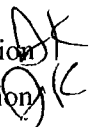


Florida Department of  
Environmental Protection

Memorandum

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To: Trina Vielhauer, Bureau of Air Regulation   
Through: Jeff Koerner, New Source Review Section  
Date: December 30, 2009  
Subject: Project No. 0510003-047-AC  
U.S. Sugar Corporation, Clewiston Sugar Mill and Refinery  
Letter of Authorization  
Alternative Method for Determining the Flue Gas Moisture Content from Boiler 8

Attached for your review is a letter of authorization for the existing Clewiston Sugar Mill and Refinery, which is located in Hendry County at the intersection of W.C. Owens Avenue and State Road 832 in Clewiston, Florida. Briefly, the attached letter authorizes an alternative method for determining the flue gas moisture content from Boiler 8. The attached Technical Evaluation and Preliminary Determination provides a detailed description of the project and the rationale for permit issuance. The project is not considered a new source review reform project. I recommend your approval of the attached draft permit package.

Attachments

TLV/jfk



# Florida Department of Environmental Protection

Bob Martinez Center  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Charlie Crist  
Governor

Jeff Kottkamp  
Lt. Governor

Michael W. Sole  
Secretary

December 30, 2009

*Electronically Sent – Received Receipt Requested*

Mr. Neil Smith, V.P. and General Manager  
Sugar Processing Operations  
U.S. Sugar Corporation  
111 Ponce de Leon Avenue  
Clewiston, FL 33440

Re: Project No. 0510003-047-AC  
Clewiston Sugar Mill and Refinery  
Letter of Authorization for Boiler 8  
Alternative Method for Determining the Flue Gas Moisture Content from Boiler 8

Dear Mr. Smith:

You submitted a request for authorization of an alternative method for determining the flue gas moisture content from Boiler 8. Based on a review of then available data, the Department approves the use of the following estimates of the flue gas moisture content as an alternative to the current continuous monitoring methods and will revise Condition 18.d as follows:

*1-Hour Averages (CO and NOx).* 1-hour block averages shall begin at the top of each hour. Each 1-hour average shall be computed using at least one data point in each fifteen-minute quadrant of an hour, where the unit combusted fuel during that quadrant of an hour. Notwithstanding this requirement, a 1-hour average shall be computed from at least two data points separated by a minimum of 15 minutes. If less than two such data points are available, the 1-hour average is not valid. The permittee shall use all valid measurements or data points collected during an hour to calculate the 1-hour averages. The CEMS shall be designed and operated to sample, analyze, and record data evenly spaced over the hour. If the CEMS measures concentration on a wet basis, the permittee shall use at least one of the following methods:

- 1) ¶The CEMS shall include provisions to determine the moisture content of the exhaust gas and an algorithm to enable correction of the monitoring results to a dry basis (0% moisture)-, or
- 2) As authorized in the letter of authorization for Project No. 0510003-047-AC, the permittee may estimate the flue gas moisture content as 26.0% for the crop season (high load operation) and 22.7% for the off-crop season (low-load operation). In addition to annual emissions compliance tests conducted at capacity, the permittee shall conduct three tests runs (30 minutes per test run) to determine the flue gas moisture content (EPA Method 4) at low-load operation (less than 50% of permitted capacity) during each federal fiscal year. Whenever new data for the flue gas moisture content becomes available, the permittee shall adjust these estimates for use in determining emissions rates and report the new moisture content estimates to the Compliance Authority.

## Letter of Authorization

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Alternatively, the owner or operator may develop through manual stack test measurements a curve of moisture contents in the exhaust gas versus load for each allowable fuel, and use these typical values in an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). Final results shall be recorded in terms of "lb/MMBtu".

Nothing in this action waves any federal requirements of the applicable New Source Performance Standards (NSPS) for this unit.

The Department will consider the above-noted action final unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57, of the Florida Statutes (F.S.). Mediation under Section 120.573, F.S., will not be available for this proposed action.

A person whose substantial interests are affected by the proposed decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Department's Office of General Counsel, MS #35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000. Petitions filed by the applicant or any of the parties listed below must be filed within 14 days of receipt of this notice. Petitions filed by any other person must be filed within 14 days of receipt of this proposed action. A petitioner must mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner; the name, address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when each petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and, (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the permitting authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the permitting authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Any party to this order has the right to seek judicial review of it under Section 120.68, F.S., by the filing of a Notice of Appeal, under Rule 9.110 of the Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000; and, by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within thirty days from the date this notice is filed with the Clerk of the permitting authority.

**Letter of Authorization**

Executed in Tallahassee, Florida.

*Jeffery J. Koern*

Trina L. Vielhauer, Chief  
Bureau of Air Regulation

FOR

TLV/jfk

**CERTIFICATE OF SERVICE**

The undersigned duly designated deputy agency clerk hereby certifies that this authorization was sent by electronic mail (or a link to this document was made available electronically on a publicly accessible server) with received receipt requested before the close of business on 12/30/09 to the persons listed below.

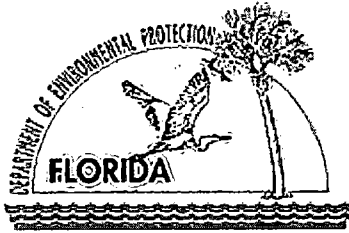
- Mr. Neil Smith, U.S. Sugar (nsmith@ussugar.com)
- Mr. Keith Tingberg, U.S. Sugar (ktingberg@ussugar.com)
- Mr. David Buff, Golder Associates (dbuff@golder.com)
- Mr. Ajaya Satyal, SD Office (ajaya.satyal@dep.state.fl.us)
- Ms. Kathleen Forney (forney.kathleen@epa.gov)
- Ms. Heather Abrams, EPA Region 4 (abrams.heather@epa.gov)
- Ms. Ana M. Oquendo, EPA Region 4 (oquendo.ana@epa.gov)
- Ms. Vickie Gibson, DEP BAR Reading File (victoria.gibson@dep.state.fl.us)

Clerk Stamp

**FILING AND ACKNOWLEDGMENT FILED**, on this date, pursuant to §120.52(7), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

*[Signature]*  
\_\_\_\_\_  
(Clerk)

12/30/09  
(Date)



**TECHNICAL EVALUATION  
&  
PRELIMINARY DETERMINATION**

**APPLICANT**

U.S. Sugar Corporation  
Clewiston Sugar Mill and Refinery

City, State, Zip

Plant Name  
Facility ID No. 0510003

**PROJECT**

Project No. 0510003-047-AC  
Letter of Authorization for Existing Boiler 8  
Alternate Method for Determining the Flue Gas Moisture Content

**COUNTY**

Hendry County, Florida

**PERMITTING AUTHORITY**

Florida Department of Environmental Protection  
Division of Air Resource Management  
Bureau of Air Regulation  
New Source Review Section  
2600 Blair Stone Road, MS#5505  
Tallahassee, Florida 32399-2400

December 30, 2009

## 1. GENERAL PROJECT INFORMATION

### Air Pollution Regulations

Projects at stationary sources with the potential to emit air pollution are subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The statutes authorize the Department of Environmental Protection (Department) to establish regulations regarding air quality as part of the Florida Administrative Code (F.A.C.), which includes the following applicable chapters: 62-4 (Permits); 62-204 (Air Pollution Control – General Provisions); 62-210 (Stationary Sources – General Requirements); 62-212 (Stationary Sources – Preconstruction Review); 62-213 (Operation Permits for Major Sources of Air Pollution); 62-296 (Stationary Sources - Emission Standards); and 62-297 (Stationary Sources – Emissions Monitoring). Specifically, air construction permits are required pursuant to Rules 62-4, 62-210 and 62-212, F.A.C.

In addition, the U. S. Environmental Protection Agency (EPA) establishes air quality regulations in Title 40 of the Code of Federal Regulations (CFR). Part 60 specifies New Source Performance Standards (NSPS) for numerous industrial categories. Part 61 specifies National Emission Standards for Hazardous Air Pollutants (NESHAP) based on specific pollutants. Part 63 specifies NESHAP based on the Maximum Achievable Control Technology (MACT) for numerous industrial categories. The Department adopts these federal regulations on a quarterly basis in Rule 62-204.800, F.A.C.

### Facility Description and Location

The United States Sugar Corporation operates the existing Clewiston sugar mill and refinery, which is located in Hendry County at the intersection of W.C. Owens Avenue and State Road 832 in Clewiston, Florida. The UTM coordinates of the existing facility are Zone 17, 506.1 km East and 2956.9 km North. This site is in an area that is in attainment (or designated as unclassifiable) for all air pollutants subject to state and federal Ambient Air Quality Standards (AAQS). The Standard Industrial Classification (SIC) code for the sugar mill is SIC No. 2061 and for the refinery is SIC No. 2062.

Sugarcane is harvested from nearby fields and transported to the mill by train. In the mill, sugarcane is cut into small pieces and passed through a series of presses to squeeze juice from the cane. The juice undergoes clarification, separation, evaporation, and crystallization to produce raw, unrefined sugar. In the refinery, raw sugar is decolorized, concentrated, crystallized, dried, conditioned, screened, packaged, stored, and distributed as refined sugar. The fibrous byproduct remaining from the sugarcane is called bagasse and is burned as boiler fuel to provide steam and heating requirements for the mill and refinery.

### Facility Regulatory Categories

- The facility is a major source of hazardous air pollutants (HAP).
- The facility does not operate units subject to the acid rain provisions of the Clean Air Act.
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

### Project Description

Currently, the plant uses continuous monitors to measure the wet and dry flue gas oxygen content from Boiler 8 to determine the moisture content of the flue gas exhaust. The flue gas oxygen content is used in connection with the continuous emissions monitoring system (CEMS) to determine emissions of nitrogen oxides (NO<sub>x</sub>) in terms of pounds per million British thermal units (lb/MMBtu). The NO<sub>x</sub> emissions standard is specified as 0.14 lb/MMBtu based on a 30-day rolling average. Condition 18.d of original Permit No. 0510003-021-AC (PSD-FL-333) authorizing the initial construction of Boiler 8 states, "If the CEMS measures concentration on a wet basis, the CEMS shall include provisions to determine the moisture content of the exhaust gas and an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). Alternatively, the owner or operator may develop through manual stack test measurements a curve of moisture contents in the exhaust gas versus load for

## TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

each allowable fuel, and use these typical values in an algorithm to enable correction of the monitoring results to a dry basis (0% moisture).” Because of frequent plugging and maintenance issues with the wet flue gas oxygen monitoring system, the applicant requests approval of an alternate method for monitoring the moisture content of the flue gas exhaust from Boiler 8.

Initially, the applicant provided the following correlation equation for determining the moisture content of the flue gas exhaust from Boiler 8:

$$y = 0.0066(x) + 20.487$$

Where:

- y = flue gas moisture content in percent
- x = boiler heat input rate (MMBtu/hour)

The Department noted that the correlation equation resulted in an average difference for the NO<sub>x</sub> emissions rate between the stack test data and the CEMS data of 6.2% and 0.0071 lb NO<sub>x</sub>/MMBtu. The Department questioned whether the correlation equation could be further adjusted. After additional review of all data including new test data and monitoring data, the applicant submitted a new request on October 26, 2009 to determine flue gas moisture content as follows:

- Assume 26.0% moisture for the crop season (high load operation, 50% of the maximum heat input rate or above), and
- Assume 22.7% moisture for the off-crop season (low-load operation, less than 50% of the maximum heat input rate).

This estimation would result in an average difference of 4.4% and 0.0058 lb/MMBtu. The applicant agrees to periodically adjust the estimates for the flue gas moisture content when new data is available.

### 2. PSD APPLICABILITY

This project is a minor revision of Permit No. PSD-FL-333 (as currently modified) and will not result in actual emissions increases. Therefore, the project is subject to the general preconstruction review requirements of Rule 62-212.300, F.A.C., but not the PSD preconstruction review requirements for major stationary sources of Rule 62-212.400, F.A.C.

### 3. DEPARTMENT REVIEW

The applicant proposes to estimate the flue gas moisture content as 26.0% for the crop season (high load operation) and 22.7% for the off-crop season (low-load operation). This results in an average difference of 4.4% and 0.0058 lb/MMBtu, which is an improvement over the initially proposed correlation equation. In response to the Department's questions, the applicant also indicated that the water content in the urea mixture being injected for NO<sub>x</sub> control contributed only 0.025% to the flue gas moisture content. This means that moisture in the flue gas comes from bagasse and wood chips being fired. The Title V renewal application indicates that the moisture contents of these fuels are typically between 49% to 55% for bagasse and approximately 38.5% for wood chips. Since these fuels are stored outside, the moisture contents remain fairly high at these typical values.

Attachment A to this Technical Evaluation and Preliminary Determination is a table provided by the applicant showing the actual flue gas moisture content measured by stack test compared to: the moisture content as determined by existing wet and dry oxygen monitors; and the moisture content as determined by the applicant's moisture content estimates for high-load operation (26%) and low-load operation (22.7%). Note that the first group of high-load tests shows an average moisture content of 28.27%, which occurred before the addition of a new grinding mill in the fall of 2007. The second group of high-load tests shows average moisture content of 26.03%, which occurred after the addition of the new grinding mill. Tests during low-load operation show an average moisture content of 22.7%, which included some tests on wood chips that are fired primarily as a supplemental fuel during the off season. The low-load tests occurred in 2006 and were probably conducted in

## TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

preparation for the NESHAP Subpart DDDDD requirements; however, this regulation was remanded to EPA for revision.

For high-load operation, the estimated moisture content of 26% results in an average difference with the actual NO<sub>x</sub> emissions test data of 4.4% (0.0058 lb NO<sub>x</sub>/MMBtu). This is lower than the difference for the moisture content calculated by the wet and dry flue gas oxygen monitors of 6.2% (0.0071 lb NO<sub>x</sub>/MMBtu). Based on limited data (3 runs) at low-load operation, the estimated moisture content of 22.7% results in an average difference with the actual NO<sub>x</sub> test data of 11.3% (0.011 lb NO<sub>x</sub>/MMBtu). This is slightly higher than the difference for the moisture content calculated by the wet and dry flue gas oxygen monitors of 8.9% (0.008 lb NO<sub>x</sub>/MMBtu). However, the limited data suggests that NO<sub>x</sub> emissions are slightly overestimated by assuming a moisture content of 22.7%. In addition, operation at low-loads represents only 30% of the annual operation.

Based on a review of the available data, the Department approves the use of the estimates as an alternative to the current monitoring methods and will revise Condition 18.d as follows:

*1-Hour Averages (CO and NO<sub>x</sub>).* 1-hour block averages shall begin at the top of each hour. Each 1-hour average shall be computed using at least one data point in each fifteen-minute quadrant of an hour, where the unit combusted fuel during that quadrant of an hour. Notwithstanding this requirement, a 1-hour average shall be computed from at least two data points separated by a minimum of 15 minutes. If less than two such data points are available, the 1-hour average is not valid. The permittee shall use all valid measurements or data points collected during an hour to calculate the 1-hour averages. The CEMS shall be designed and operated to sample, analyze, and record data evenly spaced over the hour. If the CEMS measures concentration on a wet basis, the permittee shall use at least one of the following methods:

- 1) †The CEMS shall include provisions to determine the moisture content of the exhaust gas and an algorithm to enable correction of the monitoring results to a dry basis (0% moisture); or
- 2) As authorized in the letter of authorization for Project No. 0510003-047-AC, the permittee may estimate the flue gas moisture content as 26.0% for the crop season (high load operation) and 22.7% for the off-crop season (low-load operation). In addition to annual emissions compliance tests conducted at capacity, the permittee shall conduct three tests runs (30 minutes per test run) to determine the flue gas moisture content (EPA Method 4) at low-load operation (less than 50% of permitted capacity) during each federal fiscal year. Whenever new data for the flue gas moisture content becomes available, the permittee shall adjust these estimates for use in determining emissions rates and report the new moisture content estimates to the Compliance Authority.

Alternatively, the owner or operator may develop through manual stack test measurements a curve of moisture contents in the exhaust gas versus load for each allowable fuel, and use these typical values in an algorithm to enable correction of the monitoring results to a dry basis (0% moisture). Final results shall be recorded in terms of "lb/MMBtu".

The revision requires additional testing for the moisture content at low load operation to better develop the estimated factor for moisture content at low load operation. Since the permit requires stack testing for particulate matter, data for the moisture content is already reported for each required test run at permitted capacity.

#### 4. PRELIMINARY DETERMINATION

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the draft permit. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the conditions specified in the draft permit. No air quality modeling analysis is required because the project does not result in a significant increase in emissions. Jeff Koerner is the project engineer responsible for reviewing the application and drafting the permit. Additional details of this analysis may be obtained by contacting the project engineer at the Department's Bureau of Air Regulation at Mail Station #5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.



TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

Attachment A

October 2009

093-87525

TABLE 2  
BOILER 8 COMPARISON OF STACK TEST MOISTURE DATA TO CEMS MOISTURE DATA  
U.S. SUGAR - CLEWISTON MILL

Test Date	Fuel	Run	Run Times	Stack Test Heat Input <sup>a</sup> (MMBtu/hr)	CEMS Heat Input (MMBtu/hr)	Original Moisture Data			Modified Moisture (average) <sup>b</sup>	
						Stack Test Data (% H <sub>2</sub> O)	CEMS Data (% H <sub>2</sub> O)	Percent Difference (%)	Modified CEMS Data (% H <sub>2</sub> O)	Percent Difference (%)
<b>High Load Operation (Crop Season)</b>										
03/26/05	Bagasse	RATA-5	1125-1146	875.7	877.1	28.38	22.41	21.0	28.27	0.4
03/26/05	Bagasse	RATA-6	1438-1459	855.4	857.7	27.89	22.91	17.9	28.27	-1.4
03/26/05	Bagasse	RATA-7	1534-1555	906.8	912.8	27.89	23.38	16.2	28.27	-1.4
03/26/05	Bagasse	RATA-8	1720-1741	873.8	877.5	27.59	21.42	22.4	28.27	-2.5
03/26/05	Bagasse	RATA-9	1806-1827	885.7	884.0	27.59	21.35	22.6	28.27	-2.5
03/26/05	Bagasse	RATA-10	1842-1903	844.6	840.5	27.59	22.72	17.7	28.27	-2.5
01/10/06	Bagasse	C-1	1000-1105	967.6	971.7	29.33	25.42	13.3	28.27	3.6
01/10/06	Bagasse	C-2	1241-1346	970.2	972.7	29.31	24.49	16.4	28.27	3.5
01/10/06	Bagasse	C-3	1455-1600	967.6	969.4	27.11	26.15	3.5	28.27	-4.3
01/10/06	Bagasse	C-4	1708-1814	949.6	951.0	29.77	23.85	19.9	28.27	5.0
01/11/06	Bagasse	C-5	0941-1110	910.2	936.7	29.02	22.72	21.7	28.27	2.6
01/11/06	Bagasse	C-6	1236-1340	987.3	981.8	29.67	20.17	32.0	28.27	4.7
01/11/06	Bagasse	C-7	1432-1536	978.9	984.9	30.09	22.42	25.5	28.27	6.0
01/11/06	Bagasse	C-8	1635-1656	810.8	815.0	27.01	22.26	17.6	28.27	-4.7
01/11/06	Bagasse	C-9	1710-1731	869.9	874.2	27.01	22.12	18.1	28.27	-4.7
01/11/06	Bagasse	C-10	1743-1804	939.7	943.7	27.01	21.88	19.0	28.27	-4.7
			Average <sup>c</sup> =	912.1	916.7	28.27	22.9	18.1	28.27	-0.2
01/05/07	Bagasse	C-1	1059-1203	919.5	920.4	24.23	18.19	24.9	26.03	-7.4
01/05/07	Bagasse	C-2	1346-1450	960.3	962.5	23.85	18.03	24.4	26.03	-9.1
01/05/07	Bagasse	C-3	1623-1727	948.0	957.4	24.36	17.83	26.8	26.03	-6.9
01/05/07	Bagasse	Gases-4	1821-1922	859.2	880.7	24.35	16.38	24.5	26.03	-6.9
01/06/07	Bagasse	RATA-4	0937-1007	954.1	948.7	26.23	16.69	36.4	26.03	0.8
01/06/07	Bagasse	RATA-5	1018-1048	954.1	955.4	26.23	17.73	32.4	26.03	0.8
01/06/07	Bagasse	RATA-6	1138-1208	961.1	963.9	25.57	17.97	29.7	26.03	-1.8
01/06/07	Bagasse	RATA-7	1222-1251	961.1	961.4	25.57	18.45	27.8	26.03	-1.8
01/06/07	Bagasse	RATA-8	1325-1355	912.5	924.2	26.12	20.74	20.6	26.03	0.3
01/06/07	Bagasse	RATA-9	1430-1459	912.5	909.1	26.12	19.07	27.0	26.03	0.3
11/28/07	Bagasse	RATA-1	1122-1226	968.3	971.0	26.92	18.1	32.8	26.03	3.3
11/29/07	Bagasse	RATA-2	1317-1420	980.7	988.0	24.79	17.2	30.6	26.03	-5.0
11/30/07	Bagasse	RATA-4	0806-0913	1,377.0	1,002.0	24.44	16.0	26.4	26.03	-6.5
11/30/07	Bagasse	C-5	1016-1116	1,061.9	1,066.0	26.58	18.1	31.9	26.03	2.1
11/30/07	Bagasse	C-6	1246-1346	1,011.6	1,015.0	25.69	18.3	28.8	26.03	-1.3
11/30/07	Bagasse	C-7	1534-1634	1,063.3	1,065.0	24.84	17.3	30.4	26.03	-4.8
11/30/07	Bagasse	RATA-8	1741-1755	977.0	972.0	25.17	18.5	26.5	26.03	-3.4
12/11/08	Bagasse	RATA-1	0850-0915	1,037.9	1,037.9	28.84	19.5	32.5	26.03	9.7
12/11/08	Bagasse	RATA-2	0940-1001	1,037.9	1,037.9	28.84	19.6	31.9	26.03	9.7
12/11/08	Bagasse	RATA-3	1030-1051	1,037.9	1,037.9	28.84	18.7	35.3	26.03	9.7
12/11/08	Bagasse	RATA-4	1130-1151	992.3	992.3	27.25	18.2	33.1	26.03	4.5
12/11/08	Bagasse	RATA-5	1210-1231	992.3	992.3	27.25	20.3	25.3	26.03	4.5
12/11/08	Bagasse	RATA-6	1300-1321	992.3	992.3	27.25	19.4	28.8	26.03	4.5
12/11/08	Bagasse	RATA-9	1700-1721	983.7	983.7	27.63	19.6	29.2	26.03	5.8
12/11/08	Bagasse	RATA-10	1755-1815	1,001.5	1,001.5	26.92	18.8	30.3	26.03	3.3
12/11/08	Bagasse	RATA-12	1920-1941	1,001.5	1,001.5	26.92	19.4	27.9	26.03	3.3
01/30/09	Bagasse	C-1	0831-1021	980.0	980.3	25.45	18.4	27.9	26.03	-2.3
01/30/09	Bagasse	C-2	1256-1432	922.0	931.7	24.9	18.7	24.7	26.03	-4.5
01/30/09	Bagasse	C-3	1531-1701	984.0	965.4	24.47	18.6	24.1	26.03	-6.4
			Average <sup>d</sup> =	991.2	975.8	26.03	18.5	28.7	26.03	-0.2
<b>Low Load Operation (Off-Crop Season)</b>										
6/1/2006	Bagasse	1	1244-1350	507.2	453.8	26.73	0.00	100.0	22.73	15.0
6/1/2006	Bagasse	2	1712-1818	466.4	459.5	24.13	11.47	52.5	22.73	5.8
6/2/2006	Bagasse	3	0843-0948	547.0	446.5	21.61	0.00	100.0	22.73	-5.2
6/2/2006	Bagasse	4	1124-1232	481.3	404.2	21.65	11.36	47.5	22.73	-5.0
6/2/2006	Bagasse	5	1337-1444	428.3	415.5	20.04	12.42	38.0	22.73	-13.4
09/16/05	Wood Chips	1	0944-1050	427.2	427.2	26.13	25.22	3.5	22.73	13.0
09/16/05	Wood Chips	2	1149-1253	421.3	421.3	30.61 <sup>e</sup>	23.54	23.1	22.73	25.7
09/16/05	Wood Chips	3	1327-1433	424.2	424.2	26.59	24.17	9.1	22.73	14.5
8/22/2006	Wood Chips	1	1036-1142	403.5	372.5	21.33	12.34	42.1	22.73	-6.6
8/22/2006	Wood Chips	2	1320-1426	383.6	372.8	21.12	12.30	41.8	22.73	-7.6
8/22/2006	Wood Chips	3	1530-1636	411.4	366.4	20.86	11.91	42.9	22.73	-9.0
			Average <sup>d</sup> =	427.5	407.1	22.73	16.1	33.4	22.73	-1.0

<sup>a</sup> Based on stack test calculations using 62-percent boiler efficiency.

<sup>b</sup> Based on average moisture data from historic stack tests.

<sup>c</sup> Considered an outlier.

<sup>d</sup> Average does not include moisture equal to zero.

Checked by: NG  
Reviewed by: DB

## Livingston, Sylvia

---

**From:** Livingston, Sylvia  
**Sent:** Wednesday, December 30, 2009 3:31 PM  
**To:** 'nsmith@ussugar.com'  
**Cc:** 'ktingberg@ussugar.com'; 'dbuff@golder.com'; Satyal, Ajaya; 'forney.kathleen@epa.gov'; 'abrams.heather@epa.gov'; 'oquendo.ana@epa.gov'; Gibson, Victoria; Koerner, Jeff; Walker, Elizabeth (AIR)  
**Subject:** U.S. SUGAR CLEWISTON MILL AND REFINERY; 0510003-047-AC  
**Attachments:** 0510003-047-AC\_Signature.pdf

Dear Sir/ Madam:

Attached is the official **Authorization** for the request referenced below. Click on the link displayed below to access the permit project documents and send a "reply" message verifying receipt of the document(s) provided in the link; this may be done by selecting "Reply" on the menu bar of your e-mail software, noting that you can view the documents, and then selecting "Send".

*Note: We must receive verification that you are able to access the documents. Your immediate reply will preclude subsequent e-mail transmissions to verify accessibility of the document(s).*

**Click on the following link to access the documents:**

[http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf\\_permit\\_zip\\_files/0510003.047.AC.F\\_pdf.zip](http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/0510003.047.AC.F_pdf.zip)

**Owner/Company Name:** U.S. SUGAR CORP. CLEWISTON MILL  
**Facility Name:** U.S. SUGAR CLEWISTON MILL AND REFINERY  
**Project Number:** 0510003-047-AC  
**Permit Status:** FINAL  
**Permit Activity:** CONSTRUCTION  
**Facility County:** HENDRY  
**Processor:** Jeff Koerner

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Project documents that are addressed in this email may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible, and verify that they are accessible. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record. If you have any problems opening the documents or would like further information, please contact the Florida Department of Environmental Protection, Bureau of Air Regulation at (850)488-0114.

Sylvia Livingston  
Bureau of Air Regulation  
Division of Air Resource Management (DARM)  
850/921-9506  
[sylvia.livingston@dep.state.fl.us](mailto:sylvia.livingston@dep.state.fl.us)

## Livingston, Sylvania

---

**From:** Neil Smith [nsmith@ussugar.com]  
**Sent:** Monday, January 04, 2010 9:43 AM  
**To:** Livingston, Sylvania  
**Subject:** RE: U.S. SUGAR CLEWISTON MILL AND REFINERY; 0510003-047-AC

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**From:** Livingston, Sylvania [mailto:Sylvia.Livingston@dep.state.fl.us]  
**Sent:** Wednesday, December 30, 2009 3:31 PM  
**To:** Neil Smith  
**Cc:** Keith Tingberg; dbuff@golder.com; Satyal, Ajaya; forney.kathleen@epa.gov; abrams.heather@epa.gov; oquendo.ana@epa.gov; Gibson, Victoria; Koerner, Jeff; Walker, Elizabeth (AIR)  
**Subject:** U.S. SUGAR CLEWISTON MILL AND REFINERY; 0510003-047-AC

Dear Sir/ Madam:

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[http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf\\_permit\\_zip\\_files/0510003.047.AC.F\\_pdf.zip](http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/0510003.047.AC.F_pdf.zip)

**Owner/Company Name:** U.S. SUGAR CORP. CLEWISTON MILL  
**Facility Name:** U.S. SUGAR CLEWISTON MILL AND REFINERY  
**Project Number:** 0510003-047-AC  
**Permit Status:** FINAL  
**Permit Activity:** CONSTRUCTION  
**Facility County:** HENDRY  
**Processor:** Jeff Koerner

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Sylvia Livingston  
Bureau of Air Regulation

## Livingston, Sylvia

---

**From:** Buff, Dave [DBuff@GOLDER.com]  
**To:** Livingston, Sylvia  
**Sent:** Wednesday, December 30, 2009 5:56 PM  
**Subject:** Read: U.S. SUGAR CLEWISTON MILL AND REFINERY; 0510003-047-AC

Your message was read on Wednesday, December 30, 2009 5:55:48 PM (GMT-05:00) Eastern Time (US & Canada).

## Livingston, Sylvia

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**From:** Keith Tingberg [ktingberg@ussugar.com]  
**To:** Livingston, Sylvia  
**Sent:** Wednesday, December 30, 2009 4:07 PM  
**Subject:** Read: U.S. SUGAR CLEWISTON MILL AND REFINERY; 0510003-047-AC

Your message was read on Wednesday, December 30, 2009 4:07:06 PM (GMT-05:00) Eastern Time (US & Canada).

## Livingston, Sylvia

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**From:** Satyal, Ajaya  
**Sent:** Wednesday, December 30, 2009 3:55 PM  
**To:** Livingston, Sylvia  
**Subject:** RE: U.S. SUGAR CLEWISTON MILL AND REFINERY; 0510003-047-AC

Thanks Sylvia. I was able to access the document.

AJ Satyal

---

**From:** Livingston, Sylvia  
**Sent:** Wednesday, December 30, 2009 3:31 PM  
**To:** nsmith@ussugar.com  
**Cc:** ktingberg@ussugar.com; dbuff@golder.com; Satyal, Ajaya; forney.kathleen@epa.gov; abrams.heather@epa.gov; oquendo.ana@epa.gov; Gibson, Victoria; Koerner, Jeff; Walker, Elizabeth (AIR)  
**Subject:** U.S. SUGAR CLEWISTON MILL AND REFINERY; 0510003-047-AC

Dear Sir/ Madam:

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**Owner/Company Name:** U.S. SUGAR CORP. CLEWISTON MILL  
**Facility Name:** U.S. SUGAR CLEWISTON MILL AND REFINERY  
**Project Number:** 0510003-047-AC  
**Permit Status:** FINAL  
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