY

11. Potential, Fugitive, and Actual Emissions Comment:
Maximum emissions representative of bagasse firing.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.25 lb/MMBtu**	4. Equivalent Allowable Emissions: **99.3** lb/hour **434.7** 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: **0.1 lb/MMBtu**	4. Equivalent Allowable Emissions: **13.0** lb/hour **40.5** tons/year
5. Method of Compliance: **EPA Method 5 or 17**	
6. Allowable Emissions Comment (Description of Operating Method): **Rule 62-296.410(1)(b)2, F.A.C., and Permit No. 0510003-027-AC. 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):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 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 operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: **SO2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **23.8** lb/hour **104.3** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.06 lb/MMBtu and 0.05% S Oil** Reference: **Industry Test Data**	7. Emissions Method Code: **1**
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: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:
Bagasse: 397 MMBtu/hr x 0.06 lb/MMBtu = 23.82 lb/hr
Fuel Oil: 130 MMBtu/hr x 0.053 lb/MMBtu = 6.9 lb/hr

Annual: 23.8 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 104.3 TPY

11. Potential, Fugitive, and Actual Emissions Comment:
Maximum emissions representative of bagasse firing.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 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: **0.05% sulfur oil**	4. Equivalent Allowable Emissions: **6.9** lb/hour **22.2** tons/year
5. Method of Compliance: **Fuel oil analysis.**	
6. Allowable Emissions Comment (Description of Operating Method): **Requested limit. 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):	

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):	

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: **286,543 lb/hr steam (1-hr average)**	
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: **Maximum steam rate based on 1-hour maximum heat input rate of 633 MMBtu/hr. The maximum permitted 24-hour average heat input rate for firing carbonaceous fuel is 600 MMBtu/hr, and the maximum permited 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-AC/ PSD-FL-272A).**	

ATTACHMENT USSC-EU3-B6
BOILER LOAD DATA
BOILER NO. 4

1. Boiler No. 4 – Heat Input Basis:

Maximum 1-hour (average): 633 MMBtu
Maximum 24-hour (average): 600 MMBtu

2. Steam Enthalpy Calculation

A. Steam conditions: 600 psig, 850°F
= 615 psia, 850°F
Enthalpy = 1,435 Btu/lb

B. Feedwater condition: 900 psig, 250°F
= 915 psia, 250°F
Enthalpy = 220 Btu/lb

C. Net Enthalpy: 1,435 – 220 = 1,215 Btu/lb steam

3. Steam Production Calculation (based on 55 percent thermal efficiency)

A. Maximum 1-hour (average):
633 MMBtu/hr × 0.55 ÷ 1,215 Btu/lb = 286,543 lb/hr steam

B. Maximum 24-hour (average):
600 MMBtu/hr × 0.55 ÷ 1,215 Btu/lb = 271,604 lb/hr steam

BOILER NO. 7

EMISSIONS UNIT INFORMATION
Section [4]
Boiler No. 7

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-7**	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: **225** feet	7. Exit Diameter: **8.0** feet
8. Exit Temperature: **312**°F	9. Actual Volumetric Flow Rate: **296,657** acfm	10. Water Vapor: **21.5** %
11. Maximum Dry Standard Flow Rate: **185,288** 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: **Actual volumetric flow rate, exit temperature, and percent water vapor based on average of historical stack test data. Maximum dry standard flow rate based on maximum dry standard flow rate from historical stack test data. See Attachment USSC-EU4-C15.**		

ATTACHMENT USSC-EU4-C15
SUMMARY OF STACK GAS FLOW RATES
BOILER NO. 7
U.S. SUGAR - CLEWISTON

Unit	Boiler Type	Test Date	Stack Gas Flow Rate (dscfm)	Stack Gas Flow Rate (acfm)	Steam Rate (lb/hr)	Heat Input Rate (MMBtu/hr)	Temperature (°F)	Moisture (%)
Boiler 7	Vibrating Grate	11/17/97	157,787	284,881	349,315	734.00	269	24.4
Boiler 7	Vibrating Grate	11/17/97	163,257	300,818	343,200	714.00	279	24.9
Boiler 7	Vibrating Grate	11/17/97	153,899	288,373	352,603	735.00	291	24.9
Boiler 7	Vibrating Grate	11/18/97	149,859	297,392	362,571	762.00	322	26.4
Boiler 7	Vibrating Grate	11/18/97	151,008	295,595	354,000	735.00	313	26.0
Boiler 7	Vibrating Grate	11/18/97	150,202	293,746	353,043	733.00	316	25.6
Boiler 7	Vibrating Grate	02/08/99	175,664	329,363	358,154	734.90	308	23.0
Boiler 7	Vibrating Grate	02/08/99	177,250	328,642	343,636	701.70	308	22.1
Boiler 7	Vibrating Grate	02/08/99	176,423	329,212	362,368	741.30	305	22.9
Boiler 7	Vibrating Grate	12/17/99	134,535	281,611	369,429	763.08	323	29.7
Boiler 7	Vibrating Grate	12/17/99	134,831	283,198	357,429	736.74	324	29.8
Boiler 7	Vibrating Grate	12/17/99	136,090	279,965	366,176	755.14	303	30.3
Boiler 7	Vibrating Grate	01/05/01	179,424	335,178	327,500	655.88	329	21.0
Boiler 7	Vibrating Grate	01/05/01	174,762	329,742	326,667	667.68	339	20.7
Boiler 7	Vibrating Grate	01/06/01	172,827	335,314	328,333	675.11	345	22.0
Boiler 7	Vibrating Grate	01/09/02	130,764	283,174	324,545	691.41	400	25.7
Boiler 7	Vibrating Grate	01/09/02	136,455	292,108	331,714	706.88	404	24.5
Boiler 7	Vibrating Grate	01/09/02	140,707	305,155	333,429	708.68	416	24.5
Boiler 7	Vibrating Grate	11/15/02	148,856	299,613	363,659	772.94	330	25.7
Boiler 7	Vibrating Grate	11/15/02	155,948	304,949	343,200	727.96	327	23.8
Boiler 7	Vibrating Grate	11/15/02	150,966	297,647	334,737	709.05	327	24.4
Boiler 7	Vibrating Grate	12/31/02	164,558	311,596	295,652	625.71	317	22.6
Boiler 7	Vibrating Grate	12/31/02	164,409	289,460	292,615	615.87	298	19.1
Boiler 7	Vibrating Grate	12/31/02	149,851	290,446	288,000	606.59	303	23.3
Boiler 7	Vibrating Grate	12/30/03	144,480	287,753	354,783	744.67	330	25.6
Boiler 7	Vibrating Grate	12/30/03	148,005	283,321	329,250	688.40	327	22.9
Boiler 7	Vibrating Grate	12/30/03	145,898	281,972	338,630	707.48	328	23.5
Boiler 7	Vibrating Grate	02/04/05	165,392	296,331	232,174	494.28	285	21.4
Boiler 7	Vibrating Grate	02/04/05	161,579	296,174	228,000	487.84	287	23.1
Boiler 7	Vibrating Grate	02/04/05	159,426	285,860	223,099	475.52	284	21.6
Boiler 7	Vibrating Grate	05/03/05 [a]	162,497	305,710	242,727	502.10	390	13.2
Boiler 7	Vibrating Grate	05/03/05 [a]	164,363	311,935	227,077	468.00	398	13.1
Boiler 7	Vibrating Grate	05/04/05 [b]	153,399	297,739	193,125	401.80	398	15.1
Boiler 7	Vibrating Grate	05/05/05 [a]	160,047	305,361	196,000	407.00	376	15.7
Boiler 7	Vibrating Grate	01/05/06	184,525	318,378	318,300	659.80	271	19.5
Boiler 7	Vibrating Grate	01/05/06	178,105	315,125	348,674	721.50	272	21.4
Boiler 7	Vibrating Grate	01/05/06	173,265	306,013	349,209	720.60	270	21.5
Boiler 7	Vibrating Grate	01/25/07	185,288	318,417	307,597	637.19	276	18.5
Boiler 7	Vibrating Grate	01/25/07	174,015	301,630	319,097	658.39	273	19.5
Boiler 7	Vibrating Grate	01/25/07	175,714	301,314	290,569	599.18	271	18.8
Boiler 7	Vibrating Grate	05/15/07 [c]	140,530	228,015	267,761	554.51	280	14.3
Boiler 7	Vibrating Grate	05/15/07 [c]	158,314	260,159	286,479	594.31	282	15.1
Boiler 7	Vibrating Grate	05/15/07 [c]	158,028	259,395	288,750	596.40	283	14.9
Boiler 7	Vibrating Grate	05/15/07 [c]	158,775	264,223	262,500	548.86	281	16.3
Boiler 7	Vibrating Grate	05/16/07 [c]	156,667	260,669	240,952	504.25	279	16.3
Boiler 7	Vibrating Grate	05/16/07 [c]	150,496	242,572	266,769	553.42	273	14.3
Boiler 7	Vibrating Grate	05/16/07 [c]	149,182	241,956	234,462	489.39	273	14.8
Boiler 7	Vibrating Grate	01/24/08	157,003	289,313	337,192	712.98	274	24.5
Boiler 7	Vibrating Grate	01/24/08	154,128	285,290	361,014	758.13	275	24.7
Boiler 7	Vibrating Grate	01/24/08	158,129	287,635	344,968	724.38	272	23.7
Boiler 7	Vibrating Grate	12/04/08	178,899	321,444	347,877	618.80	309	19.5
Boiler 7	Vibrating Grate	12/04/08	184,297	338,873	352,174	624.70	312	20.7
Boiler 7	Vibrating Grate	12/04/08	181,705	333,116	370,870	664.80	319	19.8
Boiler 7	Vibrating Grate	12/05/08	183,193	326,584	361,846	635.10	310	18.7
Number of Runs			54	54	54	54	54	54
Mean			**159,920**	**296,657**	**314,517**	**647.47**	**312**	**21.5**
Minimum			130,764	228,015	193,125	401.80	269	13.1
Maximum			185,288	338,873	370,870	772.94	416	30.3
Standard Deviation			14,657	24,494	49,430	99.08	40	4.3

[a] 25% Wood chip / 75% Bagasse
[b] 100% Bagasse
[c] 50% Wood chip / 50% Bagasse

BOILER NO. 8

EMISSIONS UNIT INFORMATION
Section [5]
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: **199** feet	7. Exit Diameter: **10.9** feet
8. Exit Temperature: **273**°F	9. Actual Volumetric Flow Rate: **428,895** acfm	10. Water Vapor: **27** %
11. Maximum Dry Standard Flow Rate: **249,681** 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: **Actual volumetric flow rate, exit temperature, and percent water vapor based on average of historical stack test data. Maximum dry standard flow rate based on maximum dry standard flow rate from historical stack test data. See Attachment USSC-EU5-C15.**		

ATTACHMENT USSC-EU5-C15
SUMMARY OF STACK GAS FLOW RATES
BOILER NO. 8
U.S. SUGAR - CLEWISTON

Unit	Boiler Type	Test Date	Stack Gas Flow Rate (dscfm)	Stack Gas Flow Rate (acfm)	Steam Rate (lb/hr)	Heat Input Rate (MMBtu/hr)	Temperature (°F)	Moisture (%)
Boiler 8	Traveling Grate	03/24/05	236,278	441,324	518,571	982.6	269.8	26.36
Boiler 8	Traveling Grate	03/24/05	218,901	416,739	487,595	880.2	273.0	27.44
Boiler 8	Traveling Grate	03/25/05	218,815	416,838	496,578	919.1	272.3	27.33
Boiler 8	Traveling Grate	09/16/05 [a, b]	133,612	254,877	234,240	427.2	286.1	26.13
Boiler 8	Traveling Grate	09/16/05 [a, b]	119,425	243,132	231,430	421.3	287.9	30.61
Boiler 8	Traveling Grate	09/16/05 [a, b]	131,883	254,042	233,030	424.2	288.7	26.59
Boiler 8	Traveling Grate	01/10/06	208,889	386,258	523,478	970.2	237.3	29.31
Boiler 8	Traveling Grate	01/10/06	222,090	393,669	521,408	967.6	229.3	27.11
Boiler 8	Traveling Grate	01/10/06	211,224	393,180	510,423	949.6	237.3	29.77
Boiler 8	Traveling Grate	06/02/06 [b]	160,360	286,469	238,876	547.0	279.8	21.61
Boiler 8	Traveling Grate	06/02/06 [b]	152,745	271,874	215,692	481.3	276.8	21.65
Boiler 8	Traveling Grate	06/02/06 [b]	124,942	218,045	222,067	428.3	277.3	20.04
Boiler 8	Traveling Grate	08/22/06 [a, b]	148,855	262,552	202,398	403.5		
Boiler 8	Traveling Grate	8/22/06 [a, b]	146,795	256,382	202,350	383.6		
Boiler 8	Traveling Grate	8/22/06 [a, b]	148,794	257,466	199,188	411.4		
Boiler 8	Traveling Grate	01/05/07	237,896	406,875	499,726	919.5	280.0	24.23
Boiler 8	Traveling Grate	01/05/07	236,384	429,330	520,274	960.3	274.3	23.85
Boiler 8	Traveling Grate	01/05/07	229,933	443,786	510,811	948.0	315.3	24.35
Boiler 8	Traveling Grate	11/29-30/07	227,945	448,255	526,093	968.3	301.3	26.92
Boiler 8	Traveling Grate	11/29-30/07	228,148	434,556	532,977	980.8	298.8	24.79
Boiler 8	Traveling Grate	11/29-30/07	247,952	467,497	540,786	999.6	292.3	29.75
Boiler 8	Traveling Grate	11/29-30/07	241,314	469,578	575,771	1,061.9	297.6	26.58
Boiler 8	Traveling Grate	11/29-30/07	247,207	474,721	545,768	1,011.6	296.7	25.69
Boiler 8	Traveling Grate	11/29-30/07	248,621	476,866	575,034	1,063.3	304.4	24.84
Boiler 8	Traveling Grate	12/11/08	204,011	393,592	561,322	1,037.9	265.2	28.52
Boiler 8	Traveling Grate	12/11/08	201,698	384,162	536,757	992.3	269.3	27.23
Boiler 8	Traveling Grate	12/11/08	217,265	408,602	529,901	983.7	256.7	27.60
Boiler 8	Traveling Grate	12/11/08	220,474	412,447	538,812	1,001.5	259.7	26.89
Boiler 8	Traveling Grate	01/30/09	238,331	441,283	530,642	980.1	263.2	25.45
Boiler 8	Traveling Grate	01/30/09	242,761	443,818	504,742	922.3	258.6	24.90
Boiler 8	Traveling Grate	01/30/09	249,681	452,303	531,158	984.3	257.1	24.47
Number of Runs			22	22	22	22	22	22
Mean			**228,901**	**428,895**	**528,119**	**976.6**	**273.2**	**26.52**
Minimum			201,698	384,162	487,595	880.2	229.3	23.85
Maximum			249,681	476,866	575,771	1,063.3	315.3	29.77
Standard Deviation			14,551	27,165	24,357	47.8	18.5	1.62

[a] Wood chip firing at 4,500 Btu/lb.

[b] Low load operation (off-season). Not included in summary calculations.

CAM REVISIONS

COMPLIANCE ASSURANCE MONITORING PLAN
(CAM PLAN)
UNITED STATES SUGAR CORPORATION
CLEWISTON

October 2009

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1.0 CAM APPLICABILITY ANALYSIS

1.1 CAM Rule Applicability Definition

On October 18, 2004, the Florida Department of Environmental Protection (FDEP) issued Title V Air Operation Permit Nos. 0510003-017-AV to United States Sugar Corporation (U.S. Sugar) for the operation of the Clewiston Mill. In order to renew the permit, a renewal application for the Clewiston Mill was submitted to the FDEP on June 1, 2005.

As part of the Title V renewal application, a Compliance Assurance Monitoring (CAM) Plan must be submitted as required by regulations adopted in Title 40, Part 64 of the Code of Federal Regulations (40 CFR 64). This regulation has been incorporated by reference in Rule 62-204.800, Florida Administrative Code (F.A.C.), and implemented in Rule 62-213.440, F.A.C.

CAM plans are required for all Title V permitted emissions units (EUs) using control devices to meet federally enforceable emission limits or standards and that have pre-control emissions greater than "major" source thresholds. The term "major" is defined in the Title V regulations (40 CFR 70), but applied on a source-by-source basis. For most non-hazardous pollutants, the major source threshold is 100 tons per year (TPY). For hazardous air pollutants (HAPs), the threshold is 10 TPY for an individual HAP and 25 TPY for total HAPs combined.

The CAM rules contain specific exemptions for the applicability of CAM. Specifically exempted from CAM are emission limitations or standards promulgated under the following: Stratospheric Ozone Regulations contained in 40 CFR 82; the Acid Rain Program contained in 40 CFR 72; or those that are part of an emissions cap included in the Title V Permit. Also exempt are emission limitations or standards proposed after November 15, 1990, under the following: New Source Performance Standards (NSPS) contained in 40 CFR 60; and National Emission Standards for Hazardous Air Pollutants (NESHAPs) promulgated in 40 CFR 63. These limitations and standards have monitoring requirements equivalent to CAM included as part of the standard.

Inherent process equipment (IPE), or equipment that may have the effect of controlling emissions but is installed for the primary purpose of product recovery or raw material recovery, is also exempt from CAM (40 CFR 64.1). In addition, CAM does not apply to any emission limit or standard for which the Title V permit specifies a continuous compliance determination method [40 CFR 64.2(b)(1)(vi)],

provided that the method does not include an assumed control device emission reduction factor that could be affected by the actual operation and maintenance of the control device.

1.2 Applicability of CAM to Emissions Units

A review of emission units at the U.S. Sugar Clewiston Mill was conducted to determine the applicability of the CAM rule. This evaluation was conducted for each emissions unit and regulated pollutant. First, the existence of a "control device" as defined by the CAM rule was determined on a source-by-source basis for each pollutant. Those emissions units without control devices were eliminated from further consideration. The remaining emissions units were then evaluated on a pollutant-by-pollutant basis to determine if a control device was used to meet a federally enforceable emission limit or standard.

Each pollutant without a federally enforceable emission limit or standard, emitted from a given emissions unit, was eliminated from further consideration. Uncontrolled annual emissions were then determined for each remaining source-pollutant combination. If uncontrolled emissions for a pollutant emitted from a given emissions unit were below major source thresholds, as defined by the CAM rule, that pollutant was not further considered. Specific exemptions to the applicability of the CAM rule were also considered in this evaluation.

Each pollutant-specific emissions unit at the Clewiston Mill, and its applicability to CAM, is described in the following sections. A summary of the CAM Plan applicability is presented in Table 1-1.

1.2.1 Clewiston Boiler No. 1 (EU 001)

Boiler No. 1 is a vibrating-grate boiler that is fired by carbonaceous fuel (bagasse) and No. 2 fuel oil with a maximum sulfur content of 0.05 percent by weight. Boiler No. 1 has a maximum capacity of 185,000 pounds per hour (lb/hr) steam and a maximum heat input rate of 397 million British thermal units per hour (MMBtu/hr) while burning carbonaceous fuel alone or in mixture with No. 2 fuel oil. The design maximum heat input due to No. 2 fuel oil alone is 130 MMBtu/hr, corresponding to a maximum of 963 gallons per hour (gph) of distillate oil. Fuel oil can include facility-generated "on-spec" used oil. No more than 6,000,000 gallons of distillate oil can be fired during any consecutive 12-month period for Boilers 1, 2, and 4 (combined). This boiler may also burn petroleum contaminated soils up to 2 percent by weight of the bagasse feed rate and a maximum of 500 cubic yards per season.

Boiler No. 1 has federally enforceable emission limits for particulate matter (PM) and sulfur dioxide (SO_2). Boiler No. 1 utilizes a Joy Turbulaire Impingement Scrubber, Size 125, Type D, to control PM emissions. Uncontrolled PM emissions from Boiler No. 1 are greater than 100 TPY. Since a federally enforceable emission limit exists for PM, a control device is used to comply with the PM emission limit; and because uncontrolled PM emissions are greater than 100 TPY, a CAM plan is required for PM for Boiler No. 1. Since there is no control device controlling SO_2 emissions from Boiler No. 1, a CAM plan for SO_2 is not required.

1.2.2 Clewiston Boiler No. 2 (EU 002)

Boiler No. 2 is a vibrating grate boiler that is fired by carbonaceous fuel (bagasse) and No. 2 fuel oil with a maximum sulfur content of 0.05 percent by weight. Boiler No. 2 has a maximum capacity of 185,000 lb/hr steam and a maximum heat input rate of 397 MMBtu/hr while burning carbonaceous fuel alone or in mixture with No. 2 fuel oil. The design maximum heat input due to No. 2 fuel oil alone is 130 MMBtu/hr, corresponding to a maximum of 963 gph of distillate oil. Fuel oil can include facility-generated "on-spec" used oil. No more than 6,000,000 gallons of distillate oil can be fired during any consecutive 12-month period for Boilers 1, 2, and 4 (combined). This boiler may burn petroleum-contaminated soils up to 2 percent by weight of the bagasse feed rate and maximum 500 cubic yards per season.

Boiler No. 2 has federally enforceable emission limits for PM and SO_2. Boiler No. 2 utilizes a Joy Turbulaire Impingement Scrubber, Size 125, Type D, to control PM emissions. Uncontrolled PM emissions from Boiler No. 2 are greater than 100 TPY. Since a federally enforceable emission limit exists for PM, a control device is used to comply with the PM emission limit; and because uncontrolled PM emissions are greater than 100 TPY, a CAM plan is required for PM for Boiler No. 2. Since there is no control device controlling SO_2 emissions from Boiler No. 2, a CAM plan for SO_2 is not required.

1.2.3 Clewiston Boiler No. 4 (EU 009)

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 286,543 lb/hr steam (1-hour maximum) and 271,604 lb/hr steam (24-hour average). The maximum heat input when firing bagasse alone is 633 MMBtu/hr (1-hour maximum) and 600 MMBtu/hr (24-hour average). 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 gph of distillate oil. No more than 6,000,000 gallons of distillate oil can be fired during any consecutive 12-month period for Boilers 1, 2, and 4 (combined).

Boiler No. 4 has federally enforceable emission limits for PM, SO_2, 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. Uncontrolled PM emissions from Boiler No. 4 are greater than 100 TPY. Since a federally enforceable emission limit exists for PM, a control device is used to comply with the PM emission limit; and because uncontrolled PM emissions are greater than 100 TPY, a CAM plan is required for PM for Boiler No. 4. Since there is no control device controlling NO_x, SO_2, CO, or VOC emissions from Boiler No. 4, CAM plans for NO_x, SO_2, CO, and VOC are not required.

1.2.4 Clewiston Boiler No. 7 (EU 014)

Boiler No. 7 is a spreader-stoker vibrating-grate boiler that is fired by carbonaceous fuel (bagasse and wood chips) and distillate fuel oil (Grade No. 2 or superior). Boiler No. 7 has a maximum capacity of 385,000 lb/hr steam (1-hour maximum) and 350,000 lb/hr steam (24-hour average). The maximum heat input rate is 812 MMBtu/hr (1-hour maximum) and 738 MMBtu/hr (24-hour average) while burning bagasse fuel alone or in mixture with fuel oil. The design maximum heat input due to fuel oil alone is 326 MMBtu/hr (1-hour average), corresponding to 2,417 gph of distillate oil. No more than 4,500,000 gallons of distillate oil can be fired during any consecutive 12-month period. The design maximum heat input due to wood chip firing alone is 812 MMBtu/hr (1-hour maximum) and 369 MMBtu/hr (24-hour average). The total heat input from firing wood chips is limited to 1,616,220 MMBtu during any consecutive 12 months.

Boiler No. 7 has federally enforceable emission limits for PM, particulate matter less than 10 microns in diameter (PM_{10}), NO_x, SO_2, CO, VOC, and sulfuric acid mist (SAM). Boiler No. 7 utilizes an electrostatic precipitator (ESP) to reduce PM/PM_{10} emissions. The wet sand separator (cyclone) removes sand and partially combusted bagasse fibers to protect the induced draft fan and ESP and is not considered a control device. The ESP is the control device for PM emissions from Boiler No. 7. Uncontrolled PM/PM_{10} emissions from Boiler No. 7 are greater than 100 TPY. Since a federally enforceable emission limit exists for PM/PM_{10}, a control device is used to comply with the PM/PM_{10} emission limit; and because uncontrolled PM/PM_{10} emissions are greater than 100 TPY, a CAM plan is required for PM/PM_{10} for Boiler No. 7. Since there is no control device controlling NO_x, SO_2, CO, VOC, or SAM emissions from Boiler No. 7, CAM plans for these pollutants are not required.

1.2.5 Clewiston Boiler No. 8 (EU 028)

Boiler No. 8 is a membrane wall, balanced-draft stoker boiler fired with carbonaceous fuel (bagasse and woodchips) and No. 2 distillate fuel oil with a maximum sulfur content of 0.05 percent by weight. Boiler No. 8 has a maximum heat input rate of 1,077 MMBtu/hr based on a 1-hour maximum steam rate of 550,000 lb/hr for carbonaceous fuel firing. The maximum permitted 24-hour average heat input rate for firing carbonaceous fuel is 936 MMBtu/hr, corresponding to 500,000 lb/hr steam. The maximum permitted heat input rate for firing No. 2 fuel oil is 562 MMBtu/hr. Fuel oil can include facility-generated on-specification used oil.

Boiler No. 8 has federally enforceable emission limits for PM/PM_{10}, NO_x, SO_2, CO, VOC, and ammonia (NH_3). Boiler No. 8 utilizes two wet cyclone collectors followed by an ESP. The wet cyclones remove sand and partially combusted bagasse fibers to protect the induced draft fan and ESP, and are not considered as PM/PM_{10} control devices.

NO_x emissions are controlled by a selective non-catalytic reduction (SNCR) system. Uncontrolled NO_x emissions from Boiler No. 8 are greater than 100 TPY. However, a continuous emission monitoring system (CEMS) is used as the method for continuous compliance determination. Therefore, a CAM plan for NO_x is not required.

The ESP is the control device for PM emissions from Boiler No. 8. Uncontrolled PM/PM_{10} emissions from Boiler No. 8 are greater than 100 TPY. Since a federally enforceable emission limit exists for PM/PM_{10}, a control device is used to comply with the PM/PM_{10} emission limit; and because uncontrolled PM/PM_{10} emissions are greater than 100 TPY, a CAM plan is required for PM/PM_{10} for Boiler No. 8.

There are no control devices on Boiler No. 8 for SO_2, CO, VOC, or NH_3. Therefore, CAM plans for these pollutants are not required.

1.2.6 Clewiston Sugar Processing Operations

The Sugar Processing Operations at the U.S. Sugar mill consist of multiple emissions units: VHP Sugar Dryer [Emission Unit (EU) 015], White Sugar Dryers Nos. 1 and 2 (EUs 016 and 029); Granular Carbon Regeneration Furnace (GCRF) (EU 017); three Vacuum Systems (EU 018); three Conditioning Silos (EU 019); two Screening and Distribution Baghouses (EU 020); Alcohol Usage (EU 021); and a Packaging Baghouse (EU 022).

EU 021 (Alcohol Usage) has no control device, and is therefore exempt from the CAM requirements.

Uncontrolled PM emission rates from the sugar refinery emission units are presented in Table 1-2. EUs 015 (VHP Sugar Dryer) and 016 (White Sugar Dryer No. 1) each have a baghouse, and EU 029 (White Sugar Dryer No. 2) has four cyclones followed by a wet scrubber. The uncontrolled PM emission estimates, based on dryer outlet grain loading and exhaust gas flow for the VHP Sugar Dryer and White Sugar Dryer No. 1, are approximately 50,000 TPY (shown in Table 1-2). This high emission rate shows that sugar dust recovery by an add-on control device would be necessary even without any air pollution control regulations. Therefore, the baghouses on the VHP Sugar Dryer and White Sugar Dryer No. 1 and the cyclones on the White Sugar Dryer No. 2 serve as IPE.

The White Sugar Dryer No. 2 (EU 029) wet scrubber has uncontrolled PM emissions, after the cyclones, of greater than 100 TPY; therefore, CAM is required for the wet scrubber.

EUs 017, 018, 019, 020, and 022 at the refinery each have a control device and a federally enforceable emission limit for PM. The emissions from EUs 018, 019, 020, and 022 are controlled with baghouses. There are a total of nine baghouses within these emissions units.

PM emissions from EU 017 (GCRF) are controlled with a wet venturi/impingement plate scrubber system, and VOC emissions are controlled with a direct-flame afterburner. Uncontrolled emissions of VOCs from the GCRF are both less than 100 TPY; therefore, CAM is not required (see Table 1-3). Uncontrolled PM emissions are estimated to be greater than 100 TPY (see Table 1-2); therefore, CAM is required for the wet scrubbers. There is no control device for SO_2 emissions from the GCRF; therefore, CAM is not required for SO_2.

Uncontrolled emissions of PM from the Vacuum System (EU 018) are more than 100 TPY with an estimated grain loading of 5 grains per dry standard cubic foot (gr/dscf) reaching each baghouse; therefore, CAM for PM is required for this unit (see Table 1-2).

PM emissions from the three Conditioning Silos (EU 019), Screening and Distribution System (EU 020), and Sugar Packaging System (EU 022) are controlled with baghouses. The baghouses control PM emissions from conveyor drop points, transfer points, bucket elevators, and other drop-type operations. Uncontrolled emissions of PM from each are less than 100 TPY; therefore, CAM is not required (see Table 1-2).

CAM applicability for the sugar refinery emission units is summarized in Table 1-1.

TABLE 1-1
CAM APPLICABILITY DETERMINATION FOR U.S. SUGAR CLEWISTON MILL

Emission Source	Title V EU ID	Control Equipment	Pollutants with Emission Limits	Uncontrolled Emission Rate (TPY)	CAM Plan Required? (Yes/No)	Comments
CLEWISTON						
Boiler No. 1	001	Wet Scrubber	PM	>100	**Yes**	PM uncontrolled emissions >100 TPY.
		None	SO_2	--	No	No control device.
Boiler No. 2	002	Wet Scrubber	PM	>100	**Yes**	PM uncontrolled emissions >100 TPY.
		None	SO_2	--	No	No control device.
Boiler No. 4	009	Wet Scrubber	PM	>100	**Yes**	PM uncontrolled emissions >100 TPY.
		None	SO_2	--	No	No control device.
		None	NO_x	--	No	No control device.
		None	VOC	--	No	No control device.
		None	CO	--	No	No control device.
Boiler No. 7	014	ESP	PM/PM_{10}	>100	**Yes**	PM uncontrolled emissions >100 TPY.
		None	NO_x	--	No	No control device.
		None	SO_2	--	No	No control device.
		None	VOC	--	No	No control device.
		None	CO	--	No	No control device.
		None	SAM	--	No	No control device.
Boiler No. 8	028	ESP	PM/PM_{10}	>100	**Yes**	PM uncontrolled emissions >100 TPY
		SNCR	NO_x	--	No	CEMS used for continuous compliance determination
		None	CO	--	No	No control device.
		None	SO_2	--	No	No control device.
		None	VOC	--	No	No control device.
		None	NH_3	--	No	No control device.
VHP Sugar Dryer	015 (S-11)	Baghouse	PM	--	No	Baghouse serves as inherent process equipment.
White Sugar Dryer No. 1	016 (S-10)	Baghouse	PM	--	No	Baghouse serves as inherent process equipment.
Granular Carbon Regneration Furnace	017 (S-12)	Wet Scrubber	PM	102.2 [a]	**Yes**	PM uncontrolled emissions >100 TPY.
		None	SO_2	--	No	No control device.
		Afterburner	VOC	55.0 [a]	No	VOC uncontrolled emissions < 100 TPY.
Vacuum Systems						
Screening and Distribution Vacuum	018 (S-1)	Baghouse	PM	186 [a]	**Yes**	PM uncontrolled emissions >100 TPY.
100-lb Bagging Vacuum	018 (S-2)	Baghouse	PM	164 [a]	**Yes**	PM uncontrolled emissions >100 TPY.
5-lb Bagging Vacuum	018 (S-3)	Baghouse	PM	185 [a]	**Yes**	PM uncontrolled emissions >100 TPY.
Conditioning Silos						
Conditioning Silo No. 2	019 (S-7)	Baghouse	PM	3 [a]	No	PM uncontrolled emissions <100 TPY.
Conditioning Silo No. 4	019 (S-8)	Baghouse	PM	3 [a]	No	PM uncontrolled emissions <100 TPY.
Conditioning Silo No. 6	019 (S-9)	Baghouse	PM	3 [a]	No	PM uncontrolled emissions <100 TPY.
Screening and Distribution						
Screening and Distribution #1	020 (S-5)	Baghouse	PM	22 [a]	No	PM uncontrolled emissions <100 TPY.
Screening and Distribution #2	020 (S-6)	Baghouse	PM	34 [a]	No	PM uncontrolled emissions <100 TPY.
Sugar Packaging						
Packaging Dust Collector	022 (S-4)	Baghouse	PM	25 [a]	No	PM uncontrolled emissions <100 TPY.
White Sugar Dryer No. 2	029 (S-13)	Wet Scrubber	PM	505 [a]	**Yes**	PM uncontrolled emissions >100 TPY.

[a] Uncontrolled emissions shown in Tables 1-2 and 1-3.

ESP = Electrostatic Precipitator.

SNCR = Selective non-catalytic reduction.

TABLE 1-2
UNCONTROLLED EMISSIONS OF PM FROM THE SUGAR REFINERY SOURCES, U.S. SUGAR CORP., CLEWISTON

Source/Vent Name	EU No.	Source ID	Refined Sugar Throughput[a] (TPD)	(lb/hr)	(TPY)	Number of Drop Points	Exhaust Gas Flow (dscfm)	PM Uncontrolled Emission Factor	Particulate Matter (PM) Uncontrolled Emissions (lb/hr)	(TPY)[b]
V.H.P. Sugar Dryer/Baghouse	015	S-11	2,250	187,500	803,000	--	110,042	14 gr/dscf[c]	13,205	57,838
White Sugar Dryer No. 1/Baghouse	016	S-10	2,250	187,500	803,000	--	94,488	14 gr/dscf[c]	11,339	49,663
Granular Carbon Regeneration Furnace/Wet Scrubber	017	S-12	2,250	187,500	803,000	--	--	see footnote d	23.33	102.19
White Sugar Dryer No. 2/Cyclone(4)/Wet Scrubber	029	S-13	2,250	187,500	803,000	--	96,000	0.14 gr/dscf[B]	115.2	505
Vacuum Systems										
Screening and Distribution Vacuum/Baghouse	018	S-1	2,250	187,500	803,000	--	990	5 gr/dscf[c]	42.43	185.84
100 lb Bagging Vacuum System/Baghouse	018	S-2	2,000	166,667	803,000	--	872	5 gr/dscf[c]	37.37	163.69
5 lb Bagging Vacuum System/Baghouse	018	S-3	2,000	166,667	803,000	--	984	5 gr/dscf[c]	42.17	184.71
Conditioning Silos										
Conditioning Silo No. 2/Baghouse	019	S-7	2,250	187,500	803,000	1	2,641	0.0076 lb/ton[f]	0.71	3.12
Conditioning Silo No. 4/Baghouse	019	S-8	2,250	187,500	803,000	1	2,641	0.0076 lb/ton[f]	0.71	3.12
Conditioning Silo No. 6/Baghouse	019	S-9	2,250	187,500	803,000	1	2,641	0.0076 lb/ton[f]	0.71	3.12
Screening and Distribution										
Screening and Distribution Baghouse #1	020	S-5	2,250	187,500	803,000	7	2,668	0.0076 lb/ton[f]	4.99	21.85
Screening and Distribution Baghouse #2	020	S-6	2,250	187,500	803,000	11	8,735	0.0076 lb/ton[f]	7.84	34.33
Sugar Packaging Baghouse										
Packaging Dust Collector/Baghouse	022	S-4	2,000	166,667	730,000	9	9,589	0.0076 lb/ton[f]	5.70	24.97

[a] Based on amount of sugar produced by the fluidized bed drying system and loaded via the bulk shipment facility, such that the maximum daily loadout rate is limited to 2,250 TPD. The amount of refined sugar that could be processed through packaging operations is 2,000 TPD.

[b] Based on 8,760 hr/yr operation.

[c] Based on inlet loading to White Sugar Dryer No. 2 cyclone collectors. These dryers assumed to have the same outlet grain loading.

[d] Based on a 97% control efficiency and an outlet loading of 0.7 lb/hr for the wet scrubber.

[e] Based on estimated grain loading prior to baghouse.

[f] Bulk load-out operations continuous drop emission factors are computed from AP-42 (USEPA, 1995) Section 13.2.4.
E (lb/ton) = k x 0.0032 x (U/5)^1.3 / (M/2)^1.4 ; where U is assumed to be minimum value (1.3 mph) given in AP-42 due to the building enclosure.
M = Moisture Content = 0.25% for refined sugar (minimum AP-42 value).
k = 0.74 for PM.

[B] Grain loading after the cyclones, which are considered inherent process equipment

Note: lb/hr = pounds per hour.
TPY = tons per year.

TABLE 1-3
UNCONTROLLED EMISSIONS OF VOC FROM THE SUGAR REFINERY SOURCES
U.S. SUGAR CORP., CLEWISTON

Source/Vent Name	EU No.	Source ID	Uncontrolled VOC Emissions (lb/hr)	Uncontrolled VOC Emissions (TPY) [b]
Granular Carbon Regeneration Furnace/Afterburner	017	S-12	12.50 [a]	54.75

[a] Based on an outlet loading of 1.0 lb/hr and a total VOC destruction efficiency of 92 percent.

[b] Based on operating at 8,760 hr/yr.

Note: lb/hr = pounds per hour.
TPY = tons per year.

2.0 PARTICULATE MATTER EMISSIONS FROM CLEWISTON BOILER NO. 1

2.1 Emissions Unit Identification

Clewiston Boiler No. 1 – EU ID 001.

2.2 Applicable Regulations, Emissions Limits, and Monitoring Requirements

Boiler No. 1 has a PM emission limit of 0.25 lb/MMBtu for carbonaceous fuel (Permit No. 0510003-017-AV) plus 0.1 lb/MMBtu for distillate oil [Rule 62-296.410(1)(b)2, F.A.C., and Permit No. 0510003-036-AC]. The equivalent potential emissions are 123.8 lb/hr and 542.0 TPY for carbonaceous fuel and 13.0 lb/hr and 40.5 TPY for distillate oil based on a cap of 6,000,000 gallons per year for Boilers 1, 2, and 4 combined. The current VE limit is 30 percent opacity, with an exception of up to 40-percent opacity for 2 minutes per hour [Permit Nos. 0510003-017-AV and 0510003-036-AC, and Rule 62-296.410(1)(b)1, F.A.C.].

PM and VE compliance testing is required annually on Boiler No. 1. In addition, the total pressure drop across the scrubber and the scrubber water inlet pressure 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).

2.3 Control Technology Description

PM emissions from Boiler No. 1 are controlled by a Joy Turbulaire Impingement Scrubber, Size 125, Type D. The operating pressure drop across the scrubber is 6 to 12 inches of water (in. H_2O). The operating scrubber water inlet pressure to each scrubber is 60 to 130 pounds per square inch gauge (psig). The effectiveness of the wet scrubbers is evaluated with an annual stack test and VE measurements. A detailed description of the control equipment is included in the Title V renewal application, Attachment USS-EU1-I3, which was submitted June 2006.

2.4 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. 1	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.	The scrubber water flow rate is measured using a flow meter.
Indicator Range	An excursion is defined as any pressure drop below 6.3 in. H_2O. Excursions trigger an inspection, corrective action, and a recordkeeping and reporting requirement.	An excursion is defined as any water flow rate below 191 gallons per minute (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 in. H_2O 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

2.5 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 sufficient historic test data necessary to establish indicator values for pressure drop and water flow rate to the Boiler No. 1 wet scrubber. The test data correlating the parameters to the PM emission levels is presented in Figures 2-1 and 2-2. Supporting information is contained in Appendix A.

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 = 7.0 in. H_2O
	Minimum parameter value = 7 × 0.9 = 6.3 in. H_2O
Water Flow Rate:	Minimum test run value = 212 gpm
	Minimum parameter value = 212 × 0.9 = 191 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 maximum achievable control technology (MACT) standards (note: these standards have recently been vacated by the courts).

This methodology is also appropriate due to the high measure of compliance demonstrated at the minimum test run values. The PM emission rate corresponding to the minimum pressure drop value (7 in. H_2O) is 0.196 lb/MMBtu which is well below the allowable emission rate of 0.243 lb/MMBtu. The PM emission rate corresponding to the minimum average water flow rate value (212 gpm) is 0.134 lb/MMBtu, also well below the allowable emission rate of 0.245 lb/MMBtu.

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 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.

U.S. Sugar has been recording scrubber parameters once every 8-hour shift, according to the current Title V permit conditions. Although U.S. Sugar has continuous pressure drop and water flow rate monitors in place, the mechanisms are not in place to continuously record the data and create hourly averages. It is therefore requested that the current recording frequency of once per 8-hour shift be retained.

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.

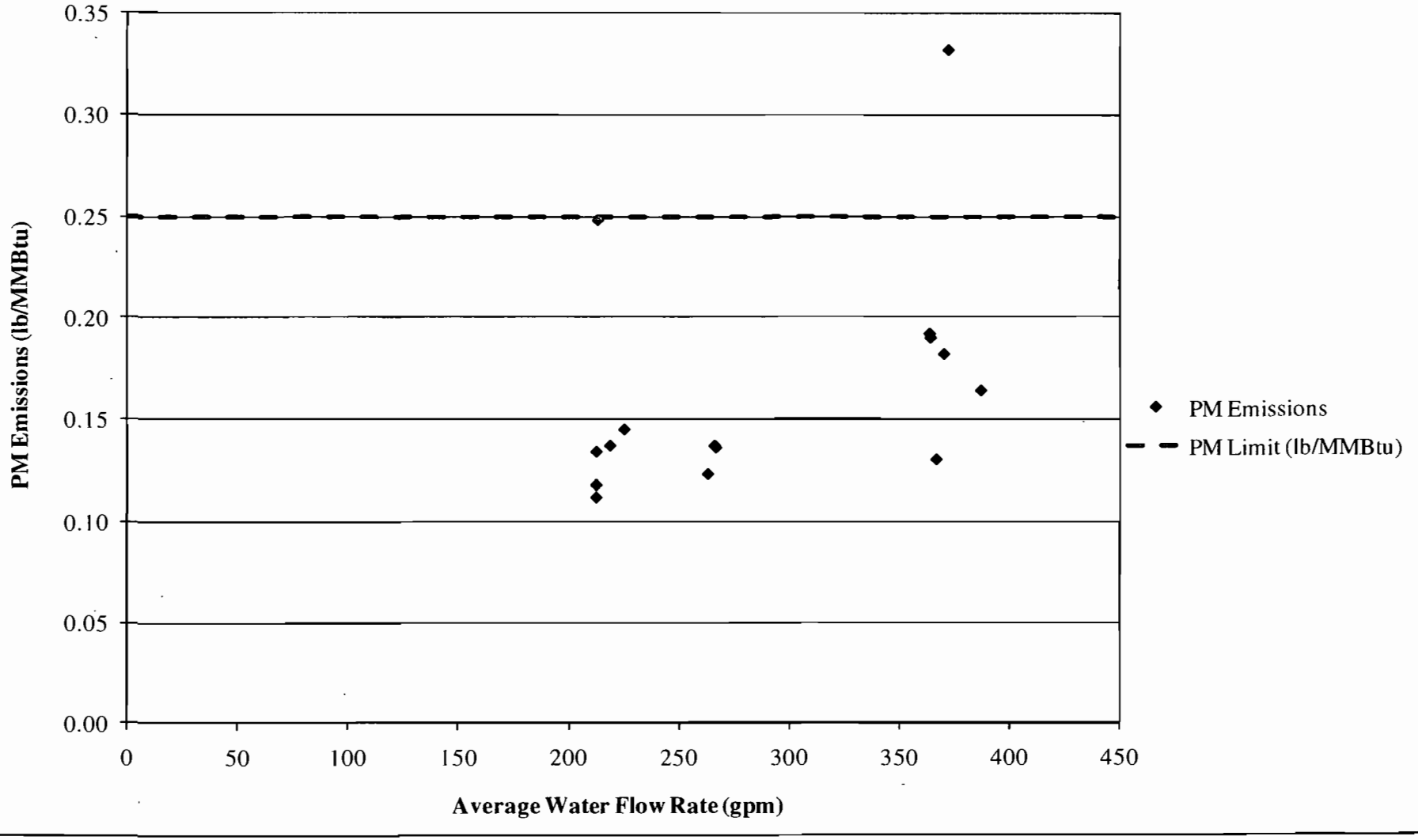


Figure 2-1
PM vs. Water Flow, Clewiston Boiler No. 1

Source: Golder, 2009.

Golder Associates

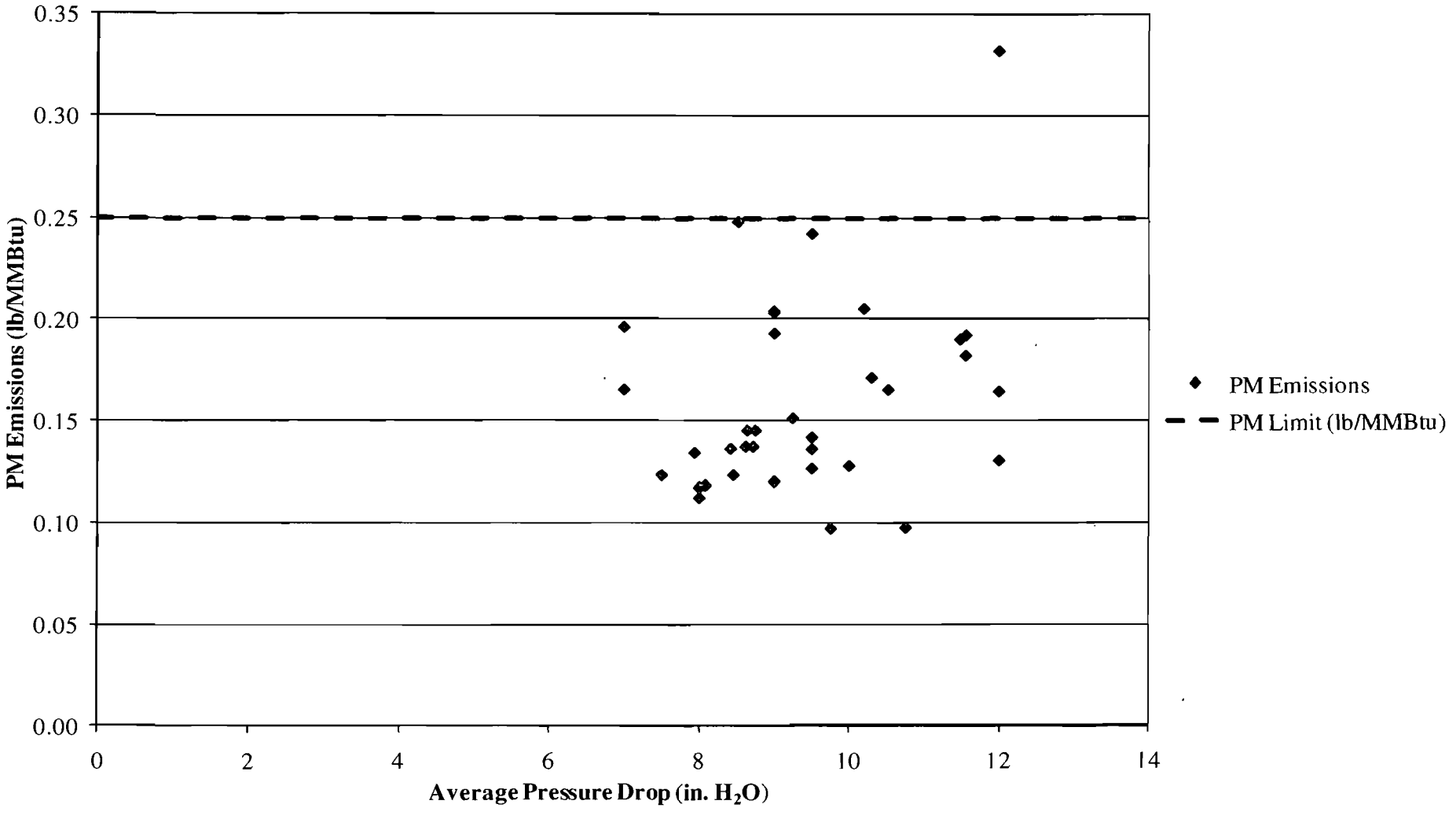


Figure 2-2
PM vs. Pressure Drop, Clewiston Boiler No. 1

Source: Golder, 2009.

Golder Associates

3.0 PARTICULATE MATTER EMISSIONS FROM CLEWISTON BOILER NO. 2

3.1 Emissions Unit Identification

Clewiston Boiler No. 2 – EU ID 002.

3.2 Applicable Regulations, Emissions Limits, and Monitoring Requirements

Boiler No. 2 has a PM emission limit of 0.25 lb/MMBtu for carbonaceous fuel (Permit No. 0510003-017-AV) plus 0.1 lb/MMBtu for distillate oil [Rule 62-296.410(1)(b)2, F.A.C., and Permit No. 0510003-036-AC]. The equivalent potential emissions are 111.8 lb/hr and 490.0 TPY for carbonaceous fuel and 13.0 lb/hr and 40.5 TPY for distillate oil, based on a cap of 6,000,000 gallons per year for Boilers 1, 2, and 4 combined. The current VE limit is 30-percent opacity, with an exception of up to 40-percent opacity for 2 minutes per hour [Permit Nos. 0510003-017-AV and 0510003-036-AC, and Rule 62-296.410(1)(b)1, F.A.C.].

PM and VE compliance testing is required annually on Boiler No. 2. In addition, the total pressure drop across the scrubber and the scrubber water inlet pressure 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).

3.3 Control Technology Description

PM emissions from Boiler No. 2 are controlled by a Joy Turbulaire Impingement Scrubber, Size 125, Type D. The operating pressure drop across the scrubber is 6 to 12 in. H_2O. The operating scrubber water inlet pressure is 60 to 130 psig. The effectiveness of the wet scrubber is evaluated with an annual stack test and VE measurements. A detailed description of the control equipment is included in the Title V renewal application, Attachment USS-EU2-I3, which was submitted June 2006.

3.4 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. 2	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.	The scrubber water flow rate is measured using a flow meter.
Indicator Range	An excursion is defined as any pressure drop below 5.4 in. H_2O. Excursions trigger an inspection, corrective action, and a recordkeeping and reporting requirement.	An excursion is defined as any water flow rate below 200 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 in. H_2O 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

3.5 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 sufficient historic test data necessary to establish indicator values for pressure drop and water flow rate to the Boiler No. 2 wet scrubber. The test data correlating the parameters to the PM emission levels is presented in Figures 3-1 and 3-2. Supporting information is contained in Appendix A.

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 = 6.0 in. H_2O
	Minimum parameter value = 6.0 × 0.9 = 5.4 in. H_2O
Water Flow Rate:	Minimum test run value = 222 gpm
	Minimum parameter value = 222 × 0.9 = 200 gpm

Note that the pressure drop values of 3.0 in H_2O and water flow rates less than 222 gpm recorded during compliance testing, shown in Appendix A, are considered to be outliers and were not used in determining the minimum parameter values.

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 (note: these standards have recently been vacated by the courts).

This methodology is also appropriate due to the high measure of compliance demonstrated at the minimum test run values. The PM emission rate corresponding to the minimum pressure drop value (6 in. H_2O) is 0.198 lb/MMBtu which is well below the allowable emission rate of 0.250 lb/MMBtu. The PM emission rate corresponding to the minimum average water flow rate value (222 gpm) is 0.218 lb/MMBtu, also well below the allowable emission rate of 0.250 lb/MMBtu.

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 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.

U.S. Sugar has been recording scrubber parameters once every 8-hour shift, according to the current Title V permit conditions. Although U.S. Sugar has continuous pressure drop and water flow rate monitors in place, the mechanisms are not in place to continuously record the data and create hourly averages. It is therefore, requested that the current recording frequency of once per 8-hour shift be retained.

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.

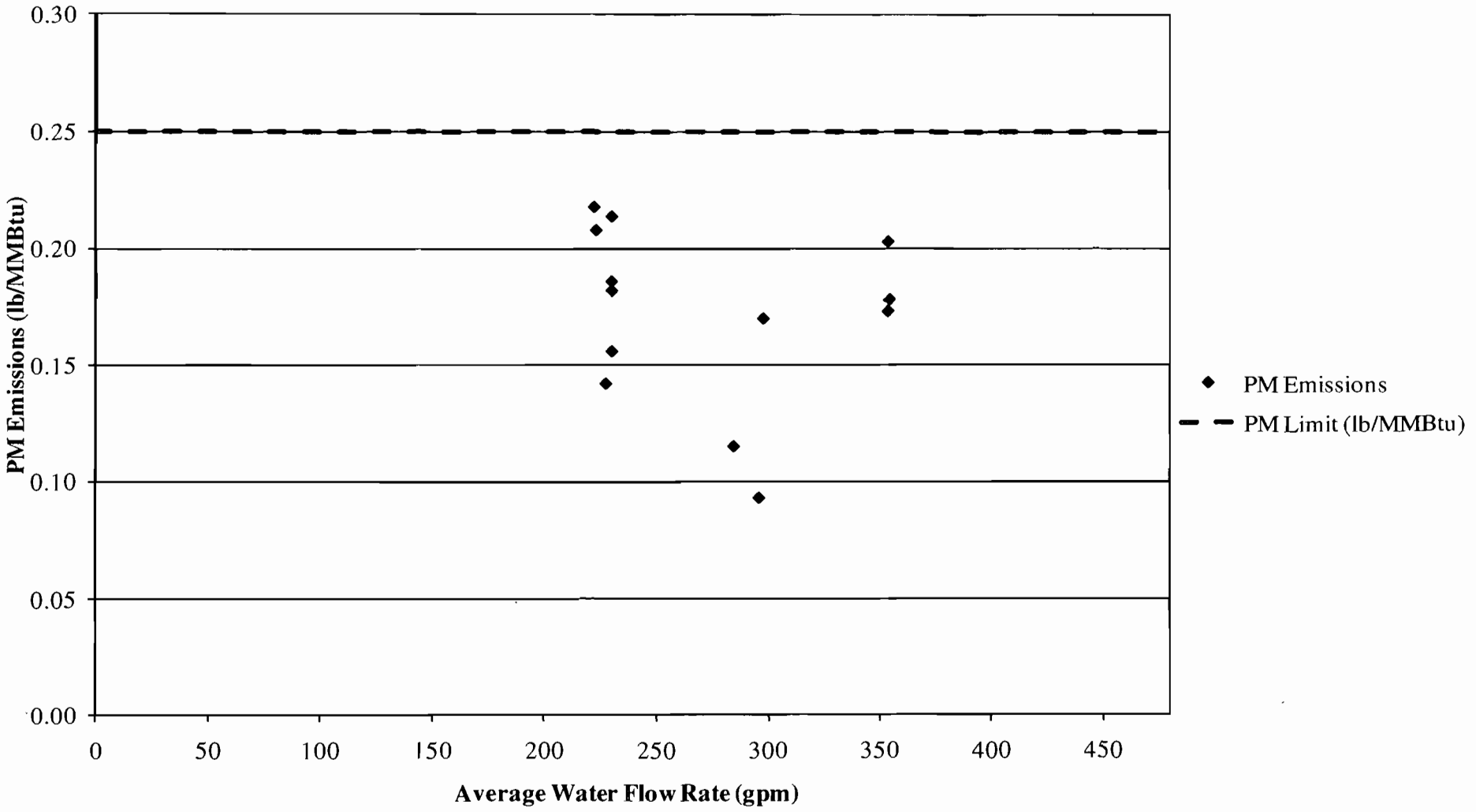


Figure 3-1
PM vs. Water Flow, Clewiston Boiler No. 2

Source: Golder, 2009.

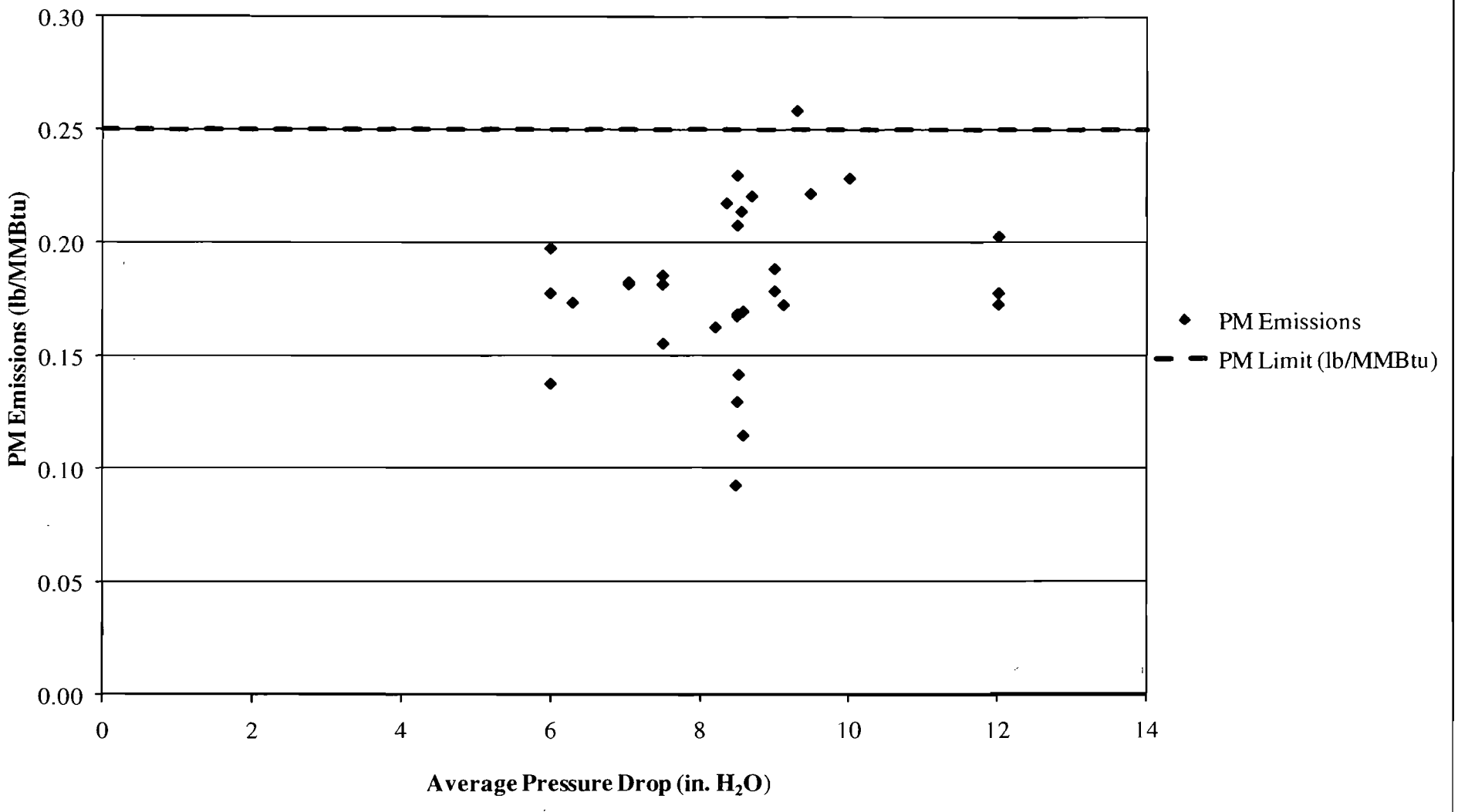


Figure 3-2
PM vs. Pressure Drop, Clewiston Boiler No. 2

Source: Golder, 2009.

Golder Associates

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]. The equivalent potential emissions are 95.0 lb/hr and 216.0 TPY for carbonaceous fuel and 32.6 lb/hr and 40.5 TPY for distillate oil, based on a cap of 6,000,000 gallons per year for Boilers 1, 2, and 4 combined. 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 is 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 in. H_2O. The operating scrubber water inlet pressure is 40 to 80 psig. The effectiveness of the wet scrubber is evaluated with an annual stack test and VE measurements. A detailed description of the control equipment is included in the Title V renewal application, Attachment USS-EU3-I3, which was submitted June 2006.

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.	The scrubber water flow rate is measured using a flow meter.
Indicator Range	An excursion is defined as any pressure drop below 5.8 in. H_2O. 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 sufficient historic test data necessary 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 A.

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 in. H_2O
	Minimum parameter value = 6.4 × 0.9 = 5.8 in. H_2O
Water Flow Rate:	Minimum test run value = 245 gpm
	Minimum parameter value = 245 × 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 (note: these standards have recently been vacated by the courts).

This methodology is also appropriate due to the high measure of compliance demonstrated at the minimum test run values. The PM emission rate corresponding to the minimum pressure drop value (6.4 in. H_2O) is 0.090 lb/MMBtu which is well below the allowable emission rate of 0.142 lb/MMBtu. The PM emission rate corresponding to the minimum average water flow rate value (245 gpm) is 0.116 lb/MMBtu, also well below the allowable emission rate of 0.150 lb/MMBtu.

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.

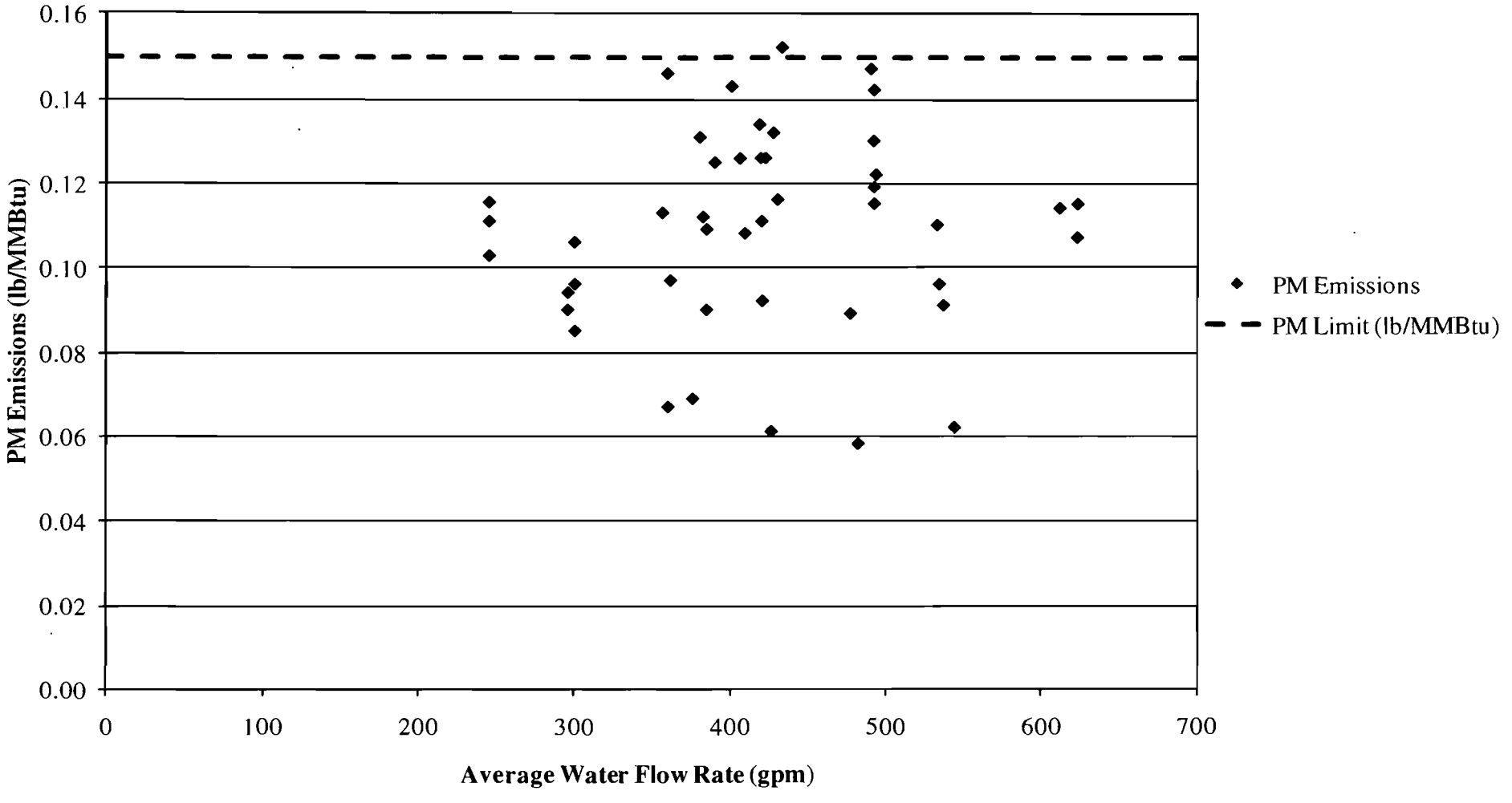


Figure 4-1
PM vs. Water Flow, Clewiston Boiler No. 4

Source: Golder. 2009.

Golder Associates

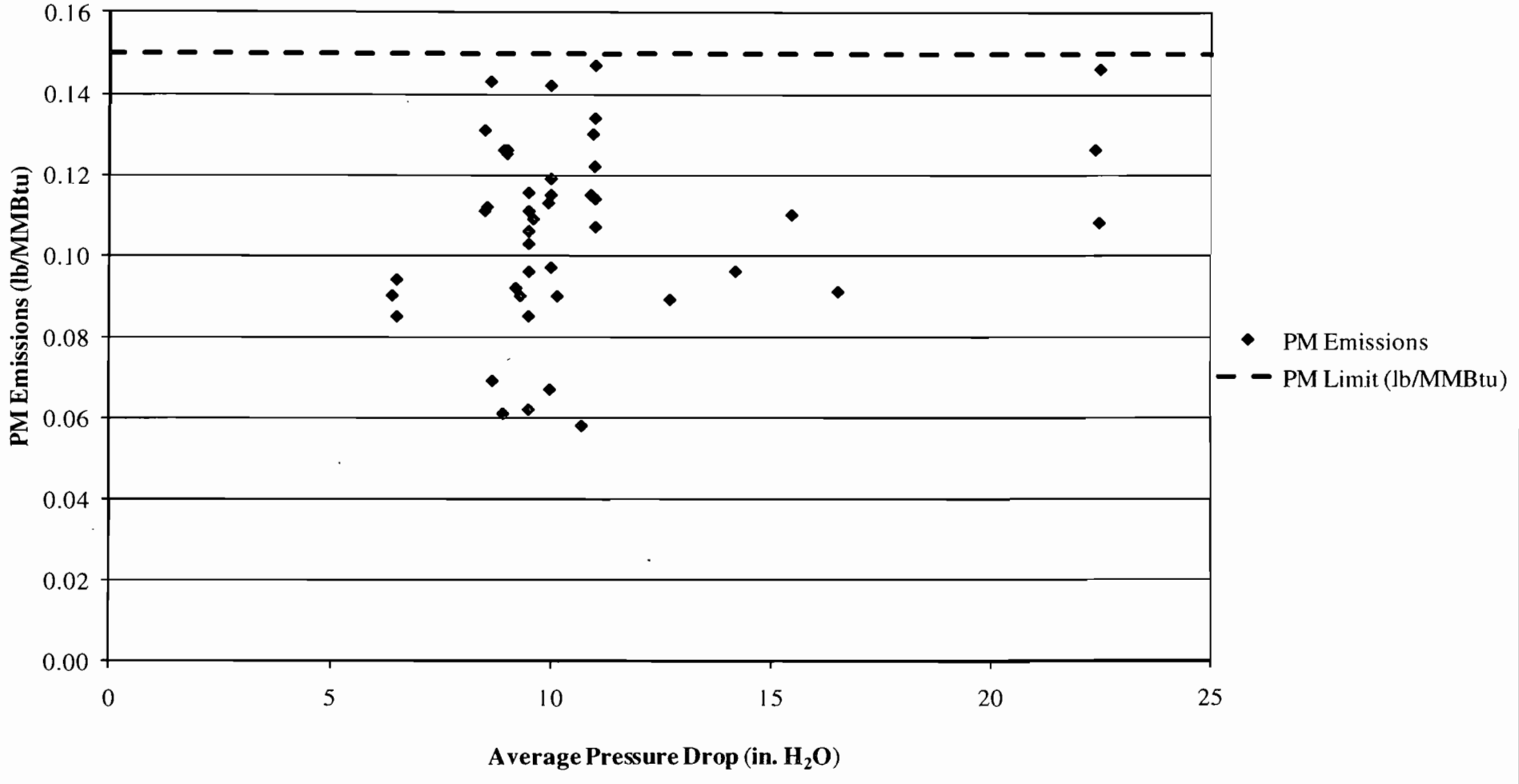


Figure 4-2
PM vs. Pressure Drop, Clewiston Boiler No. 4

Source: Golder, 2009.

Golder Associates

5.0 PARTICULATE MATTER EMISSIONS FROM CLEWISTON BOILER NO. 7

5.1 Emissions Unit Identification

Clewiston Boiler No. 7 – EU ID 014.

5.2 Applicable Regulations, Emissions Limits, and Monitoring Requirements

Boiler No. 7 has a PM/PM_{10} emission limit of 0.03 lb/MMBtu (Permit No. 0510003-017-AV). The equivalent PM/PM_{10} potential emissions are 22.14 lb/hr and 97.0 TPY. The current VE limit is 20 percent opacity, with an exception of up to 27 percent opacity for 2 minutes per hour when firing carbonaceous fuel [Rule 62-212.400(5), F.A.C. and Permit No. 0510003-017-AV] and 20 percent opacity, with an exception of up to 27 percent opacity for 6 minutes per hour (Permit No. 0510003-044-AC).

PM/PM_{10} and VE compliance testing is required annually on Boiler No. 7. PM emissions are controlled by an ESP. The wet sand separator is an integral part of Boiler No. 7, since it exists to protect the induced draft fan, and is therefore not considered a control device. The ESP is considered the PM control device for Boiler No. 7.

5.3 Control Technology Description

As described above, PM/PM_{10} emissions from Boiler No. 7 are controlled by an ESP. The wet sand separator removes sand and partially combusted bagasse fibers to protect the induced draft fan and ESP, and is considered IPE.

The effectiveness of the ESP can be evaluated based on total power input to the ESP. The ESP has a total of three fields. Total power input can be determined by monitoring secondary voltage and secondary current to each field, calculating power input to each field, and summing the individual field values to obtain total power input. A detailed description of the control equipment is included in the Title V renewal application, Attachment USS-EU4-I3, which was submitted June 2006.

5.4 Monitoring Approach

The monitoring approach is based on monitoring total ESP secondary power input, which is calculated from the ESP secondary voltage and secondary current. The monitoring approach is summarized in the table below.

Boiler No. 7	Indicator No. 1
Indicator	Total Secondary Power Input
Measurement Approach	Total secondary power input to each field is calculated from the secondary current and voltage, which are monitored with an amp/volt meter.
Indicator Range	An excursion is defined as any 3-hour block average total power input below 38 kW. Excursions trigger an inspection, corrective action, and a recordkeeping and reporting requirement.
Data Representativeness	Accuracy of the amp/volt meter is ±1 milliampere (mA) and ±1 kilovolt (kV).
Verification of Operational Status	NA
QA/QC Practices and Criteria	The amp/volt meter is maintained in accordance with the manufacturer's recommendations.
Monitoring Frequency	ESP secondary current and secondary voltage are measured continuously and used to determine the total secondary power input.
Data Collection Procedures	ESP secondary current and secondary voltage data collected continuously and total power input calculated on a 3-hour block average basis.
Averaging Period	3-hour block

5.5 Justification

Total secondary power input to the ESP is a recognized parameter for controlling PM/PM_{10} emissions. U.S. Sugar has historic test data to establish an indicator value for total secondary power input to the Boiler No. 7 ESP. The test data correlating the parameter to the PM emission levels is presented in Figure 5-1. Supporting information is contained in Appendix A.

The proposed parameter minimum value is based on 90 percent of the minimum parameter value recorded during the test run, when compliance was demonstrated with the PM/PM_{10} limit. The calculation of the minimum parameter value is provided below:

ESP secondary power input:
Minimum test run value = 41.9 kilowatts (kW)
Minimum parameter value = 41.9 × 0.9 = 38 kW

ESP operating parameter values below this minimum parameter value will be indicative of abnormal operation of the control device. 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 (note: these standards have recently been vacated by the courts).

This methodology is also appropriate due to the high measure of compliance demonstrated at the minimum test run values. The PM emission rate corresponding to the minimum ESP secondary power input value (41.9 kW) is 0.013 lb/MMBtu which is well below the allowable emission rate of 0.030 lb/MMBtu.

Table 8 of Subpart DDDDD provides work practice standards for demonstrating continuous compliance. Table 8 requires ESP operating parameter values to be continuously recorded. The continuously recorded data is then reduced to 3-hour block averages.

Based on collecting data continuously and calculating 3-hour block averages, an excursion will occur when the average 3-hour block 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.

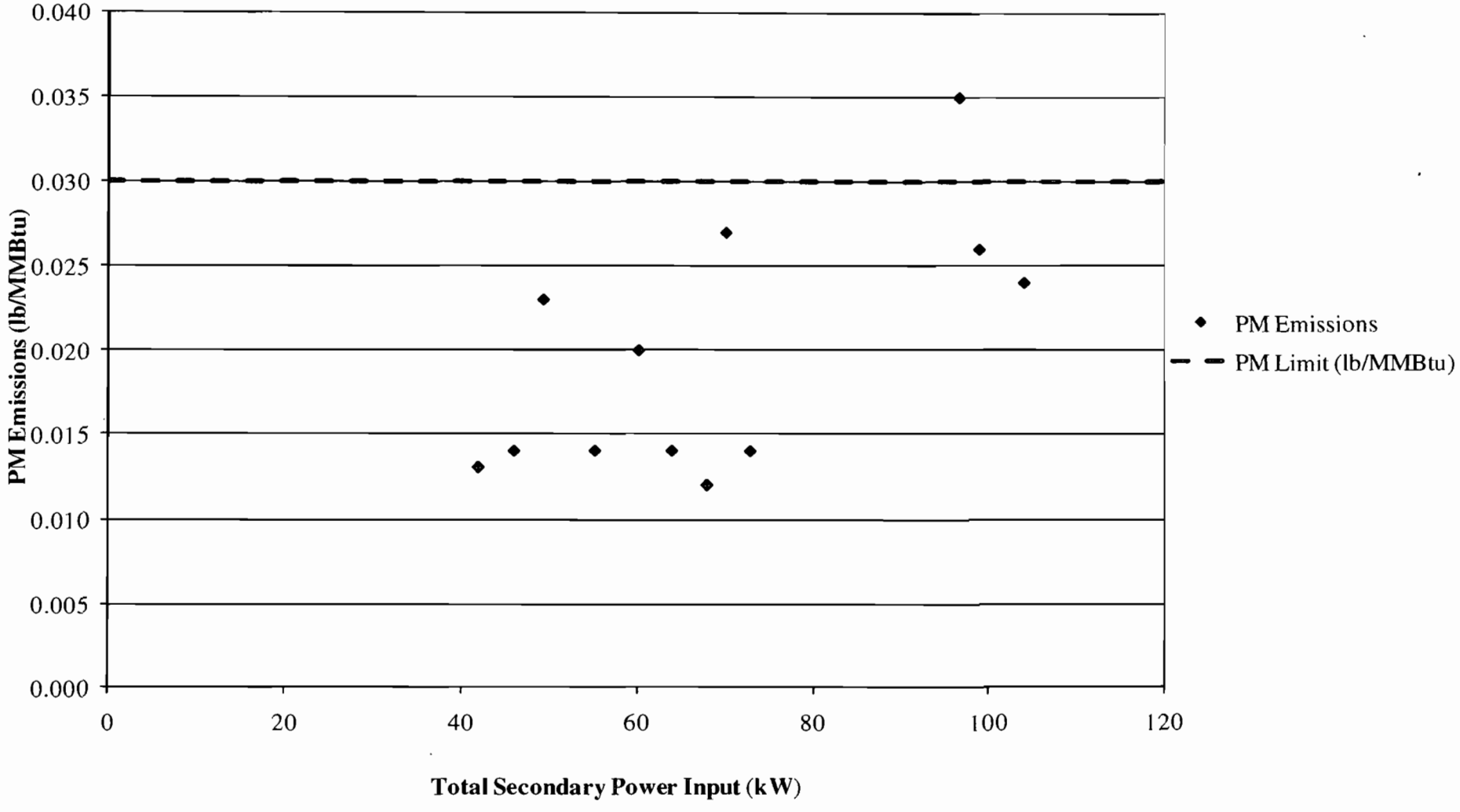


Figure 5-1
PM vs. ESP Power Input, Clewiston Boiler No. 7

Source: Golder. 2009.

6.0 PARTICULATE MATTER EMISSIONS FROM CLEWISTON BOILER NO. 8

6.1 Emissions Unit Identification

Clewiston Boiler No. 8 – EU ID 028.

6.2 Applicable Regulations, Emissions Limits, and Monitoring Requirements

Boiler No. 8 has a PM/PM_{10} emission limit of 0.025 lb/MMBtu (Permit No. 051003-037-AC/PSD-FL-333C). The equivalent PM/PM_{10} potential emissions are 26.9 lb/hr and 117.9 TPY. The current VE limit is 20 percent opacity (Permit No. 051003-037-AC/PSD-FL-333C).

PM/PM_{10} and VE compliance testing is required annually on Boiler No. 8. PM emissions are controlled by an ESP. The cyclone collectors are an integral part of Boiler No. 8, and are, therefore, not considered a control device. The ESP is considered the PM control device for Boiler No. 8.

6.3 Control Technology Description

As described above, PM/PM_{10} emissions from Boiler No. 8 are controlled by an ESP. The effectiveness of the ESP can be evaluated based on total power input to the ESP. The ESP has a total of five fields. Total power input can be determined by monitoring secondary voltage and secondary current to each field, calculating total power input to each field, and summing the individual field values to obtain total power input. A detailed description of the control equipment is included in the Title V renewal application, Attachment USS-EU4-I3, which was submitted June 2006.

6.4 Monitoring Approach

The monitoring approach is based on monitoring total ESP secondary power input, which is calculated from ESP secondary voltage and secondary current. The monitoring approach is summarized in the table below.

Boiler No. 8	Indicator No. 1
Indicator	Total Secondary Power Input
Measurement Approach	Total secondary power input to each field is calculated from the secondary current and voltage, which are monitored with an amp/volt meter.
Indicator Range	An excursion is defined as any 3-hour block average total power input below 25 kW during the crop season and 18 kW when operating during the off-crop season. Excursions trigger an inspection, corrective action, and a recordkeeping and reporting requirement.
Data Representativeness	Accuracy of the amp/volt meter is ±1 milliampere (mA) and ±1 kilovolt (kV).
Verification of Operational Status	NA
QA/QC Practices and Criteria	The amp/volt meter is maintained in accordance with the manufacturer's recommendations.
Monitoring Frequency	ESP secondary current and secondary voltage are measured continuously and used to determine the total secondary power input.
Data Collection Procedures	ESP secondary current and secondary voltage data collected continuously and total power input calculated on a 3-hour block average basis.
Averaging Period	3-hour block

6.5 Justification

Total secondary power input to the ESP is a recognized parameter for controlling PM/PM_{10} emissions. U.S. Sugar has historic test data to establish an indicator value for total secondary power input to the Boiler No. 8 ESP for operations during the crop season as well as during the off-crop season when heat input to the boiler is much lower. The test data correlating the parameter to the PM emission levels is presented in Figures 6-1 and 6-2. Supporting information is contained in Appendix A.

The proposed parameter minimum value is based on 90 percent of the minimum parameter value recorded during the test run, when compliance was demonstrated with the PM/PM_{10} limit. The calculation of the minimum parameter values is provided below:

Crop Season

ESP secondary power input:

Minimum test run value = 28 kW

Minimum parameter value = 28 × 0.9 = 25 kW

Off-Crop Season

ESP secondary power input:

Minimum test run value = 20 kW

Minimum parameter value = 20 × 0.9 = 18 kW

ESP operating parameter values below these minimum parameter values will be indicative of abnormal operation of the control device. 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 (note: these standards have recently been vacated by the courts).

This methodology is also appropriate due to the high measure of compliance demonstrated at the minimum test run values. The crop season PM emission rates corresponding to the minimum ESP secondary power input value (28.0 kW) were 0.024 lb/MMBtu and 0.019lb/MMBtu which are below the allowable emission rate of 0.025 lb/MMBtu. The off-crop season PM emission rate corresponding to the minimum ESP secondary power input value (20.0 kW) was 0.019 lb/MMBtu which is well below the allowable emission rate of 0.025 lb/MMBtu.

Table 8 of Subpart DDDDD provides work practice standards for demonstrating continuous compliance. Table 8 requires ESP operating parameter values to be continuously recorded. The continuously recorded data is then reduced to 3-hour block averages.

Based on collecting data continuously and calculating 3-hour block averages, an excursion will occur when the average 3-hour block 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.

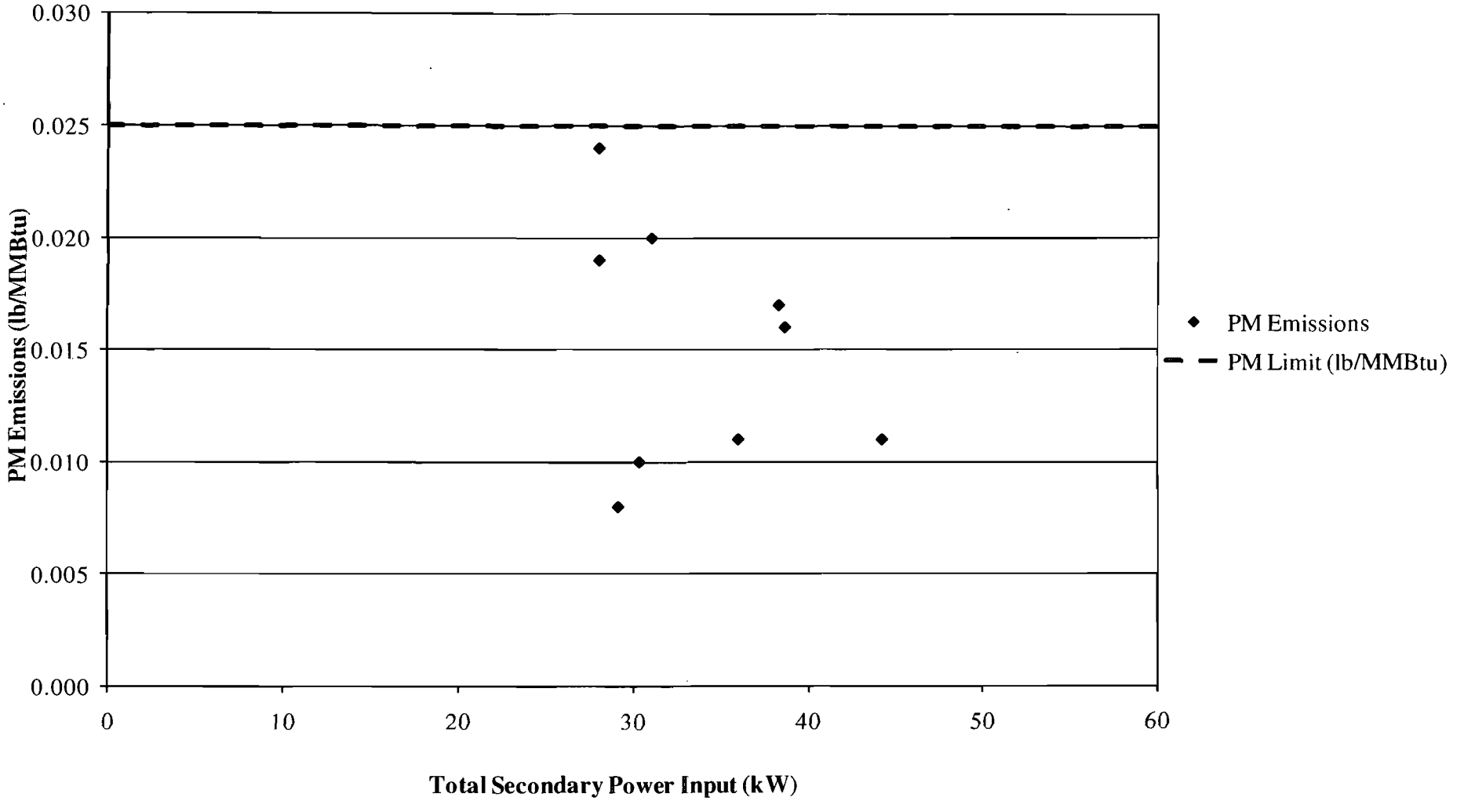


Figure 6-1
PM vs. ESP Power Input, Clewiston Boiler No. 8, On-Crop Season

Source: Golder, 2009.

Golder Associates

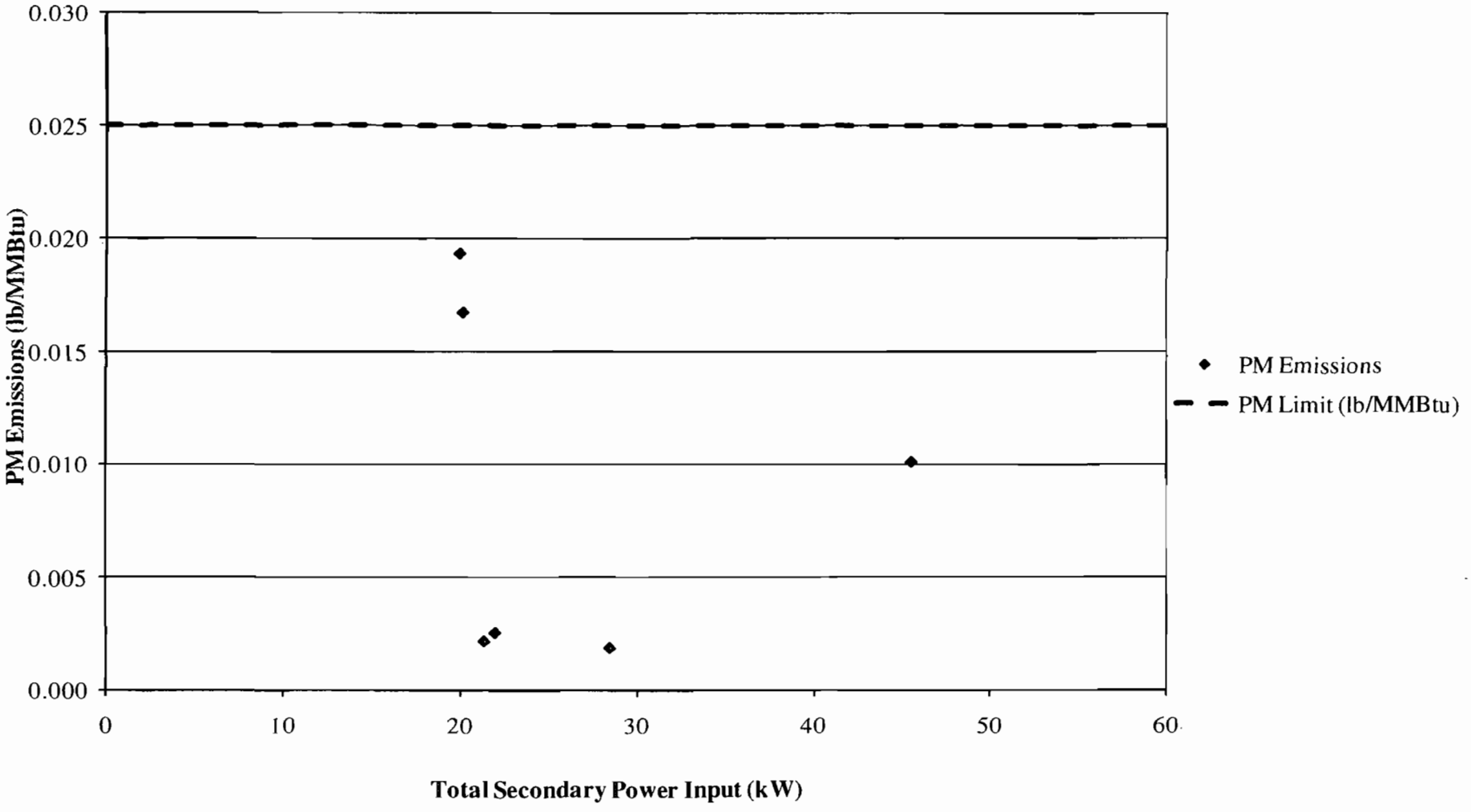


Figure 6-2
PM vs. ESP Power Input, Clewiston Boiler No. 8, Off-Crop Season

Source: Golder. 2009.

7.0 PM EMISSIONS FROM THE WHITE SUGAR DRYER NO. 2

7.1 Emissions Unit Identification

White Sugar Dryer No. 2 – EU ID No. 029.

7.2 Applicable Regulations, Emissions Limits, and Monitoring Requirements

The White Sugar Dryer No. 2, which dries the sugar following centrifugation and precedes the conditioning silos, has an allowable PM emission limit of 15.0 lb/hr and a PM_{10} emission limit of 0.005 gr/dscf and 4.2 lb/hr. The current VE limit is 10-percent opacity (Permit No. 0510003-038-AC/ PSD-FL-346A). Refined sugar production is limited to 85 tons per hour (TPH).

7.3 Control Technology Description

The White Sugar Dryer No. 2 system contains four (4) cyclone collectors followed by a wet scrubber. The cyclone collectors are considered to be IPE, since they collect sugar product from the dryer and recycle the sugar back to the process. Therefore, PM emissions are controlled by the wet scrubber. The cyclone collector is manufactured by Entoleter, LLC (Model 6600) and the wet scrubber is manufactured by Entoleter, LLC (Centrified Vortex Model 1500). A detailed description of the control equipment is included in the Title V renewal application, Attachment USS-EU6-I3, items l and m, which was submitted June 2006.

7.4 Monitoring Approach

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

White Sugar Dryer No. 2	**Indicator No. 1**	**Indicator No. 2**
Indicator	Scrubber water recirculation rate (gpm).	Pressure drop across the scrubber (in. H_2O).
Measurement Approach	Scrubber water recirculation rate is monitored with a magnetic flow meter (Rosemount 8732).	Pressure drop is monitored with a manometer.
Indicator Range	An excursion is defined as any water flow rate below 500 gpm. Excursions trigger an inspection, corrective action, and a record keeping and reporting requirement.	An excursion is defined as any pressure drop below 8 inches H_2O. Excursions trigger an inspection, corrective action, and recordkeeping and reporting requirement.
Data Representativeness	The monitoring system will consist of a magnetic flow meter located on the scrubber recirculation line. The minimum accuracy of the device is ±5 percent of water flow.	The monitoring system will consist of a manometer which measures the pressure drop across the scrubber. The minimum accuracy of the device will be ±0.5 in. H_2O gauge pressure.
Verification of Operational Status	NA	NA
QA/QC Practices and Criteria	The flow meter will be maintained in accordance with the manufacturer's recommendations.	The manometer will be maintained in accordance with the manufacturer's recommendations.
Monitoring Frequency	Water recirculation rate will be monitored continuously.	Pressure drop will be monitored continuously
Data Collection Procedures	Data continuously recorded.	Data continuously recorded.
Averaging Period	Continuous data reduced to 3 hour block average.	Continuous data reduced to 3 hour block average.

7.5 Justification

Both pressure drop across the scrubber and water recirculation 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 recirculation rate is a measure of sufficient scrubbing liquid being supplied to the scrubber.

U.S. Sugar has sufficient test data to establish indicator values for pressure drop and water recirculation rate to the wet scrubber. The test data correlating the parameters to the PM/PM_{10} emission levels is presented in Figures 7-1 through 7-4. Supporting information is contained in Appendix A.

The proposed parameter minimum values are based on the minimum parameter values recorded during the test runs, using the historic test data, when compliance was demonstrated with the PM and PM_{10} limit as well as the current permit limits (Permit No. 0510203-038-AC/PSD-FL-346A). The minimum parameter values are provided below:

Pressure Drop:	Minimum test run value = 8 inches H_2O
Water Flow Rate:	Minimum test run value = 500 gpm

Wet scrubber operating parameter values below these minimum parameter values are indicative of abnormal operation of the wet scrubber. An excursion will occur whenever any 3-hour block average 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.

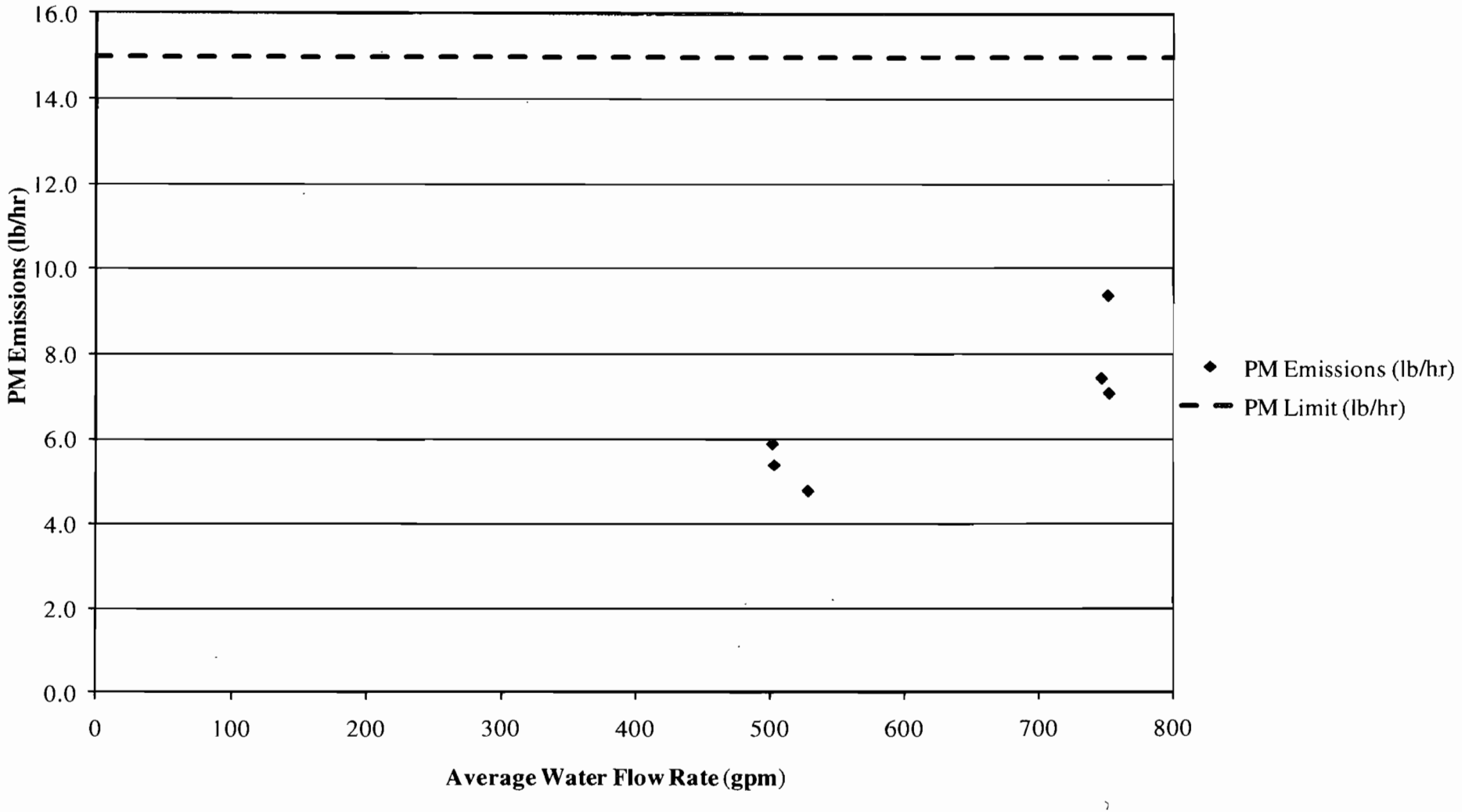


Figure 7-1
PM vs. Water Flow, White Sugar Dryer No. 2

Source: Golder, 2009.

Golder Associates

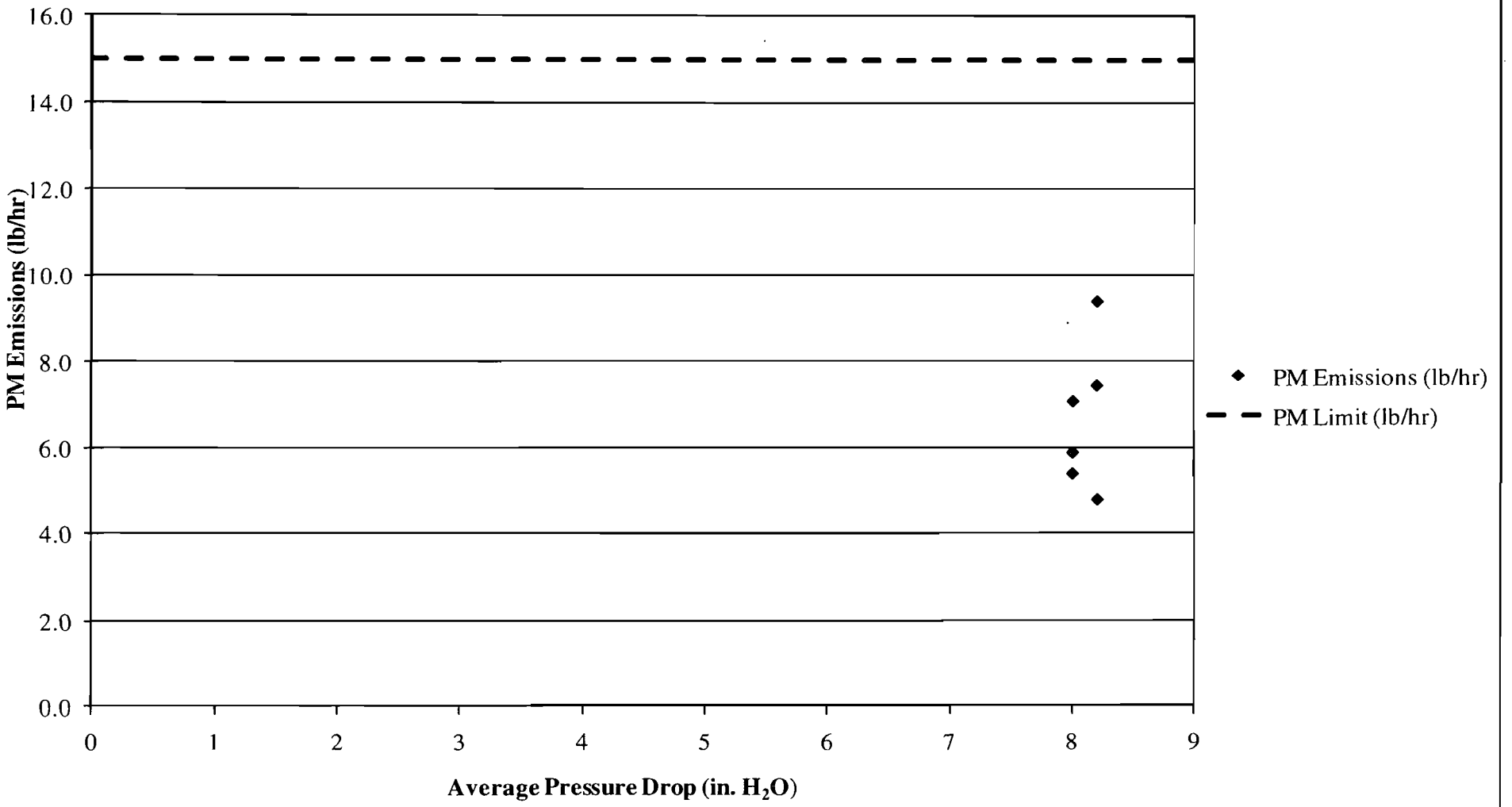


Figure 7-2
PM vs. Pressure Drop, White Sugar Dryer No. 2

Source: Golder, 2009.

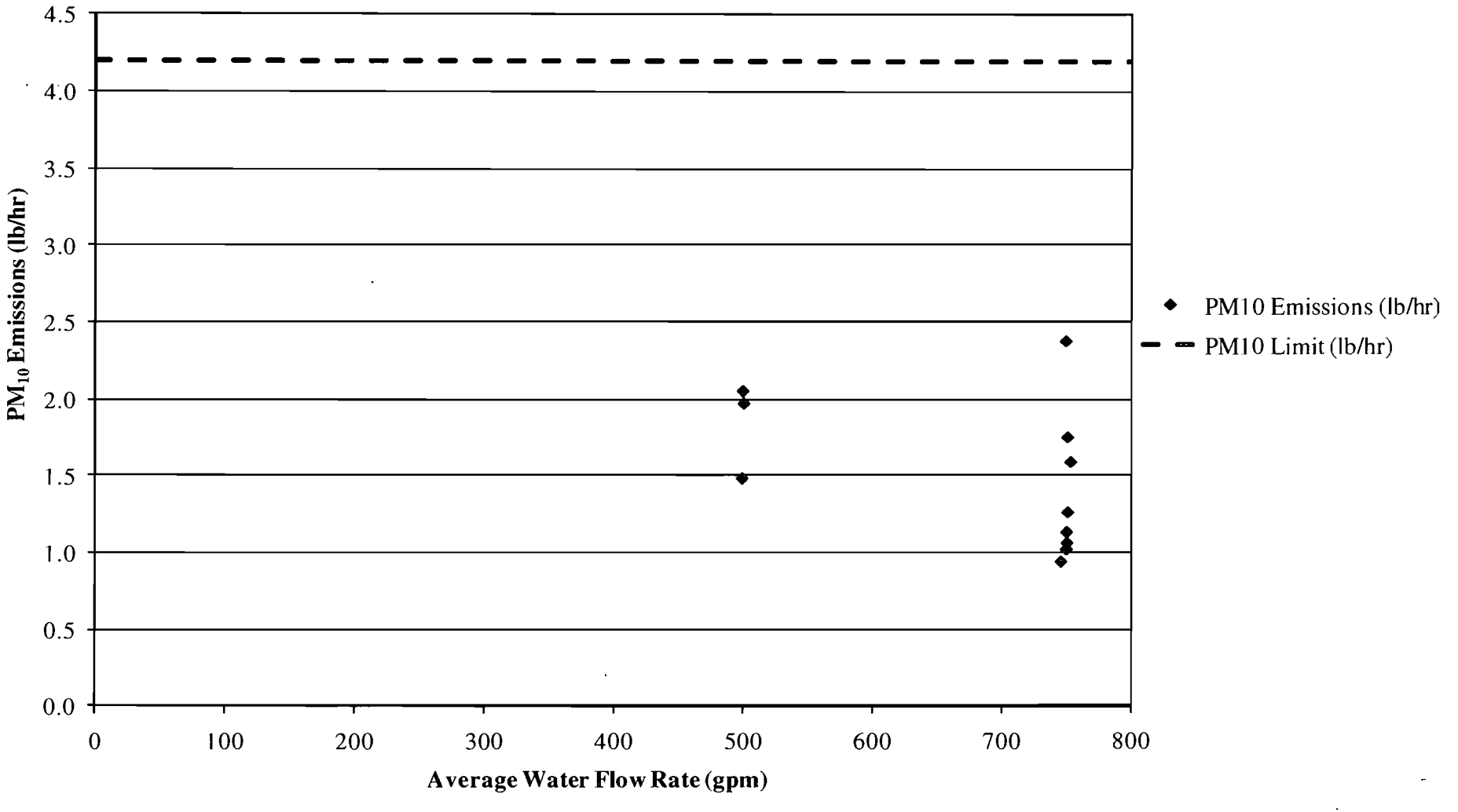


Figure 7-3
PM_{10} vs. Water Flow, White Sugar Dryer No. 2

Source: Golder, 2009.

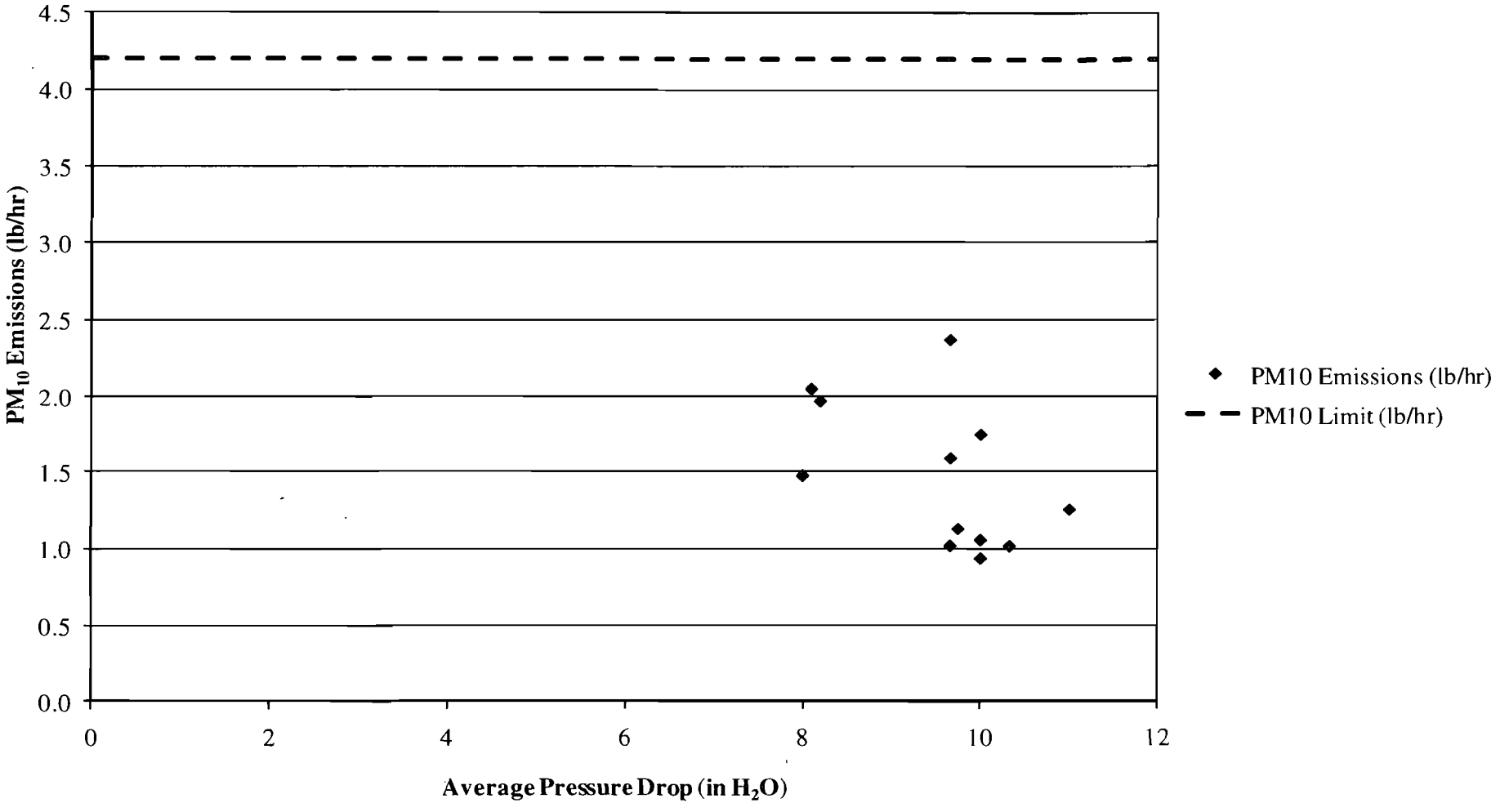


Figure 7-4
PM_{10} vs. Pressure Drop, White Sugar Dryer No. 2

Source: Golder, 2009.

Golder Associates

8.0 PM EMISSIONS FROM THE CLEWISTON SUGAR PROCESSING OPERATIONS

8.1 Emissions Unit Identification

Vacuum Systems – EU ID No. 018.

8.2 Applicable Regulations, Emissions Limits, and Monitoring Requirements

The Vacuum Systems, which collect dust from the screening/distribution bins and packaging, have a PM emission limit of 0.06 lb/hr for each baghouse (0.18 lb/hr total). The equivalent potential annual emissions are 0.28 TPY for each baghouse (0.84 TPY total) (Permit No. 0510003-010-AC/PSD-FL-272A).

FDEP has waived the PM compliance test requirements and has specified the alternative standard of 5-percent opacity (6-minute average) as the method for demonstrating compliance for this source.

8.3 Control Technology Description

PM emissions from the Vacuum Systems are controlled by three Hoffman (HPC-44120) baghouses. A detailed description of the control equipment is included in the Title V renewal application (Attachment USS-EU6-I3, items e, f and g).

8.4 Monitoring Approach

The monitoring approach is based on monitoring VE from the Clewiston Mill Sugar Processing Operation baghouses. The monitoring approach is summarized in the table below:

Sugar Processing Operations	**Indicator No. 1**
Indicator	Daily 1 minute VE observation for each baghouse.
Measurement Approach	VE are observed by an observer who is knowledgeable in VE, but who does not have to be a certified VE observer.
Indicator Range	An excursion is defined as any VE. If VE are observed, further investigation of the effectiveness of the baghouses will be performed.
Data Representativeness	VE observation according to EPA Method 22.
Verification of Operational Status	Operational status of each source will be verified prior to observing the VE.
QA/QC Practices and Criteria	VE will be determined based on 40 CFR 60, Appendix A – Method 22.
Monitoring Frequency	VE will be observed once a day for one (1) minute for each source.
Data Collection Procedures	Daily VE observations will be recorded in a log.
Averaging Period	NA

8.5 Justification

Uncontrolled PM emissions from the Vacuum Systems are greater than 100 TPY, but controlled PM emissions are less than 100 TPY. According to CAM regulations [40 CFR 64.3(b)(4)(iii)], the minimum frequency of data collection for emission-specific units emitting less than 100 TPY of controlled emissions is once per day. It is therefore proposed that a daily VE observation be conducted on each baghouse for a 1-minute period, based on EPA Method 22 (40 CFR 60, Appendix A) for EU No. 018.

EPA Method 22 does not require the opacity of emissions be determined, and does not require the use of a certified VE reader. However, the observer, at a minimum, must be knowledgeable regarding influences on the visibility of emissions. U.S. Sugar will instruct its VE observers in the

requirements and procedures for Method 22. If any VEs are observed, then further investigation will be performed to ensure the baghouses are operating correctly.

9.0 PARTICULATE MATTER EMISSIONS FROM CLEWISTON GRANULAR CARBON REGENERATION FURNACE

9.1 Emissions Unit Identification

Clewiston Granular Carbon Regeneration Furnace – EU 017.

9.2 Applicable Regulations, Emissions Limits, and Monitoring Requirements

The Granular Carbon Regeneration Furnace (GCRF) has a PM emissions limit of 0.7 lb/hr (Permit No. 0510003-017-AV) [Rule 62-212.400, F.A.C., and Permit No. 0510003-010-AC]. The equivalent potential emissions are 3.07 TPY. The current VE limit is 10 percent opacity [Permit Nos. 0510003-017-AV and 0510003-010-AC, and Rule 62-296.410(1)(b)1, F.A.C.].

VE compliance testing is required annually on the GCRF. PM tests were required upon initial startup (in 2000) and again upon Title V renewal (in 2005). In addition, the pressure drop across the venturi scrubber and the wet tray scrubber must be monitored and recorded at least once per shift during each day of operation. The afterburner temperature must also be monitored and recorded at least once per shift during each day of operation (Permit No. 0510003-017-AV).

9.3 Control Technology Description

PM emissions from the GCRF are controlled by a high-energy wet venturi scrubber, followed by a wet tray-type wet scrubber. The operating pressure drop across the venturi scrubber is 12 to 30 inches of water (H_2O). The operating pressure drop across the wet tray scrubber is 3 to 8 inches H_2O. The operating afterburner temperature is 1,200 to 1,400 degrees Fahrenheit (°F), excluding startup, shutdown, and malfunction. The effectiveness of the wet scrubbers is evaluated with a periodic stack test and annual VE measurements. A detailed description of the control equipment was included in the Title V renewal application (Attachment USS-EU6-I3).

9.4 Monitoring Approach

The monitoring approach is based on monitoring the two scrubbers' pressure drop. The monitoring approach is summarized in the table below:

Granular Carbon Regeneration Furnace	Indicator No. 1	Indicator No. 2
Indicator	Pressure drop across the venturi scrubber.	Pressure drop across the wet tray scrubber.
Measurement Approach	Pressure drop is monitored with a manometer or equivalent.	Pressure drop is monitored with a manometer or equivalent.
Indicator Range	An excursion is defined as any pressure drop below 20 inches H_2O. Excursions trigger an inspection, corrective action, and a recordkeeping and reporting requirement.	An excursion is defined as any pressure drop below 4.0 inches H_2O. 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 H_2O gauge pressure.	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 H_2O gauge pressure.
Verification of Operational Status	NA	NA
QA/QC Practices and Criteria	The nanometer is maintained in accordance with the manufacturer's recommendations.	The nanometer is maintained in accordance with the manufacturer's recommendations.
Monitoring Frequency	Pressure drop is monitored continuously.	Pressure drop 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

9.5 Justification

Pressure drop across the wet scrubber is a recognized parameter 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 afterburner temperature is related to VOC destruction and not PM emissions. Therefore, this parameter is not proposed as a CAM indicator.

U.S. Sugar has historic test and annual VE data to establish indicator values for pressure drop to the two wet scrubbers. The test data correlating the parameters to the PM emission levels and VE evaluations are presented in Appendix A, Table A-8. Pressure drop data and the corresponding VE data sheets are included in Attachment C.

The proposed parameter minimum values are based on the minimum parameter values recorded during the test runs, using the historic test data, when compliance was demonstrated with the PM limit or VE limit. Since VE evaluations are an indicator of PM emissions, the proposed parameter minimum value for the wet tray scrubber is based on the minimum parameter value recorded during the annual VE evaluations. The proposed parameter minimum value for the venturi scrubber corresponds to the minimum parameter value recorded during the annual VE evaluations and during the PM stack testing. The minimum parameter values are provided below:

Venturi Scrubber Pressure Drop	Minimum test run value = 20.0 inches H_2O
Wet Tray Scrubber Pressure Drop	Minimum test run value = 4.0 inches H_2O

Wet scrubber operating parameter values below these minimum parameter values are indicative of abnormal operation of the wet scrubbers.

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 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.

U.S. Sugar has been recording scrubber parameters once every 8-hour shift, according to the current Title V permit conditions. Although U.S. Sugar has continuous pressure drop monitors in place, the mechanisms are not in place to continuously record the data and create hourly averages. It is, therefore, requested that the current recording frequency of once per 8-hour shift be retained.

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.

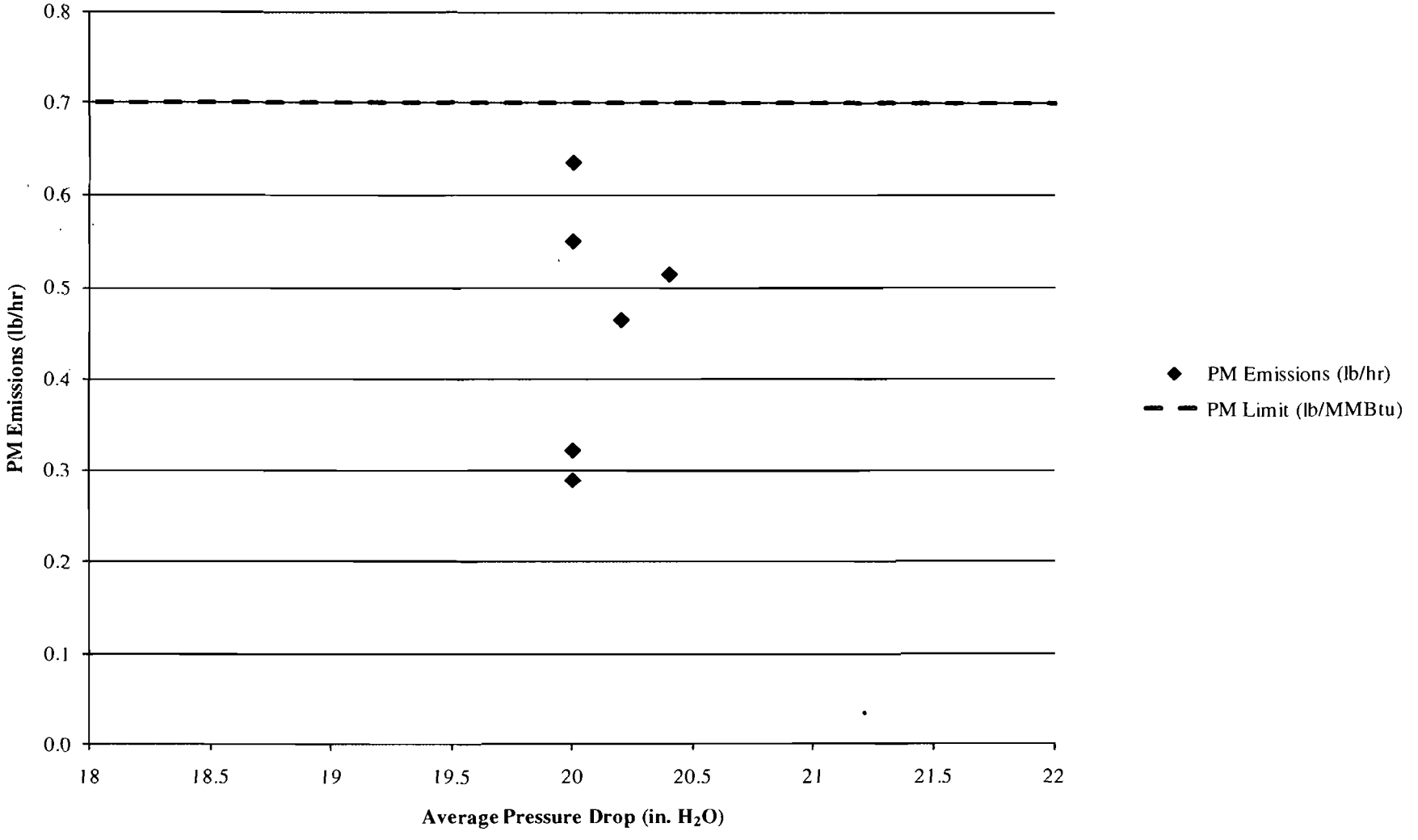


Figure 9-1
PM vs. Venturi Scrubber Pressure Drop, Granular Carbon Regenerative Furnace

Source: Golder, 2009.

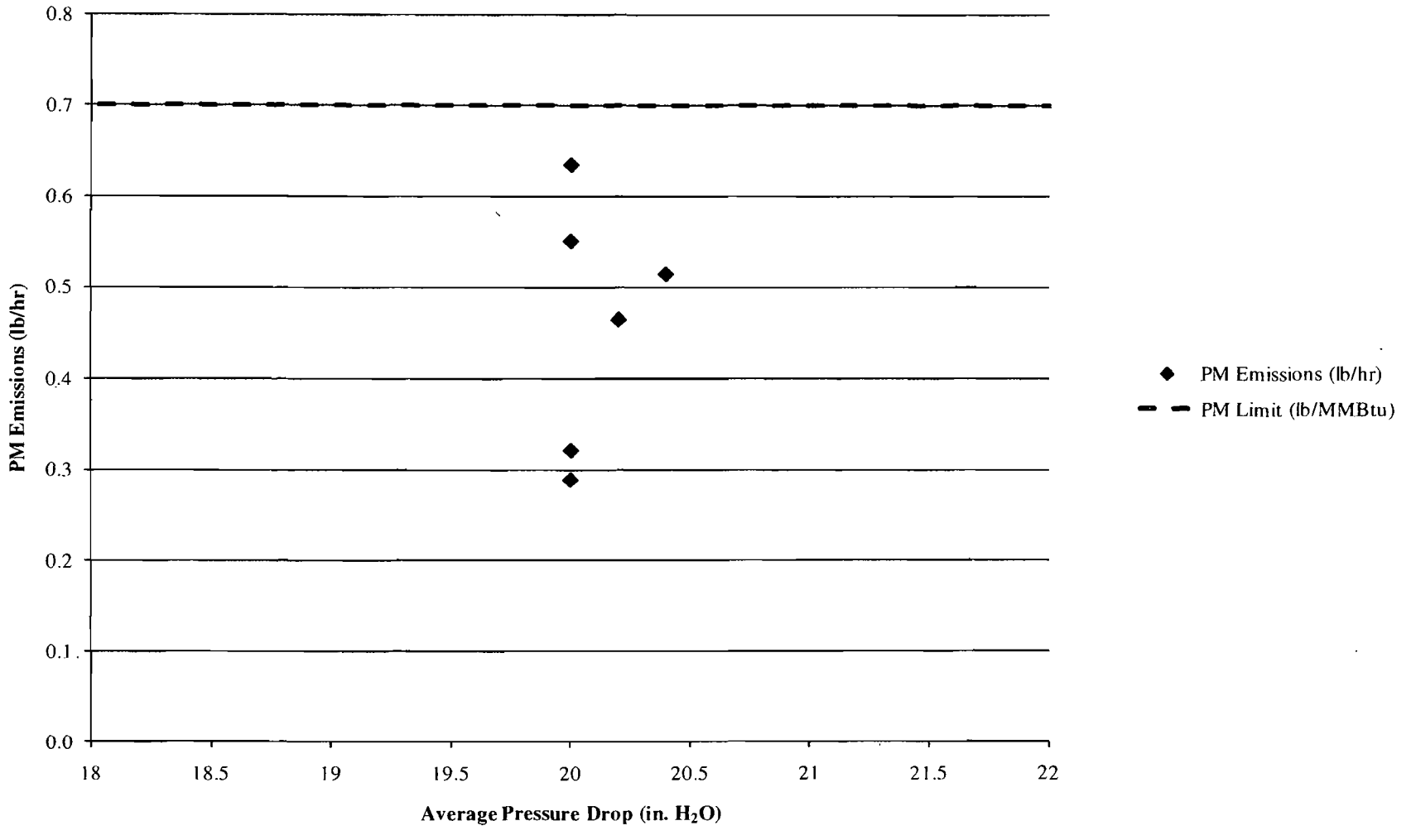


Figure 9-2
PM vs. Wet Tray Scrubber Pressure Drop, Granular Carbon Regenerative Furnace

Source: Golder, 2009.

Golder Associates

APPENDIX A

TABLE A-1

BOILER NO. 1 PM EMISSION TESTS, CLEWISTON

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) lb/hr	Allowable PM Emissions (EPA Method 5) lb/MMBtu	Actual PM Emissions (EPA Method 5) lb/hr	Actual PM Emissions (EPA Method 5) lb/MMBtu	Avg. Liquid Pressure (psig)	Avg. Water Flow (gpm)	Avg. Pressure Drop (in. H_2O)
Boiler 1	1	Vibrating Grate	01/16/96	113,127	183,707	194,211	410.0	56.94	102.49	0.250	99.14	0.242			9.5
Boiler 1	2	Vibrating Grate	01/16/96	117,058	187,835	202,025	426.0	59.17	106.50	0.250	64.43	0.151			9.3
Boiler 1	3	Vibrating Grate	01/16/96	118,730	191,603	219,200	461.0	64.02	115.24	0.250	67.68	0.147			
Boiler 1	1	Vibrating Grate	01/07/97	125,679	200,419	203,284	426.5	59.24	106.63	0.250	57.91	0.136			9.5
Boiler 1	2	Vibrating Grate	01/07/97	123,272	198,803	210,000	440.8	61.22	110.21	0.250	62.38	0.142			9.5
Boiler 1	3	Vibrating Grate	01/07/97	122,608	200,926	211,765	443.9	61.65	110.97	0.250	56.04	0.126			9.5
Boiler 1	1	Vibrating Grate	01/08/98	148,591	223,239	193,433	404.9	56.24	101.24	0.250	39.25	0.097			9.8
Boiler 1	2	Vibrating Grate	01/08/98	139,359	211,566	209,630	440.0	61.11	103.59	0.240	42.80	0.097			10.8
Boiler 1	3	Vibrating Grate	01/08/98	141,780	215,994	204,507	430.3	59.76	103.60	0.240	54.89	0.128			10.0
Boiler 1	1	Vibrating Grate	12/08/00	116,457	185,495	193,151	406.5	56.46	99.11	0.244	78.60	0.193	67.0		9.0
Boiler 1	2	Vibrating Grate	12/08/00	117,435	189,657	198,261	419.3	58.23	101.82	0.243	69.20	0.165	62.0		7.0
Boiler 1	3	Vibrating Grate	12/08/00	114,205	187,798	195,833	414.0	57.50	100.68	0.243	80.96	0.196	65.0		7.0
Boiler 1	1	Vibrating Grate	12/05/01	122,015	182,934	198,000	403.3	56.01	96.73	0.240	58.44	0.145			8.8
Boiler 1	2	Vibrating Grate	12/05/01	118,508	179,141	201,127	406.5	56.46	96.79	0.238	47.69	0.117			8.0
Boiler 1	3	Vibrating Grate	12/05/01	118,063	177,096	205,588	416.0	57.78	99.18	0.238	51.10	0.123			7.5
Boiler 1	1	Vibrating Grate	11/20/02	139,322	201,193	192,329	386.2	53.64	92.96	0.241	63.82	0.165	91.6		10.5
Boiler 1	2	Vibrating Grate	11/20/02	132,473	194,240	197,391	398.7	55.37	95.88	0.240	81.67	0.205	94.0		10.2
Boiler 1	3	Vibrating Grate	11/20/02	139,170	200,673	193,333	412.8	57.33	98.68	0.239	70.70	0.171	94.8		10.3
Boiler 1	1	Vibrating Grate	11/14/03	147,286	202,987	196,709	409.0	56.81	102.26	0.250	49.17	0.120	75.0	56 *	9.0
Boiler 1	2	Vibrating Grate	11/14/03	152,860	210,916	197,813	414.8	57.61	103.69	0.250	84.77	0.204	75.0	57 *	9.0
Boiler 1	3	Vibrating Grate	11/14/03	155,202	215,710	204,000	412.2	57.24	103.04	0.250	83.72	0.203	75.0	56 *	9.0
Boiler 1	1	Vibrating Grate	01/13/05	161,467	245,339	197,391	429.2	59.60	107.29	0.250	77.96	0.182	120.0	370	11.6
Boiler 1	2	Vibrating Grate	01/13/05	164,310	250,264	186,835	402.0	55.83	100.50	0.250	76.50	0.190	120.0	364	11.5
Boiler 1	3	Vibrating Grate	01/13/05	162,661	244,548	195,652	425.0	59.02	106.24	0.250	81.49	0.192	125.0	364	11.6
Boiler 1	1	Vibrating Grate	12/16/05	135,375	215,916	174,000	362.1	50.28	90.51	0.250	120.04	0.332	140.0	372	12.0
Boiler 1	2	Vibrating Grate	12/16/05	136,281	216,285	179,143	376.3	52.26	94.07	0.250	61.55	0.164	140.0	387	12.0
Boiler 1	3	Vibrating Grate	12/16/05	137,233	212,492	177,568	370.9	51.51	92.71	0.250	48.20	0.130	140.0	367	12.0
Boiler 1	1	Vibrating Grate	11/28/06	112,707	175,055	165,882	346.5	48.13	80.79	0.233	38.73	0.112	89.2	212	8.0
Boiler 1	2	Vibrating Grate	11/28/06	114,320	177,369	171,045	355.4	49.36	85.46	0.240	41.90	0.118	90.8	212	8.1
Boiler 1	3	Vibrating Grate	11/28/06	113,491	180,542	165,217	346.2	48.08	84.97	0.245	46.34	0.134	90.6	212	7.9
Boiler 1	1	Vibrating Grate	11/09/07	121,286	185,362	187,603	389.7	54.13	90.00	0.231	96.59	0.248	ND	213	8.5
Boiler 1	2	Vibrating Grate	11/09/07	122,440	186,131	182,076	381.3	52.96	87.64	0.230	55.22	0.145	ND	225	8.6
Boiler 1	3	Vibrating Grate	11/09/07	109,477	169,290	183,288	388.1	53.91	89.06	0.229	53.11	0.137	ND	218	8.6
Boiler 1	1	Vibrating Grate	11/19/08	102,643	159,339	173,333	353.2	49.06	80.10	0.227	43.30	0.123	ND	263	8.5
Boiler 1	2	Vibrating Grate	11/19/08	95,508	148,490	178,065	360.2	50.02	80.18	0.223	48.80	0.136	ND	266	8.4
Boiler 1	3	Vibrating Grate	11/19/08	96,863	151,753	178,095	363.4	50.48	80.70	0.222	49.74	0.137	ND	266	8.7
													Minimum	**212**	**7.0**
													90-percent of Minimum	**191**	**6.3**

* Not considered to be representative of normal operation.

TABLE A-2
BOILER NO. 2 PM EMISSION TESTS, CLEWISTON

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 Pressure (psig)	Avg. Water Flow (gpm)	Avg. Pressure Drop (in. H_2O)
									lb/hr	lb/MMBtu	lb/hr	lb/MMBtu			
Boiler 2	1	Vibrating Grate	01/22/96	105,831	163,718	177,188	371.7	51.63	92.93	0.250	73.62	0.198			6.0
Boiler 2	2	Vibrating Grate	01/22/96	94,417	150,521	177,188	371.7	51.63	92.93	0.250	66.10	0.178			6.0
Boiler 2	3	Vibrating Grate	01/22/96	93,727	154,170	181,184	379.7	52.74	94.93	0.250	52.37	0.138			6.0
Boiler 2	1	Vibrating Grate	01/12/98	107,485	165,905	172,286	363.3	50.45	90.82	0.250	45.54	0.125			3.0 *
Boiler 2	2	Vibrating Grate	01/12/98	106,311	165,445	173,824	366.9	50.96	91.72	0.250	48.70	0.133			3.0 *
Boiler 2	3	Vibrating Grate	01/12/98	104,790	166,166	175,522	370.3	51.43	92.57	0.250	69.51	0.188			
Boiler 2	1	Vibrating Grate	01/13/98	126,475	198,634	201,739	425.1	59.03	101.08	0.240	71.72	0.169			8.5
Boiler 2	2	Vibrating Grate	01/13/98	122,422	195,643	202,059	426.2	59.19	106.55	0.250	71.59	0.168			8.5
Boiler 2	3	Vibrating Grate	01/13/98	125,162	197,964	202,388	427.0	59.31	101.42	0.240	98.31	0.230			8.5
Boiler 2	1	Vibrating Grate	12/12/00	113,638	186,994	169,459	364.4	50.61	87.57	0.240	47.53	0.130	67.0		8.5
Boiler 2	2	Vibrating Grate	12/12/00	108,878	181,681	174,167	373.3	51.84	88.14	0.236	60.87	0.163	61.0		8.2
Boiler 2	3	Vibrating Grate	12/12/00	107,998	181,348	163,714	350.3	48.65	81.96	0.234	77.50	0.221	68.0		8.7
Boiler 2	1	Vibrating Grate	12/12/01	141,555	214,981	212,055	435.1	60.43	103.50	0.238	112.59	0.259			9.3
Boiler 2	2	Vibrating Grate	12/12/01	125,108	187,343	182,535	374.2	51.97	93.55	0.250	73.38	0.196			
Boiler 2	3	Vibrating Grate	12/12/01	127,585	200,931	195,211	403.0	55.97	100.75	0.250	108.53	0.269			
Boiler 2	1	Vibrating Grate	12/17/02	135,626	203,449	173,239	354.6	49.25	88.64	0.250	64.49	0.182	91.8		7.1
Boiler 2	2	Vibrating Grate	12/17/02	133,618	201,955	174,167	356.6	49.53	89.16	0.250	65.36	0.183	90.0		7.1
Boiler 2	3	Vibrating Grate	12/17/02	134,529	201,199	189,851	389.0	54.03	97.26	0.250	67.82	0.174	80.6		6.3
Boiler 2	1	Vibrating Grate	11/18/03	125,842	196,117	183,478	387.5	53.82	96.88	0.250	88.89	0.229	51.2	75 *	10.0
Boiler 2	2	Vibrating Grate	11/18/03	132,395	205,353	190,746	405.7	56.35	101.42	0.250	76.69	0.189	50.4	70 *	9.0
Boiler 2	3	Vibrating Grate	11/18/03	123,840	199,614	192,537	407.4	56.58	101.84	0.250	72.78	0.179	45.0	65 *	9.0
Boiler 2	1	Vibrating Grate	11/12/04	153,146	235,990	189,565	399.1	55.43	95.26	0.239	88.69	0.222	123.6	113 *	9.5
Boiler 2	2	Vibrating Grate	11/12/04	150,689	235,118	198,000	417.9	58.05	102.27	0.245	72.18	0.173	130.0	123 *	9.1
Boiler 2	3	Vibrating Grate	11/17/04	174,817	260,767	197,838	424.1	58.91	101.25	0.239	26.34	0.062			
Boiler 2	1	Vibrating Grate	12/14/05	116,370	174,405	183,478	383.2	53.22	85.21	0.222	77.93	0.203	115.0	354	12.0
Boiler 2	2	Vibrating Grate	12/14/05	140,607	219,765	170,000	354.5	49.24	88.62	0.250	63.04	0.178	115.0	354	12.0
Boiler 2	3	Vibrating Grate	12/14/05	137,722	214,970	177,500	371.4	51.58	92.84	0.241	64.10	0.173	115.0	353	12.0
Boiler 2	1	Vibrating Grate	11/21/06	125,586	184,473	161,053	336.7	46.76	84.17	0.250	52.61	0.156		230	7.5
Boiler 2	2	Vibrating Grate	11/21/06	119,482	177,278	170,137	358.9	49.85	89.73	0.250	66.78	0.186		230	7.5
Boiler 2	3	Vibrating Grate	11/21/06	119,232	178,147	173,043	367.7	51.07	91.93	0.250	66.81	0.182		230	7.5
Boiler 2	1	Vibrating Grate	11/07/07	107,071	168,489	150,523	315.6	43.84	78.91	0.250	65.59	0.208	ND	223	8.5
Boiler 2	2	Vibrating Grate	11/07/07	88,288	143,627	149,787	312.5	43.41	78.13	0.250	68.06	0.218	ND	222	8.4
Boiler 2	3	Vibrating Grate	11/07/07	112,218	169,029	143,076	295.6	41.05	73.89	0.250	63.13	0.214	ND	230	8.6
Boiler 2	4	Vibrating Grate	11/07/07	114,976	174,983	171,625	355.9	49.43	79.86	0.224	50.44	0.142	ND	227	8.5
Boiler 2	1	Vibrating Grate	11/21/08	103,415	157,785	168,387	350.7	48.71	78.38	0.223	40.44	0.115	ND	284	8.6
Boiler 2	2	Vibrating Grate	11/21/08	102,182	156,468	149,538	310.8	43.17	68.48	0.220	52.74	0.170	ND	298	8.6
Boiler 2	3	Vibrating Grate	11/21/08	104,360	159,672	178,065	368.7	51.20	82.80	0.225	34.47	0.093	ND	296	8.5
														Minimum	**222**	**6.0**
														90-percent of Minimum	**200**	**5.4**

* Not considered to be representative of normal operation.

TABLE A-3
BOILER NO. 4 PM EMISSION TESTS, CLEWISTON

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) lb/hr	Allowable PM Emissions (EPA Method 5) lb/MMBtu	Actual PM Emissions (EPA Method 5) lb/hr	Actual PM Emissions (EPA Method 5) lb/MMBtu	Avg. Liquid Pressure (psig)	Avg. Water Flow (gpm)	Avg. Pressure Drop (in. H_2O)
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
Boiler 4	1	Traveling Grate	11/14/07	148,008	226,867	271,454	579.6	80.50	83.85	0.145	82.69	0.143	74.2	401	8.6
Boiler 4	2	Traveling Grate	11/14/07	158,968	237,835	271,923	579.2	80.45	83.82	0.145	65.13	0.112	69.3	382	8.6
Boiler 4	3	Traveling Grate	11/14/07	156,081	234,579	265,600	568.0	78.88	82.07	0.144	39.38	0.069	43.5	376	8.7
Boiler 4	1	Traveling Grate	12/08/08	158,956	242,831	261,961	544.6	75.63	78.54	0.144	68.77	0.126	44.7	419	8.9
Boiler 4	2	Traveling Grate	12/08/08	155,783	241,570	265,735	554.0	76.95	79.98	0.144	33.99	0.061	45.9	426	8.9
Boiler 4	3	Traveling Grate	12/08/08	159,113	242,063	264,429	550.8	76.50	78.23	0.142	69.50	0.126	45.1	423	9.0
Boiler 4	4	Traveling Grate	12/08/08	159,904	238,705	273,409	567.6	78.83	79.44	0.140	52.50	0.092	44.9	421	9.2
													Minimum	**245**	**6.4**
													90-percent of Minimum	**221**	**5.8**

TABLE A-4
BOILER NO. 7 PM EMISSION TESTS, CLEWISTON

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)		ESP Secondary Power Input (kW)
									lb/hr	lb/MMBtu	lb/hr	lb/MMBtu	
Boiler 7	1	Spreader-Stoker Vibrating Grate	02/04/05	165,392	296,331	232,174	494.28	68.65	14.83	0.030	11.57	0.023	49.3
Boiler 7	2	Spreader-Stoker Vibrating Grate	02/04/05	161,579	296,174	228,000	487.84	67.76	14.64	0.030	6.84	0.014	55.1
Boiler 7	3	Spreader-Stoker Vibrating Grate	02/04/05	159,426	285,860	223,099	475.52	66.04	14.27	0.030	13.03	0.027	70.0
Boiler 7	1	Spreader-Stoker Vibrating Grate	01/05/06	184,525	318,378	318,300	659.85	91.65	19.80	0.030	13.47	0.020	60.1
Boiler 7	2	Spreader-Stoker Vibrating Grate	01/05/06	178,105	315,125	348,674	721.46	100.20	21.64	0.030	9.96	0.014	63.9
Boiler 7	3	Spreader-Stoker Vibrating Grate	01/05/06	173,265	306,013	349,209	720.61	100.08	21.62	0.030	8.77	0.012	67.9
Boiler 7	1	Spreader-Stoker Vibrating Grate	01/25/07	185,288	318,417	307,597	637.19	88.50	19.12	0.030	22.05	0.035	96.5
Boiler 7	2	Spreader-Stoker Vibrating Grate	01/25/07	174,015	301,630	319,097	658.39	91.44	19.75	0.030	16.91	0.026	98.8
Boiler 7	3	Spreader-Stoker Vibrating Grate	01/25/07	175,714	301,314	290,569	599.18	83.22	17.98	0.030	14.46	0.024	103.9
Boiler 7	1	Spreader-Stoker Vibrating Grate	01/24/08	157,003	289,313	337,192	712.98	99.03	21.39	0.030	3.62	0.005	ND
Boiler 7	2	Spreader-Stoker Vibrating Grate	01/24/08	154,128	285,290	361,014	758.13	105.30	22.74	0.030	3.84	0.005	ND
Boiler 7	3	Spreader-Stoker Vibrating Grate	01/24/08	158,129	287,635	344,968	724.38	100.61	21.73	0.030	4.16	0.006	ND
Boiler 7	1	Spreader-Stoker Vibrating Grate	12/04/08	178,899	321,444	347,877	686.71	95.38	20.60	0.030	9.70	0.014	72.8
Boiler 7	2	Spreader-Stoker Vibrating Grate	12/04/08	184,297	338,873	352,174	689.88	95.82	20.70	0.030	9.97	0.014	46.0
Boiler 7	3	Spreader-Stoker Vibrating Grate	12/04/08	181,705	333,116	370,870	731.76	101.63	21.95	0.030	9.74	0.013	41.9
											Minimum		**41.9**
											90-percent of Minimum		**37.7**

TABLE A-5

BOILER NO. 8 PM EMISSION TESTS, CLEWISTON

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) lb/hr	Allowable PM Emissions (EPA Method 5) lb/MMBtu	Actual PM Emissions (EPA Method 5) lb/hr	Actual PM Emissions (EPA Method 5) lb/MMBtu	ESP Secondary Power Input (kW)
On Crop Season													
Boiler 8	1	Traveling Grate	01/10/06	208,889	386,258	523,478	970.20	134.75	24.26	0.025	18.67	0.019	28.0
Boiler 8	2	Traveling Grate	01/10/06	222,090	393,669	521,408	967.60	134.39	24.19	0.025	19.42	0.020	31.0
Boiler 8	3	Traveling Grate	01/10/06	211,224	393,180	510,423	949.60	131.89	23.74	0.025	22.82	0.024	28.0
Boiler 8	1	Traveling Grate	01/05/07	237,896	406,875	499,726	919.5	127.71	22.99	0.025	9.65	0.010	30.4
Boiler 8	2	Traveling Grate	01/05/07	236,384	429,330	520,274	960.3	133.38	24.01	0.025	7.86	0.008	29.1
Boiler 8	3	Traveling Grate	01/05/07	229,933	443,786	510,811	948.0	131.67	23.70	0.025	10.1	0.011	36.0
Boiler 8	5	Traveling Grate	11/30/07	241,314	469,578	575,771	1,061.9	147.48	26.55	0.025	16.69	0.016	39
Boiler 8	6	Traveling Grate	11/30/07	247,207	474,721	545,768	1,011.6	140.49	25.29	0.025	11.61	0.011	44
Boiler 8	7	Traveling Grate	11/30/07	248,621	476,866	575,034	1,063.3	147.68	26.58	0.025	18.43	0.017	38
Boiler 8	1	Traveling Grate	12/11/08	204,011	393,592	561,322	1037.90	144.15	25.95	0.025	6.06	0.006	101
Boiler 8	2	Traveling Grate	12/11/08	201,698	384,162	536,757	992.31	137.82	24.81	0.025	5.10	0.005	99
Boiler 8	3	Traveling Grate	12/11/08	217,265	408,602	529,901	983.74	136.63	24.59	0.025	13.43	0.014	86
Boiler 8	4	Traveling Grate	12/11/08	220,474	412,447	538,812	1001.49	139.10	25.04	0.025	6.11	0.006	101
											On-crop Minimum		**28.0**
											90-percent of Minimum		**25.2**
Off Crop Season													
Boiler 8	3	Traveling Grate	6/2/2006 [2]	160,360	286,469	238,876	546.95	75.97	13.67	0.025	1.06	0.002	28.4
Boiler 8	4	Traveling Grate	6/2/2006 [2]	152,745	271,874	215,692	481.28	66.84	12.03	0.025	1.24	0.003	22.0
Boiler 8	5	Traveling Grate	6/2/2006 [2]	124,942	218,045	222,067	428.26	59.48	10.71	0.025	0.95	0.002	21.3
Boiler 8	1	Traveling Grate	8/22/06 [3]	148,855	262,552	202,398	403.5	56.04	10.09	0.025	4.08	0.010	45.5
Boiler 8	2	Traveling Grate	8/22/06 [3]	146,795	256,382	202,350	383.6	53.28	9.59	0.025	7.39	0.019	20.0
Boiler 8	3	Traveling Grate	8/22/06 [3]	148,794	257,466	199,188	411.4	57.14	10.29	0.025	6.89	0.017	20.2
											Off-crop Minimum		**20.0**
											90-percent of Minimum		**18.0**

Notes:

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.

[2] Off-crop

[3] Off-crop, Wood chip firing at 4,500 Btu/lb.

TABLE A-6
WHITE SUGAR DRYER NO. 2 PM EMISSION TESTS

Run Number	Test Date	Start/End Time	% Load	Stack Gas Flow Rate (dscfm)	Stack Gas Flow Rate (acfm)	Allowable PM Emissions (EPA Method 5)		Actual PM Emissions (EPA Method 5)		Avg. Water Flow (gpm)	Avg. Pressure Drop		Scrubber Water Sugar Content (Brix)	Particulate Data		
						lb/hr	gr/dscf	lb/hr	gr/dscf		Cyclone (in. H_2O)	Scrubber (in. H_2O)		Filter (mg)	Wash (mg)	% Wash of Total
1	02/20/07	0925-1030	100	77,874	89,921	15.0	--	4.78	0.0072	528	3.0	8.2	10	1.6	16.4	91.1
2	02/20/07	1134-1240	96	78,061	91,456	15.0	--	5.38	0.0080	503	3.0	8.0	8	0.8	19.4	96.0
3	02/20/07	1354-1459	91	76,039	89,248	15.0	--	5.88	0.0090	501	3.0	8.0	9	1.1	20.8	95.0
Average=			**96**	**77,325**	**90,208**	**15.0**	--	**5.3**	**0.0081**	**510**	**3.0**	**8.1**	**9**			**94.0**
4	02/21/07	1455-1559	103	76,414	89,147	15.0	--	9.36	0.0143	752	3.0	8.2	9	1.5	32.6	95.6
5	02/22/07	0836-0939	85	77,229	89,360	15.0	--	7.43	0.0112	747	3.0	8.2	9	1.4	25.1	94.7
6	02/22/07	1004-1107	88	77,871	90,404	15.0	--	7.07	0.0106	752	3.0	8.0	8	0.8	25.1	96.9
Average=			**92**	**77,171**	**89,637**	**15.0**	--	**8.0**	**0.0120**	**750**	**3.0**	**8.1**	**9**			**95.7**

Notes:
lb/hr = pounds per hour
gr/dscf = grains per dry standard cubic foot
mg = milligrams

TABLE A-7
WHITE SUGAR DRYER NO. 2 PM_{10} EMISSION TESTS

Run Number	Test Date	Start/End Time	% Load	Stack Gas Flow Rate (dscfm)	Stack Gas Flow Rate (acfm)	Allowable PM_{10} Emissions		Actual PM_{10} Emissions (EPA Method 210A)		Avg. Water Flow (gpm)	Avg. Pressure Drop		Scrubber Water Sugar Content (Brix)	Particulate Data		
						lb/hr	gr/dscf	lb/hr	gr/dscf		Cyclone (in. H_2O)	Scrubber (in. H_2O)		Filter (mg)	Wash (mg)	% Wash of Total
1	05/23/06	1015-1040	50	85,299	93,003	4.2	0.005	2.37	0.00324	750	4.7	9.7	--	1.1	1.5	57.7
2	05/23/06	1127-1200	50	85,082	92,570	4.2	0.005	1.59	0.00218	753	4.3	9.7	--	0.7	1	58.8
3	05/23/06	1220-1254	50	85,713	92,883	4.2	0.005	1.13	0.00154	750	4.0	9.8	--	0.7	0.5	41.7
4	05/23/06	1400-1433	100	83,395	91,246	4.2	0.005	1.02	0.00143	750	4.0	9.7	--	0.4	0.8	66.7
5	05/23/06	1450-1554	100	84,141	91,790	4.2	0.005	1.75	0.00242	751	4.0	10.0	--	1	1	50.0
6	05/23/06	1545-1619	100	83,009	90,815	4.2	0.005	1.06	0.00149	750	4.0	10.0	--	0.5	0.7	58.3
7	05/25/06	1024-1058	100	83,263	91,101	4.2	0.005	1.02	0.00143	750	4.0	10.3	--	0.5	0.7	58.3
8	05/25/06	1110-1144	100	83,058	90,876	4.2	0.005	0.94	0.00131	746	4.0	10.0	--	0.4	0.7	63.6
9	05/25/06	1153-1228	100	82,799	90,877	4.2	0.005	1.26	0.00177	751	3.7	11.0	--	0.7	0.8	53.3
Average=				**83,973**	**91,684**	**4.2**	**0.005**	**1.3**	**0.00187**	**750**	**4.1**	**10.0**				**56.5**
1	02/21/07	1008-1108	102	79,189	91,417	4.2	0.005	2.05	0.00302	500	3.0	8.1	8	1.2	3.6	75.0
2	02/21/07	1135-1235	97	79,637	91,805	4.2	0.005	1.97	0.00288	501	3.0	8.2	8	1.4	3.2	69.6
3	02/21/07	1314-1414	101	79,444	91,660	4.2	0.005	1.48	0.00218	499	3.0	8.0	8	1.6	1.9	54.3
Average=			**100**	**79,423**	**91,627**	**4.2**	**0.005**	**1.8**	**0.00269**	**500**	**3.0**	**8.1**	**8.0**			**66.3**

Notes:
lb/hr = pounds per hour
gr/dscf = grains per dry standard cubic foot
mg = milligrams

TABLE A-8

GRANULAR CARBON REGENERATION FURNACE PM EMISSION TESTS, CLEWISTON

Unit	Run Number	Test Date	Stack Gas Flow Rate (dscfm)	Stack Gas Flow Rate (acfm)	Allowable PM Emissions (EPA Method 5) lb/hr	Actual PM Emissions (EPA Method 5) lb/hr	Venturi Scrubber Avg. Pressure Drop (in. H_2O)	Wet Tray Scrubber Avg. Pressure Drop (in. H_2O)	Afterburner Avg. Temperature (deg. F)
GCRF	1		5,526	8,043	0.7	0.514	20.4	6.8	1,296
GCRF	2	01/20/00	5,561	8,150	0.7	0.464	20.2	6.8	1,303
GCRF	3	01/20/00	4,967	7,393	0.7	0.635	20.0	6.2	1,272
GCRF	1	09/28/05	4,844	6,420	0.7	0.288	20.0	9.0	1,300
GCRF	2	09/29/05	4,768	6,865	0.7	0.321	20.0	9.0	1,291
GCRF	3	09/29/05	4,934	7,117	0.7	0.550	20.0	9.0	1,290
Notes:						**Minimum**	**20**	**6.2**	

lb/hr = pounds per hour.

TABLE A-9

GRANULAR CARBON REGENERATION FURNACE VISIBLE EMISSIONS EVALUATIONS

Test Date	Visible Emissions Highest 6-min Average (%)	Venturi Scrubber Avg. Pressure Drop (in. H_2O)	Wet Tray Scrubber Avg. Pressure Drop (in. H_2O)	Afterburner Avg. Temperature (deg. F)
01/20/00	10	20.2	6.6	1,290.3
09/29/05	0	20.0	9.0	1,293.7
01/10/07	0	20.0	6.0	1,200.0
02/21/08	2	20.0	8.0	1,328.0
01/07/09	0	20.0	4.0	1,321.0

ATTACHMENT B

Applicable State Regulations

The environmental laws specified in Section 403 of the Florida Statutes (F.S.) authorize the Department of Environmental Protection (Department) to establish rules and regulations regarding air quality as part of the F.A.C. Emissions units at this facility are subject to the applicable requirements defined in the following.F.A.C. Chapters: 62-4 - Permitting Requirements; 62-204 - Ambient Air Quality Requirements, PSD Increments, and Federal Regulations Adopted by Reference; 62-210 - Permits Required, Public Notice, Reports, Stack Height Policy, Circumvention, Excess Emissions, and Forms; 62-212 - Preconstruction Review, PSD Review and Best Available Control Technology (BACT), and Non-attainment Area Review and Lowest Achievable Emission Rate (LAER); 62-213 - Title V Air Operation Permits for Major Sources of Air Pollution; 62-296 - Emission Limiting Standards; and 62-297 - Test Methods and Procedures, Continuous Monitoring Specifications, and Alternate Sampling Procedures. Emissions units are subject to the following source-specific regulations.

- Boilers 1, 2, 4, 7 and 8 (EU-001, 002, 009, 014 and 028) are subject to Rule 62-296.410, F.A.C. for carbonaceous fuel burning equipment.
- Boilers 4, 7 and 8 (EU-001, 002, 009, 014 and 028), the biomass handling and storage (EU-027) and emissions units in the sugar refinery (EU-015, 016, 017, 018, 019, 020, 021, 022 and 029) are subject to Rule 62-212.400(BACT), F.A.C.
- Boilers 1, 2 and 4 (EU-001, 002 and 009) are subject to Rule 62-212.400(12), F.A.C., which imposes the source obligation requirements because some restrictions have been taken to avoid PSD preconstruction review.
- For all emissions units requiring tests, Rule 62-297.310, F.A.C. establishes the general requirements.
- The following emissions units are subject to the applicable provisions in Rule 62-213.440, F.A.C. for ~~Continuous~~Compliance Assurance Monitoring: Boilers 1, 2, 4, 7 and 8 (EU-001, 002, 009, 014 and 028), granular carbon regeneration furnace (EU-017), three vacuum pickup systems (EU-018) and white sugar dryer 2 (EU-029).

Applicable Federal Regulations

Federal environmental requirements are established in Title 40 of the Code of Federal Regulations (CFR). Emissions units are subject to the following source-specific regulations.

- Boilers 7 (EU-014) and 8 (EU-028) are subject to the New Source Performance Standards (NSPS) in Subpart Db of 40 CFR 60 for Industrial-Commercial-Institutional Steam Generating Units.
- ~~The portable rock crusher is subject to NSPS Subpart OOO in 40 CFR 60.~~
- All sources subject to a specific NSPS subpart are also subject to the applicable General Provisions in NSPS Subpart A of 40 CFR 60.
- The following emissions units are subject to the applicable provisions in 40 CFR 64 for ~~Continuous~~Compliance Assurance Monitoring: Boilers 1, 2, 4, 7 and 8 (EU-001, 002, 009, 014 and 028), granular carbon regeneration furnace (EU-017), three vacuum pickup systems (EU-018) and white sugar dryer 2 (EU-029).

UNREGULATED EMISSIONS UNIITS

An "unregulated emissions unit" is an emissions unit which emits no "emissions-limited pollutant" and which is subject to no unit-specific work practice standard, though it may be subject to regulations applied on a facility-wide basis (e.g., unconfined emissions, odor, general opacity) or to regulations that require only that it be able to prove exemption from otherwise applicable unit-specific emissions or work practice standards (e.g., recordkeeping requirements for small storage tanks under 40 CFR 60, Subpart Kb). All fugitive emissions not subject to unit-specific work practice standards may be included in the application as one or more separate unregulated emissions units. The permittee identifies the following unregulated emissions units and activities for the Clewiston sugar mill and refinery.

Boiling House

- Bagacillo cyclones and handling system
- Centrifugals
- Crystallizer cooling towers
- Crystallizers
- Evaporator cleaning operations
- Evaporators
- Handling of raw sugar
- Juice heaters
- Lime storage area (slakers)
- Mud belt presses
- Process tanks including: batch, caustic, chemical neutralization, juice, clarified juice, clarifier, condensate, EDTA, flocculants/coagulant mix, flash, hot liming, lime hold tank, mingler, mixer, melter, molasses tanks, mud mixing, mud receiving, pan feed, magma, mud waste muriatic acid, phosphoric acid, slaked lime tank, spent acid, sugar receivers, sulfamic acid, syrup storage and alcohol storage tanks
- Vacuum mud filters and vacuum pumps
- Vacuum pans, receivers and condensers
- Sulfamic Acid building (tank; baghouse with hopper, Rhodine Totes)

Sugar Mill

- Cane mills
- Cush-cush and DSM screens
- Turbine vents

Agricultural Equipment Shop

- ~~Baghouse on transfer point~~
- Paint booth with filter*

Miscellaneous Activities

- Distillate oil storage tanks
- Stationary internal combustion engines (general)
- Emergency generators
- Emergency diesel generator
- Emergency diesel fire pump
- High-service diesel pump
- ~~Diesel test bench power unit (diesel engine)~~
- Propane-fired water heater in railcar wash facility
- ~~Hot water tank heater and fuel tanks ATM, DMX7, mineral mix, mixed feed, urea holding, and urea mixing storage tanks product loading (hoses) in Molasses plant~~
- ~~Paint booth with filter* in carpentry shop~~
- Ash handling, loading and storage in boiler house
- Cooling water towers, spray ponds and canals
- Wastewater treatment/cooling towers
- Cane dumping/handling
- Raw and refined sugar handling
- Vacuum cleaning systems
- Cold cleaning operations (non-halogenated solvent)
- Vehicle-generated dust
- Parts washers (non-HAP)
- Boiler feedwater plant
- Painting operations
- Solid/hazardous waste storage area
- Urea storage tank at Boiler No. 8
- Water treatment plant supply wells (H_2S emissions)

Molasses Plant

- Hot water tank heater and fuel tanks ATM, DMX7, mineral mix, mixed feed, urea holding, and urea mixing storage tanks product loading (hoses) in Molasses plant.

* Granted an exemption from air construction permitting by the South District office on February 22, 1996.

SHUTDOWN EMISSIONS UNITS

The following emissions units have been permanently shut down. Any proposed future operation of these boilers would require a preconstruction review permit as a "new" emissions unit.

EU No.	Description
003	Boiler 3: Permanent shutdown required by Permit PSD-FL-333B for PSD netting
004	Boiler 5: Permanent shutdown required by Permits PSD-FL-208 and PSD-FL-272A for PSD netting
005	Boiler 6: Permanent shutdown required by Permits PSD-FL-208 and PSD-FL-272A for PSD netting
011	Lime silo at boiling house
012	Diesel generator 1: Dismantled and no longer in operation
013	Diesel generator 2: Dismantled and no longer in operation
023	Propane Sock Heaters (EU-023)
032	Portable rock crusher

INSIGNIFICANT EMISSIONS UNITS AND ACTIVITIES

Pursuant to Rule 61-213.430(6)(b), F.A.C., an emissions unit or activity shall be considered insignificant if all of the following criteria are met:

1. Such unit or activity would be subject to no unit-specific applicable requirement.
2. Such unit or activity, in combination with other units and activities proposed as insignificant, would not cause the facility to exceed any major source threshold(s) as defined in subparagraph 62-213.420(3)(c)1., F.A.C., unless it is acknowledged in the permit application that such units or activities would cause the facility to exceed such threshold(s).
3. Such unit or activity would neither emit nor have the potential to emit:
   a. 500 pounds per year or more of lead and lead compounds expressed as lead;
   b. 1,000 pounds per year or more of any hazardous air pollutant;
   c. 2,500 pounds per year or more of total hazardous air pollutants; or
   d. 5.0 tons per year or more of any other regulated pollutant.

Pursuant to Rule 61-213.430(6)(a), F.A.C., all requests for determination of insignificant emissions units or activities made pursuant to paragraph 62-213.420(3)(n), F.A.C., shall be processed in conjunction with the permit, permit renewal or permit revision application submitted pursuant to this chapter. Insignificant emissions units or activities shall be approved by the Department consistent with the provisions of paragraph 62-4.040(1)(b), F.A.C. Emissions units or activities which are added to a Title V source after issuance of a permit under this chapter shall be incorporated into the permit at its next renewal, provided such emissions units or activities have been exempted from the requirement to obtain an air construction permit and also qualify as insignificant pursuant to this rule.

The permittee identifies the following unregulated emissions units and activities for the Clewiston sugar mill and refinery.

Agricultural Equipment Shop

- Multiple 55-gallon contaminated diesel drums
- Diesel storage tank
- Low sulfur diesel tank
- Used oil storage tanks (4)
- Gasoline storage tank
- Kerosene storage tank
- Cane burning fuel storage tank
- Various equipment shops
- "Mart Tornado" electric parts cleaner (non-HAP)
- Used Antifreeze Storage Tank

Cane Fields

- Agricultural diesel field engines and associated fuel tanks
- Agricultural diesel cane elevator engines and associated fuel tanks

Miscellaneous Activities

- Diesel, gasoline and fuel oil storage tanks
- Diesel fuel storage tanks (3)
- Large storage tanks in boiler house
- Used oil tanks/drums (covered)
- Pressurized LPG tanks
- Solvent recovery stills
- Molasses storage tanks
- Acid storage tanks
- Small polymer tanks (2) @ water treatment plant
- Ammonia storage tanks
- Process-wide flanges and valves
- Pump vents (lube oil vents)
- Vents from hydraulic/lube oil reservoirs and pumps
- Use of cutting oils
- Painting operations
- Batch mixers (< 30 cu. ft.)
- Containers for oils/wax/grease
- Electric ovens for drying

Insignificant Activities

- Gear boxes, reducers vents
- Kerosene dispenser drip pans
- Liquid loading/unloading (non-HAP)
- Oil/water separator/skimmer equipment, troughs/storage
- Scrubber water ponds and troughs
- Metallizing operations
- Wood working and metal working operations
- Locomotive repair shop
- Railroad maintenance
- Sugar warehouses
- ~~DAF solids storage area (warehouse I)~~
- Boiler blow-down pipes, vents sandblaster and grinder with filter in powerhouse
- ~~Soil treatment conveyor in spray oil building~~
- ~~Auto repair/maintenance (non-painting) in body shop~~
- Ash/lime mixing, balanced polymer tanks and chemical storage/mixing tanks for boiler feedwater plant
- ~~Bunker C rail car oil spraying storage tanks*~~

~~* Granted an exemption from air construction permitting by the South District office on February 22, 1996.~~

Permit History

Permit No.	Issued	Project Description
0510003-026-AC	02/01/2005	PSD Permit PSD-FL-346 to construct new white sugar dryer 2; superseded by Permit 0510003-038-AC
0510003-027-AC	02/24/2005	Burner modifications for Boilers 1 and 2 to fire distillate oil; superseded by Permit 0510003-036-AC
0510003-028-AC	N/A	Exempt
0510003-029-AC	04/01/2005	Revision to extend burner modifications to Boiler 4; superseded by Permit 0510003-039-AC for Boiler 4
0510003-030-AC	04/07/2006	PSD revision (PSD-FL-333B) for Boiler 8 to add final NEHSAP DDDDD provisions; superseded by Permit PSD-FL-333C
0510003-031-AC	(Pending)	Miscellaneous air construction permit revisions issued concurrent with Title V Permit 0510003-032-AV
0510003-033-AC	09/06/2005	Construct limestone silo
0510003-034-AC	01/20/06	Construct new lime storage and handling system
0510003-035-AC	06/19/2006	Addition of cyclone dust collector to Boiler 8; superseded by Permit PSD-FL-333C
0510003-036-AC	08/02/2006	Revision to burner modifications for Boilers 1 and 2; superseded by Permit 0510003-039-AC
0510003-037-AC	03/30/07	PSD revision (PSD-FL-333C) for Boiler 8 to increase heat input rate and modify bagasse handling system
0510003-038-AC	12/22/2006	Revision for white sugar dryer 2 to change PM standard; supersedes Permit 0510003-021-AC
0510003-039-AC	09/20/2006	Revision of oil firing systems for Boilers 1, 2 and 4; supersedes Permits 0510003-018-AC and 0510003-027-AC
0510003-040-AC	N/A	Withdrawn
0510003-041-AC	N/A	Withdrawn
0510003-043-AC	N/A	Exempt
051003-044-AC	12/06/2007	Boiler 7 Wood Chip Firing
0510003-045-AC	06/12/2008	Refinery Package Boiler

Good Combustion Practices for All Boilers

Purpose

The purpose of this plan is to summarize the operational, maintenance and monitoring procedures that will promote good combustion in the sugar mill boilers. Careful attention to the mixing of fuel and combustion air will result in efficient combustion and minimize CO, PM and VOC emissions while optimizing NO_X emissions. Adequate maintenance will promote effective combustion and ensure reliable operation throughout the crop season. See the permit subsections for other specific requirements regarding good combustion practices.

Training

~~The senior, most experienced boiler supervisor will instruct other boiler room supervisors, operators and other appropriate personnel in the proper operation of the boilers and air pollution control equipment. Prior to each harvest season, an instructional program will be presented and included in the orientation and training provided to new boiler room employees. A portion of this training will focus on the importance of good combustion practices as well as the proper operation of the boiler and control equipment to minimize emissions.~~

Power plant operators are required to be certified by NIULPE (National Institute for the Uniform Licensing of Power Engineers) as 4th Class Engineers. Their rate of pay is also on a sliding scale that encourages higher certification up to 1st Class Engineer. Other training requirements accompany this outside certification including all aspects of good combustion practices as well as the proper operation of the boiler and control equipment to minimize emissions.

Requirements

1. Maintenance and Repair Activities: Off season routine maintenance activities are intended to maintain the boilers at current operational levels and reliability for the upcoming cane milling seasons. Replacements shall be made with "functionally equivalent" components that serve the same purpose as the component being replaced. Routine maintenance activities shall not increase the capacity of any boiler or change the basic design parameters including fuel firing rates or heat input rates. In addition, such activities shall not increase the emission rates of any boiler or the cane milling capacity of the plant. The permittee shall consult well in advance with the Department regarding any unusually large, expensive or infrequent maintenance efforts that may not be considered routine. [Permit 0510003-022-AC]
2. Maintenance Summary Report: Within 60 days of beginning the crop season, the permittee shall submit a report to the Department's Bureau of Air Regulation and the Complaince Authority that summarizes the following information: a general description of the routine maintenance and repair work performed on each boiler during the previous off season; a summary of the off season maintenance inspections; and a revised schedule of routine maintenance and repair activities for the next off season based on the recent inspections and schedule. [Permit 0510003-022-AC]
3. Off Season Preparations: Before each crop season, the permittee shall conduct the following activities as necessary to ensure proper operation of the boilers and control equipment.
    - Inspect, clean and repair the boiler, air ductwork, air heaters, wet scrubbers, cyclones and electrostatic precipitators.
    - Inspect and repair damaged refractory and boiler casing.
    - Inspect and remove loose scale, sand and other debris from the outer surfaces of the boiler and tubes.
    - Inspect and clean settling chambers in the furnace, breeching and heat traps, where cinders can accumulate.
    - Inspect, clean and repair boiler grates to ensure proper mechanical operation and maintain open air holes.
    - Inspect, repair and adjust the combustion control settings and linkages to fuel feeders, forced-draft fan and over-fire air fan.
    - Inspect, clean and repair all oil burners and related oil piping, atomizing steam and air registers.
    - Inspect, clean and repair all fans, blades and motors.
    - Inspect and repair all pumps and pump drives.
    - Identify the proper skirt level of each wet impingement scrubber and mark a permanent reference on the outside.

General Training

All operators and supervisors shall be properly trained to operate and maintain the boilers as well as the pollution control and monitoring equipment in accordance with the guidelines and procedures established by the manufacturer and permit. The training shall include good operating practices as well as methods of minimizing excess emissions during startups, shutdowns, and malfunctions. [Rule 62-210.700(1), F.A.C.]

Boilers 1 and 2

Cold Startup

1. ~~Turn on water valves to scrubber spray nozzles to start scrubber.~~Start the feedwater pump and check for proper lubrication and vibration.
2. ~~Feed solid fuel into boiler combustion chamber.~~Fill the scrubber to the proper starting level and set the delta P controller "+8"
3. ~~Start fire in combustion chamber using a propane torch designed for that purpose.~~Open the spray nozzles in the scrubber and start water flow to the scrubber.
4. ~~As boiler heats up and starts to make steam, continuously observe the boiler and scrubber water levels, and stack plume.~~Align the fuel, gas, and air atomization lines.
5. ~~Light a burner at the lowest rate, continue to observe the stack plume and adjust if necessary, by adjusting fuel, atomizing steam, and air to obtain proper combustion.~~Start the fuel pump and start the burner sequence.
6. ~~Feed carbonaceous fuel from the mill to the boiler slowly at first; as the furnace gets hotter and the carbonaceous fuel is burning better, decrease fuel oil until burners can be turned off.~~As the boiler heats up, adjust the scrubber delta P as needed to maintain proper amps.
7. ~~Continue to observe the stack plume, the scrubber water level, and the carbonaceous fuel level, making adjustments to drafts, fuel, and scrubber to maintain optimum operating conditions.~~Start the distributor and over fire fan. Once they are operating properly, adjust the over fire fan, forced draft fan, and the undergrate air to 50-percent and start feeding bagasse.
8. Once fire is established, start all slurry water, grates, and adjust all dampers as needed.

~~7.~~9. Continue to observe the stack plume, the scrubber water level, and the carbonaceous fuel level, making adjustments to drafts, fuel, and scrubber to maintain optimum operating conditions.

~~8.~~10. Normally, a cold startup will require 6 to 12 hours from the first fire to normal working pressure.

Hot Startup

1. This type of startup is applicable when the boiler has been shutdown for a short period of time and is still hot.
2. Turn on water valves to scrubber spray nozzles to start scrubber.
3. Check the boiler and scrubber water levels, circulating pump and spray nozzles, and make sure they are functioning properly.
4. Light a burner, continue to observe the stack plume, water levels, and burners.
5. As the carbonaceous fuel fire gets hot enough to meet steam demand, reduce the burner fuel until it can be turned off. Adjust the dampers to get optimum carbonaceous fuel firing.
6. Continue to observe the stack plume, scrubber water level, and carbonaceous fuel level, making adjustments to drafts, fuel, and scrubber to maintain optimum operating conditions.
7. Normally, a warm startup requires 1 to 5 hours, depending on boiler operating conditions.

Shutdown

1. ~~Stop fuel flow to the boiler, reduce forced draft, distributor air, overfire air, and induced draft.~~Slowly reduce the feeders until the boiler is offline. Once the boiler is offline, stop the feeders.

2. ~~Continue to observe the stack plume and water levels and make adjustments to maintain safe and optimum operating conditions.~~After all of the bagasse has burned out of the furnace, stop the overfire air fans, stop the distributor air fans, and adjust the overfire air to 50-percent.
3. The scrubber is turned off after the fire in the boiler is extinguished.
~~3.~~4. When the temperature reaches 250 °F, stop the forced draft fan, adjust the damper and undergrate damper to 50-percent, and then stop the induced draft fan.

Boiler 4

Cold Startup

1. ~~Turn on water valves to scrubber spray nozzles to start scrubber.~~Start the feedwater pump and check for proper lubrication and vibration.
2. ~~Feed solid fuel into boiler combustion chamber.~~Fill the scrubber to the proper starting level and set the delta P controller to "+8".
3. ~~Start fire in combustion chamber using a propane torch designed for that purpose.~~Open the spray nozzles in the scrubber and start water flow to the scrubber.
4. ~~As boiler heats up and starts to make steam, continuously observe the boiler and scrubber water levels, and stack plume.~~Align the fuel, gas, and air atomization lines.
5. ~~Light a fuel oil burner at the lowest rate, continue to observe the stack plume and adjust, if necessary, by adjusting fuel, atomizing steam, and air to obtain proper combustion.~~Start the fuel pump and start the burner sequence.
6. ~~Feed carbonaceous fuel from the mill to the boiler slowly at first. As the furnace gets hotter and the carbonaceous fuel is burning better, decrease fuel oil flow until burners can be turned off.~~As the boiler heats up, adjust the scrubber's delta P as needed to maintain proper amps.
7. ~~Continue to observe the stack plume, the scrubber water level, and the carbonaceous fuel level, making adjustments to drafts, fuel, and scrubber to maintain the optimum operating conditions.~~Start the distributor and overfire air fan. Once they are operating properly, adjust the overfire fan, forced draft fan, and the undergrate air to 50-percent and start feeding bagasse.
8. Once a fire is established, start all slurry water, grates, and adjust all dampers as needed
~~7.~~9. Continue to observe the stack plume, the scrubber water level, and the carbonaceous fuel level, making adjustments
~~8.~~10. A cold startup is a startup after the boiler has been down for more than 4 or 5 hours. Typically, a cold startup will require 6 to 12 hours from the first fire to normal working pressure. There may be 10 cold startups per crop season (more or less) depending on excessive rain and mechanical breakdowns.

Hot Startup

1. This type of startup is applicable when the boiler has been shutdown for a short period of time and is still hot.
2. Turn on water valves to scrubber spray nozzles to start scrubber.
3. Check the boiler and scrubber water levels, circulating pump and spray nozzles, and make sure they are functioning properly.
4. Light a burner. Continue to observe the stack plume, water levels, and burners.
5. As the carbonaceous fuel fire gets hot enough to meet demand, reduce the burner fuel until it can be turned off. Adjust the dampers to get optimum carbonaceous fuel firing.
6. Continue to observe the stack plume, scrubber water level, and carbonaceous fuel level, making adjustments to drafts, fuel, and scrubber to maintain the optimum operating conditions.
7. A warm startup is a startup after the boiler has been down for less than 5 hours. Usually, the longer the boiler is down means a longer period will be needed for warm startup. Typically, a warm startup requires 1 to 5 hours depending on boiler operating conditions. There may be 5 cold startups per crop season (more or less) depending on mechanical

breakdowns and mill interruptions.

Shutdown

1. ~~Stop fuel flow to the boiler. Reduce the forced draft, distributor air, over fire air, and induced forced draft.~~Slowly reduce the feeders until the boiler is offline. Once the boiler is offline, stop the feeders.

~~1.~~2. After all of the bagasse has burned out of the furnace, stop the overfire fans, the distributer air fans, and adjust the overfire air to 50-percent.

~~2. Continue to observe the stack plume and water levels and make adjustments to maintain safe and optimum operating conditions.~~

3. The scrubber is turned off after the fire in the boiler is extinguished.

~~3.~~4. When the temperature reaches 250 °F, stop the forced draft fan and adjust the damper and the undergrate damper to 50-percent, then stop the induced draft fan.

Boiler 7

Cold Startup

1. ~~Turn on wet sand separator.~~Start the feedwater pump and check for proper lubrication and vibration.

2. ~~Light a fuel oil burner at the lowest rate. Continue to observe the stack plume and adjust, if necessary, by adjusting fuel, atomizing air and combustion air to obtain proper combustion.~~Align the fuel, gas, and ir atomization lines.

3. ~~Activate electrostatic precipitator (ESP).~~Start the fuel pump and then start the burner sequence.

4. ~~Feed carbonaceous fuel from the mill to the boiler slowly at first; as the furnace gets hotter and the carbonaceous fuel is burning better, decrease fuel oil until burners can be turned off.~~Start the slurry water, shakers, submerged ash belt, electrostatic precipitator scrolls, and then adjust the dampers as needed.

5. ~~Continue to observe the stack plume, wet sand separator water level, and the carbonaceous fuel level, making adjustments to drafts, fuel, wet sand separator and ESP to maintain optimum operating conditions.~~Start the overfire fan and once it is operating properly adjust the overfire fan, forced draft fan, and the undergrate, and start feeding bagasse.

~~5.~~6. Set up the cyclone sand separators, spray nozzles, and pumps.

~~5.~~7. When the electrostatic precipitator meets all interlocks oxygen level, temperature, ash scrolls, start all three fields.

~~6.~~8. Normally, a cold startup will require 6 to 12 hours from the first fire to normal working pressure.

Hot Startup (approximately 1 to 5 hours)

1. This type of startup is applicable when the boiler has been shutdown for a short period of time and is still hot.
2. Turn on wet sand separator.
3. Check the boiler and wet sand separator water level, and circulating pump and make sure they are functioning properly.
4. Light a burner, continue to observe the stack plume, water levels, and burners.
5. Activate ESP.
6. Feed carbonaceous fuel from the mill to the boiler slowly at first. As the furnace gets hotter and the carbonaceous fuel is burning better, decrease fuel oil until burners can be turned off. As the carbonaceous fuel fire gets hot enough to meet steam demand, reduce the fuel oil until the burners can be turned off. Adjust the dampers to get optimum carbonaceous fuel firing.
7. Continue to observe the stack plume, wet sand separator water level, and carbonaceous fuel level, making adjustments to drafts, fuel, wet sand separator and ESP to maintain optimum operating conditions.
8. Normally, a warm startup requires 1 to 5 hours, depending on boiler operating conditions.

Shutdown

1. ~~Stop fuel flow to the boiler, reduce forced draft, distributor air, overfire air, and induced draft.~~Slowly reduce the fuel

feeders until the boiler is offline, then stop them completely.

2. ~~Continue to observe the stack plume and water levels and make adjustments to maintain safe and optimum operating conditions.~~After verifying that all of the bagasse has burned out of the furnace, stop the overfire air and distributer air fans.

3. ~~After fuel flow is stopped, deactivate ESP and turn off wet sand separator~~Deactivate the electrostatic precipitator and turn off the wet sand separator.

Boiler 8

Startup: ~~During a normal startup, Boiler 8 will fire distillate oil to gradually warm up the boiler components. At a target steam temperature rise of 100° F to 120° F per hour, it will take approximately 4 to 5 hours to reach the desired superheater steam temperature of 500° F. Once this temperature is reached, bagasse (and/or wood chips) will be fed until a fire is established across the entire grate. The full steaming rate can be reached about 30 to 60 minutes after first feeding bagasse (and/or wood chips).~~

1. Align compressed air system and air compressors for Boiler No. 8 plant air and instrument air.
2. Align and start instrument air dryer.
3. Start canal water pump for wet cyclone collectors.
4. Start slurry pump.
5. Start the electrostatic precipitator ash mixing tank.
6. Start the electrostatic precipitator hopper screw conveyors.
7. Start the electrostatic precipitator purge air blowers.
8. Set up air dampers to start the induced draft fan.
9. Start the induced draft fan, overfire air fan, and the distributor air fan.
10. Start an oil pump.
11. Start the desired oil burner.
12. While boiler is heating up, start the bagasse conveyors for the No. 8 Boiler and fill the bagasse feeders.
13. When the boiler pressure gets above 500 psig, start introducing bagasse into the boiler.
14. Start the five electrostatic precipitator transformer rectifiers.
15. Start the selective non-catalytic reduction system.

Shutdown

1. Reduce boiler load to minimum.
2. Allow the bagasse feeders to run empty.
3. When the fire is completely out, stop the distributor air fan.
4. Stop the overfire air fan.
5. Turn off the precipitator fields
6. Turn off the selective non-catalytic reduction system.
7. Stop the grate drives.
8. Stop the primary air fans.
9. Stop the induced draft fan.
10. Shutdown the canal water pump.

~~1.~~

~~2.~~ PM Controls: The wet cyclone collectors will be activated before firing any fuel. Prior to activation, the ESP will be purged with ambient air for about 30 to 60 minutes. Distillate oil may be fired during startup prior to energizing the electrostatic precipitator (ESP). The ESP will be on line and functioning properly before any bagasse and/or wood chips are fired.

~~3.~~ NOx Controls: When the SNCR manufacturer's minimum operating temperature requirement is met, the SNCR system will be activated for NOx control. For a cold startup, this temperature is generally reached within 4 - 5 hours of initial distillate oil firing. During normal operation, the SCNR control system will automatically adjust the urea injection rate and zones to meet the specified NOx standard based on the current urea injection rate, boiler load, furnace temperature, and NOx emissions. During shutdown, the SNCR system shall remain operational until the operating temperature drops below the minimum requirement.

~~4. Shutdown: To initiate shutdown, the bagasse and/or wood chips fuel feed is terminated. The SNCR systems shall remain functional until operating conditions fall outside of the manufacturer's recommendations. The wet cyclone collectors and ESP shall continue to operate until solid fuel combustion on the fuel grate is substantially complete.~~

ATTACHMENT C

BOILER NO. 8

SO_2 STACK TEST RESULTS

SUMMARY OF STACK TEST RESULTS
BOILER NO. 8
U.S. SUGAR - CLEWISTON

Unit	Boiler Type	Test Date	Stack Gas Flow Rate (dscfm)	Stack Gas Flow Rate (acfm)	Steam Rate (lb/hr)	Heat Input Rate (MMBtu/hr)	SO2 Emissions (EPA Method 6)		PM Emissions (EPA Method 5)		CO Emissions (EPA Method 10)		NOx Emissions (EPA Method 7e)		VOC Emissions as Reported (EPA Method 18/25A) [2]		
							lb/hr	lb/MMBtu	lb/hr	lb/MMBtu	lb/hr	lb/MMBtu	lb/hr	lb/MMBtu	lb/hr	lb/MMBtu	Basis
Boiler 8	Traveling Grate	03/24/05	236,278	441,324	518,571	982.6	22.34	0.023	4.23	0.004	341.0	0.349	125.56	0.128	12.41	0.013	As Propane
Boiler 8	Traveling Grate	03/24/05	218,901	416,739	487,595	880.2	27.28	0.030	2.97	0.003	286.7	0.313	122.26	0.133	9.48	0.010	As Propane
Boiler 8	Traveling Grate	03/25/05	218,815	416,838	496,578	919.1	19.78	0.021	3.75	0.004	370.7	0.399	123.15	0.132	12.31	0.013	As Propane
Boiler 8	Traveling Grate	01/10/06	208,889	386,258	523,478	970.2	20.19	0.021	18.67	0.019					10.05	0.010	As Propane
Boiler 8	Traveling Grate	01/10/06	222,090	393,669	521,408	967.6	13.43	0.014	19.42	0.020					14.01	0.014	As Propane
Boiler 8	Traveling Grate	01/10/06	211,224	393,180	510,423	949.6	27.20	0.029	22.82	0.024					12.01	0.013	As Propane
Boiler 8	Traveling Grate	01/05/07	237,896	406,875	499,726	919.5	43.36	0.045	9.65	0.010	456.9	0.497	120.80	0.131	41.07	0.045	As Propane
Boiler 8	Traveling Grate	01/05/07	236,384	429,330	520,274	960.3	27.29	0.028	7.86	0.008	371.8	0.387	126.28	0.132	19.38	0.020	As Propane
Boiler 8	Traveling Grate	01/05/07	229,933	443,786	510,811	948.0	20.46	0.022	10.10	0.011	493.7	0.521	119.39	0.126	27.24	0.029	As Propane
Boiler 8	Traveling Grate	11/29-30/07	241,314	469,578	575,771	1,061.9	12.10	0.011	16.69	0.016	475.3	0.448	143.37	0.135	15.47	0.015	As Propane
Boiler 8	Traveling Grate	11/29-30/07	247,207	474,721	545,768	1,011.6	20.84	0.021	11.61	0.011	437.1	0.432	134.84	0.133	19.95	0.020	As Propane
Boiler 8	Traveling Grate	11/29-30/07	248,621	476,866	575,034	1,063.3	10.22	0.010	18.43	0.017	726.4	0.683	134.01	0.126	41.20	0.039	As Propane
Boiler 8	Traveling Grate	01/30/09	238,331	441,283	530,642	980.1	25.25	0.026							17.26	0.018	As Propane
Boiler 8	Traveling Grate	01/30/09	242,761	443,818	504,742	922.3	34.04	0.037							97.05	0.105	As Propane
Boiler 8	Traveling Grate	01/30/09	249,681	452,303	531,158	984.3	21.40	0.022							0.41	0.000	As Propane
Number of Runs			12	12	12	12	12	12	12	12	9	9	9	9	12	12	
Mean			**229,796**	**429,097**	**523,786**	**969.5**	**22.04**	**0.023**	**12.18**	**0.012**	**439.9**	**0.448**	**127.74**	**0.131**	**19.55**	**0.020**	
Minimum			208,889	386,258	487,595	880.2	10.22	0.010	2.97	0.003	286.7	0.313	119.39	0.126	9.48	0.010	
Maximum			248,621	476,866	575,771	1,063.3	43.36	0.045	22.82	0.024	726.4	0.683	143.37	0.135	41.20	0.045	
Standard Deviation			13,558	32,396	28,338	55.0	8.85	0.010	6.85	0.007	127.1	0.110	7.98	0.003	11.24	0.012	

1 Boiler 8 - SO2 stack test table

AIR CONSULTING and ENGINEERING, INC.

COMPLETE EMISSION DATA

US SUGAR CORP
CLEWISTON, FLORIDA
BOILER 8

	DATE:	3/24/05	3/24/05	3/25/05	3/25/05
	RUN NUMBER:	1	2	3	4
	BEGIN TIME:	11:32	17:37	11:02	14:44
	END TIME:	12:47	18:50		15:52
	OXYGEN %:	6.52	6.96		6.53
	VOLUMETRIC FLOW (SCFMD):	236279	218899	Test	218814
	TOTAL HEAT INPUT (MMBTUH):	977.3	916.6	Aborted	929.63
	"F" FACTOR:	NA	NA		NA
	OXIDES of NITROGEN (NOx) PPM:	74.18	77.97		78.56
	TOTAL HYDROCARBONS PPM as PROPANE (THC):	7.66	6.32		8.21
	METHANE PPM (CH4):	0.00	0.00		0
	CARBON MONOXIDE PPM (CO):	330.99	300.38		388.57
	SULFUR DIOXIDE PPM (SO2):	9.49	12.50		9.07
NOx:	LB/HR:	125.56	122.26		123.15
	LB/MMBTU:	0.128	0.133		0.132
	PPM @7%O2	71.70	77.77		75.98
ALLOWABLE:	LB/HR:	131.00	131.00		131.00
	LB/MMBTU:	0.14	0.14		0.14
VOC as PROPANE:	LB/HR:	12.41	9.48		12.31
	LB/MMBTU:	0.013	0.010		0.013
	PPM @7%O2	7.40	6.30		7.94
ALLOWABLE:	LB/HR:	46.800	46.800		46.482
	LB/MMBTU:	0.05	0.05		0.05
CO:	LB/HR:	340.95	286.65		370.67
	LB/MMBTU:	0.349	0.313		0.399
	PPM @7%O2	319.9	299.6		375.8
ALLOWABLE:	LB/HR:				
	LB/MMBTU:	0.38	0.38		0.38
SO2:	LB/HR:	22.34	27.28		19.78
	LB/MMBTU:	0.023	0.030		0.021
	PPM @7%O2	9.17	12.47		8.77
ALLOWABLE:	LB/HR:	56.20	56.20		55.78
	LB/MMBTU:	0.06	0.06		0.06

AIR CONSULTING and ENGINEERING, INC.
SULFUR DIOXIDE DATA

COMPANY NAME:	US SUGAR CORPORATION - CLEWISTON MILL
LOCATION:	CLEWISTON, FLORIDA
SOURCE:	BOILER 8
DATE:	JANUARY 10, 2006

RUN:	1	2	3	4
TITRANT VOLUME (ml):	2.25	2.70	1.80	3.65
BLANK VOLUME (ml):	0.10	0.10	0.10	0.1
BARIUM PERCHLORATE NORMALITY:	0.0079	0.0079	0.0079	0.007947
SOLUTION VOLUME (ml):	1000.0	1000.0	1000.0	1000
ALIQUOT VOLUME (ml):	20.0	20.0	20.0	20

SULFUR DIOXIDE EMISSION RESULTS

RUN:	1	2	3	4	
SO2 CONCENTRATION (LB/DSCF):	1.31E-06	1.61E-06	1.01E-06	2.15E-06	1.59E-06
PARTS PER MILLION DRY:	7.9	9.7	6.1	12.9	9.6
POUNDS PER HOUR:	16.74	20.19	13.43	27.20	20.27
POUNDS PER MMBTU:	0.017	0.021	0.014	0.029	0.021

Run 1 is excluded from average

AIR CONSULTING and ENGINEERING, INC.

COMPLETE EMISSION DATA

U.S.S.C. - CLEWISTON MILL.
CLEWISTON, FLORIDA
BOILER 8
JANUARY 5, 2007

RUN NUMBER:		C-1	C-2	C-3
BEGIN TIME:		10:58 AM	1:45 PM	4:22 PM
END TIME:		12:03 PM	2:50 PM	17:27
OXYGEN %:		7.73	7.65	7.25
VOLUMETRIC FLOW (SCFMD):		237896	236384	229933
TOTAL HEAT INPUT (MMBTUH):		919.5	960.3	948.0
"F" FACTOR:		NA	NA	NA
OXIDES of NITROGEN (NOx) PPM:		70.88	74.57	72.48
TOTAL HYDROCARBONS PPM dry as PROPANE (THC):		25.18	11.96	17.28
METHANE PPM (CH4):		0	0	0
CARBON MONOXIDE PPM (CO):		440.53	360.81	492.46
SULFUR DIOXIDE PPM (SO2):		NA	NA	NA
NOx:	LB/HR:	120.80	126.28	119.39
	LB/MMBTU:	0.131	0.132	0.126
VOC as PROPANE:	LB/HR:	41.07	19.38	27.24
	LB/MMBTU:	0.045	0.020	0.029
CO:	LB/HR:	456.89	371.83	493.65
	LB/MMBTU:	0.497	0.387	0.521
	PPM @ 7%O2	464.95	378.51	501.48
SO2:	LB/HR:	NA	NA	NA
	LB/MMBTU:	NA	NA	NA
PM:	LB/HR:	9.65	7.86	10.10
	LB/MMBTU:	0.010	0.008	0.011

AIR CONSULTING and ENGINEERING, INC.
COMPLETE EMISSION DATA

COMPANY NAME:	USSC
LOCATION:	Clewiston, FL
SOURCE:	Boiler 8
DATE:	11/30/07

RUN NUMBER:		C-5	C-6	C-7	
BEGIN TIME:		10:16 AM	12:46 PM	3:27 PM	
END TIME:		11:21 AM	1:51 PM	4:32 PM	
OXYGEN %:		6.7	6.73	6.6	
VOLUMETRIC FLOW (SCFMD):		241314	247207	248621	
TOTAL HEAT INPUT (MMBTUH):		1061.9	1011.5	1063.3	
"F" FACTOR:		NA	NA	NA	
OXIDES of NITROGEN (NOx) PPM dry:		82.93	76.14	75.24	
OTAL HYDROCARBONS PPM as PROPANE (THC) dry:		9.35	11.77	24.17	
METHANE PPM (CH4) dry:		0	0	0	
CARBON MONOXIDE PPM (CO) dry:		451.79	405.6	670.16	
SULFUR DIOXIDE PPM (SO2) dry:		NA	NA	NA	
NOx:					
	LB/HR:	143.37	134.84	134.01	137.41
	LB/MMBTU	0.135	0.133	0.126	0.131
VOC as PROPANE:					
	LB/HR:	15.47	19.95	41.20	25.54
	LB/MMBTU:	0.015	0.020	0.039	0.024
CO:					
	LB/HR:	475.30	437.12	726.38	546.27
	LB/MMBTU:	0.448	0.432	0.683	0.521
SO2:					
	LB/HR:	NA	NA	NA	NA
	LB/MMBTU:	NA	NA	NA	NA
PM:					
	LB/HR:	16.69	11.61	18.43	15.58
	LB/MMBTU:	0.016	0.011	0.017	0.015

Table 1. Emission Summary
Boiler 8 - ESP Outlet
United States Sugar Corporation - Clewiston Mill
Clewiston, Florida
January 30, 2009

Run Number	Time	Heat Input MMBTUH	Steam Rate lbs/hr	Flow Rate dscfm	Oxygen %	Ammonia Slip ppm	Ammonia Slip ppm @7% O2	SO2 Emissions lbs/MMBTU	SO2 Emissions lbs/hr	VOC Emissions as Propane lbs/MMBTU	VOC Emissions as Propane lbs/hr
C-1	0831-1021	980	530642	238331	7.70	4.11	4.32	0.026	25.25	0.018	17.26
C-2	1256-1432	922	504742	242761	10.40	3.81	5.04	0.037	34.04	0.105	97.05
C-3	1531-1704	984	531158	249681	5.80	4.22	3.89	0.022	21.40	0.000	0.41
Average	---	**962**	**522181**	**243591**	**7.97**	**4.05**	**4.42**	**0.028**	**26.90**	**0.041**	**38.24**

lbs/hr = PPM(2.595*10E-9)MW(Flow Rate)(60 min/hr)
lbs/MMBTU = (lbs/hr)/Heat Input

Allowable Emissions:

Ammonia Slip = 20 ppm @ 7% O2
VOC = 0.05 lbs/MMBTU & 46.8 as Propane
SO2 = 0.06 lbs/MMBTU & 56.2 lbs/hr

LIME SILO – BT-13 AREA

EPA METHOD 9

TEST RESULTS

Golder Associates Inc.

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

Golder Associates

January 25, 2007 063-7657

U.S. Sugar Corporation
111 Ponce de Leon Avenue
Clewiston, FL 33440

Attention: Mr. Don Griffin

RE: U.S. SUGAR CORPORATION CLEWISTON NEW BT-13 AREA, 2007 USEPA METHOD 9 VISIBLE EMISSION TEST RESULTS

Dear Mr. Griffin:

On January 11, 2007, Golder Associates Inc. performed visible emissions (VE) testing on the two lime silos and truck/railcar unloading equipment baghouses located at US Sugar's BT-13 Area, FDEP Permit No. 0510003-034-AC. The VE evaluations were conducted on the baghouse exhausts while the silos were being pneumatically loaded with pebble lime, the slaker silo was loaded from a commercial carrier truck while the lime storage silo and product transport system were tested while being loaded from a railcar. The process rates during the loading of the slaker silo and the storage silo and product transport system were 14.1, 3.1, and 3.1 tons per hour (tph), respectively. According to the results from these observations, the lime silos and the product transport systems are meeting the specific conditions of its permit, and are therefore in compliance.

Enclosed please find copies of the data sheets and VE certifications for submittal to the regulatory agency. Should you have any questions concerning these tests please feel free to contact me at 352-336-5600.

Sincerely,

GOLDER ASSOCIATES, INC.

Michael J. Arrants
Certified VE Evaluator

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

Cc: GNV DP

Enclosures

USSC2007 BT13 VE

VISIBLE EMISSION OBSERVATION FORM

Golder Associates

Method Used (Circle One): Method 9 | 203A | 203B | Other: _____

Company Name: U.S. SUGAR CORPORATION

Facility Name: CLEWISTON, FL

Street Address: W.C. OWENS & SR 832

City: CLEWISTON | State: FL | Zip: 33440

PNEUMATIC LOADING OF LIME (PEBBLE)

Process: INTO SILO VIA TRUCK | Unit #: | Operating Mode: NORM

Control Equipment: SILO DUST COLLECTOR SLAKER SILO | Operating Mode: NORM

Describe Emission Point: ~8" ROUND STACK VENTING THROUGH WEST SIDE OF SILO DUST COLLECTOR

Height of Emission Point: Start ~70 End ~70 | Height of Emission Point Rel. to Observer: Start ~65 End ~65

Distance to Emission Point: Start ~350 End ~350 | Direction to Emission Point (Degrees): Start 3° End 3°

Vertical Angle to Obs. Pt.: Start 10° End 10° | Direction to Obs. Pt. (Degrees): Start 30 End 3°

Distance and Direction to Observation Point from Emission Point: Start SAME POINT End S/P

Describe Emissions: Start NONE APPARENT End N/A

Emission Color: Start N/A End N/A | Water Droplet Plume: Attached ☐ Detached ☐ None ☑

Describe Plume Background: Start SKY End SAME

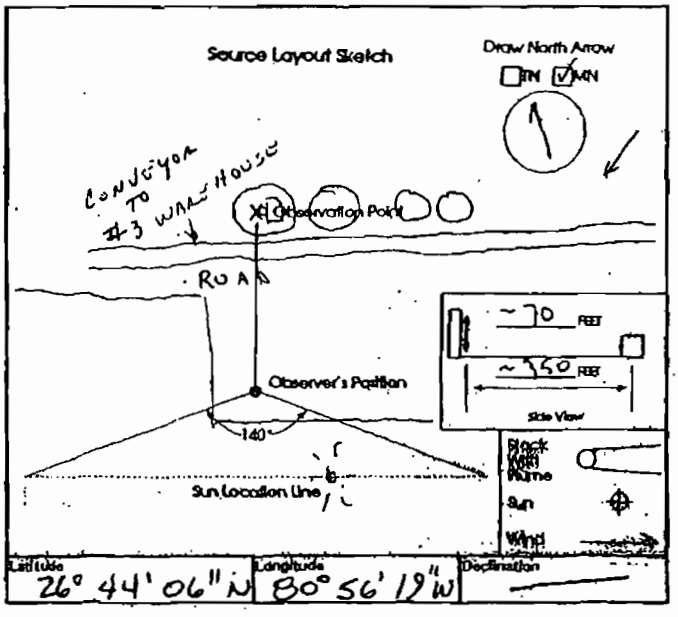
Background Color: Start BLUE End DW/WHITE | Sky Conditions: Start CLEAR End SCATTERED

Wind Speed: Start 3-5 End 3-5 | Wind Direction: Start NE End NE

Ambient Temp.: Start 68 End 70 | Wet Bulb Temp.: 60 | RH Percent: 64

Source Layout Sketch

Draw North Arrow: ☐ RN ☑ MN



Latitude: 26° 44' 06" N | Longitude: 80° 56' 19" W | Declination: —

Additional Information: 0510003-034-AC

BT-13

FORMS/VEOF (02/18/97)

Form Number: U S S C 14 | Page 1 of 1

Continued on VEO Form Number: N/A

Observation Date: 11 JAN 07 | Time Zone: EAST | Start Time: 0948 | End Time: 1018

Sec / Min	0	15	30	45	
1	0	0	0	0	
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	
5	0	0	0	0	
6	0	0	0	0	
7	0	0	0	0	
8	0	0	0	0	
9	0	0	0	0	
10	0	0	0	0	
11	0	0	0	0	
12	0	0	0	0	
13	0	0	0	0	
14	0	0	0	0	
15	0	0	0	0	
16	0	0	0	0	
17	0	0	0	0	
18	0	0	0	0	
19	0	0	0	0	
20	0	0	0	0	
21	0	0	0	0	
22	0	0	0	0	
23	0	0	0	0	
24	0	0	0	0	
25	0	0	0	0	
26	0	0	0	0	
27	0	0	0	0	
28	0	0	0	0	
29	0	0	0	0	
30	0	0	0	0	

Observer's Name (Print): MICHAEL J. ARRANTS

Observer's Signature: [signature] | Date: 11 JAN. 07

Organization: GOLDER ASSOCIATES INC

Certified By: ETA | Date: 8 AUG 06

START TIME 0948
STOP TIME 1138

0924.5
0947

JAN.11.2007 8:58AM NO. 834 P. 2

UNIFORM STRAIGHT BILL OF LADING

ORIGINAL - NOT NEGOTIABLE 4872685

Chemical Lime
A Mississippi Lime Company

[redacted] 1023188228

[redacted] 01/10/2007 15:48:31

RECEIVED, subject to the classifications and lawful tariffs in effect on the date of the issue of this Bill of Lading.

[redacted] C.L. Nichols Terminal

[redacted] L.L.L. Holdings [illegible] Riverside Road P.O. NICHOLS, FL 33863

[redacted]

"Customer hereby acknowledges its responsibility to remove the product tendered on the delivery vehicle. Due to the nature of the product and the delivery mode and situs, a quantity of the product may remain in the delivery vehicle following distribution. Customer may remove such quantity, but if not removed, it agrees, by the signature below to pay for the entire quantity indicated hereon which is tendered and thus available for removal."

[redacted] 23144 US SUGAR CORPORATION

[redacted] 43684 US SUGAR CORP-CLEWISTON [redacted] HENDRY

[redacted] CLEWISTON SUGAR MILL WAREHOUSE / 50 HC DIKEN AVE/CLEWISTON FL 33440

[redacted] 39957 COMMERCIAL CARRIER LOGISTICS LLC [redacted] C9236U/S

[redacted] CHICAGO IL

[redacted]

01/10/2007 15:48:31	Gross weight:	79,088	LB
01/10/2007 15:38:10	Tare weight:	27,400	LB
	Net weight:	51,688	LB

Subject to Section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The Carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of consignor)

If the charges are to be prepaid, write or stamp here, "To be Prepaid."

Freight prepaid

Customer shipping instructions:
LABELS SHOULD REQUIRED CERTIFIED ANALYSIS: _____
_____SHIP DATE_____ ORDER NO_____RESIDUE_____T/R 36 SEC_____T/R 5
_____CERTIFIED BY UL FOR DRINKING WATER TREATMENT ADDITIVES WITH RESPECT TO STANDARD NSF 60 ANSI STANDARD B602-95 FOR DRINKING WATER.

Sales Rel. P6208040

Seal #:

C210115

P.O.:

Contract# 0070810249

Mileage 0

605733

[redacted] CONTROL NUMBER

[redacted] SHIPPER [illegible] CARRIER LOGIST CHICAGO IL

[redacted] DRIVER LEE 7850 3197 RECEIVED BY

[redacted] AGENT

[redacted] PERMANENT POST OFFICE ADDRESS [illegible] NICHOLS, FL 33863

[redacted] DESTINATION

Get Carrier's Driver 11/10/07 8:10 AM

BT-13

USSC ACCT # 9902314 10:46 01/25/2007

VISIBLE EMISSION OBSERVATION FORM

Golder Associates

Form Number	U	S	S	C	17	Page 1 of 1
Continued on VEO Form Number	N/A					

Method Used (Circle One): **Method 9** 203A 203B Other: _____

Company Name: U.S. SUGAR CORPORATION

Facility Name: CLEWISTON, FL

Street Address: W.C. OWENS & SR 832

City: CLEWISTON | State: FL | Zip: 33440

PNEUMATIC LOADING VIA RAILCAR

Process: LOADING PEBBLE LIME IN SILO | Unit #: — | Operating Mode: NORMAL

Control Equipment: SILO DUST COLLECTOR STORAGE SILO | Operating Mode: NORMAL

Describe Emission Point: ~8" ROUND HORIZONTAL DUCT VENTING THROUGH EAST SIDE OF DUST COLLECTOR

	Start	End
Height of Emission Point	~65	~65
Height of Emission Point Ref. to Observer	~60	~60
Distance to Emission Point	~200	~200
Direction to Emission Point (Degrees)	~10°	~10°
Vertical Angle to Obs. Pt.	140	140
Direction to Obs. Pt. (Degrees)	~10°	~10°

Distance and Direction to Observation Point from Emission Point: Start SAME POINT End S/P

Describe Emissions: Start NONE APPARENT End N/A

Emission Color: Start N/A End N/A | Water Droplet Plume: Attached ☐ Detached ☐ None ☒

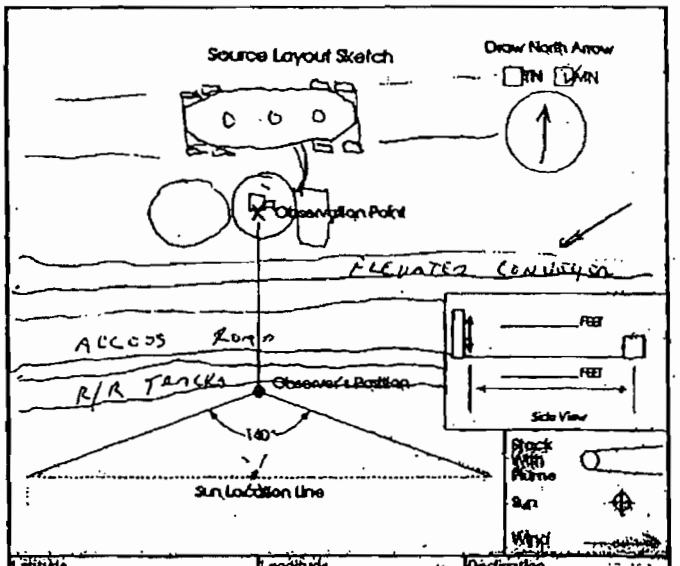
Describe Plume Background: Start SKY End SKY

Background Color: Start BLUE/WHITE End B/W | Sky Conditions: Start BROKEN End SCATTERED

Wind Speed: Start 3-10 End 3-10 | Wind Direction: Start NE End NE

Ambient Temp.: Start 75 End 76 | Wet Bulb Temp.: 62 | RH Percent: 48

Source Layout Sketch — Draw North Arrow: ☐ RN ☒ MN



Latitude: 26° 44' 06" N | Longitude: 80° 56' 19" W | Declination: —

Additional Information: 0510083-034-AC

BT-13 AREA - BULK LIMESTONE

Observation Date	Time Zone	Start Time	End Time
11 JAN 07	EAST	1307	1403

Sec / Min	0	15	30	45	
1	0	0	0	0	
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	
5	0	0	0	0	
6	0	0	0	0	
7	0	0	0	0	
8	0	0	0	0	
9	0	0	0	0	
10	0	0	0	0	
11	0	0	0	0	
12	0	0	0	0	
13	0	0	0	0	CLOUDED UNE STOP @ 1320
14	0	0	0	0	RESUME 1346
15	0	0	0	0	
16	0	0	0	0	
17	0	0	0	0	
18	0	0	0	0	
19	0	0	0	0	
20	0	0	0	0	
21	0	0	0	0	
22	0	0	0	0	
23	0	0	0	0	
24	0	0	0	0	
25	0	0	0	0	
26	0	0	0	0	
27	0	0	0	0	
28	0	0	0	0	
29	0	0	0	0	
30	0	0	0	0	

Observer's Name (Print): MICHAEL J. ARRANTS

Observer's Signature: [signature] | Date: 11 JAN. 07

Organization: GOLDER ASSOCIATES INC

Certified By: ETA | Date: 8 AUG 06

FORMS/VEOF (02/18/97)

START @ 1303

VISIBLE EMISSION OBSERVATION FORM

Golder Associates

Method Used: (Circle One) Method 9 | 203A | 203B | Other: _____

Company Name: U.S. SUGAR CORPORATION

Facility Name: CLEWISTON, FL

Street Address: W.C. OWENS & SR 82

City: CLEWISTON | State: FL | Zip: 33440

LOADING PEBBLE LIME VIA RAILCAR

Process: COLLECTION BIN | Unit #: | Operating Mode:

Control Equipment: COLLECTION BIN DUST COLLECT. | Operating Mode: NORMAL

Describe Emission Point: ~4" ROUND HORIZONTAL DUCT ATTACHED TO MUFFLER TYPE SYSTEM. LOCATED AT N. BASE OF NORTHERN SILO

Height of Emission Point: Start 21 End 21 | Height of Emission Point Ref. to Observer: Start -2 End -2'

Distance to Emission Point: Start ~25' End ~25' | Direction to Emission Point (Degrees): Start 169° End 168°

Vertical Angle to Obs. Pt.: Start -2° End -2° | Direction to Obs. Pt. (Degrees): Start 169° End 168°

Distance and Direction to Observation Point from Emission Point: Start SAME POINT End S/P

Describe Emissions: Start NONE APPARENT End N/A

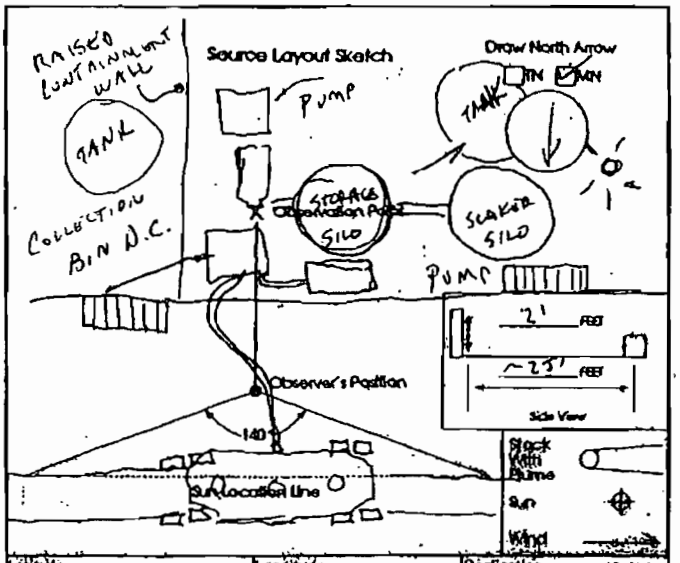
Emission Color: Start N/A End N/A | Water Droplet Plume: Attached ☐ Detached ☐ None ☒

Describe Plume Background: Start MOUTH OF STACK End SAME

Background Color: Start BLACK/DIVERSE End SAME | Sky Conditions: Start BROKEN End SAME

Wind Speed: Start 3-10 End SAME | Wind Direction: Start NE End NE

Ambient Temp.: Start 75 End 75 | Wet Bulb Temp.: 63 | RH Percent: 52



Latitude: 26° 44' 06" N | Longitude: 80° 56' 19" W | Declination:

Additional Information:

FORMS/VEOF (02/18/97)

Form Number	U	S	S	C	18	Page 1 of 1
Continued on VEO Form Number	N/A					

Observation Date	Time Zone	Start Time	End Time
11 JAN 07	EAST	1519	1549

Sec / Min	0	15	30	45
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
7	0	0	0	0
8	0	0	0	0
9	0	0	0	0
10	0	0	0	0
11	0	0	0	0
12	0	0	0	0
13	0	0	0	0
14	0	0	0	0
15	0	0	0	0
16	0	0	0	0
17	0	0	0	0
18	0	0	0	0
19	0	0	0	0
20	0	0	0	0
21	0	0	0	0
22	0	0	0	0
23	0	0	0	0
24	0	0	0	0
25	0	0	0	0
26	0	0	0	0
27	0	0	0	0
28	0	0	0	0
29	0	0	0	0
30	0	0	0	0

Observer's Name (Print): MICHAEL J. ARRANTS

Observer's Signature: [signature] | Date: 11 JAN 07

Organization: GOLDER ASSOCIATES INC

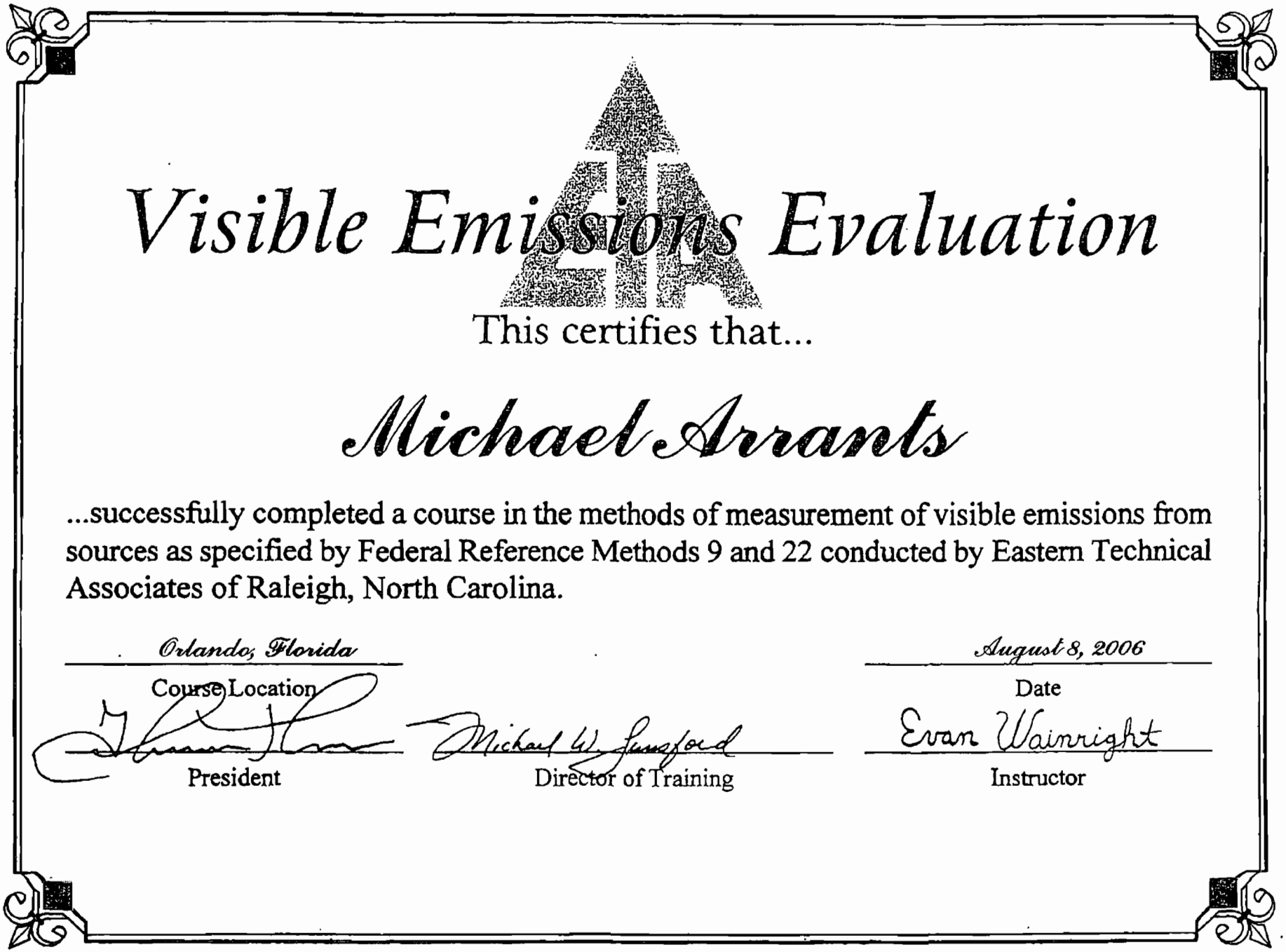
Certified By: ETA | Date: 8 AUG 06

LINE PRESSURE 11 PSI Blower

11 PSI VACUM

DIFFERENTIAL PRESSURE 1"

6 SEC CONTINUOUS PULSE



Visible Emissions Evaluation

This certifies that...

Michael Arrants

...successfully completed a course in the methods of measurement of visible emissions from sources as specified by Federal Reference Methods 9 and 22 conducted by Eastern Technical Associates of Raleigh, North Carolina.

Orlando, Florida		August 8, 2006
Course Location		Date
President	Director of Training	Instructor
	Michael W. Lunsford	Evan Wainright

VISIBLE EMISSIONS EVALUATOR

This is to certify that

Michael Arrants

met the specifications of Federal Reference Method 9 and qualified as a visible emissions evaluator. Maximum deviation on white and black smoke did not exceed 7.5% opacity and no single error exceeding 15% opacity was incurred during the certification test conducted by Eastern Technical Associates of Raleigh, North Carolina. This certificate is valid for six months from date of issue.

342367	*Orlando, Florida*	*August 9, 2006*
Certificate Number	Location	Date of Issue

Thomas Hoke
President

Michael W. Sandford
Director of Training

Golder Associates Inc.

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

March 10, 2008 073-87733

U.S. Sugar Corporation
111 Ponce de Leon Avenue
Clewiston, FL 33440

Attention: Mr. Keith Tingberg

RE: U.S. SUGAR CORPORATION CLEWISTON NEW BT-13 AREA (EU-031), 2008 USEPA METHOD 9 VISIBLE EMISSION TEST RESULTS

Dear Mr. Griffin:

On February 20, 2008, Golder Associates Inc. performed visible emissions (VE) testing on the two lime silos and truck/railcar unloading equipment baghouses located at U.S. Sugar's BT-13 Area, FDEP Permit No. 0510003-034-AC. The VE evaluations were conducted on the baghouse exhausts while the silos were being pneumatically loaded with pebble lime. The slaker silo was tested while being loaded from a commercial carrier truck, and the lime storage silo and product transport system were tested while being loaded from a railcar. The process rates during the loading of the slaker silo, and the storage silo, and product transport system were 19.85, 7.84, and 7.84 tons per hour (tph), respectively. According to the results from these observations, the lime silos and the product transport systems are meeting the specific conditions of its permit, and are therefore in compliance.

Enclosed please find copies of the data sheets, weigh bills, and VE certifications for submittal to the regulatory agency. Should you have any questions concerning these tests please feel free to contact David Buff or me at 352-336-5600.

Sincerely,

GOLDER ASSOCIATES, INC.

Michael J. Arrants
Certified VE Evaluator

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

Cc: GNV DP

Enclosures

USSC2007 BT13 VE

VISIBLE EMISSION OBSERVATION FORM

Golder Associates

Form Number	U S S 1 3	Page A 1 of 1
Continued on VEO Form Number	N/A	

Method Used (Circle One): Method 9 | 203A | 203B | Other:

Company Name: US SUGAR CORPORATION

Facility Name: CLEWISTON

Street Address: W C OWENS AND SR 82

City: CLEWISTON | State: FL | Zip: 33440

LOADING PEBBLE LIME INTO STORAGE SILO

Process: VIA RAILCAR | Unit #: — | Operating Mode: 3.25" H_2O

Control Equipment: SILO DUST COLLECTOR | Operating Mode: NORMAL

Describe Emission Point: ~8" ROUND HORIZONTAL DUCT VENTING THRU E. SIDE OF DUST COLLECT.

Height of Emission Point: Start ~65' End ~65' | Height of Emission Point Rel. to Observer: Start ~60 End ~60

Distance to Emission Point: Start ~225' End ~225' | Direction to Emission Point (Degrees): Start ~96 End ~96

Vertical Angle to Obs. Pt.: Start 16° End 16° | Direction to Obs. Pt. (Degrees): Start 96 End ~96

Distance and Direction to Observation Point from Emission Point: Start SAME POINT End S/P

Describe Emissions: Start NONE APPARENT End N/A

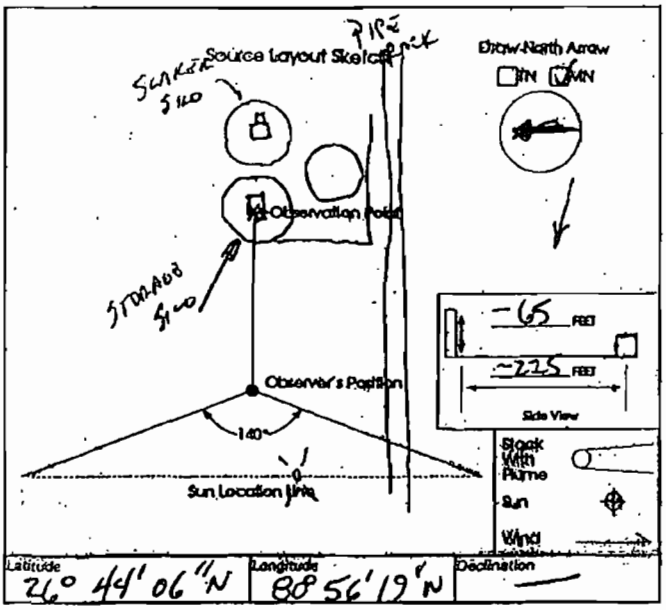
Emission Color: Start N/A End N/A | Water Droplet Plume: Attached ☐ Detached ☐ None ☑

Describe Plume Background: Start SILO DUST COLLECT End SAME

Background Color: Start BLUE End BLUE | Sky Conditions: Start PARTLY CLOUDY End SCATTERED

Wind Speed: Start 3-7 End 3-7 | Wind Direction: Start ESE End ESE

Ambient Temp.: Start 78 End 78 | Wet Bulb Temp.: 65 | RH Percent: 50



Latitude: 26° 44' 06" N | Longitude: 80° 56' 19" W | Declination: —

Additional Information: EU031 7.84 TPH LOADING RATE

Observation Date	Time Zone	Start Time	End Time
20 FEB 08	EAST	1455	1525

Sec / Min	0	15	30	45
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
7	0	0	0	0
8	0	0	0	0
9	0	0	0	0
10	0	0	0	0
11	0	0	0	0
12	0	0	0	0
13	0	0	0	0
14	0	0	0	0
15	0	0	0	0
16	0	0	0	0
17	0	0	0	0
18	0	0	0	0
19	0	0	0	0
20	0	0	0	0
21	0	0	0	0
22	0	0	0	0
23	0	0	0	0
24	0	0	0	0
25	0	0	0	0
26	0	0	0	0
27	0	0	0	0
28	0	0	0	0
29	0	0	0	0
30	0	0	0	0

Observer's Name (Print): MICHAEL J. ARRANTS

Observer's Signature: [signature] | Date: 20 FEB 08

Organization: GOLDER ASSOCIATES INC.

Certified By: EPA | Date: 6 FEB 08

FORMS/VEOF (02/18/97)

13.25" H_2O = 0.12 psig = 14.58 psia

DIFFERENTIAL PRESSURE = 1.0" H_2O

VISIBLE EMISSION OBSERVATION FORM

Golder Associates

Form Number	U	S	S	1	3	Page 1 of 1
Continued on VEO Form Number	N/A					

Method Used (Circle One): Method 9 | 203A | 203B | Other: _____

Company Name: US SUGAR CORPORATION

Facility Name: CLEWISTON

Street Address: W C OWENS AND SR 82

City: CLEWISTON | State: FL | Zip: 33440

LOADING PEBBLE LIME VIA DAILLAR

Process: COLECTION BIN | Unit #: — | Operating Mode: NORMAL

Control Equipment: DUST COLLECTOR | Operating Mode: NORMAL

Describe Emission Point: ~4" ROUND HORIZONTAL DUCT ATTACHED TO MUFFLER TYPE SYS. N.BASE N. SILO

Height of Emission Point: Start 2' End 2' | Height of Emission Point Rel. to Observer: Start -4 End -4

Distance to Emission Point: Start ~20' End ~W | Direction to Emission Point (Degrees): Start 162 End 162

Vertical Angle to Obs. Pt.: Start -11 End -11 | Direction to Obs. Pt. (Degrees): Start 162 End 162

Distance and Direction to Observation Point from Emission Point: Start SAME POINT End S/P

Describe Emissions: Start NO VISIBLE APPARENT End N/A

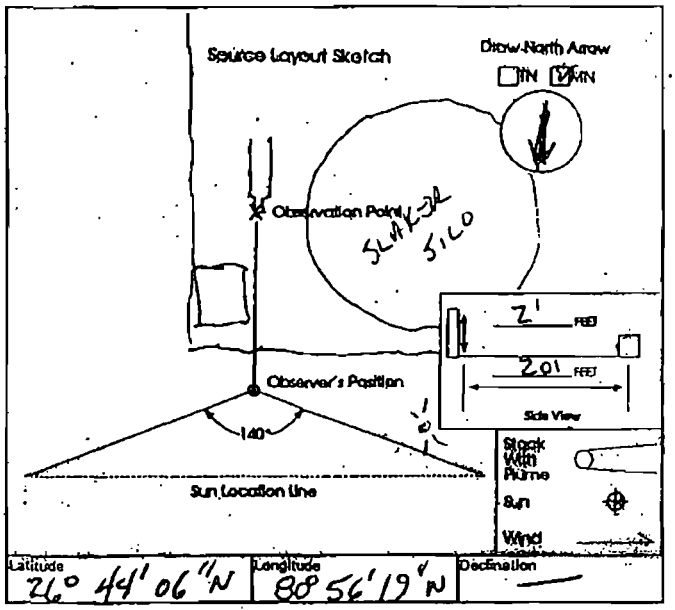
Emission Color: Start N/A End N/A | Water Droplet Plume: Attached ☐ Detached ☐ None ☑

Describe Plume Background: Start MUFFLER STYLE OUTLET End SAME

Background Color: Start BLUE/WHITE End B/W | Sky Conditions: Start SCATTERED End SAME

Wind Speed: Start 3-7 End 3-7 | Wind Direction: Start ENE End ENE

Ambient Temp.: Start 75 End 75 | Wet Bulb Temp.: 60 | RH Percent: 52



Latitude: 26° 44' 06" N | Longitude: 80° 56' 19" W | Declination: —

Additional Information: SUN & IN CORRECT. SHIELDED BY SLAKER SILO EU 031

Observation Date	Time Zone	Start Time	End Time
20 FEB 08	EAST	1547	1617

Sec / Min	0	15	30	45
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
7	0	0	0	0
8	0	0	0	0
9	0	0	0	0
10	0	0	0	0
11	0	0	0	0
12	0	0	0	0
13	0	0	0	0
14	0	0	0	0
15	0	0	0	0
16	0	0	0	0
17	0	0	0	0
18	0	0	0	0
19	0	0	0	0
20	0	0	0	0
21	0	0	0	0
22	0	0	0	0
23	0	0	0	0
24	0	0	0	0
25	0	0	0	0
26	0	0	0	0
27	0	0	0	0
28	0	0	0	0
29	0	0	0	0
30	0	0	0	0

Observer's Name (Print): MICHAEL J. ARRANTS

Observer's Signature: [signature] | Date: 20 FEB 08

Organization: GOLDER ASSOCIATES INC.

Certified By: EPA | Date: 6 FEB 08

FORMS/VEOF (02/18/97)

LOADING RATE = 7.84 TPH

14.58 PSI VAC PRESSURE

1.0" H_2O DIFFERENTIAL PRESSURE

VISIBLE EMISSION OBSERVATION FORM

Golder Associates

Form Number	U	S	1	2	Page 1 of 1
Continued on VEO Form Number	N/A				

Method Used (Circle One): Method 9 | 203A | 203B | Other: _____

Company Name: US SUGAR CORPORATION

Facility Name: CLEWISTON

Street Address: W E OWENS AND SR 82

City: CLEWISTON | State: FL | Zip: 33440

LOADING PEBBLE LIME INTO SILO (SCALE)

Process: VIA CONTAINED TRUCK | Unit #: — | Operating Mode: 19.85 TPH

Control Equipment: SILO DUST COLLECTOR | Operating Mode: NORMAL

Describe Emission Point: ~ 8" ROUND STACK VENTING THRU WEST SIDE OF SILO DUST COLLECTOR

Height of Emission Point: Start ~70' End ~76 | Height of Emission Point Ref. to Observer: Start ~65' End ~75

Distance to Emission Point: Start ~100 End ~100 | Direction to Emission Point (Degrees): Start 320 End 320

Vertical Angle to Obs. Pt.: Start 20° End 20° | Direction to Obs. Pt. (Degrees): Start 320 End 320

Distance and Direction to Observation Point from Emission Point: Start SAME POINT End S/P

Describe Emissions: Start NONE APPARENT End N/A

Emission Color: Start N/A End | Water Droplet Plume: Attached ☐ Detached ☐ None ☒

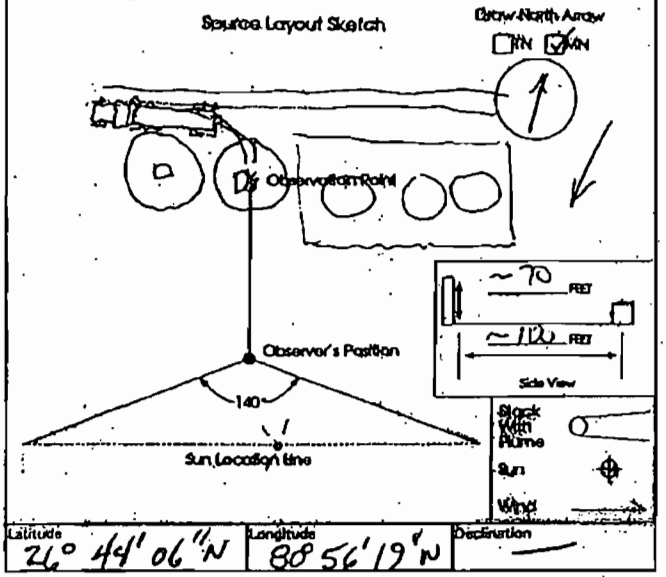
Describe Plume Background: Start SILO DUST COLLECTOR End

Background Color: Start BLUE End BLUE | Sky Conditions: Start CLEAR End SCATTERED

Wind Speed: Start 5-7 End 5-7 | Wind Direction: Start NE End NE

Ambient Temp.: Start 69 End 69 | Wet Bulb Temp.: 60 | RH Percent: 60

Source Layout Sketch — Draw North Arrow: ☐ N ☑ N



Latitude: 26° 44' 06" N | Longitude: 80 56' 19" W | Declination: —

Additional Information: EQ #31

Observation Date	Time Zone	Start Time	End Time
20 FEB 08	EAST	1106	1139

Sec / Min	0	15	30	45	
1	0	0	0	0	STOPPED @ 1106 - 1110
2	0	0	0	0	FOR DISCUSSION
3	0	0	0	0	
4	0	0	0	0	
5	0	0	0	0	
6	0	0	0	0	
7	0	0	0	0	
8	0	0	0	0	
9	0	0	0	0	
10	0	0	0	0	
11	0	0	0	0	
12	0	0	0	0	
13	0	0	0	0	
14	0	0	0	0	
15	0	0	0	0	
16	0	0	0	0	
17	0	0	0	0	
18	0	0	0	0	
19	0	0	0	0	
20	0	0	0	0	
21	0	0	0	0	
22	0	0	0	0	
23	0	0	0	0	
24	0	0	0	0	
25	0	0	0	0	
26	0	0	0	0	
27	0	0	0	0	
28	0	0	0	0	
29	0	0	0	0	
30	0	0	0	0	

Observer's Name (Print): MICHAEL J. ARRANTS

Observer's Signature: [signature] | Date: 20 FEB 08

Organization: GOLDER ASSOCIATES INC.

Certified By: EVR | Date: 6 FEB 08

FORMS/VEOF (02/18/97)

12 psia - BLOWER PRESSURE OF TRUCK

Chemical Lime
A Lhoist Group Company

ORIGINAL - NOT NEGOTIABLE

BILL OF LADING NO. 103745303

DATE 02/20/2008 06:10:27

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading.

SHIPPER CLC Yelvington Terminal

FROM CLC Yelvington Terminal, 708 West McNab Road, POMPANO BEACH, FL

"Customer hereby acknowledges its responsibility to remove the product tendered on the delivery vehicle. Due to the nature of the product and the delivery mode and situs, a quantity of the product may remain in the delivery vehicle following distribution. Customer may remove such quantity, but if not removed, it agrees, by the signature below to pay for the entire quantity indicated hereon which is tendered and thus available for removal."

CONSIGNED TO 123149 US SUGAR CORPORATION

DESTINATION 143684 US SUGAR, CORP-CLEWISTON

COUNTY OF HENDRY

ROUTE CLEWISTON SUGAR MILL WAREHOUSE / SO WC OWEN AVE/CLEWISTON FL 33440

DELIVERY CARRIER 39957 COMMERCIAL CARRIER LOGISTICS LLC
CHICAGO IL

UNIT ID USFLC3418J/5

DESCRIPTION OF ARTICLES, SPECIAL MARKS, AND EXCEPTIONS	*WEIGHT (Subject to Correction)	
14 Hi Cal Quicklime - Pebble - Small	25.480	TON
02/20/2008 06:10:27 Gross weight:	78,280	LB
02/20/2008 06:10:27 Tare weight:	27,320	LB
Net weight:	50,960	LB

25.48T

Customer shipping instructions:
ALYSIS SHEET REQUIRED CERTIFIED ANALYSIS: ____________
____________ SHIP DATE ____________ AVAIL CAO ______ RESIDUE ______ T/A 30 SEC ______ T/A 3
[______ CERTIFIED BY UL FOR DRINKING WATER TREATMENT ADDITIVES WITH RESPECT TO STANDARD
I/NSF 60 MEETS AWWA STANDARD B202-93 FOR DRINKING WATER.

1033 AM = 1.28 Hr
1150 AM = 19.85 TPH
START TIME
END TIME

Subject to Section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The Carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of consignor)

If the charges are to be prepaid, write or stamp here, "To be Prepaid."

Freight prepaid

Sales Ref. # 378170

Seal #:

P.O.: C235230

Contract# 0070010249
Mileage 0

0016 2855417
CONTROL NUMBER

39957 COMMERCIAL CARRIER LOGIST CHICAGO IL
RECEIVED BY

SHIPPER [signature]

DRIVER/AGENT [signature] 2/20/08 930 AM

RECEIVED BY CONSIGNEE

PER

CLC Yelvington Terminal, 708 West McNab Road, POMPANO BEACH, FL 33060

PERMANENT ADDRESS OF SHIPPER

CUSTOMER

Chemical Lime

A Lhoist Group Company

UNIFORM STRAIGHT BILL OF LADING

ORIGINAL - NOT NEGOTIABLE

BILL OF LADING NO. 1036231644

DATE 01/14/2008 14:15:56

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading.

SHIPPER O'Neal Plant

FROM O'Neal Plant, 2885 Highway 31 North, CALERA, AL 35040 Bin 6

"Customer hereby acknowledges its responsibility to remove the product tendered on the delivery vehicle. Due to the nature of the product and the delivery mode and situs, a quantity of the product may remain in the delivery vehicle following distribution. Customer may remove such quantity, but if not removed, it agrees, by the signature below to pay for the entire quantity indicated hereon which is tendered and thus available for removal."

CONSIGNED TO 123149 US SUGAR CORPORATION

DESTINATION 181049 US SUGAR CORP RAIL CLEWISTON COUNTY OF HENDRY

ROUTE CLEWISTON SUGAR MILL / CLEWISTON FL 33440

DELIVERY CARRIER 19145 CSXT N/A 104030 ATLANTA GA UNIT ID

DESCRIPTION OF ARTICLES, SPECIAL MARKS, AND EXCEPTIONS	WEIGHT (Subject to Correction)	
1104 HI Cal Quicklime - Pebble - Seall	100.375 TQH	

Rail Car	Gross	Tare	Net	UoM
GCCX174556	261,350	60,600	200,750	LB

Rail Contract: CSXT 52372
Route: CSXT-SBRNF-SCXF
Customer directions:
Car Loaded to Full Visible Capacity Route: CSXT-SBRNF-SCXF

3 CELLS

$\frac{200,750}{3} = 66,917$ LB

$\frac{66,917 / 2000 \text{ lb/T}}{4.2667} = 7.84$ TPH

START TIME 1444 HRS
STOP TIME 1900 HRS = 4.2667 Hrs

Subject to Section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The Carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

CEW

(Signature of consignor)

If the charges are to be prepaid, write or stamp here, "To be Prepaid."

Freight prepaid

Sales Ref. #: 941152

Seal #: 43661-70

P.O.: C235230

Contract# 0070038272

1981952
CONTROL NUMBER

19145 CSXT N/A 104030
RECEIVED BY

ATLANTA GA

SHIPPER

DRIVER/AGENT

RECEIVED BY CONSIGNEE

PER

PERMANENT ADDRESS OF SHIPPER

O'Neal Plant, 2885 Highway 31 North, CALERA, AL 35040

ORIGINAL

VISIBLE EMISSIONS EVALUATOR

This is to certify that

MICHAEL ARRANTS

met the specifications of Federal Reference Method 9 and qualifies as a visible emissions evaluator. Maximum deviation on white and black smoke did not exceed 7.5% opacity and no single error exceeding 15% opacity was incurred during the certification test conducted by Eastern Technical Associates of Raleigh, NC. This certificate is valid for six months from date of issue and expires on the date below

2/6/2008 359218

CERT NUMBER

ORLANDO, FL ARR214104

SCHOOL LOCATION STUDENT ID NUMBER

EASTERN TECHNICAL ASSOCIATES

MICHAEL ARRANTS

ARR214104 STUDENT ID NUMBER

met the specifications of Federal Reference Method 9 and qualifies as a visible emissions evaluator. Maximum deviation on white and black smoke did not exceed 7.5% opacity and no single error exceeding 15% opacity was incurred during the certification test conducted by Eastern Technical Associates of Raleigh, NC. This certificate is valid for six months from date of issue and expires on the date below

ORLANDO, FL	2/6/2008	359218
SCHOOL LOCATION	DATE OF SCHOOL	CERT NUMBER
ORLF06	8/7/2008	
LAST LECTURE	CERTIFICATION EXP DATE	BEARER

Customer Support
Debbie or Sheila
919-878-3188
www.eta-is-opacity.com

Golder Associates Inc.

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

February 10, 2009 083-87725

U.S. Sugar Corporation
111 Ponce de Leon Avenue
Clewiston, FL 33440

Attention: Mr. Keith Tingberg

RE: U.S. SUGAR CORPORATION CLEWISTON BT-13 AREA (EU-031), 2009 USEPA METHOD 9 VISIBLE EMISSION TEST RESULTS

Dear Mr. Griffin:

On January 8, 2009, Golder Associates Inc. performed visible emissions (VE) testing on the two lime silos and truck/railcar unloading equipment baghouses located at U.S. Sugar's BT-13 Area, FDEP Permit No. 0510003-034-AC. The VE evaluations were conducted on the baghouse exhausts while the silos were being pneumatically loaded with pebble lime via railcar. The process rates during the loading of the slaker silo, the storage silo, and product transport system were each 2.74 tons per hour (tph). According to the results from these observations, the lime silos and the product transport systems are meeting the specific conditions of its permit, and are therefore in compliance. There was a previous Method 9 performed while the slaker silo was being filled via commercial carrier truck. Unfortunately the product was put into the lime storage silo instead of the slaker silo so the test was invalid. However, no emissions were noted from either silo during the testing period.

Enclosed please find copies of the data sheets, weigh bills, and VE certifications for submittal to the regulatory agency. Should you have any questions concerning these tests please feel free to contact David Buff or me at 352-336-5600.

Sincerely,

GOLDER ASSOCIATES, INC.

Michael J. Arrants
Certified VE Evaluator

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

Cc: GNV DP
Enclosures

USSC2009 BT13 VE

VISIBLE EMISSION OBSERVATION FORM

Golder Associates

Form Number	U	S	S	1	6	Page 1 of 1
Continued on VEO Form Number N/A						

Method Used (Circle One): Method 9 | 203A | 203B | Other: _____

Company Name: US SUGAR CORPORATION

Facility Name: CLEWISTON REFINERY

Street Address: WC OWENS AND SR 832

City: CLEWISTON | State: FL | Zip: 33440

LOADING PEBBLE LIME INTO STORAGE SILO

Process	Unit #	Operating Mode
SILO VIA RAILCAR	—	
Control Equipment: SILO DUST COLLECTOR		Operating Mode: NORMAL

Describe Emission Point: ~8" ROUND HORIZONTAL DUCT VENTING THRU W. SIDE OF DUST COLLECTOR

Height of Emission Point		Height of Emission Point Rel. to Observer	
Start ~65'	End ~65	Start ~60	End ~60
Distance to Emission Point		**Direction to Emission Point (Degrees)**	
Start ~100	End ~100	Start ~243	End ~243

Vertical Angle to Obs. Pt.		Direction to Obs. Pt. (Degrees)	
Start ~32	End ~32	Start ~243	End ~243

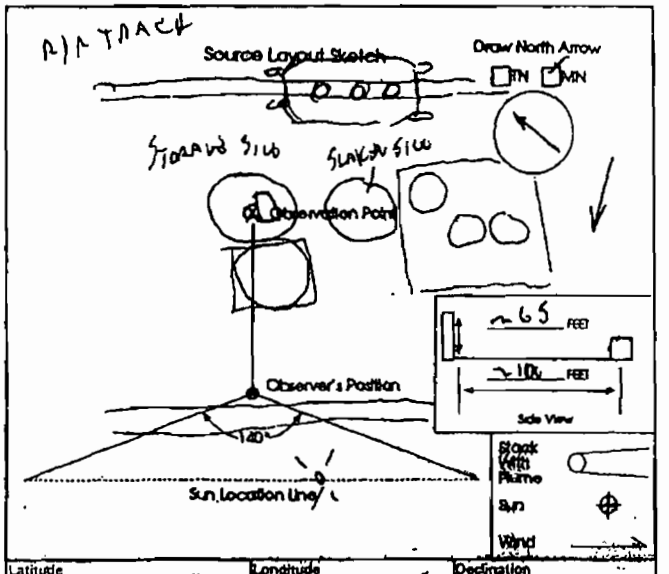
Distance and Direction to Observation Point from Emission Point: Start SAME POINT | End S/P

Describe Emissions: Start NONE APPARENT | End N/A

Emission Color		Water Droplet Plume			
Start N/A	End N/A	Attached ☐	Detached ☐	None ☑	

Describe Plume Background: Start SKY | End SKY

Background Color		Sky Conditions	
Start BLUE	End BLUE	Start CLEAR	End CLEAR
Wind Speed		**Wind Direction**	
Start 3-10	End 3-10	Start NE	End NE
Ambient Temp.		**Wet Bulb Temp.**	**RH Percent**
Start 64	End 69	57	46



Latitude	Longitude	Declination
26° 44' 06" N	80° 56' 19" W	—

Additional Information: START 1000 EU 031

Observation Date	Time Zone	Start Time	End Time
8 JAN 09	EAST	1003	1033

Sec / Min	0	15	30	45
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
7	0	0	0	0
8	0	0	0	0
9	0	0	0	0
10	0	0	0	0
11	0	0	0	0
12	0	0	0	0
13	0	0	0	0
14	0	0	0	0
15	0	0	0	0
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20	0	0	0	0
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24	0	0	0	0
25	0	0	0	0
26	0	0	0	0
27	0	0	0	0
28	0	0	0	0
29	0	0	0	0
30	0	0	0	0

Observer's Name (Print): MICHAEL J ARRANTS

Observer's Signature: [signature] | Date: 8 JAN 08

Organization: GOLDER ASSOCIATES INC.

Certified By: ETA | Date: AUG 08

FORMS/VEOF (02/18/97)

1A6 READING 2.0'1

VISIBLE EMISSION OBSERVATION FORM

Golder Associates

Form Number	U S S 1 7	Page 1 of 1
Continued on VEO Form Number	N/A	

Method Used (Circle One): **Method 9** 203A 203B Other: _____

Company Name: US SUGAR CORPORATION

Facility Name: CLEWISTON REFINERY

Street Address: WC OWENS AND SR 832

City: CLEWISTON | State: FL | Zip: 33440

LOADING PUBLIC LIME SILO RAIL CAR

Process: TRANSFER FROM SILO TO STORAGE SILO | Unit #: — | Operating Mode:

Control Equipment: DUST COLLECTOR | Operating Mode: NORMAL

Describe Emission Point: ~4" ROUND HORIZONTAL DUCT ATTACHED TO MUFFLER TYPE SYSTEM. @ BASE OF E. SILO

Height of Emission Point: Start 0.75' End ~0.75 | Height of Emission Point Rel. to Observer: Start ~4' End ~4'

Distance to Emission Point: Start ~15' End ~16 | Direction to Emission Point (Degrees): Start ~250 End ~250

Vertical Angle to Obs. Pt.: Start -7 End -7 | Direction to Obs. Pt. (Degrees): Start ~250 End ~250

Distance and Direction to Observation Point from Emission Point: Start SAME POINT End S/P

Describe Emissions: Start NONE APPARENT End N/A

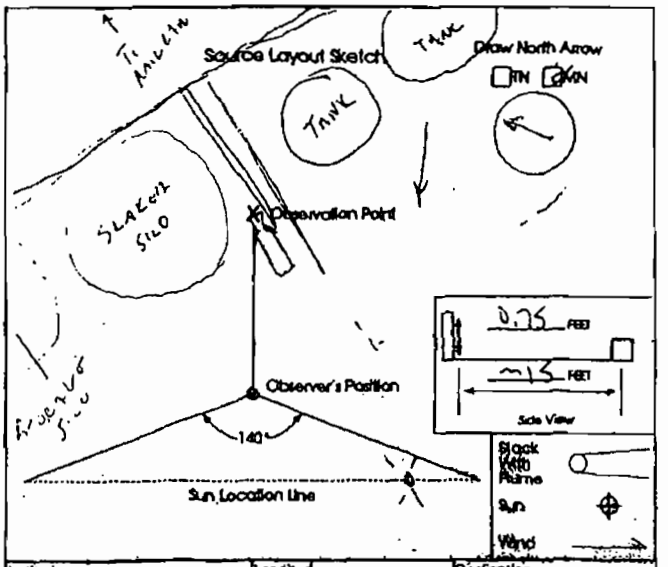
Emission Color: Start N/A End N/A | Water Droplet Plume: Attached ☐ Detached ☐ None ☑

Describe Plume Background: Start RETAINING WALL End SAME

Background Color: Start GRAY End GRAY | Sky Conditions: Start CLEAR End CLEAR

Wind Speed: Start 3-10 End 3-10 | Wind Direction: Start NE End NE

Ambient Temp.: Start 68 End 68 | Wet Bulb Temp.: 58 | RH Percent: 55



Latitude: 26° 44' 06" N | Longitude: 80° 56' 19" W | Declination: —

Additional Information: EU-031

Observation Date	Time Zone	Start Time	End Time
8 JAN 09	EAST	1051	1121

Sec / Min	0	15	30	45	
1	0	0	0	0	
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	
5	0	0	0	0	
6	0	0	0	0	
7	0	0	0	0	
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11	0	0	0	0	
12	0	0	0	0	
13	0	0	0	0	
14	0	0	0	0	
15	0	0	0	0	
16	0	0	0	0	
17	0	0	0	0	
18	0	0	0	0	
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20	0	0	0	0	
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22	0	0	0	0	
23	0	0	0	0	
24	0	0	0	0	
25	0	0	0	0	
26	0	0	0	0	
27	0	0	0	0	
28	0	0	0	0	
29	0	0	0	0	
30	0	0	0	0	

Observer's Name (Print): MICHAEL J. ARRANZ

Observer's Signature: _____ Date: 8 JAN 09

Organization: GOLDER ASSOCIATES INC.

Certified By: ETA Date: AUG 08

FORMS/VEOF (02/18/97)

MAG READING 2.0" H2O

GAGE 4.0 PSIG

VISIBLE EMISSION OBSERVATION FORM

Golder Associates

Method Used (Circle One): Method 9 | 203A | 203B | Other: _____

Company Name	US SUGAR CORPORATION
Facility Name	CLEWISTON REFINERY
Street Address	WC OWENS AND SR 832
City	CLEWISTON VIA RAILCAR
State	FL
Zip	33440

Process: LOADING LIME INTO SILO	Unit #: —	Operating Mode:
Control Equipment: SILO DUST COLLECTOR		Operating Mode: NORMAL

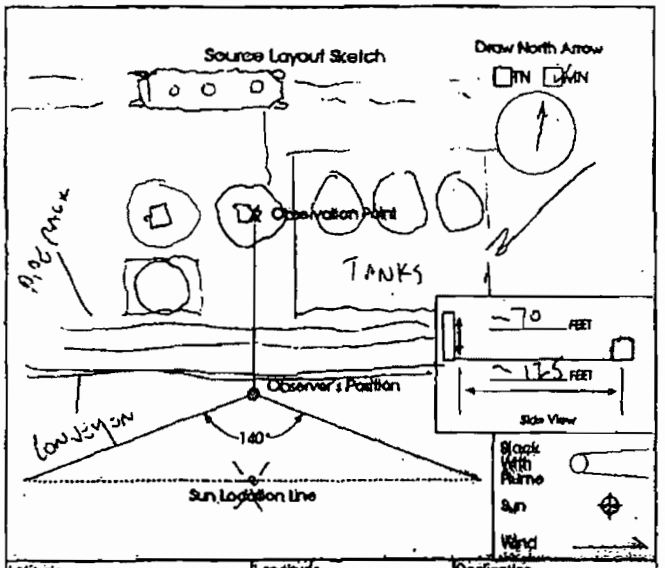
Describe Emission Point: ~8" ROUND STACK VENTING TANK EAST SIDE OF SILO DUST COLLECTOR

Height of Emission Point: Start ~70	End ~70	Height of Emission Point Rel. to Observer: Start ~65	End ~65
Distance to Emission Point: Start ~125	End ~125	Direction to Emission Point (Degrees): Start ~346	End ~346
Vertical Angle to Obs. Pt.: Start 20°	End 20°	Direction to Obs. Pt. (Degrees): Start ~346	End ~346

Distance and Direction to Observation Point from Emission Point: Start SAME POINT End SAME

Describe Emissions: Start NONE APPARENT		End N/A	
Emission Color: Start N/A	End N/A	Water Droplet Plume: Attached ☐ Detached ☐ None ☑	

Describe Plume Background: Start SKY		End SKY	
Background Color: Start BLUE	End BLUE	Sky Conditions: Start CLEAR	End CLEAR
Wind Speed: Start 3-7	End 3-7	Wind Direction: Start NE	End NE
Ambient Temp.: Start 67	End 71	Wet Bulb Temp. 60	RH Percent 60



Latitude: 26° 44' 06" N	Longitude: 80° 56' 19" W	Declination: —

Additional Information: FU 031

FORMS/VEOF (02/18/97)

START 1125

Form Number: US51				Page 1 of 1
Continued on VEO Form Number: N/A				

Observation Date	Time Zone	Start Time	End Time
8 JAN 09	EAST	1136	1206

Sec / Min	0	15	30	45
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
7	0	0	0	0
8	0	0	0	0
9	0	0	0	0
10	0	0	0	0
11	0	0	0	0
12	0	0	0	0
13	0	0	0	0
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21	0	0	0	0
22	0	0	0	0
23	0	0	0	0
24	0	0	0	0
25	0	0	0	0
26	0	0	0	0
27	0	0	0	0
28	0	0	0	0
29	0	0	0	0
30	0	0	0	0

Observer's Name (Print)	MICHAEL J ARRANZ
Observer's Signature	Date: 8 JAN 08
Organization	GOLDER ASSOCIATES INC.
Certified By: ETA	Date: AUG 08

BT-13 RAILCAR / TRUCK UNLOAD - TRANSFER

PRODUCT IS PEBBLE LIME

NET WEIGHT RAILCAR 197,250 lbs

3 CELLS / RAIL CAR ~ 65,750 lbs/cell

UNLOADING TIME FOR ONE CELL ~ 12 HOURS

UNLOADING RATE = 65,750 / 12

RATE = 5,479.17 lbs/hr

= 2.74 TPH

UNITED STATES SUGAR CORP.
111 PONCE DE LEON AVE
CLEWISTON, FLORIDA 33440
FAX# 863-902-3149 PH# 863-983-8121

FACSIMILE TRANSMITTAL SHEET

TO: M. ARRANTS	FROM: K. TINGBERG
COMPANY: GOLDEN ASSOCIATES	DATE: 1/14/09
FAX NUMBER: (352) 336-6603	total no. of pages including cover: 2
PHONE NUMBER:	SENDER'S REFERENCE NUMBER:
RE:	YOUR REFERENCE NUMBER:

☐ URGENT ☑ FOR REVIEW ☐ PLEASE COMMENT ☐ PLEASE REPLY ☐ PLEASE RECYCLE

NOTES/COMMENTS: 1/8/09 RAILCAR UNLOADING TEST

BILL OF LADING FOR RAILCAR # CEFX50807 FOR PEBBLE LIME: NET WT = 197,250 LBS.

3 CELLS/RAILCAR ~ 65,750 LBS/CELL

UNLOADING TIME FOR CELL = 12 HOURS

UNLOADING RATE = 65,750/12 = 5,479 lbs/hr.

Keith Tingberg
Corporate Environmental & Safety Manager

UNITED STATES SUGAR CORPORATION

111 Ponce de Leon Avenue
Clewiston, FL 33440
Tel: 863.902.3186
Fax: 863.902.3149
Mobile: 863.233.1297
ktingberg@ussugar.com

Chemical Lime
A Lhoist Group Company

UNIFORM STRAIGHT BILL OF LADING

ORIGINAL - NOT NEGOTIABLE

BILL OF LADING NO. 104779425

DATE 12/19/2008

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading,

SHIPPER: O'Neal Plant

FROM: O'Neal Plant, 2005 Highway 31 North, CALERA, AL 35040 Via R

"Customer hereby acknowledges its responsibility to remove the product tendered on the delivery vehicle. Due to the nature of the product and the delivery mode and situs, a quantity of the product may remain in the delivery vehicle following distribution. Customer may remove such quantity, but if not removed, it agrees, by the signature below to pay for the entire quantity indicated hereon which is tendered and thus available for removal."

CONSIGNED TO: 123149 US SUGAR CORPORATION

DESTINATION: 101049 US SUGAR CORP RAIL CLEWISTON — COUNTY OF: HENDRY

ROUTE: CLEWISTON SUGAR MILL / CLEWISTON FL 33440

DELIVERY CARRIER: 19145 CSXT N/A 104030 ATLANTA GA — UNIT ID:

DESCRIPTION OF ARTICLES, SPECIAL MARKS, AND EXCEPTIONS			*WEIGHT (Subject to Correction)
104 Hi Cal Quicklime - Pebble - Small			98.625 TON 98,625
Rail Car	Gross	Tare	Net
LCFX39807	261,250	64,000	197,250 LB
Rail Contract: CSXT 52972			
Route: CSXT-SBDF-SCXF			
Customer directions:			
Car Loaded to Full Visible Capacity Route: CSXT-SBDF-SCXF			

Subject to Section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:

The Carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of consignor)

If the charges are to be prepaid, write or stamp here, "To be Prepaid."

Freight prepaid

Sales Ref. #: 123[illegible]

Seal #: 92378-79

P.O.: C235230

Contract: [illegible]

0502 2296368
CONTROL NUMBER

19145 CSXT N/A 104030 ATLANTA GA
RECEIVED BY

SHIPPER

DRIVER/AGENT

RECEIVED BY CONSIGNEE

PER

O'Neal Plant, 2005 Highway 31 North, CALERA, AL 35040
PERMANENT ADDRESS OF SHIPPER

DUPLICATE (2)

VISIBLE EMISSIONS EVALUATOR

This is to certify that

MICHAEL ARRANTS

met the specifications of Federal Reference Method 9 and qualifies as a visible emissions evaluator. Maximum deviation on white and black smoke did not exceed 7.5% opacity and no single error exceeding 15% opacity was incurred during the certification test conducted by Eastern Technical Associates of Raleigh, NC. This certificate is valid for six months from date of issue.

365674
CERT NUMBER

8/13/2008
DATE OF SCHOOL

TAMPA, FL
SCHOOL LOCATION

2/12/2009
CERTIFICATION EXP DATE

ARR214104
STUDENT ID NUMBER

EASTERN TECHNICAL ASSOCIATES

MICHAEL ARRANTS

ARR214104 STUDENT ID NUMBER

met the specifications of Federal Reference Method 9 and qualifies as a visible emissions evaluator. Maximum deviation on white and black smoke did not exceed 7.5% opacity and no single error exceeding 15% opacity was incurred during the certification test conducted by Eastern Technical Associates of Raleigh, NC. This certificate is valid for six months from date of issue and expires on the date below

TAMPA, FL	8/13/2008	365674
SCHOOL LOCATION	DATE OF SCHOOL	CERT NUMBER
ORLF06	2/12/2009	
LAST LECTURE	CERTIFICATION EXP DATE	BEARER

Customer Support
Debbie or Sheila
919-878-3188
www.eta-is-opacity.com

GRANULAR CARBON
REGENERATION FURNACE
EPA METHOD 9 TEST RESULTS

ACE AIR CONSULTING & ENGINEERING, INC.

VISIBLE EMISSION OBSERVATION FORM

START TIME: 1232 END TIME: 1332

OBSERVATION DATE 9/29/05 TIME ZONE EST PAGE 1 OF 1

COMPANY NAME K5 Sugar, Clewiston

SOURCE Granular Carbon Reg. Furnace

ADDRESS

CITY Clewiston STATE FL ZIP

PHONE SOURCE ID NO. EM 17

PROCESS Carbon regen. OPERATING MODE

CONTROL EQUIPMENT OPERATING MODE

DESCRIBE EMISSION POINT Circular metal stack, ~2' diameter, beside tank, shorter than tank

HEIGHT OF EMISSION POINT START ~75' END ~75' HEIGHT RELATIVE TO OBSERVER START ~75' END ~75'

DISTANCE TO EMISSION POINT START ~600' END ~600' DIRECTION TO EM. PT. (DEGREES) START 315° END 315°

VERTICAL ANGLE TO OBS. PT. START 4° END 4° DIRECTION TO OBS. PT. (DEGREES) START 315° END 315°

DISTANCE AND DIRECTION TO OBS. PT. FROM EM. PT. START Same point END Same Point

DESCRIBE EMISSIONS START None observed END None observed

EMISSION COLOR START Invisible END Invisible WATER DROPLET PLUME ATTACHED / DETACHED

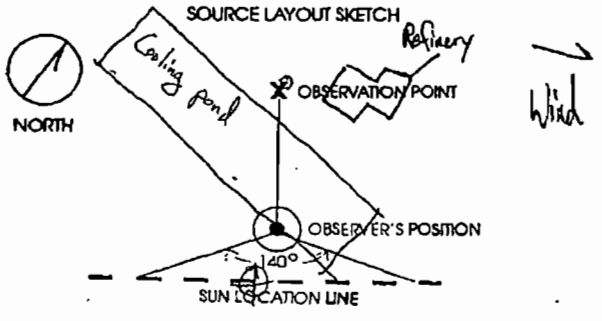
DESCRIBE PLUME BACKGROUND START Sky END Sky

BACKGROUND COLOR START Blue END Blue SKY CONDITIONS START Scattered END Scattered

WIND SPEED START 2-4 END 3-5 WIND DIRECTION START E END E

AMBIENT TEMPERATURE START 93 END 95 WET BULB TEMP. %RH 45

SOURCE LAYOUT SKETCH



= SOURCE WITH PLUME = SUN = WIND

SEC/MIN	0	15	30	45	SEC/MIN	0	15	30	45
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2	0	0	0	0	32	0	0	0	0
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22	0	0	0	0	52	0	0	0	0
23	0	0	0	0	53	0	0	0	0
24	0	0	0	0	54	0	0	0	0
25	0	0	0	0	55	0	0	0	0
26	0	0	0	0	56	0	0	0	0
27	0	0	0	0	57	0	0	0	0
28	0	0	0	0	58	0	0	0	0
29	0	0	0	0	59	0	0	0	0
30	0	0	0	0	60	0	0	0	0

OBSERVER'S NAME (PRINT) Joshua Gelston

OBSERVER'S SIGNATURE [signature] DATE 9/29/05

ORGANIZATION Air Consulting & Engineering

CERTIFIED BY Eastern Technical Assoc. DATE 8/05

COMMENTS Black polarized lenses per certification

JOS 587 6797
295 1134

UNITED STATES SUGAR CORPORATION
REFINERY GRANULAR CARBON FURNACE LOG

DATE: January 20/2000.

DAY	~~0800-1600~~ RUN #1				~~1600-2400~~ RUN #2				~~0000-0800~~ RUN #3			
	AFTERBURNER TEMP (°F) (10 MIN AVG)	VENTURI SCRUBBER ΔP (IN H_2O)	IMPINGENT SCRUBBER ΔP (IN H_2O)	OPERATOR SIGNATURE	AFTERBURNER TEMP (°F) (10 MIN AVG)	VENTURI SCRUBBER ΔP (IN H_2O)	IMPINGENT SCRUBBER ΔP (IN H_2O)	OPERATOR SIGNATURE	AFTERBURNER TEMP (°F) (10 MIN AVG)	VENTURI SCRUBBER ΔP (IN H_2O)	IMPINGENT SCRUBBER ΔP (IN H_2O)	OPERATOR SIGNATURE
9:05	1304	21	7									
9:20	1286	20	7									
9:35	1305	21	6									
9:50	1283	20	7									
10:05	1303	20	7									
6												
7												
10:05					1288	21	7					
11:40					1295	20	7					
11:25					1296	20	7					
11:40					1307	20	7					
11:55					1340	20	6					
13												
14												
12:40									1323	20	6	
12:55									1280	20	6	
13:10									1307	20	6	
13:25									1271	20	6	
13:40									1279	20	7	
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

VISIBLE EMISSIONS EVALUATOR

This is to certify that

Joshua Gelston

met the specifications of Federal Reference Method 9 and qualified as a visible emissions evaluator. Maximum deviation on white and black smoke did not exceed 7.5% opacity and no single error exceeding 15% opacity was incurred during the certification test conducted by Eastern Technical Associates of Raleigh, North Carolina. This certificate is valid for six months from date of Issue.

331479 — Certificate Number

Orlando, Florida — Location

August 11, 2005 — Date of Issue

Thomas Hoel — President

Michael W. Sandford — Director of Training

ACE AIR CONSULTING & ENGINEERING, INC.

VISIBLE EMISSION OBSERVATION FORM

START TIME: 0910 END TIME: 1010

OBSERVATION DATE: 1-20-00 TIME ZONE: PAGE 1 OF 1

COMPANY NAME: USSC - Clewiston

SOURCE: Granular Carbon Regeneration Furnace

ADDRESS:

CITY: Clewiston STATE: FL. ZIP:

PHONE: SOURCE ID NO.:

PROCESS: Furnace OPERATING MODE:

CONTROL EQUIPMENT: OPERATING MODE:

DESCRIBE EMISSION POINT: 25.25" diameter Metal Stack

HEIGHT OF EMISSION POINT: START ~50' END SAME

HEIGHT RELATIVE TO OBSERVER: START ~50' END SAME

DISTANCE TO EMISSION POINT: START ~110' END SAME

DIRECTION TO EM. PT. (DEGREES): START ~310° END SAME

VERTICAL ANGLE TO OBS. PT.: START ~30° END SAME

DIRECTION TO OBS. PT. (DEGREES): START ~310° END SAME

DISTANCE AND DIRECTION TO OBS. PT. FROM EM. PT.: START ~12" above exit END SAME

DESCRIBE EMISSIONS: START Lofting END SAME

EMISSION COLOR: START LT BRN END

WATER DROPLET PLUME: (NONE) ATTACHED DETACHED

DESCRIBE PLUME BACKGROUND: START Clouds END Sky

BACKGROUND COLOR: START Grey END Blue

SKY CONDITIONS: START Sc. Clds END SAME

WIND SPEED: START 5-8 END SAME

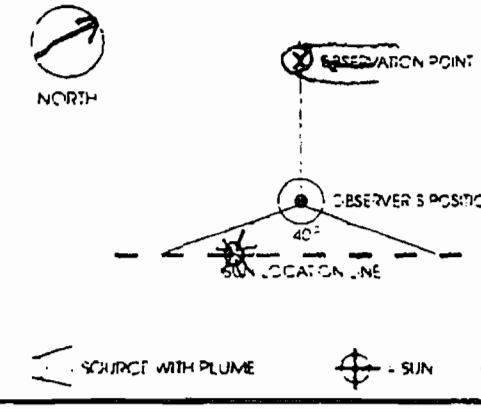
WIND DIRECTION: START WSW END SAME

AMBIENT TEMPERATURE: START 60 END 62

WET BULB TEMP.: 50

%RH:

SOURCE LAYOUT SKETCH



SEC / MIN	0	15	30	45	SEC / MIN	0	15	30	45
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2	10	5	10	10	32	10	10	15	15
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4	15	10	10	10	34	10	10	10	5
5	10	10	10	10	35	5	10	10	10
6	10	10	10	5	36	10	10	10	15
7	5	10	10	10	37	15	10	10	10
8	10	10	10	10	38	10	10	10	10
9	15	15	10	10	39	10	15	15	10
10	10	10	10	10	40	10	10	10	10
11	5	5	10	10	41	10	10	15	15
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24	5	5	10	10	54	10	10	10	10
25	10	10	10	10	55	10	15	10	10
26	5	5	10	5	56	10	10	10	15
27	10	10	10	10	57	10	10	10	10
28	10	10	10	10	58	10	10	15	15
29	10	10	10	10	59	15	10	10	10
30	10	10	5	5	60	10	10	15	15

OBSERVER'S NAME (PRINT): CHARLES RESHARD

OBSERVER'S SIGNATURE: Charles Reshard DATE: 1-20-00

ORGANIZATION: Air Consulting & Eng.

CERTIFIED BY: E.T.A. DATE: 12-99

COMMENTS:

UNITED STATES SUGAR CORPORATION
REFINERY GRANULAR CARBON FURNACE LOG

DATE: 9/1/05

DAY	0800-1600				1600-2400				0000-0800			
	AFTERBURNER TEMP. (°F) (10 MIN AVG.)	VENTURI SCRUBBER ΔP (IN. H2O)	IMPINGENT SCRUBBER ΔP (IN. H2O)	OPERATOR SIGNATURE	AFTERBURNER TEMP. (°F) (10 MIN AVG.)	VENTURI SCRUBBER ΔP (IN. H2O)	IMPINGENT SCRUBBER ΔP (IN. H2O)	OPERATOR SIGNATURE	AFTERBURNER TEMP. (°F) (10 MIN AVG.)	VENTURI SCRUBBER ΔP (IN. H2O)	IMPINGENT SCRUBBER ΔP (IN. H2O)	OPERATOR SIGNATURE
1	1352°F	20.00 W.C	6.00 W.C		1337	20.00 W.C	4.00 W.C		1350°F	20.00 W.C	6.00 W.C	
2	1287°F	20.00 W.C	6.00 W.C		1321°F	20.00 W.C	4.00 W.C		1347°F	20.00 W.C	6.00 W.C	
3	1229°F	20.00 W.C	6.00 W.C		1281°F	20.00 W.C	6.00 W.C		1301°F	20.00 W.C	6.00 W.C	
4	1267°F	20.00 W.C	6.00 W.C		1074°F	20.00 W.C	6.00 W.C		1105°F	20.00 W.C	6.00 W.C	
5	1245°F	20.00 W.C	5.00 W.C		1320°F	20.00 W.C	6.00 W.C		1358°F	20.00 W.C	6.00 W.C	
6	1297°F	20.00 W.C	5.00 W.C		1259°F	20.00 W.C	5.00 W.C		1339°F	20.00 W.C	6.00 W.C	
7	1411°F	20.00 W.C	5.00 W.C		1439°F	20.00 W.C	5.00 W.C		1299°F	20.00 W.C	5.00 W.C	
8	1405	20.00 W.C	5.00 W.C		1322°F	20.00 W.C	5.00 W.C		1299°F	20.00 W.C	5.00 W.C	
9	1275°F	20.00 W.C	5.00 W.C		1300°F	20.00 W.C	5.00 W.C		1301°F	20.00 W.C	6.00 W.C	
10	1291°F	20.00 W.C	5.00 W.C		1128°F	20.00 W.C	6.00 W.C		1239°F	20.00 W.C	6.00 W.C	
11	1417°F	20.00 W.C	5.00 W.C		1336°F	20.00 W.C	5.00 W.C		1288°F	20.00 W.C	6.00 W.C	
12	~~1237°F~~ 1150°	20.00 W.C	5.00 W.C		1437°F	20.00 W.C	7.00 W.C		1191°F	20.00 W.C	6.00 W.C	
13	1272°F	20.00 W.C	5.00 W.C		1511°F	20.00 W.C	5.00 W.C		1234°F	20.00 W.C	6.00 W.C	
14	1360°F	20.00 W.C	6.00 W.C		1330°F	20.00 W.C	8.00 W.C		1330°F	20.00 W.C	7.00 W.C	
15	1310°F	20.00 W.C	5.00 W.C		1300°F	20.00 W.C	8.00 W.C		1275°F	20.00 W.C	5.00 W.C	
16	1287°F	20.00 W.C	8.00 W.C		1399°F	20.00 W.C	8.00 W.C		1404°F	20.00 W.C	9.00 W.C	
17	1452°F	20.00 W.C	10.00 W.C		1425°F	20.00 W.C	9.00 W.C		1386°F	20.00 W.C	8.00 W.C	
18	1214°F	20.00 W.C	10.00 W.C		1454°F	20.00 W.C	10.00 W.C		1435°F	20.00 W.C	10.00 W.C	
19	1421°F	20.00 W.C	10.00 W.C		1463°F	20.00 W.C	8.00 W.C		1416°F	20.00 W.C	9.00 W.C	
20	1341°F	20.00 W.C	10.00 W.C		1418°F	20.00 W.C	9.00 W.C		1340°F	20.00 W.C	9.00 W.C	
21	1347°F	20.00 W.C	9.00 W.C		1891°F	20.00 W.C	8.00 W.C		1325°F	20.00 W.C	9.00 W.C	
22	1443°F	20.00 W.C	9.00 W.C		1440°F	20.00 W.C	9.00 W.C		1329	20.00 W.C	8.00 W.C	
23	1317°F	20.00 W.C	8.00 W.C		1358°F	20.00 W.C	8.00 W.C		1363°F	20.00 W.C	9.00 W.C	
24	1348°F	20.00 W.C	8.00 W.C		1310°F	20.00 W.C	10.00 W.C		1358°F	20.00 W.C	8.00 W.C	
25	1278°F	20.00 W.C	8.00 W.C		1297°F	20.00 W.C	9.00 W.C		1324°F	20.00 W.C	10.00 W.C	
26	1,336°F	20.00 W.C	9.00 W.C		1318°F	20.00 W.C	10.00 W.C		1149°F	20.00 W.C	10.00 W.C	
27	1,130°F	20.00 W.C	9.00 W.C		1231°F	20.00 W.C	10.00 W.C		1228°F	20.00 W.C	11.00 W.C	
28	1300°F	20.00 W.C	9.00 W.C		1201°F	20.00 W.C	9.00 W.C		1221°F	20.00 W.C	9.00 W.C	
29	1297°F	20.00 W.C	9.00 W.C		1313°F	20.00 W.C	9.00 W.C		1207°F	20.00 W.C	10.00 W.C	
30	1,306°F	20.00 W.C	10.00 W.C		1269	20.00 W.C	9.00 W.C		1272°F	20.00 W.C	9.00 W.C	
31												

VISIBLE EMISSIONS EVALUATOR

This is to certify that

Charles Reshard

met the specifications of Federal Reference Method 9 and qualified as a visible emissions evaluator. Maximum deviation on white and black smoke did not exceed 7.5% opacity and no single error exceeding 15% opacity was incurred during the certification test conducted by Eastern Technical Associates of Raleigh, North Carolina. This certificate is valid for six months from date of issue.

274956	*Jacksonville, Florida*	*December 9, 1999*
Certificate Number	Location	Date of Issue

President

Director of Training

VISIBLE EMISSION OBSERVATION FORM

Golder Associates

Form Number	U	S	S	1	2	Page 1 of 1
Continued on VEO Form Number N/A						

Method Used (Circle One): **Method 9** 203A 203B Other:

Company Name: US SUGAR CORPORATION

Facility Name: CLEWISTON REFINERY

Street Address: WC OWENS AND SR 82

City: CLEWISTON | State: FL | Zip: 33440

Process: CANNOCAR CARBON FURN | Unit #: 1 | Operating Mode: 1264°F

Control Equipment: WATER SCRUBBER | Operating Mode: NORMAL

Describe Emission Point: ~15' ROUND STEEL STACK LOCATED @ SW CORNER OF PROCESS BLDG

Height of Emission Point: Start ~75 End ~75 | Height of Emission Point Ref. to Observer: Start ~50' End ~50

Distance to Emission Point: Start ~800 End ~800 | Direction to Emission Point (Degrees): Start ~31° End ~31

Vertical Angle to Obs. Pt.: Start ~5° End ~5° | Direction to Obs. Pt. (Degrees): Start ~31 End ~31

Distance and Direction to Observation Point from Emission Point: Start SAME POINT End S/P

Describe Emissions: Start NONE APPARENT End N/A

Emission Color: Start N/A End N/A | Water Droplet Plume: Attached ☐ Detached ☐ None ☐

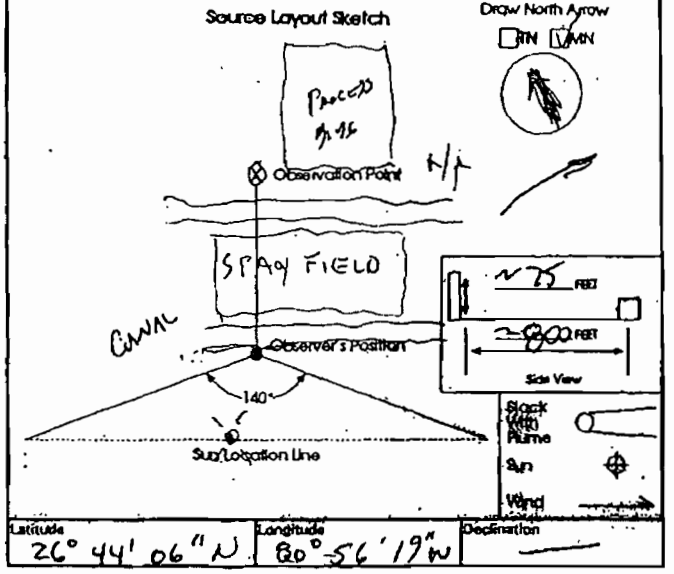
Describe Plume Background: Start PROCESS BLDG End SAME

Background Color: Start GRAY End GRAY | Sky Conditions: Start BROKEN End BROKEN

Wind Speed: Start 10-25 End 10-25 | Wind Direction: Start SW End SW

Ambient Temp.: Start 85 End 85 | Wet Bulb Temp. 73 | RH Percent 57

Source Layout Sketch



Latitude: 26° 44' 06" N | Longitude: 80° 56' 19" W | Declination: —

Additional Information: EXIT TEMP 254° F; OP TEMP 1264° F

Observation Date	Time Zone	Start Time	End Time
7 JAN 09	EAST	1405	1435

Sec / Min	0	15	30	45	
1	0	0	0	0	
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	
5	0	0	0	0	
6	0	0	0	0	
7	0	0	0	0	
8	0	0	0	0	
9	0	0	0	0	
10	0	0	0	0	
11	0	0	0	0	
12	0	0	0	0	
13	0	0	0	0	
14	0	0	0	0	
15	0	0	0	0	
16	0	0	0	0	
17	0	0	0	0	
18	0	0	0	0	
19	0	0	0	0	
20	0	0	0	0	
21	0	0	0	0	
22	0	0	0	0	
23	0	0	0	0	
24	0	0	0	0	SPRINKLING
25	0	0	0	0	
26	0	0	0	0	
27	0	0	0	0	
28	0	0	0	0	
29	0	0	0	0	
30	0	0	0	0	

Observer's Name (Print): MICHAEL J. ARRANTS

Observer's Signature: [signature] Date: 7 JAN 09

Organization: GOLDER ASSOCIATES INC.

Certified By: ETA Date: AUG 08

FORMS/VEOF (02/18/97)

COPY

UNITED STATES SUGAR CORPORATION
REFINERY GRANULAR CARBON FURNACE LOG

DATE: 1/1/09

DAY	0800-1600 AFTERBURNER TEMP. (°F) (10 MIN AVG.)	VENTURI SCRUBBER ΔP (IN. H_2O)	IMPINGENT SCRUBBER ΔP (IN. H_2O)	OPERATOR SIGNATURE	1600-2400 AFTERBURNER TEMP. (°F) (10 MIN AVG.)	VENTURI SCRUBBER ΔP (IN. H_2O)	IMPINGENT SCRUBBER ΔP (IN. H_2O)	OPERATOR SIGNATURE	0000-0800 AFTERBURNER TEMP. (°F) (10 MIN AVG.)	VENTURI SCRUBBER ΔP (IN. H_2O)	IMPINGENT SCRUBBER ΔP (IN. H_2O)	OPERATOR SIGNATURE
1	1276	20.00	600	[illegible]	1290°F	20.00wc	5.00 wc	J Aguirre	1300°F	20.00in	4.00in	David Hubbard
2	1294	2000	600	[illegible]	1293°F	20.00 wc	5.00 wc	J Aguirre	1297°F	20.00wc	4.00wc	[illegible]
3	1306	2000	500	[illegible]	1300°F	20.00wc	4.00 wc	J Aguirre	1281°F	20.00wc	4.00wc	[illegible]
4	1305	2000	400	[illegible]	1288°F	20.00wc	4.00 wc	J A	1294°F	20.00wc	4.00wc	[illegible]
5	1298°F	20.00in	5.00in	David Hubbard	1289°F	20.00wc	4.00wc	J A	1301°F	20.00wc	4.00wc	[illegible]
6	1296°F	20.00in	5.00in	David Hubbard	1298°F	20.00wc	5.00wc	J A	1266°F	20.00wc	5.00wc	[illegible]
7	1291°F	20.00in	5.00in	David Hubbard	1306	20.00	400	[illegible]	1280°F	20.00wc	6.00wc	[illegible]
8	1300°F	20.00in	5.00in	David Hubbard	1295	20.00	400	[illegible]	1277°F	20.00wc	5.00wc	[illegible]
9	1302°F	20.00in	5.00in	David Hubbard	1321	2000	400	[illegible]	1276°F	20.00wc	5.00wc	[illegible]
10	1315°F	20.00in	4.00wc	David Hubbard	1304	2000	400	[illegible]	1317°F	20.00wc	5.00wc	[illegible]
11	1309°F	20.00wc	4.00wc	David Hubbard	1238	2000	400	[illegible]	1250°F	20.00 wc	5.00wc	[illegible]
12	1300.0°F	20.00wc	4.00wc	[illegible]	1307	2000	400	[illegible]	1303°F	20.00 wc	5.00wc	J Aguirre
13	1271°F	20.00wc	5.00wc	[illegible]	1296	2000	500	[illegible]	1302°F	20.00wc	4.00wc	[illegible]
14	1281°F	20.00wc	4.00 wc	[illegible]	1245°F	20.00wc	5.00wc	David Hubbard	1313°F	20.00wc	5.00wc	[illegible]
15	1336°F	20.00wc	4.00wc	[illegible]	1299°F	20.00wc	5.00wc	David Hubbard	1250°F	20.00 wc	5.00wc	[illegible]
16	1297°F	20.00wc	4.00 wc	[illegible]	1300°F	20.00wc	5.00wc	David Hubbard	1296	2000	400	[illegible]
17	1301°F	20.00wc	4.00wc	[illegible]	1304°F	20.00wc	5.00wc	David Hubbard	1305	2000	400	[illegible]
18	1318°F	20.00wc	4.00wc	[illegible]	1288°F	20.00wc	4.00wc	David Hubbard	1295	2000	400	[illegible]
19	1299°F	20.00wc	4.00 wc	[illegible]	1285°F	20.00wc	4.00wc	David Hubbard	1263	2060	500	[illegible]
20	1280°F	20.00 wc	4.00 wc	[illegible]	1303°F	20.00wc	4.00wc	David Hubbard	1307	20.00	400	[illegible]
21	1298°F	20.00wc	6.00wc	J Aguirre	1248°F	20.00wc	6.00wc	[illegible]	1291	20.00	400	[illegible]
22	1299°F	20.00wc	4.00wc	J Aguirre	1306°F	20.00wc	4.00wc	[illegible]	1289	2000	500	[illegible]
23	1292°F	20.00wc	4.00wc	J Aguirre	1295°F	20.00wc	4.00wc	[illegible]	1286°F	20.00wc	5.00wc	David Hubbard
24	1295°F	20.00wc	4.00wc	J Aguirre	1307	20.00wc	4.00wc	[illegible]	1303°F	20.00wc	4.00wc	David Hubbard
25	1265°F	20.00wc	4.00wc	J Aguirre	1300°F	20.00wc	4.00wc	[illegible]	1302°F	20.00wc	4.00wc	David Hubbard
26	1333	20.00	400	[illegible]	1287°F	20.00wc	4.00wc	[illegible]	1299°F	20.00wc	4.00wc	David Hubbard
27	1307	20.00	400	[illegible]	1302°F	20.00wc	4.00wc	[illegible]	1241°F	20.00wc	3.00wc	David Hubbard
28	1291	2000	400	[illegible]	1295°F	20.00wc	4.00wc	J Aguirre	1293°F	20.00wc	4.00wc	David Hubbard
29	1293	2000	400	[illegible]	1305°F	20.00wc	4.00wc	J Aguirre	1299°F	20.00wc	4.00wc	David Hubbard
30	1235	2000	500	[illegible]	1309°F	20.00wc	4.00wc	[illegible]	1289°F	20.00wc	4.00wc	[illegible]
31	1296	2000	400	[illegible]	1293°F	20.00wc	4.00wc	[illegible]	1302°F	20.00wc	4.00wc	[illegible]

VISIBLE EMISSION OBSERVATION FORM

Golder Associates

Form Number	Page	of
U S S 1 3	1	1

Continued on VEO Form Number: N/A

Method Used (Circle One): Method 9 | 203A | 203B | Other:

Company Name: US SUGAR CORPORATION

Facility Name: CLEWISTON

Street Address: W C OWENS AND SR 82

City: CLEWISTON | State: FL | Zip: 33440

Process: GRANULAR CARBON FURN. | Unit #: — | Operating Mode: ~1000

Control Equipment: WATER SCRUBBER* | Operating Mode: NORMAL

Describe Emission Point: ~15" ROUND STEEL STACK LOCATED AT SW CORNER OF PROCESS BUILDING

Height of Emission Point: Start ~70' End ~70' | Height of Emission Point Ref. to Observer: Start ~65 End ~65

Distance to Emission Point: Start ~140 End ~140 | Direction to Emission Point (Degrees): Start 358 End 358

Vertical Angle to Obs. Pt.: Start 24 End 24° | Direction to Obs. Pt. (Degrees): Start 352 End 352

Distance and Direction to Observation Point from Emission Point: Start ~20 WEST End ~60' WEST

Describe Emissions: Start STEAM WHITE End PUFFS

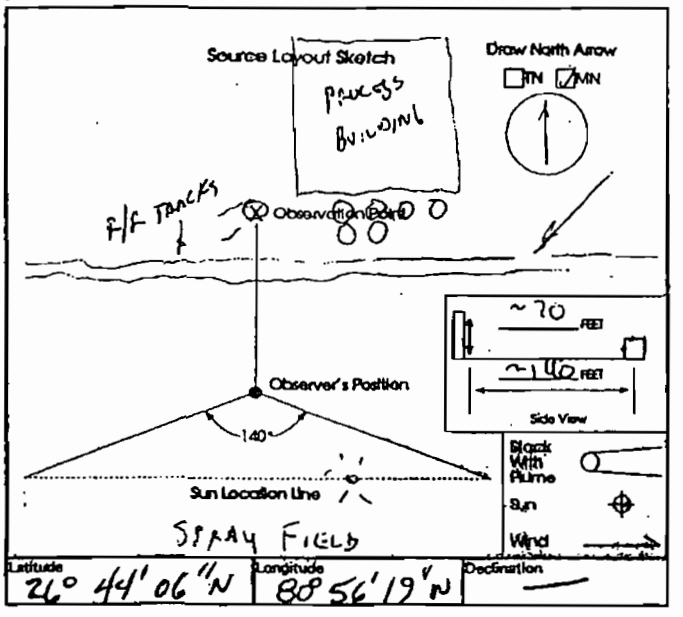
Emission Color: Start N/A End WHITE | Water Droplet Plume: Attached ☑ Detached ☐ None ☐

Describe Plume Background: Start SKY End SKY

Background Color: Start BLUE End B/W/G | Sky Conditions: Start SCATTERED End OVERCAST

Wind Speed: Start 4-9 End 4-10 | Wind Direction: Start NE End NE

Ambient Temp.: Start 72 End 73 | Wet Bulb Temp.: 65 | RH Percent: 82



Latitude: 26° 44' 06" N | Longitude: 80° 56' 19" W | Declination: —

Additional Information: EQ-017

EMISSIONS APPEAR TO BE STEAM BUT CARRYING BEYOND WHERE MOST STEAM CONDENSING OUT.

6 MINUTE AVERAGE (HIGH) < 2% OPACITY

* PER BUFF

Observation Date	Time Zone	Start Time	End Time
21 FEB 08	EAST	0820	0850

Sec / Min	0	15	30	45
1	0	10	0	0
2	0	0	0	0
3	0	0	10	0
4	0	0	0	0
5	0	10	0	0
6	0	0	0	0
7	0	0	10	0
8	0	0	0	0
9	0	0	0	0
10	5	0	0	0
11	0	0	0	0
12	0	0	0	10
13	0	5	0	0
14	0	0	0	10
15	0	0	0	0
16	10	0	0	10
17	0	0	0	0
18	0	5	0	0
19	0	0	5	0
20	0	5	0	0
21	0	0	10	0
22	0	10	0	0
23	0	0	0	0
24	5	0	0	0
25	0	0	0	0
26	0	0	0	0
27	0	0	0	0
28	0	0	0	5
29	0	0	0	0
30	0	0	0	0

Observer's Name (Print): MICHAEL J. ARRANTS

Observer's Signature: [signature] | Date: 21 FEB 08

Organization: GOLDER ASSOCIATES INC.

Certified By: EVA | Date: 6 FEB 08

UNITED STATES SUGAR CORPORATION
REFINERY GRANULAR CARBON FURNACE LOG

DATE: February 08

DAY	0800-1600 AFTERBURNER TEMP. (°F) (10 MIN AVG.)	VENTURI SCRUBBER ΔP (IN. H_2O)	IMPINGENT SCRUBBER ΔP (IN. H_2O)	OPERATOR SIGNATURE	1600-2400 AFTERBURNER TEMP (°F) (10 MIN AVG.)	VENTURI SCRUBBER ΔP (IN. H_2O)	IMPINGENT SCRUBBER ΔP (IN. H_2O)	OPERATOR SIGNATURE	0000-0800 AFTERBURNER TEMP. (°F) (10 MIN AVG.)	VENTURI SCRUBBER ΔP (IN. H_2O)	IMPINGENT SCRUBBER ΔP (IN. H_2O)	OPERATOR SIGNATURE
1	1366 °F	20.00 WC	7.00 WC	[signature]	1505 °F	20.00 WC	7.00 WC	[signature]	1356 °F	20.00 WC	7.00 WC	[signature]
2	1439 °F	20.00 WC	7.00 WC	[signature]	1455 °F	20.00 WC	7.00 WC	[signature]	1410 °F	20.00 WC	7.00 WC	[signature]
3	1295 °F	20.00 WC	7.00 WC	[signature]	1320 °F	20.00 WC	7.00 WC	[signature]	1366 °F	20.00 WC	7.00 WC	[signature]
4	1408 °F	20.00 WC	8.00 WC	[signature]	1412 °F	20.00 WC	8.00 WC	[signature]	1397 °F	20.00 WC	7.00 WC	[signature]
5	1329 °F	20.00 WC	8.00 WC	[signature]	1295 °F	20.00 WC	7.00 WC	[signature]	1339 °F	20.00 WC	7.00 WC	[signature]
6	1405 °F	20.00 WC	8.00 WC	[signature]	1308 °F	20.00 WC	8.00 WC	[signature]	1377 °F	20.00 WC	7.00 WC	[signature]
7	1399 °F	20.00 WC	8.00 WC	[signature]	1480 °F	20.00 WC	8.00 WC	[signature]	1476 °F	20.00 WC	7.00 WC	[signature]
8	1435 °F	20.00 WC	8.00 WC	[signature]	1348 °F	20.00 WC	7.00 WC	[signature]	1355 °F	20.00 WC	7.00 WC	[signature]
9	1519 °F	20.00 WC	8.00 WC	[signature]	1290 °F	20.00 WC	7.00 WC	[signature]	1455 °F	20.00 WC	7.00 WC	[signature]
10	1400 °F	20.00 WC	8.00 WC	[signature]	1503 °F	20.00 WC	7.00 WC	[signature]	1375 °F	20.00 WC	7.00 WC	[signature]
11	1318 °F	20.00 WC	7.00 WC	[signature]	1325 °F	20.00 WC	7.00 WC	[signature]	1425 °F	20." WC	7.00 WC	[signature]
12	1350 °F	20.00 WC	7.00 WC	[signature]	1458 °F	20.00 WC	7.00 WC	[signature]	1339 °F	20." WC	7." WC	[signature]
13	1366 °F	20.00 WC	7.00 WC	[signature]	1439 °F	20.00 WC	7.00 WC	[signature]	1305 °F	20." WC	7.00 WC	[signature]
14	1398 °F	20.00 WC	7.00 WC	[signature]	1402 °F	20.00 WC	7.00 WC	[signature]	1415 °F	20." WC	7." WC	[signature]
15	1369 °F	20.00 WC	8.00 WC	[signature]	1435 °F	20.00 WC	7.00 WC	[signature]	1540 °F	20.00 WC	8.00 WC	[signature]
16	1372 °F	20.00 WC	8.00 WC	[signature]	1370 °F	20.00 WC	7.00 WC	[signature]	1249 °F	20.00 WC	8.00 WC	[signature]
17	1492 °F	20.00 WC	8.00 WC	[signature]	1450 °F	20.00 WC	7.00 WC	[signature]	1420 °F	20.00 WC	7.00 WC	[signature]
18	1375 °F	20.00 WC	7.00 WC	[signature]	1438 °F	20.00 WC	7.00 WC	[signature]	1372 °F	20.00 WC	8.00 WC	[signature]
19	1348 °F	20.00 WC	7.00 WC	[signature]	1291 °F	20.00 WC	8.00 WC	[signature]	1453 °F	20.00 WC	8.00 WC	[signature]
20	1280 °F	20.00 WC	7.00 WC	[signature]	1316 °F	20.00 WC	8.00 WC	[signature]	1242 °F	20.00 WC	7.00 WC	[signature]
21	1328	20.00 WC	8.00 WC	[signature]	1296 °F	20.00 WC	8.00 WC	[signature]	1300 °F	20.00 WC	8.00 WC	[signature]
22	1373 °F	20.00 WC	7.00 WC	[signature]	1386 °F	20.00 WC	8.00 WC	[signature]	1300 °F	20.00 WC	9.00 WC	[signature]
23	1325 °F	20.00 WC	10.00 WC	[signature]	1239 °F	20.00 WC	9.00 WC	[signature]	1325 °F	20.00 WC	11.00 WC	[signature]
24	1240 °F	20.00 WC	8.00 WC	[signature]	1215 °F	20.00 WC	7.00 WC	[signature]	1231 °F	20.00 WC	8.00 WC	[signature]
25	1310 °F	20.00 WC	7.00 WC	[signature]	1173 °F	20.00 WC	8.00 WC	[signature]	1187 °F	20.00 WC	9.00 WC	[signature]
26	1420 °F	20.00 WC	7.00 WC	[signature]	1310 °F	20.00 WC	8.00 WC	[signature]	1200 °F	20.00 WC	8.00 WC	[signature]
27	1275 °F	20.00 WC	7.00 WC	[signature]	1227 °F	20.00 WC	8.00 WC	[signature]	1238 °F	20.00 WC	8.00 WC	[signature]
28	1386 °F	20.00 WC	7.00 WC	[signature]	1255 °F	20.00 WC	8.00 WC	[signature]	1350 °F			
29	1408 °F	20.00 WC	7.00 WC	[signature]	1357 °F	20.00 WC	10.00 WC	[signature]	1277 °F	20.00 WC	8.00 WC	[signature]
30												
31												

SIBLE EMISSION OBSERVATION FORM

Form Number	U	S	S	C	11	Page 1 of 1
Continued on VEO Form Number N/A						

203A 203B Other:

OGAR CORPORATION

ISTON, FL

OWENS & SR 82

ISTON | State: FL | Zip: 33440

1000°F

ANDUCKA CANADA FURNACE | Unit #: — | Operating Mode: 1000°F

Equipment: N/A | Operating Mode: N/A

Describe Emission Point: 15" ROUND STEEL STACK LOCATED (10) SW CORNER OF PROCESS BLDG

Height of Emission Point: Start ~70 End ~70 | Height of Emission Point Ref. to Observer: Start ~66 End ~66

Distance to Emission Point: Start ~475 End ~475 | Direction to Emission Point (Degrees): Start 350° End 350°

Vertical Angle to Obs. Pt.: Start 7% End 7% | Direction to Obs. Pt. (Degrees): Start 350° End 350°

Distance and Direction to Observation Point from Emission Point: Start SAME POINT End

Describe Emissions: Start HEATWAVE End SAME

Emission Color: Start N/A End N/A | Water Droplet Plume: Attached ☐ Detached ☐ None ☑

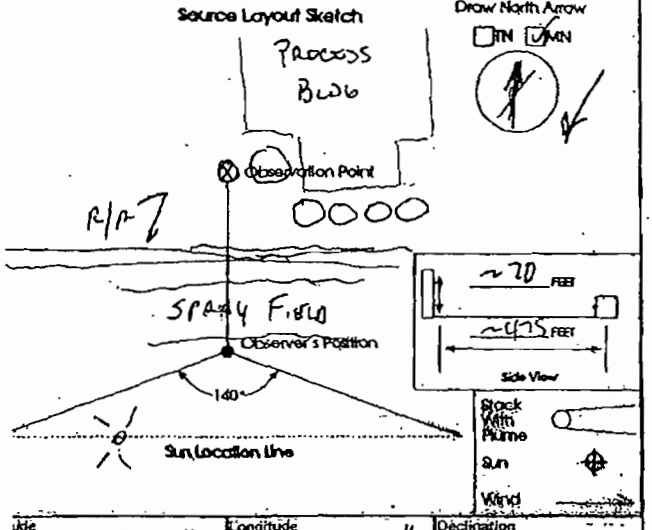
Describe Plume Background: Start SKY End SAME

Background Color: Start BLUE/WHITE End | Sky Conditions: Start BROKEN End SAME

Wind Speed: Start 7/14 End SAME | Wind Direction: Start NE End NE

Ambient Temp.: Start 70 End 70 | Wet Bulb Temp.: 60 | RH Percent: 5%

Source Layout Sketch



Observation Date	Time Zone	Start Time	End Time
10 JAN 07	EAST	1425	1455

Sec / Min	0	15	30	45
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
7	0	0	0	0
8	0	0	0	0
9	0	0	0	0
10	0	0	0	0
11	0	0	0	0
12	0	0	0	0
13	0	0	0	0
14	0	0	0	0
15	0	0	0	0
16	0	0	0	0
17	0	0	0	0
18	0	0	0	0
19	0	0	0	0
20	0	0	0	0
21	0	0	0	0
22	0	0	0	0
23	0	0	0	0
24	0	0	0	0
25	0	0	0	0
26	0	0	0	0
27	0	0	0	0
28	0	0	0	0
29	0	0	0	0
30	0	0	0	0

Latitude: 26° 44' 06" N | Longitude: 80° 56' 19" W | Declination: —

Additional Information

Observer's Name (Print): MICHAEL J. ARRANTS

Observer's Signature: Michael J. Arrants | Date: 10 JAN. 07

Organization: GOLDER ASSOCIATES INC

Certified By: ETA | Date: 8 AUG 06

VS/VEOF (02/18/97)

UNITED STATES SUGAR CORPORATION
REFINERY GRANULAR CARBON FURNACE LOG

DATE: January 2007

DAY	0800-1600 AFTERBURNER TEMP. (°F) (10 MIN AVG.)	0800-1600 VENTURI SCRUBBER ΔP (IN. H_2O)	0800-1600 IMPINGENT SCRUBBER ΔP (IN. H_2O)	0800-1600 OPERATOR SIGNATURE	1600-2400 AFTERBURNER TEMP (°F) (10 MIN AVG.)	1600-2400 VENTURI SCRUBBER ΔP (IN. H_2O)	1600-2400 IMPINGENT SCRUBBER ΔP (IN. H_2O)	1600-2400 OPERATOR SIGNATURE	0000-0800 AFTERBURNER TEMP. (°F) (10 MIN AVG.)	0000-0800 VENTURI SCRUBBER ΔP (IN. H_2O)	0000-0800 IMPINGENT SCRUBBER ΔP (IN. H_2O)	0000-0800 OPERATOR SIGNATURE
1	1450 °F	20.00wc	10.00 wc	[signature]	1216 °F	20.00wc	6.00wc	[signature]	1400°F	20.00wc	7.00wc	[signature]
2	1303°F	20.00wc	6.00wc	[signature]	1232°F	20.00wc	5.00wc	[signature]	1318°F	20.00wc	6.00wc	[signature]
3	1296°F	20.00wc	6.00wc	[signature]	1272°F	20.00wc	7.00wc	[signature]	1300°F	20.00wc	6.00wc	[signature]
4	1389°F	20.00wc	6.00wc	[signature]	1269°F	20.00wc	11.00wc	[signature]	1300°F	20.00wc	6.00wc	[signature]
5	1230°F	20.00wc	6.00wc	[signature]	1429°F	20.00wc	11.00wc	[signature]	1310°F	20.00wc	6.00wc	[signature]
6	1068°F	20.00wc	5.00wc	[signature]	1179°F	20.00wc	5.00wc	[signature]	1249°F	20.00wc	6.00wc	[signature]
7	1353°F	20.00wc	7.00wc	[signature]	1262°F	20.00wc	7.00wc	[signature]	1265°F	20.00wc	6.00wc	[signature]
8	1255°F	20.00wc	5.00wc	[signature]	Furnace down		[signature]	[signature]	1325°F	20.00wc	8.00wc	[signature]
9	1280°F	20.00wc	5.00wc	[signature]	1305°F	20.00wc	7.00wc	[signature]	1299°F	20.00wc	6.00wc	[signature]
10	1334°F	20.00wc	5.00wc	[signature]	1200°F	20.00wc	6.00wc	[signature]	1287°F	20.00wc	6.00wc	[signature]
11	1200°F	20.00wc	5.00wc	[signature]	1212°F	20.00wc	6.00wc	[signature]	1231°F	20.00wc	6.00wc	[signature]
12	1200°F	20.00wc	5.00wc	[signature]	1338°F	20.00wc	5.00wc	[signature]	1300°F	20.00wc	6.00wc	[signature]
13	1181°F	20.00wc	7.00wc	[signature]	1257°F	20.00wc	5.00wc	[signature]	1257°F	20.00wc	6.00wc	[signature]
14	1182°F	20.00wc	8.00wc	[signature]	1383°F	20.00wc	6.00wc	[signature]	1166°F	20.00wc	6.00wc	[signature]
15	1225°F	20.00wc	5.00wc	[signature]	Cooling down Furnace			[signature]	1189°F	20.00wc	6.00wc	[signature]
16	1295°F	20.00wc	5.00wc	[signature]	1200°F	20.00wc	5.00	[signature]	Warming up Furnace			[signature]
17	1305°F	20.00wc	5.00wc	[signature]	1208°F	20.00wc	5.00wc	[signature]	1389°F	20.00wc	5.00wc	[signature]
18	1371°F	20.00wc	6.00wc	[signature]	1241°F	20.00wc	6.00wc	[signature]	1407°F	20.00wc	5.00wc	[signature]
19	1362°F	20.00wc	5.00wc	[signature]	1223°F	20.00wc	6.00wc	[signature]	1200°F	20.00wc	6.00wc	[signature]
20	1256°F	20.00wc	6.00wc	[signature]	1230°F	20.00wc	6.00wc	[signature]	1230°F	20.00wc	6.00wc	[signature]
21	1200°F	20.00wc	6.00wc	[signature]	1100°F	20.00wc	6.00wc	[signature]	1290°F	20.00wc	6.00wc	[signature]
22	1069°F	20.00wc	6.00wc	[signature]	1130°F	20.00wc	6.00wc	[signature]	1250°F	20.00wc	6.00wc	[signature]
23	1100°F	20.00wc	6.00wc	[signature]	1100°F	20.00wc	6.00wc	[signature]	1216°F	20.00wc	5.00wc	[signature]
24	1156°F	20.00wc	6.00wc	[signature]	1200°F	20.00wc	6.00wc	[signature]	1158°F	20.00wc	5.00wc	[signature]
25	1215°F	20.00wc	6.00wc	[signature]	1215°F	20.00wc	6.00wc	[signature]	1265°F	20.00wc	6.00wc	[signature]
26	1280°F	20.00wc	6.00wc	[signature]	1267°F	20.00wc	6.00wc	[signature]	Furnace	down	shut	[signature]
27	1306°F	20.00wc	6.00wc	[signature]	1311°F	20.00wc	6.00wc	[signature]	1294°F	20.00wc	7.00wc	[signature]
28	1278°F	20.00wc	6.00wc	[signature]	1236°F	20.00wc	7.00wc	[signature]	1237°F	20.00wc	6.00wc	[signature]
29	1250°F	20.00wc	5.00wc	[signature]	1350°F	20.00wc	7.00wc	[signature]	Furnace	down	shut	[signature]
30	1234°F	20.00wc	5.00 wc	[signature]	1262°F	20.00wc	5.00wc	[signature]	1245°F	20.00wc	5.00wc	[signature]
31					1255°F	21.00wc	6.00wc	[signature]	1295°F	20.00wc	5.00wc	[signature]