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March 22, 2007

063-7591

Florida Department of Environmental Regulation
Air Permitting South Program
2600 Blair Stone Road, MS #5505
Tallahassee, Florida 32399-2400

Attention: Mr. Jeff Koerner, P.E.

RE: PERMIT NO. 0510003-038-AC/PSD-FL-346A
U. S. SUGAR CORPORATION – CLEWISTON SUGAR MILL AND REFINERY
NEW WHITE SUGAR DRYER NO. 2
FEBRUARY 2007 TESTING- TEST REPORT

Dear Mr. Koerner:

United States Sugar Corporation (U.S. Sugar) was issued Air Construction Permit No. 0510003-038-AC/PSD-FL-346A, on December 22, 2006. Specific Condition 7 in Section 3.A of the permit requires that compliance testing be conducted within 90 days of issuance of the final permit. Specific Condition 10 further requires that a stack test report be submitted to the Florida Department of Environmental Protection (FDEP) presenting the results of the testing as well as the cyclone and scrubber operating data. The compliance testing was conducted during the period February 20 to 22, 2007.

The purpose of this correspondence is to submit the test report for the compliance testing, along with the required data. The test report, prepared by Air Consulting and Engineering, Inc. (ACE) is attached. A summary of the test data is provided in the attached tables, Tables 1 and 2, which also include previous White Sugar Dryer No. 2 test data for comparison purposes. A discussion of the test results is provided below.

PM TESTING

A total of six test runs were conducted using U.S. Environmental Protection Agency (EPA) Method 5 for particulate matter (PM). The first set of three runs, conducted on February 20, were conducted with a target scrubber liquid recirculation flow rate of 500 gallons per minute (gpm). The second set of three runs, conducted on February 21 to 22, were conducted at a target rate of 750 gpm. During all runs, the brix (sugar content) of the scrubber liquid recirculating water was maintained below 15.

As shown in the report and in Table 1, the PM emissions averaged 5.3 pounds per hour (lb/hr) during the first three runs, when the scrubber recirculation rate averaged 510 gpm and the brix averaged 9. The PM emissions averaged 8.0 lb/hr during the second series of three runs, when the scrubber recirculation rate averaged 750 gpm and the brix averaged 9. This substantiates the theory that a higher scrubber recirculation rate does not improve performance because of the increased water droplet carryout from the scrubber. These water droplets contain dissolved sugar which is collected in the Method 5 train as PM emissions. During all PM runs, the pressure drop across the cyclones was approximately 3 inches H_2O, while the pressure drop across the scrubber was approximately 8 inches H_2O.

The PM test results for all six runs were below the permit limitation of 15 lb/hr. The PM test results also indicate that the changes and improvements implemented in the emission control system has significantly improved performance. Previous PM emissions tests resulted in PM emissions ranging from 3.7 to 32.6 lb/hr.

PM_{10} TESTING

A total of three test runs were conducted using EPA Method 201A for particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}). The three runs, conducted on February 21, were conducted with a target scrubber liquid recirculation flow rate of 500 gpm, which is U.S. Sugar's desired flow rate. During all runs, the brix (sugar content) of the scrubber liquid recirculating water was maintained below 15.

As shown in the report and in Table 2, the PM_{10} emissions averaged 1.8 lb/hr, while the scrubber recirculation rate averaged 500 gpm and the brix averaged 8. These results are consistent with previous PM_{10} test results for the dryer. During all PM_{10} runs, the pressure drop across the cyclones was approximately 3 inches H_2O, while the pressure drop across the scrubber was approximately 8 inches H_2O.

The PM_{10} test results for all three runs were below the PM_{10} permit limitation of 4.2 lb/hr. The results also indicate that the changes and improvements implemented in the emission control system have not adversely affected PM_{10} emissions. Previous PM_{10} emissions tests resulted in PM_{10} emissions ranging from 0.9 to 2.4 lb/hr.

CONCLUSIONS

We believe this testing satisfies the final requirements of the air construction permit. We also believe, based on the test results and the previous information submitted to FDEP, that the current Air Construction Permit No. 0510003-038-AC/PSD-FL-346A, does not need revision.

Based on the emission test results, U.S. Sugar intends to maintain the scrubber water recirculation rate at a minimum of 500 gpm, 3-hour block average, and to maintain the scrubber pressure drop at a minimum of 8, 3-hour block average. Also, the brix of the scrubber water will be maintained at or below 15.

If you have any questions regarding this information, please call me at (352) 336-5600 or email me at dbuff@golder.com.

Sincerely,
GOLDER ASSOCIATES INC.

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

DB/kjp

cc: Mr. Don Griffin, USSC
Mr. Peter Briggs, USSC
Mr. Ron Blackburn, FDEP South District Office

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TABLE 1
WHITE SUGAR DRYER NO. 2 PM EMISSION TESTS

Run Number	Test Date	Start/End Time	% Load	Stack Gas Flow Rate (dscfm)	Stack Gas Flow Rate (acfm)	Allowable PM Emissions (EPA Method 5) lb/hr	Allowable PM Emissions (EPA Method 5) gr/dscf	Actual PM Emissions (EPA Method 5) lb/hr	Actual PM Emissions (EPA Method 5) gr/dscf	Avg. Water Flow (gpm)	Avg. Pressure Drop Cyclone (in. H_2O)	Avg. Pressure Drop Scrubber (in. H_2O)	Scrubber Water Sugar Content (Brix)	Particulate Data Filter (mg)	Particulate Data Wash (mg)	Particulate Data % Wash of Total
1	12/07/05	1056-1206	100	82,909	96,941	4.2	0.005	6.82	0.0096	529.4	3.8	9.6	--	0.3	23.5	98.7
2	12/07/05	1235-1345	100	82,993	97,239	4.2	0.005	3.65	0.0051	527.8	4.0	9.0	--	0.2	12.4	98.4
3	12/07/05	1453-1605	100	82,541	97,104	4.2	0.005	19.23	0.0272	524.8	4.0	9.0	--	0.4	65.2	99.4
Average=				**82,814**	**97,095**	**4.2**	**0.005**	**9.9**	**0.0140**	**527**	**3.9**	**9.2**	--			**98.8**
													--			
1	05/24/06	0852-0927	100	83,682	96,546	4.2	0.005	26.10	0.0364	747.7	5.0	9.0	--	1.0	46.5	97.9
2	05/24/06	1002-1037	100	82,769	95,849	4.2	0.005	18.61	0.0262	747.7	4.3	9.0	--	0.7	33.8	98.0
3	05/24/06	1100-1134	100	83,743	96,872	4.2	0.005	20.89	0.0291	750.0	4.3	9.0	--	0.6	36.6	98.4
4	05/24/06	1208-1243	50	85,704	98,102	4.2	0.005	19.65	0.0267	750.0	4.8	9.5	--	0.5	35.1	98.6
5	05/24/06	1303-1337	50	86,321	98,919	4.2	0.005	32.55	0.0440	747.3	3.7	10.7	--	0.5	57.1	99.1
6	05/24/06	1350-1425	50	85,981	98,614	4.2	0.005	20.89	0.0283	749.0	4.0	10.0	--	0.8	36	97.8
7	05/25/06	0802-0836	100	82,866	96,457	4.2	0.005	24.30	0.0342	747.7	4.7	10.0	--	0.5	42.7	98.8
8	05/25/06	0850-0925	100	82,501	96,272	4.2	0.005	20.21	0.0286	749.7	4.0	10.3	--	0.7	34.1	98.0
9	05/25/06	0934-1008	100	83,246	97,078	4.2	0.005	20.99	0.0294	745.7	3.0	11.0	--	0.6	35.4	98.3
Average=				**84,090**	**97,190**	**4.2**	**0.005**	**22.7**	**0.0314**	**748**	**4.2**	**9.8**				**98.3**
1	08/23/06	1320-1353	50	74,966	88,090	4.2	0.005	14.09	0.0219	750	3.0	8.5	--	0.8	28.9	97.3
2	08/23/06	1415-1449	50	75,900	88,771	4.2	0.005	10.38	0.0160	750	2.3	8.7	--	0.8	22.5	96.6
3	08/23/06	1502-1535	50	75,677	89,775	4.2	0.005	10.61	0.0164	751	3.0	8.7	--	0.7	23.3	97.1
4	08/23/06	1543-1600	50	75,650	89,117	4.2	0.005	11.97	0.0185	747	2.5	9.0	--	0.7	26.2	97.4
5	08/23/06	1635-1708	50	75,618	89,384	4.2	0.005	9.72	0.0150	757	3.0	8.7	--	0.8	21.1	96.3
6	08/23/06	1720-1753	50	76,365	89,939	4.2	0.005	6.91	0.0106	752	3.3	9.0	--	1.1	14.2	92.8
Average=				**75,696**	**89,179**	**4.2**	**0.005**	**10.6**	**0.0164**	**751**	**2.9**	**8.8**				**96.3**
1	02/20/07	0925-1030	100	77,874	89,921	15.0	--	4.78	0.0072	528	3.0	8.2	10	1.6	16.4	91.1
2	02/20/07	1134-1240	96	78,061	91,456	15.0	--	5.38	0.0080	503	3.0	8.0	8	0.8	19.4	96.0
3	02/20/07	1354-1459	91	76,039	89,248	15.0	--	5.88	0.0090	501	3.0	8.0	9	1.1	20.8	95.0
Average=			**96**	**77,325**	**90,208**	**15.0**	**--**	**5.3**	**0.0081**	**510**	**3.0**	**8.1**	**9**			**94.0**
4	02/21/07	1455-1559	103	76,414	89,147	15.0	--	9.36	0.0143	752	3.0	8.2	9	1.5	32.6	95.6
5	02/22/07	0836-0939	85	77,229	89,360	15.0	--	7.43	0.0112	747	3.0	8.2	9	1.4	25.1	94.7
6	02/22/07	1004-1107	88	77,871	90,404	15.0	--	7.07	0.0106	752	3.0	8.0	8	0.8	25.1	96.9
Average=			**92**	**77,171**	**89,637**	**15.0**	**--**	**8.0**	**0.0120**	**750**	**3.0**	**8.1**	**9**			**95.7**

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

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

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

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