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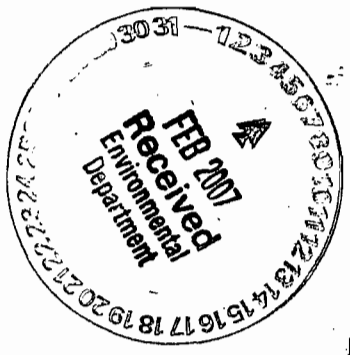

Golder Associates

063-7603

January 18, 2007

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

Attention: Mr. Don Griffin

RE: BOILER NO. 8 SEMI-ANNUAL REPORT – JULY 2006 TO DECEMBER 2006

Dear Mr. Griffin:

Enclosed are three copies of the Boiler No. 8 Semi-Annual Report for the second half of 2006. This report covers the period from July 1, 2006 to December 31, 2006. Please have Neil Smith sign the reports where indicated and send one copy to Ron Blackburn and one copy to Jeff Koerner at the addresses below. Please keep one copy for your files.

Mr. Ron Blackburn
Florida Department of Environmental Protection
Department of Air Resources Management
Fort Myers, Florida 33902-2549

Mr. Jeff Koerner
Florida Department of Environmental Protection
Department of Air Resources Management
2600 Blair Stone Road, MS 5500
Tallahassee, FL 32399-2400

Sincerely,

GOLDER ASSOCIATES INC.

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

Claire Booth, E.I.
Staff Engineer

ECB/all

Enclosures

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40 CFR Part 63, Subpart DDDDD

Semi-Annual Report – United States Sugar Corporation – Boiler No. 8
(January 18, 2007)

Required Information [40 CFR 63.7550(c)]:

1. United States Sugar Corporation (U.S. Sugar)
   111 Ponce de Leon Avenue
   Clewiston, Florida 33440

2. I, the responsible official, certify the truth, accuracy, and completeness of the content of this report.

   Responsible Official Name: Neil Smith

   Responsible Official Title: Vice President and General Manager, Sugar Processing Operations

3. Responsible Official Signature: _____

4. Date of Report: January 18, 2007
   Reporting Period: July 1, 2006 – December 31, 2006.

5. The total fuel usage for each calendar month within the semi-annual reporting period:

Boiler No. 8 – Fuel Usage	Bagasse (tons) [a]	Wood Chips (tons) [a]	No. 2 Fuel Oil (gallons) [b]
July 2006	0	1,166	19,084
August 2006	0	22,308	47,678
September 2006	0	31,490	28,541
October 2006	35,035	5,825	56,524
November 2006	69,484	0	34,795
December 2006	71,269	0	33,979
Total	***175,788***	***60,790***	***220,601***

[a] Based on a heating value of 3,600 Btu/lb for bagasse and 4,500 Btu/lb for wood chips. Wood chips represent approximately 100% of the total carbonaceous fuel burned during the off-crop season from July 1, 2006 through October 15, 2006. Bagasse represents approximately 100% of the total carbonaceous fuel burned during the crop season from October 16, 2006 through December 31, 2006.

[b] Heating value of 136,000 Btu/gal, density of 6.83 lb/gal, 0.05% sulfur.

6. Please refer to Table A for a summary of the performance test conducted in August 2006 (off-crop season) while burning wood chips in Boiler No. 8. Previous fuel analyses indicated that wood chips and not bagasse were the worst-case fuel for chlorine and mercury; however, only performance tests while burning bagasse had been conducted. This test was performed as an additional test to demonstrate compliance while burning wood chips. Through the wood chip performance test, the following operating limits were reestablished: total ESP power input and the pressure drop for both scrubbers. Table A presents the re-established parameters. Note that beginning September 1, 2006, pressure drop was deleted as an operating parameter for Boiler No. 8.

7. U.S. Sugar did not burn any new type of fuel in Boiler No. 8. Compliance with Boiler MACT while burning wood chips was demonstrated by the August 22, 2006 performance test, with deviations as noted in Item 12 below.

8. The hours of operation for each calendar month within the semi-annual reporting period for Boiler No. 8 are not included since this is not a limited use boiler or process heater.

9. SSM Report [40 CFR 63.10(d)(5)(i)]:

   a. There were no instances where any actions taken by an owner or operator during SSM events were not consistent with the affected source's SSM plan.
   b. There were no malfunctions that caused or may have caused an emission limitation to be exceeded.
   c. The name, title, and signature of the responsible official certifying the accuracy of this report is shown in Item 2 above.

10. There were deviations from the ESP total secondary power input, wet cyclone water flow rate, and wet cyclone pressure drop minimum operating limits (see Tables 1 through 5, attached). A summary of the operating limit deviations as a percentage of total boiler operating hours is presented in Table 6.

11. There were periods when the CMS was out of control as specified in 40 CFR 63.8(c)(7) during the reporting period (see Tables 7 and 8, attached).

12. Deviation Summary:

EMISSION LIMITS/WORK PRACTICE STANDARDS

CO Deviations (400 ppmvd – 30 day rolling average)
Excluding SSM: No deviations
Including SSM: No deviations

PM Deviations (0.025 lb/MMBtu) – There were no deviations based on the August 2006 performance test for wood chips (see Table A).

HCl Deviations (0.02 lb/MMBtu) – There were deviations based on the August 2006 performance test for wood chips (see Table A). Based on previous test results with bagasse, HCl measurements were obtained at the inlet to the wet cyclones. The average of the three wood chip test runs measured at the inlet was 0.085 lb/MMBtu. Due to the nature of carbonaceous fuel, it is expected that most of the HCl will be absorbed in the ash prior to exiting the stack. However, due to the crop season beginning in early October 2006, additional HCl testing at the stack could not be performed during the off-crop season. Additional testing will be performed within 30 days of again burning wood chips during the 2007 off-crop season.

Hg Deviations ($3x10^{-6}$ lb/MMBtu) – There were no deviations based on the August 2006 performance test for wood chips (see Table A).

OPERATING LIMITS – Because the semi-annual reporting period includes portions of the off-crop and crop seasons, the minimum operating limits established during each representative season are used to determine deviations. This semi-annual report covers the period from

July 1, 2006 to December 31, 2006, and the crop season began October 16, 2006. Therefore, all deviations during the off-crop season (i.e., July 1, 2006 to October 15, 2006) are based on the minimum operating limits established during off-crop season performance tests. Because lower scrubber water flows were not reestablished in the August 2006 off-crop testing, the minimum scrubber flows from the June 2006 off-crop testing remain the current minimum operating parameters. The operating parameters from the June 2006 testing were included in the last semi-annual report.

All deviations during the crop season (October 16, 2006 to December 31, 2006) are based on the minimum operating limits established during the crop season performance tests. The January 2006 performance test established all operating parameters for the crop season and was included in the last semi-annual report.

In a letter dated September 1, 2006, the U.S. Environmental Protection Agency (EPA) approved a request to cease continuous monitoring of the pressure drop across each cyclone. Therefore, no pressure drop data after September 1, 2006, was analyzed for deviations and no pressure drop operating limits will be re-established in future performance tests.

OFF-CROP SEASON OPERATING LIMITS (7/1/06-10/15/06) – Based on the June 2006 and August 2006 Performance Tests. A deviation is a 3 hour block average.

Total Secondary Power Input Deviations (18 kW)
Excluding SSM: 2 deviations (see Table 1)
Including SSM: 3 deviations (see Table 1)

Scrubber 1 Pressure Drop Deviations (0.36 inches H_2O)
Excluding SSM: 0 deviations (see Table 2)
Including SSM: 10 deviations (see Table 2)

Scrubber 2 Pressure Drop Deviations (0.32 inches H_2O)
Excluding SSM: 0 deviations (see Table 3)
Including SSM: 10 deviations (see Table 3)

Scrubber 1 Water Flow Deviations (7,695 gal/hr)
Excluding SSM: 0 deviations
Including SSM: 0 deviations

Scrubber 2 Water Flow Deviations (8,685 gal/hr)
Excluding SSM: 0 deviations
Including SSM: 0 deviations

CROP SEASON OPERATING LIMITS (10/16/06-12/31/06) – Based on the January 2006 Performance Test. A deviation is a 3 hour block average.

Total Secondary Power Input Deviations (25 kW)
Excluding SSM: 0 deviations
Including SSM: 0 deviations

Scrubber 1 Water Flow Deviations (22,536 gal/hr)
Excluding SSM: 11 deviations (see Table 4)
Including SSM: 17 deviations (see Table 4)

Scrubber 2 Water Flow Deviations (22,644 gal/hr)
Excluding SSM: 12 deviations (see Table 5)
Including SSM: 18 deviations (see Table 5)

Tables 1 through 5 show the date and time duration of each deviation, the number of 3-hour block deviations, the parameter deviation range, and the reason for each deviation for each operating limit.

Total deviations as a percentage of total boiler operating time are shown in Table 6 for each operating limit. One deviation is equivalent to 3 hours.

Tables 7 and 8 show the date and time duration that each CMS was inoperative/out-of-control for each operating limit for which there was a deviation.

Total CMS downtime as a percentage of total boiler operating time is shown in Table 9 for each operating limit for which there was a deviation.

Date of latest CMS certification or audit: During the January 10-11, 2006 performance test, a Relative Accuracy Test Audit (RATA) for NO_x and CO on the CEMS was performed while firing bagasse.

TABLE A
SUMMARY OF OFF-CROP SEASON AUGUST 2006 COMPLIANCE TEST RESULTS ON WOOD CHIPS FOR BOILER NO. 8, U.S. SUGAR CLEWISTON

Parameter	Source of Data	C-1 8/22/2006 1036-1142	C-2 8/22/2006 1320-1426	C-3 8/22/2006 1530-1636	C-1 thru C-3 Average	Permit or Subpart DDDDD Limit
Fuel Type		Wood chips	Wood chips	Wood chips		
Steam Production (lb/hr)	DAHS	202,398	202,350	199,188	**201,312**	**550,000**
Heat Input (MMBtu/hr) (62% eff.) [a]	DAHS	373	373	366	**371**	**1,030**
Stack Flow (acfm)	DAHS	158,715 *	154,201 *	153,943 *	**155,619** *	**--**
Stack Flow (dscfm)	DAHS	100,590 *	98,492 *	99,304 *	**99,462** *	**--**
Stack Temp. (deg. F)	DAHS	270	265	261	**265**	**--**
Oxygen (%) - wet basis	DAHS	9.25	9.24	9.41	**9.30**	**--**
F-Factor (dscf/MMBtu)	Fuel Analysis	11,162	11,501	11,005	**11,223**	**--**
Stack Flow (acfm)	Stack Test	262,552	256,382	257,466	**258,800**	
Stack Flow (dscfm)	Stack Test	148,855	146,795	148,794	**148,148**	**--**
Oxygen (%) - dry basis	Stack Test	10.36	10.43	10.30	**10.36**	**--**
Heat Input from F-Factor (MMBtu/hr)	Stack Test	404	384	411	**400**	**1,030**
Particulate Matter based on F-Factor (lb/MMBtu)	Stack Test	0.0101	0.0193	0.0167	**0.0154**	**0.025**
Nitrogen Oxides (lb/MMBtu)	Stack Test	N/A	N/A	N/A	**N/A**	**0.14** [c]
Carbon Monoxide (lb/MMBtu)	Stack Test	N/A	N/A	N/A	**N/A**	**0.38** [b]
Sulfur Dioxide (lb/MMBtu)	Stack Test	N/A	N/A	N/A	**N/A**	**0.06**
Volatile Organic Compds (lb/MMBtu)	Stack Test	N/A	N/A	N/A	**N/A**	**0.05**
Chlorine (inlet) (lb/MMBtu)	Stack Test	0.0031	0.0029	0.0021	**0.0027**	**N/A**
Hydrogen Chloride (inlet) (lb/MMBtu)	Stack Test	0.0785	0.0967	0.0809	**0.0854**	**N/A**
Hydrogen Chloride (oulet) (lb/MMBtu)	Stack Test	N/A	N/A	N/A	**N/A**	**0.02**
Mercury (lb/MMBtu)	Fuel Analysis	3.7E-07	1.1E-06	1.4E-06	**9.6E-07**	**3.0E-06**
Ammonia Slip (ppmvd @ 7% O_2)	Stack Test	N/A	N/A	N/A	**N/A**	**20**
NOx CEMS						
NOx (ppmvd)	DAHS	66.67	69.57	66.21	**67.48**	**--**
NOx (ppmvd @ 7% O_2)	DAHS	89.89	93.60	90.27	**91.25**	**--**
NOx (lb/hr)	DAHS	47.92	49.00	47.02	**47.98**	**131** [b]
NOx (lb/MMBtu)	DAHS	0.13	0.13	0.13	**0.13**	**0.14** [c]
CO CEMS						
CO (ppmvd)	DAHS	82.39	85.51	93.07	**86.99**	**--**
CO (ppmvd @ 7% O_2)	DAHS	111.69	115.36	127.06	**118.04**	**400** [c]
CO (lb/hr)	DAHS	36.05	36.64	40.24	**37.64**	**--**
	--					**Operating Limits @ 90%** [d]
Urea Injection Rate (gal/hr)	DAHS	13.50	13.40	13.90	**13.60**	**--**
Total ESP Power Input (kW) [e]	DAHS	46	20	20	**29**	**18**
Scrubber 1 Water Flow (gal/hr)	DAHS	21,000	21,000	21,000	**21,000**	**7,695** [f]
Scrubber 2 Water Flow (gal/hr)	DAHS	21,000	21,000	21,000	**21,000**	**8,685** [f]
Scrubber 1 Pressure Drop (in. H_2O)	DAHS	0.40	0.42	0.45	**0.42**	**0.36**
Scrubber 2 Pressure Drop (in. H_2O)	DAHS	0.35	0.35	0.36	**0.35**	**0.32**

[a] Calculated using steam parameters and 62% thermal efficiency.

[b] Applicable only during initial compliance test.

[c] Based on a 30-day rolling average.

[d] Based on 40 CFR 63, Subpart DDDDD: limit is 90% of minimum test value.

[e] Three fields operating for C-1, and two fields operating for C-2 and C-3.

[f] Although 90 percent of the minimum water flow rate for both scrubbers is 18,900 gal/hr, the minimum operating limit remains as established in the June 2006 off-crop season testing.

* After investigation, DAHS stack flows were found to be in error due to sample line pluggage. This was subsequently repaired.

TABLE 1
OPERATING LIMIT DEVIATIONS, BOILER NO. 8,
ESP TOTAL SECONDARY POWER, INCLUDING SSM

Start Date/Time	End Date/Time	Nunber of 3-Hour Block Deviations	Parameter Deviation Range (kW)	During startup, shutdown, control equipment problems, process problems, other known causes, or other unknown causes?	Parameter
7/1/06 9:00	7/1/06 11:59	1	17	Unknown	ESP – Secondary Total Power - 18 kW (3-hour block average) – before October 16, 2006
7/2/06 9:00	7/2/06 11:59	1	11	Known	
9/6/06 9:00	9/6/06 11:59	1	16	Shutdown	

TABLE 2
OPERATING LIMIT DEVIATIONS, BOILER NO. 8,
SCRUBBER 1, PRESSURE DROP, INCLUDING SSM

Start Date/Time	End Date/Time	Nunber of 3-Hour Block Deviations	Parameter Deviation Range (in. H_2O)	During startup, shutdown, control equipment problems, process problems, other known causes, or other unknown causes?	Parameter
8/9/06 0:00	8/10/06 2:59	9	0.19 - 0.30	Startup	Scrubber 1 – Pressure Drop - 0.36 in. H_2O (3-hour block average) – before September 1, 2006
8/29/06 6:00	8/29/06 8:59	1	0.30	Shutdown	

TABLE 3
OPERATING LIMIT DEVIATIONS, BOILER NO. 8,
SCRUBBER 2, PRESSURE DROP, INCLUDING SSM

Start Date/Time	End Date/Time	Nunber of 3-Hour Block Deviations	Parameter Deviation Range (in. H_2O)	During startup, shutdown, control equipment problems, process problems, other known causes, or other unknown causes?	Parameter
8/9/06 0:00	8/10/06 2:59	9	0.14 - 0.26	Startup	Scrubber 2 – Pressure Drop - 0.32 in. H_2O (3-hour block average) – before September 1, 2006
8/29/06 6:00	8/29/06 8:59	1	0.28	Shutdown	

TABLE 4
OPERATING LIMIT DEVIATIONS, BOILER NO. 8,
SCRUBBER 1, WATER FLOW RATE, INCLUDING SSM

Start Date/Time	End Date/Time	Nunber of 3-Hour Block Deviations	Parameter Deviation Range (gal/hr)	During startup, shutdown, control equipment problems, process problems, other known causes, or other unknown causes?	Parameter
10/16/06 0:00	10/16/06 8:59	3	21,000 - 21,120	Unknown	**Scrubber 1 – Water Flow Rate - 22,536 gal/hr (3-hour block average) – after October 15, 2006**
10/16/06 15:00	10/17/06 8:59	6	21,000	Unknown	
10/31/06 12:00	10/31/06 14:59	1	17,587	Startup	
11/8/06 15:00	11/8/06 17:59	1	16,273	Startup	
11/9/06 6:00	11/9/06 8:59	1	21,270	Shutdown	
12/7/06 12:00	12/7/06 14:59	1	20,925	Startup	
12/23/06 21:00	12/24/06 2:59	2	21,737 - 22,440	Unknown	
12/28/06 6:00	12/28/06 8:59	1	21,795	Shutdown	
12/28/06 12:00	12/28/06 14:59	1	21,470	Startup	

TABLE 5
OPERATING LIMIT DEVIATIONS, BOILER NO. 8,
SCRUBBER 2, WATER FLOW RATE, INCLUDING SSM

Start Date/Time	End Date/Time	Nunber of 3-Hour Block Deviations	Parameter Deviation Range (gal/hr)	During startup, shutdown, control equipment problems, process problems, other known causes, or other unknown causes?	Parameter
10/16/06 0:00	10/16/06 8:59	3	21,000 - 21,137	Unknown	**Scrubber 2 – Water Flow Rate - 22,644 gal/hr (3-hour block average) – after October 15, 2006**
10/16/06 15:00	10/17/06 8:59	6	21,000	Unknown	
10/31/06 9:00	10/31/06 11:59	1	21,613	Shutdown	
10/31/06 12:00	10/31/06 14:59	1	15,457	Startup	
11/1/06 9:00	11/1/06 17:59	3	19,600 - 20,127	Unknown	
11/8/06 15:00	11/8/06 17:59	1	16,330	Shutdown	
11/9/06 6:00	11/9/06 8:59	1	21,173	Shutdown	
12/7/06 12:00	12/7/06 14:59	1	20,925	Startup	
12/28/06 12:00	12/28/06 14:59	1	18,767	Shutdown	

TABLE 6
OPERATING LIMIT DEVIATIONS, BOILER NO. 8

Parameter	Total Deviation Time (hours) [a]		% Total Deviation [b]	
	Excluding SSM	Including SSM	Excluding SSM	Including SSM
ESP - Secondary Power Input	6	9	0.2%	0.3%
Scrubber 1 - Water Flow Rate	33	51	1.1%	1.8%
Scrubber 1 - Pressure Drop	0	30	0%	1.0%
Scrubber 2 - Water Flow Rate	36	54	1.2%	1.9%
Scrubber 2 - Pressure Drop	0	30	0%	1.0%

[a] Total deviation is determined by adding up the 3-hour block average deviations and multiplying by 3 since one deviation is comprised of 3 hours.

[b] Boiler No. 8 operated 2,902 hours during period of July 1, 2006 - December 31, 2006.

TABLE 7

BOILER NO. 8, ESP, TOTAL SECONDARY POWER INPUT, CMS DOWNTIME

Start Date/Time	End Date/Time	Hours	Total Cumulative Hours	Parameter
9/6/06 0:00	9/6/06 0:59	1	1	
10/14/06 17:00	10/14/06 19:59	3	4	
10/27/06 21:00	10/27/06 21:59	1	5	**ESP – Total Secondary Power Input**
11/8/06 17:00	11/8/06 18:59	2	7	
11/21/06 9:00	11/21/06 13:59	5	12	
12/9/06 22:00	12/9/06 22:59	1	13	

TABLE 8
BOILER NO. 8, SCRUBBERS 1 AND 2, CMS DOWNTIME

Start Date/Time	End Date/Time	Hours	Cumulative Hours	Parameter
8/29/06 7:00	8/29/06 9:59	3	3	**Scrubber 1 - Pressure Drop**
8/29/06 7:00	8/29/06 9:59	3	3	**Scrubber 2 - Pressure Drop**

TABLE 9
BOILER NO. 8, CMS PERCENT DOWNTIME

Parameter	Total CMS Downtime (Hours)	Total Downtime [a]
ESP - Power Input	0	0%
Scrubber 1 - Water Flow	0	0%
Scrubber 2 - Water Flow	0	0%
Scrubber 1 - Pressure Drop	3	0.1%
Scrubber 2 - Pressure Drop	3	0.1%

[a] Boiler No. 8 operated 2,902 hours during period of July 1, 2006 - December 31, 2006.

40 CFR Part 63, Subpart DDDDD

Semi-Annual Report – United States Sugar Corporation – Boiler No. 8
(January 18, 2007)

Required Information [40 CFR 63.7550(c)]:

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   111 Ponce de Leon Avenue
   Clewiston, Florida 33440

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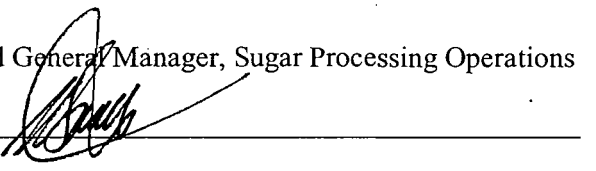
   Responsible Official Name: Neil Smith

   Responsible Official Title: Vice President and General Manager, Sugar Processing Operations

3. Responsible Official Signature: 

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Excluding SSM: 0 deviations (see Table 2)
Including SSM: 10 deviations (see Table 2)

Scrubber 2 Pressure Drop Deviations (0.32 inches H_2O)
Excluding SSM: 0 deviations (see Table 3)
Including SSM: 10 deviations (see Table 3)

Scrubber 1 Water Flow Deviations (7,695 gal/hr)
Excluding SSM: 0 deviations
Including SSM: 0 deviations

Scrubber 2 Water Flow Deviations (8,685 gal/hr)
Excluding SSM: 0 deviations
Including SSM: 0 deviations

CROP SEASON OPERATING LIMITS (10/16/06-12/31/06) – Based on the January 2006 Performance Test. A deviation is a 3 hour block average.

Total Secondary Power Input Deviations (25 kW)
Excluding SSM: 0 deviations
Including SSM: 0 deviations

Scrubber 1 Water Flow Deviations (22,536 gal/hr)
Excluding SSM: 11 deviations (see Table 4)
Including SSM: 17 deviations (see Table 4)

Scrubber 2 Water Flow Deviations (22,644 gal/hr)
Excluding SSM: 12 deviations (see Table 5)
Including SSM: 18 deviations (see Table 5)

Tables 1 through 5 show the date and time duration of each deviation, the number of 3-hour block deviations, the parameter deviation range, and the reason for each deviation for each operating limit.

Total deviations as a percentage of total boiler operating time are shown in Table 6 for each operating limit. One deviation is equivalent to 3 hours.

Tables 7 and 8 show the date and time duration that each CMS was inoperative/out-of-control for each operating limit for which there was a deviation.

Total CMS downtime as a percentage of total boiler operating time is shown in Table 9 for each operating limit for which there was a deviation.

Date of latest CMS certification or audit: During the January 10-11, 2006 performance test, a Relative Accuracy Test Audit (RATA) for NO_x and CO on the CEMS was performed while firing bagasse.

TABLE A
SUMMARY OF OFF-CROP SEASON AUGUST 2006 COMPLIANCE TEST RESULTS ON WOOD CHIPS FOR BOILER NO. 8, U.S. SUGAR CLEWISTON

Parameter	Source of Data	C-1 8/22/2006 1036-1142	C-2 8/22/2006 1320-1426	C-3 8/22/2006 1530-1636	C-1 thru C-3 Average	Permit or Subpart DDDDD Limit
Fuel Type		Wood chips	Wood chips	Wood chips		
Steam Production (lb/hr)	DAHS	202,398	202,350	199,188	**201,312**	**550,000**
Heat Input (MMBtu/hr) (62% eff.) [a]	DAHS	373	373	366	**371**	**1,030**
Stack Flow (acfm)	DAHS	158,715 *	154,201 *	153,943 *	**155,619** *	**--**
Stack Flow (dscfm)	DAHS	100,590 *	98,492 *	99,304 *	**99,462** *	**--**
Stack Temp. (deg. F)	DAHS	270	265	261	**265**	**--**
Oxygen (%) - wet basis	DAHS	9.25	9.24	9.41	**9.30**	**--**
F-Factor (dscf/MMBtu)	Fuel Analysis	11,162	11,501	11,005	**11,223**	**--**
Stack Flow (acfm)	Stack Test	262,552	256,382	257,466	**258,800**	
Stack Flow (dscfm)	Stack Test	148,855	146,795	148,794	**148,148**	**--**
Oxygen (%) - dry basis	Stack Test	10.36	10.43	10.30	**10.36**	**--**
Heat Input from F-Factor (MMBtu/hr)	Stack Test	404	384	411	**400**	**1,030**
Particulate Matter based on F-Factor (lb/MMBtu)	Stack Test	0.0101	0.0193	0.0167	**0.0154**	**0.025**
Nitrogen Oxides (lb/MMBtu)	Stack Test	N/A	N/A	N/A	**N/A**	**0.14** [c]
Carbon Monoxide (lb/MMBtu)	Stack Test	N/A	N/A	N/A	**N/A**	**0.38** [b]
Sulfur Dioxide (lb/MMBtu)	Stack Test	N/A	N/A	N/A	**N/A**	**0.06**
Volatile Organic Compds (lb/MMBtu)	Stack Test	N/A	N/A	N/A	**N/A**	**0.05**
Chlorine (inlet) (lb/MMBtu)	Stack Test	0.0031	0.0029	0.0021	**0.0027**	**N/A**
Hydrogen Chloride (inlet) (lb/MMBtu)	Stack Test	0.0785	0.0967	0.0809	**0.0854**	**N/A**
Hydrogen Chloride (oulet) (lb/MMBtu)	Stack Test	N/A	N/A	N/A	**N/A**	**0.02**
Mercury (lb/MMBtu)	Fuel Analysis	3.7E-07	1.1E-06	1.4E-06	**9.6E-07**	**3.0E-06**
Ammonia Slip (ppmvd @ 7% O_2)	Stack Test	N/A	N/A	N/A	**N/A**	**20**
NOx CEMS						
NOx (ppmvd)	DAHS	66.67	69.57	66.21	**67.48**	**--**
NOx (ppmvd @ 7% O_2)	DAHS	89.89	93.60	90.27	**91.25**	**--**
NOx (lb/hr)	DAHS	47.92	49.00	47.02	**47.98**	**131** [b]
NOx (lb/MMBtu)	DAHS	0.13	0.13	0.13	**0.13**	**0.14** [c]
CO CEMS						
CO (ppmvd)	DAHS	82.39	85.51	93.07	**86.99**	**--**
CO (ppmvd @ 7% O_2)	DAHS	111.69	115.36	127.06	**118.04**	**400** [c]
CO (lb/hr)	DAHS	36.05	36.64	40.24	**37.64**	**--**
	--					**Operating Limits @ 90%** [d]
Urea Injection Rate (gal/hr)	DAHS	13.50	13.40	13.90	**13.60**	**--**
Total ESP Power Input (kW) [e]	DAHS	46	20	20	**29**	**18**
Scrubber 1 Water Flow (gal/hr)	DAHS	21,000	21,000	21,000	**21,000**	**7,695** [f]
Scrubber 2 Water Flow (gal/hr)	DAHS	21,000	21,000	21,000	**21,000**	**8,685** [f]
Scrubber 1 Pressure Drop (in. H_2O)	DAHS	0.40	0.42	0.45	**0.42**	**0.36**
Scrubber 2 Pressure Drop (in. H_2O)	DAHS	0.35	0.35	0.36	**0.35**	**0.32**

[a] Calculated using steam parameters and 62% thermal efficiency.

[b] Applicable only during initial compliance test.

[c] Based on a 30-day rolling average.

[d] Based on 40 CFR 63, Subpart DDDDD: limit is 90% of minimum test value.

[e] Three fields operating for C-1, and two fields operating for C-2 and C-3.

[f] Although 90 percent of the minimum water flow rate for both scrubbers is 18,900 gal/hr, the minimum operating limit remains as established in the June 2006 off-crop season testing.

* After investigation, DAHS stack flows were found to be in error due to sample line pluggage. This was subsequently repaired.

Scrubber 2 Water Flow Deviations (22,644 gal/hr)
Excluding SSM: 12 deviations (see Table 5)
Including SSM: 18 deviations (see Table 5)

Tables 1 through 5 show the date and time duration of each deviation, the number of 3-hour block deviations, the parameter deviation range, and the reason for each deviation for each operating limit.

Total deviations as a percentage of total boiler operating time are shown in Table 6 for each operating limit. One deviation is equivalent to 3 hours.

Tables 7 and 8 show the date and time duration that each CMS was inoperative/out-of-control for each operating limit for which there was a deviation.

Total CMS downtime as a percentage of total boiler operating time is shown in Table 9 for each operating limit for which there was a deviation.

Date of latest CMS certification or audit: During the January 10-11, 2006 performance test, a Relative Accuracy Test Audit (RATA) for NO_x and CO on the CEMS was performed while firing bagasse.

July 1, 2006 to December 31, 2006, and the crop season began October 16, 2006. Therefore, all deviations during the off-crop season (i.e., July 1, 2006 to October 15, 2006) are based on the minimum operating limits established during off-crop season performance tests. Because lower scrubber water flows were not reestablished in the August 2006 off-crop testing, the minimum scrubber flows from the June 2006 off-crop testing remain the current minimum operating parameters. The operating parameters from the June 2006 testing were included in the last semi-annual report.

All deviations during the crop season (October 16, 2006 to December 31, 2006) are based on the minimum operating limits established during the crop season performance tests. The January 2006 performance test established all operating parameters for the crop season and was included in the last semi-annual report.

In a letter dated September 1, 2006, the U.S. Environmental Protection Agency (EPA) approved a request to cease continuous monitoring of the pressure drop across each cyclone. Therefore, no pressure drop data after September 1, 2006, was analyzed for deviations and no pressure drop operating limits will be re-established in future performance tests.

OFF-CROP SEASON OPERATING LIMITS (7/1/06-10/15/06) – Based on the June 2006 and August 2006 Performance Tests. A deviation is a 3 hour block average.

Total Secondary Power Input Deviations (18 kW)
Excluding SSM: 2 deviations (see Table 1)
Including SSM: 3 deviations (see Table 1)

Scrubber 1 Pressure Drop Deviations (0.36 inches H_2O)
Excluding SSM: 0 deviations (see Table 2)
Including SSM: 10 deviations (see Table 2)

Scrubber 2 Pressure Drop Deviations (0.32 inches H_2O)
Excluding SSM: 0 deviations (see Table 3)
Including SSM: 10 deviations (see Table 3)

Scrubber 1 Water Flow Deviations (7,695 gal/hr)
Excluding SSM: 0 deviations
Including SSM: 0 deviations

Scrubber 2 Water Flow Deviations (8,685 gal/hr)
Excluding SSM: 0 deviations
Including SSM: 0 deviations

CROP SEASON OPERATING LIMITS (10/16/06-12/31/06) – Based on the January 2006 Performance Test. A deviation is a 3 hour block average.

Total Secondary Power Input Deviations (25 kW)
Excluding SSM: 0 deviations
Including SSM: 0 deviations

Scrubber 1 Water Flow Deviations (22,536 gal/hr)
Excluding SSM: 11 deviations (see Table 4)
Including SSM: 17 deviations (see Table 4)

7. U.S. Sugar did not burn any new type of fuel in Boiler No. 8. Compliance with Boiler MACT while burning wood chips was demonstrated by the August 22, 2006 performance test, with deviations as noted in Item 12 below.

8. The hours of operation for each calendar month within the semi-annual reporting period for Boiler No. 8 are not included since this is not a limited use boiler or process heater.

9. SSM Report [40 CFR 63.10(d)(5)(i)]:

   a. There were no instances where any actions taken by an owner or operator during SSM events were not consistent with the affected source's SSM plan.
   b. There were no malfunctions that caused or may have caused an emission limitation to be exceeded.
   c. The name, title, and signature of the responsible official certifying the accuracy of this report is shown in Item 2 above.

10. There were deviations from the ESP total secondary power input, wet cyclone water flow rate, and wet cyclone pressure drop minimum operating limits (see Tables 1 through 5, attached). A summary of the operating limit deviations as a percentage of total boiler operating hours is presented in Table 6.

11. There were periods when the CMS was out of control as specified in 40 CFR 63.8(c)(7) during the reporting period (see Tables 7 and 8, attached).

12. Deviation Summary:

EMISSION LIMITS/WORK PRACTICE STANDARDS

CO Deviations (400 ppmvd – 30 day rolling average)
Excluding SSM: No deviations
Including SSM: No deviations

PM Deviations (0.025 lb/MMBtu) – There were no deviations based on the August 2006 performance test for wood chips (see Table A).

HCl Deviations (0.02 lb/MMBtu) – There were deviations based on the August 2006 performance test for wood chips (see Table A). Based on previous test results with bagasse, HCl measurements were obtained at the inlet to the wet cyclones. The average of the three wood chip test runs measured at the inlet was 0.085 lb/MMBtu. Due to the nature of carbonaceous fuel, it is expected that most of the HCl will be absorbed in the ash prior to exiting the stack. However, due to the crop season beginning in early October 2006, additional HCl testing at the stack could not be performed during the off-crop season. Additional testing will be performed within 30 days of again burning wood chips during the 2007 off-crop season.

Hg Deviations ($3x10^{-6}$ lb/MMBtu) – There were no deviations based on the August 2006 performance test for wood chips (see Table A).

OPERATING LIMITS – Because the semi-annual reporting period includes portions of the off-crop and crop seasons, the minimum operating limits established during each representative season are used to determine deviations. This semi-annual report covers the period from

40 CFR Part 63, Subpart DDDDD

Semi-Annual Report – United States Sugar Corporation – Boiler No. 8
(January 18, 2007)

Required Information [40 CFR 63.7550(c)]:

1. United States Sugar Corporation (U.S. Sugar)
   111 Ponce de Leon Avenue
   Clewiston, Florida 33440

2. I, the responsible official, certify the truth, accuracy, and completeness of the content of this report.

   Responsible Official Name: Neil Smith

   Responsible Official Title: Vice President and General Manager, Sugar Processing Operations

3. Responsible Official Signature: _____

4. Date of Report: January 18, 2007
   Reporting Period: July 1, 2006 – December 31, 2006.

5. The total fuel usage for each calendar month within the semi-annual reporting period:

Boiler No. 8 – Fuel Usage	Bagasse (tons) [a]	Wood Chips (tons) [a]	No. 2 Fuel Oil (gallons) [b]
July 2006	0	1,166	19,084
August 2006	0	22,308	47,678
September 2006	0	31,490	28,541
October 2006	35,035	5,825	56,524
November 2006	69,484	0	34,795
December 2006	71,269	0	33,979
Total	***175,788***	***60,790***	***220,601***

[a] Based on a heating value of 3,600 Btu/lb for bagasse and 4,500 Btu/lb for wood chips. Wood chips represent approximately 100% of the total carbonaceous fuel burned during the off-crop season from July 1, 2006 through October 15, 2006. Bagasse represents approximately 100% of the total carbonaceous fuel burned during the crop season from October 16, 2006 through December 31, 2006.

[b] Heating value of 136,000 Btu/gal, density of 6.83 lb/gal, 0.05% sulfur.

6. Please refer to Table A for a summary of the performance test conducted in August 2006 (off-crop season) while burning wood chips in Boiler No. 8. Previous fuel analyses indicated that wood chips and not bagasse were the worst-case fuel for chlorine and mercury; however, only performance tests while burning bagasse had been conducted. This test was performed as an additional test to demonstrate compliance while burning wood chips. Through the wood chip performance test, the following operating limits were reestablished: total ESP power input and the pressure drop for both scrubbers. Table A presents the re-established parameters. Note that beginning September 1, 2006, pressure drop was deleted as an operating parameter for Boiler No. 8.

TABLE 9
BOILER NO. 8, CMS PERCENT DOWNTIME

Parameter	Total CMS Downtime (Hours)	Total Downtime [a]
ESP - Power Input	0	0%
Scrubber 1 - Water Flow	0	0%
Scrubber 2 - Water Flow	0	0%
Scrubber 1 - Pressure Drop	3	0.1%
Scrubber 2 - Pressure Drop	3	0.1%

[a] Boiler No. 8 operated 2,902 hours during period of July 1, 2006 - December 31, 2006.

TABLE 8
BOILER NO. 8, SCRUBBERS 1 AND 2, CMS DOWNTIME

Start Date/Time	End Date/Time	Hours	Cumulative Hours	Parameter
8/29/06 7:00	8/29/06 9:59	3	3	**Scrubber 1 - Pressure Drop**
8/29/06 7:00	8/29/06 9:59	3	3	**Scrubber 2 - Pressure Drop**

TABLE 7

BOILER NO. 8, ESP, TOTAL SECONDARY POWER INPUT, CMS DOWNTIME

Start Date/Time	End Date/Time	Hours	Total Cumulative Hours	Parameter
9/6/06 0:00	9/6/06 0:59	1	1	ESP – Total Secondary Power Input
10/14/06 17:00	10/14/06 19:59	3	4	
10/27/06 21:00	10/27/06 21:59	1	5	
11/8/06 17:00	11/8/06 18:59	2	7	
11/21/06 9:00	11/21/06 13:59	5	12	
12/9/06 22:00	12/9/06 22:59	1	13	

TABLE 6
OPERATING LIMIT DEVIATIONS, BOILER NO. 8

Parameter	Total Deviation Time (hours) [a]		% Total Deviation [b]	
	Excluding SSM	Including SSM	Excluding SSM	Including SSM
ESP - Secondary Power Input	6	9	0.2%	0.3%
Scrubber 1 - Water Flow Rate	33	51	1.1%	1.8%
Scrubber 1 - Pressure Drop	0	30	0%	1.0%
Scrubber 2 - Water Flow Rate	36	54	1.2%	1.9%
Scrubber 2 - Pressure Drop	0	30	0%	1.0%

[a] Total deviation is determined by adding up the 3-hour block average deviations and multiplying by 3 since one deviation is comprised of 3 hours.

[b] Boiler No. 8 operated 2,902 hours during period of July 1, 2006 - December 31, 2006.

TABLE 5
OPERATING LIMIT DEVIATIONS, BOILER NO. 8,
SCRUBBER 2, WATER FLOW RATE, INCLUDING SSM

Start Date/Time	End Date/Time	Nunber of 3-Hour Block Deviations	Parameter Deviation Range (gal/hr)	During startup, shutdown, control equipment problems, process problems, other known causes, or other unknown causes?	Parameter
10/16/06 0:00	10/16/06 8:59	3	21,000 - 21,137	Unknown	**Scrubber 2 – Water Flow Rate - 22,644 gal/hr (3-hour block average) – after October 15, 2006**
10/16/06 15:00	10/17/06 8:59	6	21,000	Unknown	
10/31/06 9:00	10/31/06 11:59	1	21,613	Shutdown	
10/31/06 12:00	10/31/06 14:59	1	15,457	Startup	
11/1/06 9:00	11/1/06 17:59	3	19,600 - 20,127	Unknown	
11/8/06 15:00	11/8/06 17:59	1	16,330	Shutdown	
11/9/06 6:00	11/9/06 8:59	1	21,173	Shutdown	
12/7/06 12:00	12/7/06 14:59	1	20,925	Startup	
12/28/06 12:00	12/28/06 14:59	1	18,767	Shutdown	

TABLE 4
OPERATING LIMIT DEVIATIONS, BOILER NO. 8,
SCRUBBER 1, WATER FLOW RATE, INCLUDING SSM

Start Date/Time	End Date/Time	Nunber of 3-Hour Block Deviations	Parameter Deviation Range (gal/hr)	During startup, shutdown, control equipment problems, process problems, other known causes, or other unknown causes?	Parameter
10/16/06 0:00	10/16/06 8:59	3	21,000 - 21,120	Unknown	**Scrubber 1 – Water Flow Rate - 22,536 gal/hr (3-hour block average) – after October 15, 2006**
10/16/06 15:00	10/17/06 8:59	6	21,000	Unknown	
10/31/06 12:00	10/31/06 14:59	1	17,587	Startup	
11/8/06 15:00	11/8/06 17:59	1	16,273	Startup	
11/9/06 6:00	11/9/06 8:59	1	21,270	Shutdown	
12/7/06 12:00	12/7/06 14:59	1	20,925	Startup	
12/23/06 21:00	12/24/06 2:59	2	21,737 - 22,440	Unknown	
12/28/06 6:00	12/28/06 8:59	1	21,795	Shutdown	
12/28/06 12:00	12/28/06 14:59	1	21,470	Startup	

TABLE 3
OPERATING LIMIT DEVIATIONS, BOILER NO. 8,
SCRUBBER 2, PRESSURE DROP, INCLUDING SSM

Start Date/Time	End Date/Time	Nunber of 3-Hour Block Deviations	Parameter Deviation Range (in. H_2O)	During startup, shutdown, control equipment problems, process problems, other known causes, or other unknown causes?	Parameter
8/9/06 0:00	8/10/06 2:59	9	0.14 - 0.26	Startup	Scrubber 2 – Pressure Drop - 0.32 in. H_2O (3-hour block average) – before September 1, 2006
8/29/06 6:00	8/29/06 8:59	1	0.28	Shutdown	

TABLE 2
OPERATING LIMIT DEVIATIONS, BOILER NO. 8,
SCRUBBER 1, PRESSURE DROP, INCLUDING SSM

Start Date/Time	End Date/Time	Nunber of 3-Hour Block Deviations	Parameter Deviation Range (in. H_2O)	During startup, shutdown, control equipment problems, process problems, other known causes, or other unknown causes?	Parameter
8/9/06 0:00	8/10/06 2:59	9	0.19 - 0.30	Startup	**Scrubber 1 – Pressure Drop - 0.36 in. H_2O (3-hour block average) – before September 1, 2006**
8/29/06 6:00	8/29/06 8:59	1	0.30	Shutdown	

TABLE 1
OPERATING LIMIT DEVIATIONS, BOILER NO. 8,
ESP TOTAL SECONDARY POWER, INCLUDING SSM

Start Date/Time	End Date/Time	Nunber of 3-Hour Block Deviations	Parameter Deviation Range (kW)	During startup, shutdown, control equipment problems, process problems, other known causes, or other unknown causes?	Parameter
7/1/06 9:00	7/1/06 11:59	1	17	Unknown	ESP – Secondary Total Power - 18 kW (3-hour block average) – before October 16, 2006
7/2/06 9:00	7/2/06 11:59	1	11	Known	
9/6/06 9:00	9/6/06 11:59	1	16	Shutdown	

TABLE A
SUMMARY OF OFF-CROP SEASON AUGUST 2006 COMPLIANCE TEST RESULTS ON WOOD CHIPS FOR BOILER NO. 8, U.S. SUGAR CLEWISTON

Parameter	Source of Data	C-1 8/22/2006 1036-1142	C-2 8/22/2006 1320-1426	C-3 8/22/2006 1530-1636	C-1 thru C-3 Average	Permit or Subpart DDDDD Limit
Fuel Type		Wood chips	Wood chips	Wood chips		
Steam Production (lb/hr)	DAHS	202,398	202,350	199,188	**201,312**	**550,000**
Heat Input (MMBtu/hr) (62% eff.) [a]	DAHS	373	373	366	**371**	**1,030**
Stack Flow (acfm)	DAHS	158,715 *	154,201 *	153,943 *	**155,619** *	–
Stack Flow (dscfm)	DAHS	100,590 *	98,492 *	99,304 *	**99,462** *	–
Stack Temp. (deg. F)	DAHS	270	265	261	**265**	–
Oxygen (%) - wet basis	DAHS	9.25	9.24	9.41	**9.30**	–
F-Factor (dscf/MMBtu)	Fuel Analysis	11,162	11,501	11,005	**11,223**	–
Stack Flow (acfm)	Stack Test	262,552	256,382	257,466	**258,800**	
Stack Flow (dscfm)	Stack Test	148,855	146,795	148,794	**148,148**	–
Oxygen (%) - dry basis	Stack Test	10.36	10.43	10.30	**10.36**	–
Heat Input from F-Factor (MMBtu/hr)	Stack Test	404	384	411	**400**	**1,030**
Particulate Matter based on F-Factor (lb/MMBtu)	Stack Test	0.0101	0.0193	0.0167	**0.0154**	**0.025**
Nitrogen Oxides (lb/MMBtu)	Stack Test	N/A	N/A	N/A	**N/A**	**0.14** [c]
Carbon Monoxide (lb/MMBtu)	Stack Test	N/A	N/A	N/A	**N/A**	**0.38** [b]
Sulfur Dioxide (lb/MMBtu)	Stack Test	N/A	N/A	N/A	**N/A**	**0.06**
Volatile Organic Compds (lb/MMBtu)	Stack Test	N/A	N/A	N/A	**N/A**	**0.05**
Chlorine (inlet) (lb/MMBtu)	Stack Test	0.0031	0.0029	0.0021	**0.0027**	**N/A**
Hydrogen Chloride (inlet) (lb/MMBtu)	Stack Test	0.0785	0.0967	0.0809	**0.0854**	**N/A**
Hydrogen Chloride (oulet) (lb/MMBtu)	Stack Test	N/A	N/A	N/A	**N/A**	**0.02**
Mercury (lb/MMBtu)	Fuel Analysis	3.7E-07	1.1E-06	1.4E-06	**9.6E-07**	**3.0E-06**
Ammonia Slip (ppmvd @ 7% O_2)	Stack Test	N/A	N/A	N/A	**N/A**	**20**
NOx CEMS						
NOx (ppmvd)	DAHS	66.67	69.57	66.21	**67.48**	–
NOx (ppmvd @ 7% O_2)	DAHS	89.89	93.60	90.27	**91.25**	–
NOx (lb/hr)	DAHS	47.92	49.00	47.02	**47.98**	**131** [b]
NOx (lb/MMBtu)	DAHS	0.13	0.13	0.13	**0.13**	**0.14** [c]
CO CEMS						
CO (ppmvd)	DAHS	82.39	85.51	93.07	**86.99**	–
CO (ppmvd @ 7% O_2)	DAHS	111.69	115.36	127.06	**118.04**	**400** [c]
CO (lb/hr)	DAHS	36.05	36.64	40.24	**37.64**	–
	–					**Operating Limits @ 90%** [d]
Urea Injection Rate (gal/hr)	DAHS	13.50	13.40	13.90	**13.60**	–
Total ESP Power Input (kW) [e]	DAHS	46	20	20	**29**	**18**
Scrubber 1 Water Flow (gal/hr)	DAHS	21,000	21,000	21,000	**21,000**	**7,695** [f]
Scrubber 2 Water Flow (gal/hr)	DAHS	21,000	21,000	21,000	**21,000**	**8,685** [f]
Scrubber 1 Pressure Drop (in. H_2O)	DAHS	0.40	0.42	0.45	**0.42**	**0.36**
Scrubber 2 Pressure Drop (in. H_2O)	DAHS	0.35	0.35	0.36	**0.35**	**0.32**

[a] Calculated using steam parameters and 62% thermal efficiency.

[b] Applicable only during initial compliance test.

[c] Based on a 30-day rolling average.

[d] Based on 40 CFR 63, Subpart DDDDD: limit is 90% of minimum test value.

[e] Three fields operating for C-1, and two fields operating for C-2 and C-3.

[f] Although 90 percent of the minimum water flow rate for both scrubbers is 18,900 gal/hr, the minimum operating limit remains as established in the June 2006 off-crop season testing.

* After investigation, DAHS stack flows were found to be in error due to sample line pluggage. This was subsequently repaired.

TABLE 1
OPERATING LIMIT DEVIATIONS, BOILER NO. 8,
ESP TOTAL SECONDARY POWER, INCLUDING SSM

Start Date/Time	End Date/Time	Nunber of 3-Hour Block Deviations	Parameter Deviation Range (kW)	During startup, shutdown, control equipment problems, process problems, other known causes, or other unknown causes?	Parameter
7/1/06 9:00	7/1/06 11:59	1	17	Unknown	ESP – Secondary Total Power - 18 kW (3-hour block average) – before October 16, 2006
7/2/06 9:00	7/2/06 11:59	1	11	Known	
9/6/06 9:00	9/6/06 11:59	1	16	Shutdown	

TABLE 2
OPERATING LIMIT DEVIATIONS, BOILER NO. 8,
SCRUBBER 1, PRESSURE DROP, INCLUDING SSM

Start Date/Time	End Date/Time	Nunber of 3-Hour Block Deviations	Parameter Deviation Range (in. H_2O)	During startup, shutdown, control equipment problems, process problems, other known causes, or other unknown causes?	Parameter
8/9/06 0:00	8/10/06 2:59	9	0.19 - 0.30	Startup	**Scrubber 1 – Pressure Drop - 0.36 in. H_2O (3-hour block average) – before September 1, 2006**
8/29/06 6:00	8/29/06 8:59	1	0.30	Shutdown	

TABLE 3
OPERATING LIMIT DEVIATIONS, BOILER NO. 8,
SCRUBBER 2, PRESSURE DROP, INCLUDING SSM

Start Date/Time	End Date/Time	Nunber of 3-Hour Block Deviations	Parameter Deviation Range (in. H_2O)	During startup, shutdown, control equipment problems, process problems, other known causes, or other unknown causes?	Parameter
8/9/06 0:00	8/10/06 2:59	9	0.14 - 0.26	Startup	**Scrubber 2 – Pressure Drop - 0.32 in. H_2O (3-hour block average) – before September 1, 2006**
8/29/06 6:00	8/29/06 8:59	1	0.28	Shutdown	

TABLE 4
OPERATING LIMIT DEVIATIONS, BOILER NO. 8,
SCRUBBER 1, WATER FLOW RATE, INCLUDING SSM

Start Date/Time	End Date/Time	Nunber of 3-Hour Block Deviations	Parameter Deviation Range (gal/hr)	During startup, shutdown, control equipment problems, process problems, other known causes, or other unknown causes?	Parameter
10/16/06 0:00	10/16/06 8:59	3	21,000 - 21,120	Unknown	**Scrubber 1 – Water Flow Rate - 22,536 gal/hr (3-hour block average) – after October 15, 2006**
10/16/06 15:00	10/17/06 8:59	6	21,000	Unknown	
10/31/06 12:00	10/31/06 14:59	1	17,587	Startup	
11/8/06 15:00	11/8/06 17:59	1	16,273	Startup	
11/9/06 6:00	11/9/06 8:59	1	21,270	Shutdown	
12/7/06 12:00	12/7/06 14:59	1	20,925	Startup	
12/23/06 21:00	12/24/06 2:59	2	21,737 - 22,440	Unknown	
12/28/06 6:00	12/28/06 8:59	1	21,795	Shutdown	
12/28/06 12:00	12/28/06 14:59	1	21,470	Startup	

TABLE 5
OPERATING LIMIT DEVIATIONS, BOILER NO. 8,
SCRUBBER 2, WATER FLOW RATE, INCLUDING SSM

Start Date/Time	End Date/Time	Nunber of 3-Hour Block Deviations	Parameter Deviation Range (gal/hr)	During startup, shutdown, control equipment problems, process problems, other known causes, or other unknown causes?	Parameter
10/16/06 0:00	10/16/06 8:59	3	21,000 - 21,137	Unknown	Scrubber 2 – Water Flow Rate - 22,644 gal/hr (3-hour block average) – after October 15, 2006
10/16/06 15:00	10/17/06 8:59	6	21,000	Unknown	
10/31/06 9:00	10/31/06 11:59	1	21,613	Shutdown	
10/31/06 12:00	10/31/06 14:59	1	15,457	Startup	
11/1/06 9:00	11/1/06 17:59	3	19,600 - 20,127	Unknown	
11/8/06 15:00	11/8/06 17:59	1	16,330	Shutdown	
11/9/06 6:00	11/9/06 8:59	1	21,173	Shutdown	
12/7/06 12:00	12/7/06 14:59	1	20,925	Startup	
12/28/06 12:00	12/28/06 14:59	1	18,767	Shutdown	

TABLE 6
OPERATING LIMIT DEVIATIONS, BOILER NO. 8

Parameter	Total Deviation Time (hours) [a]		% Total Deviation [b]	
	Excluding SSM	Including SSM	Excluding SSM	Including SSM
ESP - Secondary Power Input	6	9	0.2%	0.3%
Scrubber 1 - Water Flow Rate	33	51	1.1%	1.8%
Scrubber 1 - Pressure Drop	0	30	0%	1.0%
Scrubber 2 - Water Flow Rate	36	54	1.2%	1.9%
Scrubber 2 - Pressure Drop	0	30	0%	1.0%

[a] Total deviation is determined by adding up the 3-hour block average deviations and multiplying by 3 since one deviation is comprised of 3 hours.

[b] Boiler No. 8 operated 2,902 hours during period of July 1, 2006 - December 31, 2006.

TABLE 7

BOILER NO. 8, ESP, TOTAL SECONDARY POWER INPUT, CMS DOWNTIME

Start Date/Time	End Date/Time	Hours	Total Cumulative Hours	Parameter
9/6/06 0:00	9/6/06 0:59	1	1	ESP – Total Secondary Power Input
10/14/06 17:00	10/14/06 19:59	3	4	
10/27/06 21:00	10/27/06 21:59	1	5	
11/8/06 17:00	11/8/06 18:59	2	7	
11/21/06 9:00	11/21/06 13:59	5	12	
12/9/06 22:00	12/9/06 22:59	1	13	

TABLE 8
BOILER NO. 8, SCRUBBERS 1 AND 2, CMS DOWNTIME

Start Date/Time	End Date/Time	Hours	Cumulative Hours	Parameter
8/29/06 7:00	8/29/06 9:59	3	3	**Scrubber 1 - Pressure Drop**
8/29/06 7:00	8/29/06 9:59	3	3	**Scrubber 2 - Pressure Drop**

TABLE 9
BOILER NO. 8, CMS PERCENT DOWNTIME

Parameter	Total CMS Downtime (Hours)	Total Downtime [a]
ESP - Power Input	0	0%
Scrubber 1 - Water Flow	0	0%
Scrubber 2 - Water Flow	0	0%
Scrubber 1 - Pressure Drop	3	0.1%
Scrubber 2 - Pressure Drop	3	0.1%

[a] Boiler No. 8 operated 2,902 hours during period of July 1, 2006 - December 31, 2006.

?

Permit File Scanning Request from Elizabeth

Priority: ☐-ASAP (Public Records Request, etc.) ☒-Place in Normal Scanning Queue

Facility ID	Project#	Type	PSD #	Submittal Date	Batch #
051003	030	AC	333B		

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☐ Correspondence ☐ Intent ☐ Permit ☐ Draft
☐ Amendment ☐ Application ☐ OGC ☐ Proposed

Document Date 10/23/06

CC: J. Koerner
FDEP

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October 18, 2006

RECEIVED
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BUREAU OF AIR REGULATION

063-7602

Florida Department of Environmental Protection
Department of Air Resources Management
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33901-3881

Attention: Mr. Ron Blackburn, Environmental Administrator

RE: UNITED STATES SUGAR CORPORATION – CLEWISTON MILL
BOILER NO. 8 – MACT PERFORMANCE TESTING
40 CFR PART 63, SUBPART DDDDD
PERMIT NO. 0510003-030-AC/PSD-FL-333B

Dear Mr. Blackburn:

On August 22, 2006, United States Sugar Corporation (U.S. Sugar) conducted a performance test on Boiler No. 8 while burning wood chips to satisfy the requirements of Title 40, Part 63 of the Code of Federal Regulations (40 CFR 63), Subpart DDDDD, the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial and Institutional Boilers and Process Heaters [Boiler Maximum Available Control Technology (MACT) rule]. The purpose of the testing was to assess compliance and set operating parameter limits for wood chip burning during off-season operations. The complete source test report from the August 22, 2006 testing, prepared by Air Consulting and Engineering, Inc., is attached to this report.

A summary of the complete test results of the August 22, 2006 testing while firing wood chips only is presented in Table 1. The stack sampling and fuel sampling and analysis were conducted according to the protocol submitted to FDEP in a letter dated August 9, 2006, from Golder Associates Inc. A discussion of the test results follows below.

Boiler No. 8 Operation

During the performance testing of August 22, 2006, the boiler averaged approximately 201,312 pounds per hour (lb/hr) of steam, which was approximately 37-percent of the maximum 1-hour steam production limit of 550,000 lb/hr, and was 40-percent of the maximum 24-hour steam production limit of 500,000 lb/hr. The lower steam production rate is expected for off-crop season operation. Off-crop season rates are typically about one-half of the crop season rates. The heat input rate, based on steam production, steam conditions, and a boiler thermal efficiency of 62 percent, averaged approximately 371 million British thermal units per hour (MMBtu/hr), compared to a 1-hour permit limit of 1,030 MMBtu/hr and 24-hour permit limit of 936 MMBtu/hr. Boiler oxygen (O_2) levels were approximately 9.3 percent.

During the testing, fuel analysis was performed on wood chips, which was the only fuel burned during the performance test. The F-Factor values based on the fuel analysis averaged approximately

11,223 dry standard cubic foot per million British thermal units (dscf/MMBtu). Based on this F-Factor, heat input to the boiler averaged 400 MMBtu/hr.

Particulate Matter Test Results

Particulate matter (PM) emissions from Boiler No. 8 averaged 0.0154 pound per million British thermal units (lb/MMBtu) during the performance test runs on August 22, 2006, based on the F-Factor method of determining heat input to the boiler. This result is below the Boiler MACT limit of 0.025 lb/MMBtu.

It is noted that these runs were also conducted while monitoring electrostatic precipitator (ESP) power input and wet cyclone (scrubber) water flow rate and pressure drop, in order to establish off-crop season operating limits for these parameters while burning wood chips, as required by the MACT regulations.

Nitrogen Oxides Test Results

There is no permit limit based on stack testing for nitrogen oxides (NO_x), since compliance is demonstrated with the continuous emission monitoring system (CEMS) for NO_x. During the performance tests, NO_x emissions from the CEMS averaged 0.13 lb/MMBtu. The permit limit for NO_x based on the CEMS is 0.14 lb/MMBtu, based on a 30-day rolling average.

Carbon Monoxide Test Results

There is no permit limit based on stack testing for carbon monoxide (CO), since compliance is demonstrated with the CEMS for CO. During the performance tests, CO emissions from the CEMS averaged 118 parts per million by volume, dry (ppmvd) at 7-percent O_2. The permit limit for CO, based on the CEMS, is 400 ppmvd at 7-percent O_2, based on a 30-day rolling average.

Sulfur Dioxide Test Results

Sulfur dioxide (SO_2) emissions from Boiler No. 8 were not tested as part of the August 22, 2006 testing since there are no Boiler MACT limits for SO_2.

Volatile Organic Compound Test Results

Volatile organic compound (VOC) emissions from Boiler No. 8 were not tested as part of the August 22, 2006 testing since there are no Boiler MACT limits for VOCs.

Ammonia Slip Test Results

Ammonia slip from Boiler No. 8 was not tested as part of the August 22, 2006 testing since there are no Boiler MACT limits for ammonia slip.

Control Device Operating Limits

The MACT regulations require that operating limits for the control devices be set during the MACT performance testing. Because previous compliance tests were conducted while burning bagasse, the August 22, 2006 test established new operating limits for the control devices during the off-crop season while burning wood chips. The operating limits are set based on 90 percent of the minimum test run which demonstrated compliance. The MACT rules regulate PM emissions. For PM, the control device is the ESP. However, the U.S. Environmental Protection Agency (EPA) has also determined (in a letter dated September 20, 2005) that the wet cyclones are also PM control devices and, therefore, water flow rate and pressure drop must be monitored for these control devices.

During the August 22, 2006 testing, the ESP was operating with three ESP fields in operation (i.e., two fields were shut down) for the first test run, and two ESP fields in operation (i.e., three fields were shutdown) for the second and third test runs. Compliance with the MACT PM limit of 0.025 lb/MMBtu was demonstrated on all three test runs. Total ESP power input averaged 29 kilowatts (kW), with the minimum test run averaging 20 kW. This results in an operating limit of 18 kW (90 percent of minimum test run value). This establishes the minimum ESP power input for subsequent operation while burning wood chips during the off-crop season.

During the performance test runs, the wet cyclones demonstrated the following control device parameters, which is applicable to wood chip burning during off-crop season operation:

- Scrubber 1- Water flow rate – Average = 21,000 gallons per hour (gal/hr)
  – Minimum = 21,000 gal/hr
  – Operating limit at 90 percent of min. = 18,900 gal/hr
- Scrubber 1- Pressure drop – Average = 0.42 inches of water (H_2O)
  – Minimum = 0.40 inches H_2O
  – Operating limit at 90 percent of min. = 0.36 inches H_2O
- Scrubber 2- Water flow rate – Average = 21,000 gal/hr
  – Minimum = 21,000 gal/hr
  – Operating limit at 90 percent of min. = 18,900 gal/hr
- Scrubber 2- Pressure drop – Average = 0.35 inches H_2O
  – Minimum = 0.35 inches H_2O
  – Operating limit at 90 percent of min. = 0.32 inches H_2O

It is noted that on September 1, 2006, U.S. Sugar received approval from the Department to delete the requirement to monitor and record pressure drop across the cyclones. Therefore, pressure drop is no longer a Boiler MACT parameter. In addition, U.S. Sugar has been test operating the wet cyclones as dry cyclones (i.e., water used only to sluice ash from the cyclones). If the cyclones are operated as dry control devices, there is no requirement to monitor water flow rate under the Boiler MACT regulation.

Hydrogen Chloride

Emissions of hydrogen chloride (HCl) and chlorine (Cl_2) from Boiler No. 8 were tested at the inlet to the wet cyclones while burning wood chips. During the performance testing, HCl emissions from Boiler No. 8 averaged 0.0854 lb/MMBtu and Cl_2 emissions averaged 0.0027 lb/MMBtu. The HCl emissions, which were tested before the wet scrubber (cyclone) and ESP, are higher than the Boiler MACT limit of 0.02 lb/MMBtu for HCl at the stack. Therefore, additional testing will be conducted at the stack (ESP outlet) during the next off-crop season. This testing will potentially demonstrate that the scrubbers are not necessary for compliance with the MACT standard for HCl while burning wood chips. It is expected that much of the HCl from the wood chips will be absorbed in the ash, further reducing the emissions. Since wood chips will not be burned for the remainder of the off-crop season, no operating parameters (i.e., water flow rate, pressure drop, and pH) were established for the wet scrubbers for HCl emissions.

Fuel Sampling and Analysis

Stack sampling and fuel sampling and analysis were conducted according to the protocol submitted to FDEP in a letter dated August 9, 2006. Wood chips from the wood chip pile are moved by front-end

loaders and dropped into the feeder box. The feeder box contains a very slow moving chain and conveyor. The feeder box discharges directly to the conveying system, which delivers the wood chips to the Boiler No. 8 feeders.

Samples at this location were obtained by using a sampling cup at the end of a 7-foot metal arm. The wood chip fuel analysis results are presented in Table 2.

Since the Boiler MACT limit for HCl could not be met using the fuel analysis, an HCl stack test at the ESP outlet will be conducted during the next off-crop season at the U.S. Sugar Clewiston Mill. Wood chips are not expected to be burned during the upcoming crop season.

Please call me at (352) 336-5600 or e-mail me at dbuff@golder.com if you have any questions concerning this information.

Sincerely,

GOLDER ASSOCIATES INC.

David A. Buff

David A. Buff, P.E., Q.E.P.
Principal Engineer
Florida P.E. #19011
SEAL

Elizabeth C. Booth

Elizabeth Claire Booth
Staff Engineer

ECB/DB/mid

Enclosures

cc: Don Griffin
Peter Briggs
Jeff Koerner, FDEP Tallahassee

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TABLE 1
SUMMARY OF AUGUST 2006 COMPLIANCE TEST RESULTS ON WOOD CHIPS FOR BOILER NO. 8, U.S. SUGAR CLEWISTON

Parameter	Source of Data	C-1 8/22/2006 1036-1142	C-2 8/22/2006 1320-1426	C-3 8/22/2006 1530-1636	C-1 thru C-3 Average	Permit or Subpart DDDDD Limit
Fuel Type		Wood chips	Wood chips	Wood chips		
Steam Production (lb/hr)	DAHS	202,398	202,350	199,188	**201,312**	**550,000**
Heat Input (MMBtu/hr) (62% eff.) [a]	DAHS	373	373	366	**371**	**1,030**
Stack Temp. (deg. F)	DAHS	270	265	261	**265**	--
Oxygen (%) - wet basis	DAHS	9.25	9.24	9.41	**9.30**	--
F-Factor (dscf/MMBtu)	Fuel Analysis	11,162	11,501	11,005	**11,223**	--
Stack Flow (acfm)	Stack Test	262,552	256,382	257,466	**258,800**	
Stack Flow (dscfm)	Stack Test	148,855	146,795	148,794	**148,148**	--
Oxygen (%)	Stack Test	10.36	10.43	10.30	**10.36**	--
Heat Input from F-Factor (MMBtu/hr)	Stack Test	404	384	411	**400**	**1,030**
Particulate Matter based on F-Factor (lb/MMBtu)	Stack Test	0.0101	0.0193	0.0167	**0.0154**	**0.025**
Nitrogen Oxides (lb/MMBtu)	Stack Test	N/A	N/A	N/A	**N/A**	**0.14** [c]
Carbon Monoxide (lb/MMBtu)	Stack Test	N/A	N/A	N/A	**N/A**	**0.38** [b]
Sulfur Dioxide (lb/MMBtu)	Stack Test	N/A	N/A	N/A	**N/A**	**0.06**
Volatile Organic Compds (lb/MMBtu)	Stack Test	N/A	N/A	N/A	**N/A**	**0.05**
Chlorine (inlet) (lb/MMBtu)	Stack Test	0.0031	0.0029	0.0021	**0.0027**	**N/A**
Hydrogen Chloride (inlet) (lb/MMBtu)	Stack Test	0.0785	0.0967	0.0809	**0.0854**	**N/A**
Hydrogen Chloride (oulet) (lb/MMBtu)	Stack Test	N/A	N/A	N/A	**N/A**	**0.02**
Mercury (lb/MMBtu)	Stack Test	3.7E-07	1.1E-06	1.4E-06	**9.6E-07**	**3.0E-06**
Ammonia Slip (ppmvd @ 7% O_2)	Stack Test	N/A	N/A	N/A	**N/A**	**20**
NOx CEMS						
NOx (ppmvd)	DAHS	66.67	69.57	66.21	**67.48**	--
NOx (ppmvd @ 7% O_2)	DAHS	89.89	93.60	90.27	**91.25**	--
NOx (lb/hr)	DAHS	47.92	49.00	47.02	**47.98**	**131** [b]
NOx (lb/MMBtu)	DAHS	0.13	0.13	0.13	**0.13**	**0.14** [c]
CO CEMS						
CO (ppmvd)	DAHS	82.39	85.51	93.07	**86.99**	--
CO (ppmvd @ 7% O_2)	DAHS	111.69	115.36	127.06	**118.04**	**400** [c]
CO (lb/hr)	DAHS	36.05	36.64	40.24	**37.64**	--
						Operating Limits @ 90% [d]
Urea Injection Rate (gal/hr)	DAHS	13.50	13.40	13.90	**13.60**	--
Total ESP Power Input (kW) [e]	DAHS	46	20	20	**29**	**18**
Scrubber 1 Water Flow (gal/hr)	DAHS	21,000	21,000	21,000	**21,000**	**18,900**
Scrubber 2 Water Flow (gal/hr)	DAHS	21,000	21,000	21,000	**21,000**	**18,900**
Scrubber 1 Pressure Drop (in. H_2O)	DAHS	0.40	0.42	0.45	**0.42**	**0.36**
Scrubber 2 Pressure Drop (in. H_2O)	DAHS	0.35	0.35	0.36	**0.35**	**0.32**

[a] Calculated using steam parameters and 62% thermal efficiency.
[b] Applicable only during initial compliance test.
[c] Based on a 30-day rolling average.
[d] Based on 40 CFR 63, Subpart DDDDD: limit is 90% of minimum test value.
[e] Three fields operating for C-1, and two fields operating for C-2 and C-3.

TABLE 2
WOOD CHIP ANALYSIS - U.S. SUGAR CLEWISTON - BOILER NO. 8

Parameter	Units	8/22/2006 1036-1142	8/22/2006 1320-1426	8/22/2006 1530-1636	Average	Boiler MACT Limit
No. of Samples Composited		3	3	3		
Moisture	%, as received	36.57	32.72	33.93	34.41	
Ash	%, as received	12.08	12.02	11.70	11.93	
Ash	%, dry basis	19.04	17.87	17.71	18.21	
HHV	Btu/lb, as received	4,397	4,757	4,782	4645	
HHV	Btu/lb, dry basis	6,932	7,071	7,238	7080	
Nitrogen	%, as received	0.33	0.32	0.36	0.34	
Nitrogen	%, dry basis	0.52	0.48	0.54	0.51	
Chlorine	%, as received	0.092	0.095	0.107	0.098	
Chlorine	%, dry basis	0.145	0.141	0.161	0.149	
Chlorine	lb/MMBtu	0.209	0.199	0.222	**0.210**	
				Standard deviation =	**0.01**	
				t-distribution =	**1.8856**	
				90th percentile =	**0.23**	**0.02**
Mercury	ppm, as received	0.01	0.01	0.01	0.01	
Mercury	ppm, dry basis	0.02	0.02	0.02	0.02	
Mercury	lb/MMBtu	2.9E-06	2.8E-06	2.8E-06	**2.8E-06**	
				Standard deviation =	**6.1E-08**	
				t-distribution =	**1.8856**	
				90th percentile =	**2.9E-06**	**3.0E-06**
Manganese	ppm, dry basis	19	18	19	18.7	
Manganese	lb/MMBtu	2.7E-03	2.5E-03	2.6E-03	2.6E-03	

Note: % = percent
Btu/lb = British thermal unit per pound
HHV = higher heating value
lb/MMBtu = pound per million British thermal units
ppm = parts per milion

90th percentile = mean + (SD*t)
SD = standard deviation
t = t-distribution critical value for the 90th percentile

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Priority: ☐-ASAP (Public Records Request, etc.) ☒-Place in Normal Scanning Queue

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Document Date 8/9/06

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August 8, 2006

063-7563

Florida Department of Environmental Protection
Department of Air Resources Management
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33901-3881

Attention: Mr. Ron Blackburn, Environmental Administrator

RE: UNITED STATES SUGAR CORPORATION – CLEWISTON MILL
BOILER NO. 8 – PERFORMANCE TESTING
40 CFR PART 63, SUBPART DDDDD
PERMIT NO. 0510003-030-AC/PSD-FL-333B

Dear Mr. Blackburn:

On June 2, 2006, United States Sugar Corporation (U.S. Sugar) conducted additional performance testing on Boiler No. 8 to satisfy the requirements of Title 40, Part 63 of the Code of Federal Regulations (40 CFR 63), Subpart DDDDD, the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial and Institutional Boilers and Process Heaters [Boiler Maximum Available Control Technology (MACT) rule]. The purpose of the testing was to assess compliance and set operating parameter limits for off-season operation. Preliminary tests were conducted on June 1, 2006. The results from the June 1 - 2, 2006 testing are attached to this report.

The summary of the complete test results of the June 1 - 2, 2006 testing is presented in Table 1. The stack sampling and fuel sampling and analysis were conducted according to the protocol submitted to FDEP in a letter dated May 17, 2006, from Golder Associates Inc., except for the minor deviation noted below. A discussion of the test results follows below.

Boiler No. 8 Operation

During the preliminary performance testing of June 1, 2006, the boiler averaged approximately 244,030 pounds per hour (lb/hr) of steam, which was approximately 44 percent of the maximum 1-hour steam production limit of 550,000 lb/hr, and was 49-percent of the maximum 24-hour steam production limit of 500,000 lb/hr. The lower steam production rate is expected for off-crop season operation. Off-crop season rates are typically one-half of the crop season rates. The heat input rate, based on steam production, steam conditions, and a boiler thermal efficiency of 62 percent, averaged approximately 457 million British thermal units per hour (MMBtu/hr), compared to a 1-hour permit limit of 1,030 MMBtu/hr and 24-hour permit limit of 936 MMBtu/hr. Boiler oxygen (O_2) levels were approximately 7.8 percent.

During the preliminary testing, fuel analysis was performed on bagasse, which was the only fuel burned during the performance test. The F-Factor values averaged at approximately 9,801 dry standard cubic foot per million British thermal units (dscf/MMBtu). Based on this F-Factor, heat input to the boiler averaged 487 MMBtu/hr.

During the official performance testing of June 2, 2006, the boiler averaged approximately 225,545 lb/hr of steam, which was approximately 41 percent of the maximum 1-hour steam production limit of 550,000 lb/hr, and was 45 percent of the maximum 24-hour steam production limit of 500,000 lb/hr. The heat input rate, based on steam production, steam conditions, and a boiler thermal efficiency of 62 percent, averaged approximately 422 MMBtu/hr, compared to a 1-hour permit limit of 1,030 MMBtu/hr and 24-hour permit limit of 936 MMBtu/hr. Boiler O_2 levels were approximately 9.4 percent.

During the performance testing, fuel analysis was performed on bagasse, which was the only fuel burned during the performance test. The F-Factor values averaged approximately 9,930 dscf/MMBtu; and heat input, based on the F-Factor, averaged 485 MMBtu/hr.

Particulate Matter Test Results

Particulate matter (PM) emissions from Boiler No. 8 averaged 0.0022 pound per million British thermal units (lb/MMBtu) during the performance test runs on June 2, 2006, based on the thermal efficiency method of determining heat input.

PM emissions from Boiler No. 8 averaged 0.0023 lb/MMBtu during the performance test runs on June 2, 2006, based on the F-Factor method of determining heat input to the boiler. This result is below the Boiler MACT limit of 0.025 lb/MMBtu.

It is noted that these runs were also conducted while monitoring electrostatic precipitator (ESP) power input and wet cyclone (scrubber) water flow rate and pressure drop, in order to establish off-crop season operating limits for these parameters as required by the MACT regulations.

Nitrogen Oxides Test Results

There is no permit limit based on stack testing for nitrogen oxides (NO_x), since compliance is demonstrated with the continuous emission monitoring system (CEMS) for NO_x. During the preliminary tests, NO_x emissions from the CEMS averaged 0.08 lb/MMBtu; and during the performance tests, NO_x emissions from the CEMS averaged 0.11 lb/MMBtu. The permit limit for NO_x based on the CEMS is 0.14 lb/MMBtu, based on a 30-day rolling average.

Carbon Monoxide Test Results

There is no permit limit based on stack testing for carbon monoxide (CO), since compliance is demonstrated with the CEMS for CO. During the preliminary tests, CO emissions from the CEMS averaged 271 parts per million volumetric dry (ppmvd) at 7-percent O_2; and during the performance tests, CO emissions from the CEMS averaged 113 ppmvd at 7-percent O_2. The permit limit for CO based on the CEMS is 400 ppmvd at 7-percent O_2, based on a 30-day rolling average.

Sulfur Dioxide Test Results

Sulfur dioxide (SO_2) emissions from Boiler No. 8 were not tested as part of the June 1 - 2, 2006 testing since there are no Boiler MACT limits for SO_2.

Volatile Organic Compound Test Results

Volatile organic compound (VOC) emissions from Boiler No. 8 were not tested as part of the June 1 - 2, 2006 testing since there are no Boiler MACT limits for VOCs.

Ammonia Slip Test Results

Ammonia slip from Boiler No. 8 was not tested as part of the June 1 - 2, 2006 testing since there are no Boiler MACT limits for ammonia slip.

Control Device Operating Limits

The MACT regulations require that operating limits for the control devices be set during the MACT performance testing. Because previous compliance tests were conducted during the crop season, the June 1 - 2, 2006 test established new operating limits for the control devices during the off-crop season. The operating limits are set based on 90 percent of the minimum test run that demonstrated compliance. The MACT rules regulate PM emissions. For PM, the control device is the ESP. However, the U.S. Environmental Protection Agency (EPA) has also declared (in a letter dated September 20, 2005) that the wet cyclones are also PM control devices and, therefore, water flow rate and pressure drop must be monitored for these control devices.

During the June 2, 2006 testing, the ESP was operating with three ESP fields in operation (i.e., two fields were shut down) for the first test run, and two ESP fields in operation (i.e., three fields were shutdown) for the second and third test runs. Compliance with the MACT PM limit of 0.025 lb/MMBtu was demonstrated on all three test runs. Total ESP power input averaged 24 kilowatts (kW), with the minimum test run averaging 21 kW. This results in an operating limit of 19 kW (90 percent of minimum test run value). This establishes the minimum ESP power input for subsequent operation during the off-crop season.

During the performance test runs, the wet cyclones demonstrated the following control device parameters, which is applicable to off-crop season operation:

- Scrubber 1- Water flow rate – Average = 8,943 gallons per hour (gal/hr)
  – Minimum = 8,550 gal/hr
  – Operating limit at 90 percent of min. = 7,695 gal/hr
- Scrubber 1- Pressure drop – Average = 0.80 inches of water (H_2O)
  – Minimum = 0.71 inches H_2O
  – Operating limit at 90 percent of min. = 0.64 inches H_2O
- Scrubber 2- Water flow rate – Average = 10,780 gal/hr
  – Minimum = 9,650 gal/hr
  – Operating limit at 90 percent of min. = 8,685 gal/hr
- Scrubber 2- Pressure drop – Average = 0.98 inches H_2O
  – Minimum = 0.89 inches H_2O
  – Operating limit at 90 percent of min. = 0.80 inches H_2O

Hydrogen Chloride

Emissions of hydrogen chloride (HCl) and chlorine (Cl_2) from Boiler No. 8 were tested at the inlet to the ESP to demonstrate that no control device is necessary to meet the HCl emission limit. During the official performance testing, HCl emissions from Boiler No. 8 averaged 0.0054 lb/MMBtu and Cl_2 emissions averaged 0.0004 lb/MMBtu. The HCl emissions, which were tested before the wet scrubber (cyclone) and ESP, are lower than the Boiler MACT limit of 0.02 lb/MMBtu for HCl at the stack. This testing demonstrates that the scrubbers are not necessary for compliance with the MACT standard for HCl. Therefore, no operating parameters (i.e., water flow rate, pressure drop, and pH) were established for the wet scrubbers for HCl emissions.

Fuel Sampling and Analysis

Stack sampling and fuel sampling and analysis were conducted according to the protocol submitted to FDEP in a letter dated May 17, 2006, except for one deviation while sampling bagasse. The original protocol stated that bagasse would be sampled directly from the moving conveyor belt at the point where the bagasse is introduced into the bagasse feeders. However, due to the difficulty of obtaining the samples and the safety hazard presented by sampling at this point, grab samples were taken at the conveyor belt feeder box instead. Bagasse from the bagasse fuel pile is moved by front-end loaders and dropped into the feeder box. The feeder box contains a very slow-moving chain and conveyor. The feeder box discharges directly to the bagasse conveying system, which delivers the bagasse to the Boiler No. 8 feeders.

Samples at this location were obtained by using a sampling cup at the end of a 7-foot metal arm. The bagasse fuel analysis results are presented in Table 2.

There were no deviations from the fuel sampling and analysis protocol for wood chips. The results of the wood chip analysis are presented in Table 3. As can be seen in Tables 2 and 3, wood chips are the worst-case fuel for HCl and mercury (Hg). Since the Boiler MACT limits could not be met using the fuel analysis, an HCl and Hg stack test will be conducted on August 22, 2006, at the U.S. Sugar Clewiston Mill.

Please call me at (352) 336-5600 or e-mail me at dbuff@golder.com if you have any questions concerning this information.

Sincerely,

GOLDER ASSOCIATES INC.

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

Elizabeth Claire Booth
Staff Engineer

ECB/DB/all

Enclosures

cc: Don Griffin
Peter Briggs
Jeff Koerner, FDEP Tallahassee

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TABLE 1
SUMMARY OF JUNE 2006 COMPLIANCE TEST RESULTS ON BAGASSE FOR BOILER NO. 8, U.S. SUGAR CLEWISTON

Parameter	Source of Data	C-1 6/1/2006 1244-1350	C-2 6/1/2006 1712-1818	C-1 thru C-2 Average	C-3 6/2/2006 0843-0948	C-4 6/2/2006 1124-1232	C-5 6/2/2006 1337-1444	C-3 thru C-6 Average	Permit or Subpart DDDDD Limit
Fuel Type		Bagasse	Bagasse		Bagasse	Bagasse	Bagasse		
Steam Production (lb/hr)	DAHS	241,527	246,533	**244,030**	238,876	215,692	222,067	**225,545**	**550,000**
Heat Input (MMBtu/hr) (62% eff.) [a]	DAHS	454	460	**457**	447	404	416	**422**	**1,030**
Stack Flow (acfm)	DAHS	217,865	195,686	**206,776**	209,117	188,968	187,143	**195,076**	--
Stack Flow (dscfm)	DAHS	155,820	124,119	**139,970**	150,847	121,418	118,668	**130,311**	--
Stack Temp. (deg. F)	DAHS	278	277	**277**	272	268	269	**270**	--
Oxygen (%) - wet basis	DAHS	N/A	7.21	**7.21**	9.65	8.76	7.94	**8.78**	--
F-Factor (dscf/MMBtu)	Fuel Analysis	9,841	9,760	**9,801**	9,831	10,077	9,883	**9,930**	--
Stack Flow (dscfm)	Stack Test	130,516	122,830	**126,673**	160,360	152,745	124,942	**146,016**	--
Oxygen (%)	Stack Test	7.58	7.99	**7.79**	9.22	9.84	9.10	**9.39**	--
Stream Production (lb/hr)	Stack Test	241,527	246,533	**244,030**	238,876	215,692	222,067	**225,545**	**550,000**
Heat Input from F-Factor (MMBtu/hr)	Stack Test	507	466	**487**	547	481	428	**485**	**1,030**
Particulate Matter (lb/MMBtu) (62% eff) [c]	Stack Test	0.0041	0.0025	**0.0033**	0.0019	0.0026	0.0022	**0.0022**	**N/A**
Particulate Matter based on F-Factor (lb/MMBtu)	Stack Test	0.0041	0.0026	**0.0033**	0.0036	0.0014	0.0018	**0.0023**	**0.025**
Nitrogen Oxides (lb/MMBtu)	Stack Test	N/A	N/A	**N/A**	N/A	N/A	N/A	**N/A**	**0.14** [c]
Carbon Monoxide (lb/MMBtu)	Stack Test	N/A	N/A	**N/A**	N/A	N/A	N/A	**N/A**	**0.38** [b]
Sulfur Dioxide (lb/MMBtu) (62% eff)	Stack Test	N/A	N/A	**N/A**	N/A	N/A	N/A	**N/A**	**0.06**
Volatile Organic Compds ((lb/MMBtu) (62% eff)	Stack Test	N/A	N/A	**N/A**	N/A	N/A	N/A	**N/A**	**0.05**
Chlorine (inlet) (lb/MMBtu)	Stack Test	N/A	0.0003	**0.0003**	0.0004	0.0003	0.0004	**0.0004**	**N/A**
Hydrogen Chloride (inlet) (lb/MMBtu)	Stack Test	N/A	0.0348	**0.0348**	0.0088	0.0021	0.0052	**0.0054**	**N/A**
Hydrogen Chloride (oulet) (lb/MMBtu)	Stack Test	N/A	N/A	**N/A**	N/A	N/A	N/A	**N/A**	**0.02**
Mercury (lb/MMBtu)	Fuel Analysis	[f]	1.2E-06	**1.2E-06**	2.5E-06	2.5E-06	1.2E-06	**2.1E-06**	**3.0E-06**
Ammonia Slip (ppmvd @ 7% O_2)	Stack Test	N/A	N/A	**N/A**	N/A	N/A	N/A	**N/A**	**20**
NOx CEMS									
NOx (ppmvd)	DAHS	N/A	43.34	**43.34**	51.78	55.59	54.24	**53.87**	--
NOx (ppmvd @ 7% O_2)	DAHS	N/A	47.77	**47.77**	61.51	70.52	64.57	**65.53**	--
NOx (lb/hr)	DAHS	N/A	38	**38**	42	48	46	**45**	**131** [b]
NOx (lb/MMBtu)	DAHS	N/A	0.08	**0.08**	0.10	0.12	0.11	**0.11**	**0.14** [c]
CO CEMS									
CO (ppmvd)	DAHS	N/A	254.97	**254.97**	63.73	83.55	108.99	**85.42**	--
CO (ppmvd @ 7% O_2)	DAHS	N/A	271	**271**	76	120	143	**113**	**400** [c]
CO (lb/hr)	DAHS	N/A	140.21	**140.21**	45.08	44.10	55.54	**48.24**	--
									Operating Limits @ 90% [d]
Urea Injection Rate (gal/hr)	DAHS	N/A	N/A	**N/A**	18.4	14.4	N/A	**16.4**	--
Total ESP Power Input (kW) [e]	DAHS	64	41	**53**	28	22	21	**24**	**19**
Scrubber 1 Water Flow (gal/hr)	DAHS	11,020	11,070	**11,045**	8,550	9,290	8,990	**8,943**	**7,695**
Scrubber 2 Water Flow (gal/hr)	DAHS	12,160	12,260	**12,210**	12,150	10,540	9,650	**10,780**	**8,685**
Scrubber 1 Pressure Drop (in. H_2O)	DAHS	1.00	0.81	**0.91**	0.96	0.74	0.71	**0.80**	**0.64**
Scrubber 2 Pressure Drop (in. H_2O)	DAHS	1.22	0.99	**1.11**	1.13	0.91	0.89	**0.98**	**0.80**

[a] Calculated using steam parameters and 62% thermal efficiency.

[b] Applicable only during initial compliance test.

[c] Based on a 30-day rolling average.

[d] Based on 40 CFR 63, Subpart DDDDD: limit is 90% of minimum June 2, 2006 test values for runs 3 through 5.

[e] Three fields operating for C-1 through C-3, and two fields operating for C-4 through C-5.

[f] Considered an outlier based on all previous testing; mercury has consistently been less than 0.02 ppm for bagasse.

TABLE 2
BAGASSE ANALYSIS - U.S. SUGAR CLEWISTON - BOILER NO. 8

Parameter	Units	Analysis Results - Bagasse Samples 6/1/2006 1245-1345	6/1/2006 1715-1815	6/2/2006 0845-0945	6/2/2006 1120-1220	6/2/2006 1340-1440	Average	Boiler MACT Limit
No. of Samples Composited		3	3	3	3	3		
Moisture	%, as received	59.95	50.41	49.04	49.00	46.23	50.93	
Ash	%, as received	1.91	1.60	4.39	3.10	2.81	2.76	
Ash	%, dry basis	4.78	3.23	8.61	6.09	5.23	5.59	
HHV	Btu/lb, as received	3,278	4,118	4,025	4,034	4,360	3963	
HHV	Btu/lb, dry basis	8,185	8,303	7,898	7,910	8,108	8081	
Nitrogen	%, as received	0.17	0.19	0.24	0.22	0.22	0.21	
Nitrogen	%, dry basis	0.42	0.38	0.46	0.44	0.40	0.42	
Chlorine	%, as received	0.026	0.025	0.046	0.047	0.043	0.037	
Chlorine	%, dry basis	0.065	0.050	0.090	0.092	0.080	0.075	
Chlorine	lb/MMBtu	0.079	0.061	0.114	0.117	0.099	**0.094**	
						Standard deviation =	**0.02**	
						t-distribution =	**1.533206**	
						90th percentile =	**0.13**	**0.02**
Mercury	ppm, as received	[b]	0.005	0.010	0.010	0.006	0.008	
Mercury	ppm, dry basis	[b]	0.010	0.020	0.020	0.010	0.015	
Mercury	lb/MMBtu	[b]	1.2E-06	2.5E-06	2.5E-06	1.2E-06	**1.9E-06**	
						Standard deviation =	**7.6E-07**	
						t-distribution =	**1.637744**	
						90th percentile =	**3.E-06**	**3.E-06**
Manganese	ppm, dry basis	17.4	8.2	18.1	[a]	11.2	14	
Manganese	lb/MMBtu	2.1E-03	9.9E-04	2.3E-03	--	1.4E-03	1.7E-03	

Note: % = percent
Btu/lb = British thermal unit per pound
HHV = higher heating value
lb/MMBtu = pound per million British thermal units
ppm = parts per milion

90th percentile = mean + (SD*t)
SD = standard deviation
t = t-distribution critical value for the 90th percentile

Footnotes:

[a] Value is excluded as an outlier.

[b] Considered an outlier based on all previous testing; mercury has consistently been less than 0.02 ppm for bagasse.

TABLE 3
WOOD CHIP ANALYSIS - U.S. SUGAR CLEWISTON - BOILER NO. 8

Parameter	Units	Analysis Results - Wood Chip Samples Sample 1 6/1/2006	Sample 2 6/1/2006	Sample 3 6/1/2006	Average	Boiler MACT Limit
No. of Samples Composited		5	5	5		
Moisture	%, as received	32.24	33.95	30.20	32.13	
Ash	%, as received	5.73	8.52	8.86	7.70	
Ash	%, dry basis	8.46	12.90	12.70	11.35	
HHV	Btu/lb, as received	5,434	4,901	5,157	5,164	
HHV	Btu/lb, dry basis	8,018	7,421	7,388	7,609	
Nitrogen	%, as received	0.44	0.30	0.29	0.34	
Nitrogen	%, dry basis	0.65	0.45	0.42	0.51	
Chlorine	%, as received	0.173	0.132	0.122	0.14	
Chlorine	%, dry basis	0.255	0.200	0.175	0.21	
Chlorine	lb/MMBtu	0.318	0.269	0.237	**0.27**	
				Standard deviation =	**0.04**	
				t-distribution =	**1.885618**	
				90th percentile =	**0.35**	**0.02**
Mercury	ppm, as received	0.04	0.03	0.03	0.03	
Mercury	ppm, dry basis	0.05	0.04	0.04	0.04	
Mercury	lb/MMBtu	6.2E-06	5.4E-06	5.4E-06	**5.7E-06**	
				Standard deviation =	**4.8E-07**	
				t-distribution =	**1.885618**	
				90th percentile =	**6.6E-06**	**3.E-06**
Arsenic	ppm, as received	3.1	3.4	12.4	6.3	
Arsenic	ppm, dry basis	4.5	5.1	17.7	9.1	
Arsenic	lb/MMBtu	5.7E-04	6.9E-04	2.4E-03	1.2E-03	
Beryllium	ppm, dry basis	<0.08	<0.1	<0.1	0.1	
Beryllium	lb/MMBtu	1.0E-05	1.3E-05	1.4E-05	1.2E-05	
Cadmium	ppm, dry basis	0.69	0.88	0.72	0.76	
Cadmium	lb/MMBtu	8.5E-05	1.2E-04	9.8E-05	1.0E-04	
Chromium	ppm, dry basis	12.7	14.2	16.5	14.5	
Chromium	lb/MMBtu	1.6E-03	1.9E-03	2.2E-03	1.9E-03	
Lead	ppm, dry basis	6.3	6.3	5.8	6.1	
Lead	lb/MMBtu	7.8E-04	8.5E-04	7.9E-04	8.1E-04	
Manganese	ppm, dry basis	34.3	37.0	25.1	32.2	
Manganese	lb/MMBtu	4.3E-03	5.0E-03	3.4E-03	4.2E-03	
Nickel	ppm, dry basis	1.7	2.6	1.3	1.8	
Nickel	lb/MMBtu	2.1E-04	3.5E-04	1.7E-04	2.4E-04	
Selenium	ppm, as received	0.06	0.06	0.06	0.06	
Selenium	ppm, dry basis	0.08	0.09	0.09	0.09	
Selenium	lb/MMBtu	1.0E-05	1.2E-05	1.2E-05	1.1E-05	
TSM	ppm, dry basis	60.3	66.2	67.3	64.6	
TSM	lb/MMBtu	7.5E-03	8.9E-03	9.1E-03	**8.5E-03**	
				Standard deviation =	**8.7E-04**	
				t-distribution =	**1.885618**	
				90th percentile =	**0.010**	**0.0003 [a]**

Note: % = percent
Btu/lb = British thermal unit per pound
HHV = higher heating value
lb/MMBtu = pound per million British thermal units
ppm = parts per milion
TSM = total selected metals (arsenic, beryllium, cadmium, chromium, lead, manganese, nickel and selenium)

Footnotes:
[a] For informational purposes only. Boiler No. 8 complies with the MACT limit for PM.

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Fax: (303) 278-1528

Date July 14 2006
HRI Project 009-555
HRI Series No. F26/06-1
Date Rec'd. 06/08/06
Cust. P.O.#

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

Sample Identification
USSC-060106-1 Wood Chips

Reporting Basis >	As Rec'd	Dry	Air Dry
Proximate (%)			
Moisture	32.24	0.00	4.26
Ash	5.73	8.46	8.10
Volatile	51.15	75.49	72.27
Fixed C	10.88	16.05	15.37
Total	100.00	100.00	100.00
Sulfur	0.06	0.09	0.09
Btu/lb (HHV)	5434	8018	7677
MMF Btu/lb	5791	8825	
MAF Btu/lb		8760	
Air Dry Loss (%)	29.22		
Ultimate (%)			
Moisture	32.24	0.00	4.26
Carbon	35.67	52.63	50.39
Hydrogen	3.85	5.69	5.44
Nitrogen	0.44	0.65	0.62
Sulfur	0.06	0.09	0.09
Ash	5.73	8.46	8.10
Oxygen*	22.01	32.48	31.10
Total	100.00	100.00	100.00
Chlorine**	0.173	0.255	0.244

Forms of Sulfur (as S,%)

Sulfate		
Pyritic		
Organic		
Total	0.06	0.09

Water Soluble Alkalies (%)

Na2O	
K2O	

Lb. Alkali/MM Btu=
Lb. Ash/MM Btu= 10.55
Lb. SO2/MM Btu= 0.23
HGI= @ % Moisture
As Rec'd. Sp.Gr.=
Free Swelling Index=
F-Factor(dry),DSCF/MM BTU= 10,778

Report Prepared By:

Gerard H. Cunningham
Fuels Laboratory Supervisor

* Oxygen by Difference.
** Not usually reported as part of the ultimate analysis.

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Date July 14 2006
HRI Project 009-555
HRI Series No. F26/06-2
Date Rec'd. 06/08/06
Cust. P.O.#

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

Sample Identification
USSC-060106-2 Wood Chips

Reporting Basis >	As Rec'd	Dry	Air Dry
Proximate (%)			
Moisture	33.95	0.00	2.67
Ash	8.52	12.90	12.56
Volatile	45.16	68.38	66.55
Fixed C	12.37	18.72	18.22
Total	100.00	100.00	100.00
Sulfur	0.06	0.09	0.09
Btu/lb (HHV)	4901	7421	7223
MMF Btu/lb	5397	8622	
MAF Btu/lb		8521	
Air Dry Loss (%)	32.14		
Ultimate (%)			
Moisture	33.95	0.00	2.67
Carbon	29.98	45.39	44.18
Hydrogen	3.54	5.35	5.21
Nitrogen	0.30	0.45	0.44
Sulfur	0.06	0.09	0.09
Ash	8.52	12.90	12.56
Oxygen*	23.65	35.82	34.85
Total	100.00	100.00	100.00
Chlorine**	0.132	0.200	0.195

Forms of Sulfur (as S,%)

Sulfate		
Pyritic		
Organic		
Total	0.06	0.09

Water Soluble Alkalies (%)

Na2O	
K2O	

Lb. Alkali/MM Btu=
Lb. Ash/MM Btu= 17.39
Lb. SO2/MM Btu= 0.25
HGI= @ % Moisture
As Rec'd. Sp.Gr.=
Free Swelling Index=
F-Factor(dry),DSCF/MM BTU= 9,781

Report Prepared By:

Gerard H. Cunningham
Fuels Laboratory Supervisor

* Oxygen by Difference.
** Not usually reported as part of the ultimate analysis.

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Date July 14 2006
HRI Project 009-555
HRI Series No. F26/06-3
Date Rec'd. 06/08/06
Cust. P.O.#

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

Sample Identification
USSC-060106-3 Wood Chips

Reporting Basis >	As Rec'd	Dry	Air Dry
Proximate (%)			
Moisture	30.20	0.00	2.51
Ash	8.86	12.70	12.38
Volatile	50.81	72.79	70.96
Fixed C	10.13	14.51	14.15
Total	100.00	100.00	100.00
Sulfur	0.04	0.06	0.06
Btu/lb (HHV)	5157	7388	7203
MMF Btu/lb	5702	8562	
MAF Btu/lb		8463	
Air Dry Loss (%)	28.40		
Ultimate (%)			
Moisture	30.20	0.00	2.51
Carbon	33.84	48.48	47.26
Hydrogen	3.92	5.62	5.48
Nitrogen	0.29	0.42	0.41
Sulfur	0.04	0.06	0.06
Ash	8.86	12.70	12.38
Oxygen*	22.85	32.72	31.90
Total	100.00	100.00	100.00
Chlorine**	0.122	0.175	0.171
Forms of Sulfur (as S,%)			
Sulfate			
Pyritic			
Organic			
Total	0.04	0.06	
Water Soluble Alkalies (%)			
Na2O			
K2O			

Lb. Alkali/MM Btu=
Lb. Ash/MM Btu= 17.19
Lb. SO2/MM Btu= 0.17
HGI= @ % Moisture
As Rec'd. Sp.Gr.=
Free Swelling Index=
F-Factor(dry),DSCF/MM BTU= 10,784

Report Prepared By:

Gerard H. Cunningham
Fuels Laboratory Supervisor

* Oxygen by Difference.
** Not usually reported as part of the ultimate analysis.

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Date July 14 2006
HRI Project 009-555
HRI Series No. F26/06-4
Date Rec'd. 06/08/06
Cust. P.O.#

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

Sample Identification
USSC-060106-4 Bagasse

Reporting Basis >	As Rec'd	Dry	Air Dry
Proximate (%)			
Moisture	59.95	0.00	4.30
Ash	1.91	4.78	4.57
Volatile	32.43	80.96	77.48
Fixed C	5.71	14.26	13.65
Total	100.00	100.00	100.00
Sulfur	0.03	0.07	0.07
Btu/lb (HHV)	3278	8185	7833
MMF Btu/lb	3346	8630	
MAF Btu/lb		8596	
Air Dry Loss (%)	58.15		
Ultimate (%)			
Moisture	59.95	0.00	4.30
Carbon	20.16	50.33	48.17
Hydrogen	2.33	5.83	5.58
Nitrogen	0.17	0.42	0.40
Sulfur	0.03	0.07	0.07
Ash	1.91	4.78	4.57
Oxygen*	15.45	38.57	36.91
Total	100.00	100.00	100.00
Chlorine**	0.026	0.065	0.062
Forms of Sulfur (as S,%)			
Sulfate			
Pyritic			
Organic			
Total	0.03	0.07	
Water Soluble Alkalies (%)			
Na2O			
K2O			

Lb. Alkali/MM Btu=
Lb. Ash/MM Btu= 5.83
Lb. SO2/MM Btu= 0.18
HGI= @ % Moisture
As Rec'd. Sp.Gr.=
Free Swelling Index=
F-Factor(dry),DSCF/MM BTU= 9,846

Report Prepared By:

Gerard H. Cunningham
Fuels Laboratory Supervisor

* Oxygen by Difference.
** Not usually reported as part of the ultimate analysis.

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

Date July 14 2006
HRI Project 009-555
HRI Series No. F26/06-5
Date Rec'd. 06/08/06
Cust. P.O.#

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

Sample Identification
USSC-060106-5 Bagasse

Reporting Basis >	As Rec'd	Dry	Air Dry
Proximate (%)			
Moisture	50.41	0.00	4.48
Ash	1.60	3.23	3.09
Volatile	40.60	81.86	78.19
Fixed C	7.39	14.91	14.24
Total	100.00	100.00	100.00
Sulfur	0.03	0.06	0.06
Btu/lb (HHV)	4118	8303	7931
MMF Btu/lb	4189	8603	
MAF Btu/lb		8580	
Air Dry Loss (%)	48.08		
Ultimate (%)			
Moisture	50.41	0.00	4.48
Carbon	25.16	50.72	48.45
Hydrogen	2.94	5.92	5.66
Nitrogen	0.19	0.38	0.36
Sulfur	0.03	0.06	0.06
Ash	1.60	3.23	3.09
Oxygen*	19.67	39.69	37.90
Total	100.00	100.00	100.00
Chlorine**	0.025	0.050	0.048

Lb. Alkali/MM Btu=
Lb. Ash/MM Btu= 3.90
Lb. SO2/MM Btu= 0.15
HGI= @ % Moisture
As Rec'd. Sp.Gr.=
Free Swelling Index=
F-Factor(dry),DSCF/MM BTU= 9,757

Forms of Sulfur (as S,%)		
Sulfate		
Pyritic		
Organic		
Total	0.03	0.06

Water Soluble Alkalies (%)

Na2O	
K2O	

Report Prepared By:

Gerard H. Cunningham
Fuels Laboratory Supervisor

* Oxygen by Difference.
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Date July 14 2006
HRI Project 009-555
HRI Series No. F26/06-6
Date Rec'd. 06/08/06
Cust. P.O.#

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

Sample Identification
USSC-060106-6 Bagasse

Reporting Basis >	As Rec'd	Dry	Air Dry
Proximate (%)			
Moisture	49.04	0.00	6.87
Ash	4.39	8.61	8.02
Volatile	38.41	75.37	70.19
Fixed C	8.16	16.02	14.92
Total	100.00	100.00	100.00
Sulfur	0.04	0.08	0.07
Btu/lb (HHV)	4025	7898	7355
MMF Btu/lb	4224	8708	
MAF Btu/lb		8642	
Air Dry Loss (%)	45.28		
Ultimate (%)			
Moisture	49.04	0.00	6.87
Carbon	24.87	48.80	45.45
Hydrogen	2.76	5.41	5.04
Nitrogen	0.24	0.46	0.43
Sulfur	0.04	0.08	0.07
Ash	4.39	8.61	8.02
Oxygen*	18.66	36.64	34.12
Total	100.00	100.00	100.00
Chlorine**	0.046	0.090	0.084

Forms of Sulfur (as S,%)

Sulfate		
Pyritic		
Organic		
Total	0.04	0.08

Water Soluble Alkalies (%)

Na2O	
K2O	

Lb. Alkali/MM Btu=
Lb. Ash/MM Btu= 10.90
Lb. SO2/MM Btu= 0.19
HGI= @ % Moisture
As Rec'd. Sp.Gr.=
Free Swelling Index=
F-Factor(dry),DSCF/MM BTU= 9,829

Report Prepared By:

Gerard H. Cunningham
Fuels Laboratory Supervisor

* Oxygen by Difference.
** Not usually reported as part of the ultimate analysis.

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Date July 14 2006
HRI Project 009-555
HRI Series No. F26/06-7
Date Rec'd. 06/08/06
Cust. P.O.#

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

Sample Identification
USSC-060106-7 Bagasse

Reporting Basis >	As Rec'd	Dry	Air Dry
Proximate (%)			
Moisture	49.00	0.00	5.86
Ash	3.10	6.09	5.73
Volatile	40.55	79.51	74.85
Fixed C	7.35	14.40	13.56
Total	100.00	100.00	100.00
Sulfur	0.04	0.08	0.08
Btu/lb (HHV)	4034	7910	7446
MMF Btu/lb	4172	8466	
MAF Btu/lb		8422	
Air Dry Loss (%)	45.83		
Ultimate (%)			
Moisture	49.00	0.00	5.86
Carbon	25.50	50.00	47.07
Hydrogen	2.87	5.63	5.30
Nitrogen	0.22	0.44	0.41
Sulfur	0.04	0.08	0.08
Ash	3.10	6.09	5.73
Oxygen*	19.27	37.76	35.55
Total	100.00	100.00	100.00
Chlorine**	0.047	0.092	0.087

Forms of Sulfur (as S,%)

Sulfate		
Pyritic		
Organic		
Total	0.04	0.08

Water Soluble Alkalies (%)

Na2O	
K2O	

Lb. Alkali/MM Btu=
Lb. Ash/MM Btu= 7.70
Lb. SO2/MM Btu= 0.21
HGI= @ % Moisture
As Rec'd. Sp.Gr.=
Free Swelling Index=
F-Factor(dry),DSCF/MM BTU= 10,082

Report Prepared By:

Gerard H. Cunningham
Fuels Laboratory Supervisor

* Oxygen by Difference.
** Not usually reported as part of the ultimate analysis.

Hazen Research, Inc.
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Date July 14 2006
HRI Project 009-555
HRI Series No. F26/06-8
Date Rec'd. 06/08/06
Cust. P.O.#

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

Sample Identification
USSC-060106-8 Bagasse

Reporting Basis >	As Rec'd	Dry	Air Dry
Proximate (%)			
Moisture	46.23	0.00	7.66
Ash	2.81	5.23	4.83
Volatile	41.87	77.88	71.91
Fixed C	9.09	16.89	15.60
Total	100.00	100.00	100.00
Sulfur	0.05	0.09	0.08
Btu/lb (HHV)	4360	8108	7487
MMF Btu/lb	4495	8593	
MAF Btu/lb		8556	
Air Dry Loss (%)	41.77		
Ultimate (%)			
Moisture	46.23	0.00	7.66
Carbon	27.14	50.47	46.60
Hydrogen	3.01	5.60	5.17
Nitrogen	0.22	0.40	0.37
Sulfur	0.05	0.09	0.08
Ash	2.81	5.23	4.83
Oxygen*	20.54	38.21	35.29
Total	100.00	100.00	100.00
Chlorine**	0.043	0.080	0.074

Forms of Sulfur (as S,%)

Sulfate		
Pyritic		
Organic		
Total	0.05	0.09

Water Soluble Alkalies (%)

Na2O
K2O

Lb. Alkali/MM Btu=
Lb. Ash/MM Btu= 6.45
Lb. SO2/MM Btu= 0.21
HGI= @ % Moisture
As Rec'd. Sp.Gr.=
Free Swelling Index=
F-Factor(dry),DSCF/MM BTU= 9,882

Report Prepared By:

Gerard H. Cunningham
Fuels Laboratory Supervisor

* Oxygen by Difference.
** Not usually reported as part of the ultimate analysis.

Hazen Research, Inc.
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Fax: (303) 278-1528

August 3, 2006

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

David,

The following methods were used in the analysis of your samples. Please contact me if you have further needs.

Element	Matrix	Hazen MDL, mg/kg	Method Hazen uses for coal	Method for Hazen uses biomass
Arsenic	Solid	0.1	ASTM D3683	ASTM E885-88 for biomass
Beryllium	Solid	1	SW846-6010B	ASTM E885-88 for biomass
Cadmium	Solid	1	SW846-7130	ASTM E885-88 for biomass
Chromium	Solid	10	SW846-7190	ASTM E885-88 for biomass
Lead	Solid	5	SW846-7420	ASTM E885-88 for biomass
Manganese	Solid	1	SW846-7460	ASTM E885-88 for biomass
Nickel	Solid	1	SW846-7520	ASTM E885-88 for biomass
Selenium	Solid	0.1	ASTM D3683	ASTM E885-88 for biomass
Bomb Prep, Hg			ASTM D3684	ASTM D3684
Bomb Prep, As, Se			ASTM D3683	ASTM D3683
Mercury	Solid	0.01	ASTM D3684	ASTM D3684-01 or SW846-7471A
Chlorine	Solid	50	ASTM D2361	ASTM E776-87
Heating Value	Solid		ASTM D5865	ASTM E711
Moisture	Solid		ASTM D3173	ASTM D3173 (modified)

Regards,

Gerard H. Cunningham
Fuel Laboratory Manager

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

Date: August 2, 2006
Project No: 009-555
Control No: F26/06
Received: 06/08/06

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

Sample Number: F26/06	-1	-2	-3	-4	-5	-6	-7	-8
Sample Identification: USSC-060106	-1	-2	-3	-4	-5	-6	-7	-8
Air Dry Loss, %	29.22	32.14	28.40	58.15	48.08	45.28	45.83	41.77
Residual Moisture, %	4.26	2.67	2.51	4.30	4.48	6.87	5.86	7.66
As Received Moisture, %	32.24	33.95	30.20	59.95	50.41	49.04	49.00	46.23
Ash (Air Dry Basis), %	8.10	12.56	12.38	4.57	3.09	8.02	5.73	4.83
Ash (As Received Basis), %	5.73	8.52	8.86	1.91	1.60	4.39	3.10	2.81
Ash (Dry Basis), %	8.46	12.90	12.70	4.78	3.23	8.61	6.09	5.23
Arsenic (Air Dry Basis), mg/kg	4.34	4.98	17.3					
Arsenic (As Received Basis), mg/kg	3.07	3.38	12.39					
Arsenic (Dry Basis), mg/kg	4.53	5.12	17.75					
Mercury (Air Dry Basis), mg/kg	0.05	0.04	0.04	0.09	0.01	0.02	0.02	0.01
Mercury (As Received Basis), mg/kg	0.04	0.03	0.03	0.04	0.005	0.01	0.01	0.006
Mercury (Dry Basis), mg/kg	0.05	0.04	0.04	0.09	0.01	0.02	0.02	0.01
Selenium (Air Dry Basis), mg/kg	0.08	0.09	0.09					
Selenium (As Received Basis), mg/kg	0.06	0.06	0.06					
Selenium (Dry Basis), mg/kg	0.08	0.09	0.09					
Metals in Ash								
Beryllium, mg/kg	<1	<1	<1					
Cadmium, mg/kg	8.1	6.8	5.7					
Chromium, mg/kg	150	110	130					
Lead, mgkg	74	49	46					
Manganese, mg/kg	406	287	198	364	254	210	2630	215
Nickel, mg/kg	20	20	10					
Dry Whole Fuel Basis								
Beryllium, mg/kg	<0.08	<0.1	<0.1					
Cadmium, mg/kg	0.69	0.88	0.72					
Chromium, mg/kg	13	14	17					
Lead, mgkg	6.26	6.32	5.84					
Manganese, mg/kg	34.3	37.0	25.1	17.4	8.2	18.1	160	11.2
Nickel, mg/kg	2	3	1					

The ash was prepared at 600 degrees Celsius.
Samples 1-3 are wood. Samples 4-8 are bagasse.
The 'dry whole' fuel values are calculated values.

By: _____
Gerard H. Cunningham
Fuel Laboratory Manager