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## DIVISION OF AIR RESOURCE MANAGEMENT

January 15, 2013 123-87714

Mr. Jeffrey Koerner, Administrator, Office of Permitting and Compliance Florida Department of Environmental Protection Department of Air Resources Management 2600 Blair Stone Road, MS 5500 Tallahassee, Florida 32399-2400

RE:

UNITED STATES SUGAR CORPORATION, CLEWISTON MILL

ANNUAL BOILER MAINTENANCE SUMMARY REPORT

PERMIT NO. 0510003-053-AV, APPENDIX J

2012 OFF-SEASON REPAIRS AND PLANNED REPAIRS FOR THE 2013 OFF-SEASON

Dear Mr. Koerner:

This correspondence provides to the Florida Department of Environmental Protection (FDEP) the list of boiler maintenance and repair activities conducted at the United States Sugar Corporation (US Sugar) Clewiston Mill during the 2012 off-season and the repairs planned on the boilers for the upcoming 2013 off-season.

US Sugar was issued Air Construction Permit No. 0510003-022-AC on June 3, 2003. This permit authorized a 3-year boiler maintenance project at the existing Clewiston Sugar Mill and Refinery located in Hendry County, Florida, for the 2003 through 2005 off-seasons. Because all the repairs were not completed during the specified time, US Sugar requested an extension to the air permit to include the 2006 through 2008 off-seasons. Due to the pending Title V renewal permit application, FDEP chose to not extend Permit No. 0510003-022-AC, and the permit has since expired. However, FDEP included the reporting requirement in the subsequent Title V permit (Permit No. 0510003-032-AV), and the requirement continues to be included in the current Title V permit (Permit No. 0510003-053-AV).

Condition 2 of Appendix J of the Title V operating permit requires US Sugar to submit a "Maintenance Summary Report." The condition requires that the permittee summarize the following information:

- General description of the routine maintenance and repair work performed on each boiler during the previous off-season
- Summary of the off-season maintenance inspections
- Revised schedule of maintenance and repair activities for the next off-season

The current US Sugar crop season began October 1, 2012. The maintenance and repair activities conducted during the 2012 off-season, and those planned for the 2013 off-season, are provided in the attachments.

In accordance with the Title V operating permit, the replacements US Sugar is planning are all "functionally equivalent" to the existing components, and are intended to return the boilers to their current steam production capabilities. The maintenance activities will not increase the capacity of any boiler, nor change the basic design parameters, including fuel firing rates or heat input rates. The repairs will not increase the emission rates of any boiler, nor the cane milling capacity of the plant. As such, we believe these repairs are authorized activities under the Title V air operation permit.

Y:\Projects\2012\123-87714 USSC\Blr Maint Rpt - 2012\Final\2012 Maintenance Summary Report.docx



Please call me at (352) 336-5600 or Keith Tingberg at (863) 902-3186 if you have any questions concerning this information, or need additional information.

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Sincerely,

**GOLDER ASSOCIATES INC.** 

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

Principal Engineer

Philip D. Cobb, Ph.D., P.E. Senior Project Engineer

CC:

Carter Endsley, FDEP Keith Tingberg, USSC Bret Nesbitt, USSC

Enclosures

DB/tz

## **CLEWISTON BOILER REPAIRS SUMMARY - 2012 OFF-SEASON**

Boiler repairs and maintenance conducted during the 2012 off-season are described below.

## Boiler No. 1

- Boiler casing and refractory patch work
- Replaced bad buckstay on front wall

## Boiler No. 2

- Boiler casing and refractory patch work
- Replaced superheater pendants

#### Boiler No. 4

- Boiler casing and refractory patch work
- Replaced 50% of air heater tubes

## Boiler No. 7

- Boiler casing and refractory patch work
- Repaired a large section of refractory on the lower west wall of furnace
- Replaced 80% of air heater tubes
- Replaced perforated plate in ESP inlet
- Replaced hoppers and screw conveyors on ESP
- Replaced 2 riser tubes in the boiler penthouse
- Replaced boiler outlet / economizer inlet flue

#### Boiler No. 8

- Installed inconel overlay under urea nozzles in furnace
- Replaced a damaged shaft on the boiler stoker
- Replace inlet plenum on the ESP
- Replace the upper and a portion of the lower cone sections of the sand separators

## CLEWISTON BOILER MAINTENANCE INSPECTIONS – 2012 OFF-SEASON

Boiler maintenance inspections performed during the 2012 off-season are described below.

#### Boiler Nos. 1, 2, 4, 7, 8

- Eddy current testing on all boiler main banks
- Safety relief valve certifications
- OEM inspections of ESPs on Boiler Nos. 7 and 8
- Quarterly maintenance and inspections of CEMS
- General crawl through inspections by USSC
- Smoke stack inspections by certified inspector



## **CLEWISTON BOILER REPAIR PROJECTIONS - 2013 OFF-SEASON**

Boiler repairs projected to be accomplished during the 2013 off-season are described below.

#### Boiler No. 1

- Boiler casing and refractory patch work
- Replace air heater outlet to scrubber inlet flue
- Replace superheater pendants
- Repair roof and inner skirting on scrubber

#### Boiler No. 2

- Boiler casing and refractory patch work
- Replace air heater outlet to scrubber inlet flue
- Repair roof and inner skirting on scrubber

#### Boiler No. 4

- Boiler casing and refractory patch work
- Replace lower ends of 20% of air heater tubes with stainless material to prevent cold end corrosion.

#### Boiler No. 7

- Replace remaining three walls of furnace with membrane construction (to also be addressed with FDEP in a separate submittal)
- Replace smokestack found to have stress corrosion cracking
- Replace one badly corroded buckstay on front wall
- General repair of wear areas in sand separators
- Replace another perforated plate in ESP inlet plus the outlet perforated plate

## Boiler No. 8

- Repair corrosion damage in ESP hoppers. Consider replacement of one hopper with stainless.
- General repair of wear areas in sand separators
- Install new shaft in stoker

## CLEWISTON BOILER PROJECTED MAINTENANCE INSPECTIONS 2013 OFF-SEASON

## Boiler Nos. 1, 2, 4, 7, 8

- Eddy current testing on all boiler main banks
- Safety relief valve certifications
- OEM inspections of ESPs on Boiler Nos. 7 and 8
- Quarterly maintenance and inspections of CEMS
- General crawl through inspections by USSC
- Pressure vessel inspection on one deaerator

