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1. Article Addressed to: Mr. William A. Raiola Vice President United States Sugar Corporation 111 Ponce DeLeon Avenue Clewiston, FL 33440	C. Signature <u>Andrew J. Sals</u> <input type="checkbox"/> Agent <input type="checkbox"/> Addressee D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No
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William A. Raiola
Street, Apt. No. or PO Box No.
111 Ponce DeLeon Ave.
City, State, ZIP+4
Clewiston, FL 33440

PS Form 3800, January 2001 See Reverse for Instructions

7001 0320 0001 3692 9106



Jeb Bush
Governor

Department of Environmental Protection

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

David B. Struhs
Secretary

March 22, 2002

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

William A. Raiola, Vice President
United States Sugar Corporation
111 Ponce DeLeon Avenue
Clewiston, FL 33440

Re: United States Sugar Corporation – Clewiston Sugar Mill and Refinery
Boiler No. 4, Off-Season Repairs
Air Permit No. PSD-FL-272A

Dear Mr. Raiola:

On March 8th, U.S. Sugar Corporation (USSC) met with Department representatives in Tallahassee to discuss the maintenance and repair of components in Boiler No. 4, which is scheduled for this May during the sugar milling off-season. On March 14, 2002, USSC submitted detailed information (attached) regarding the scheduled off-season maintenance. USSC requests the Department's concurrence that the planned activities do not require an air construction permit. The following summarizes the Department's review and conclusion.

Background

Boiler No. 4 was originally installed at the Clewiston mill in 1985. It is a refurbished coal-fired boiler and was permitted in accordance with the PSD preconstruction review requirements. The refurbishment included new steam generating banks, a new superheater, a re-tubed air heater, and a re-tubed economizer. The permitted capacity is 300,000 pounds per hour of steam at 750°F and 600 psig. The boiler is used to produce process steam during the sugarcane-milling season and serves as a backup to Boiler No. 7, which supports the sugar refinery.

Scheduled Maintenance Activities

USSC identifies two significant scheduled repairs to be performed during the upcoming off-season.

1. *Problem:* An inspection of the steam-generating bank shows excessive erosion of the tubing at the inlet and outlet areas near the internal center baffle due to the high sand content of the bagasse fuel. These areas experience the most wear due to the narrow gas pathway and high flue gas velocity.

Repair: USSC plans to replace approximately 60% of the steam-generating bank tubes, which provide about 40% of the boiler heating surface. In addition, flow modeling indicates that the opening at the center baffle can be enlarged to reduce flue gas velocity without causing other maintenance problems or sacrificing performance. This change would slow erosion and reduce future problems in these areas.

2. *Problem:* An inspection of the roof tubes indicates corrosion around the welded joint between the roof tube and the buckstay (an expansion connection that supports the roof tube). The corrosion is believed to be a result of moisture buildup during the off-season.

Repair: USSC plans to replace all 64 roof tubes, which is about 4% of the boiler heating surface.

"More Protection, Less Process"

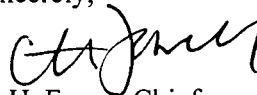
Conclusion

The Department agrees that the proposed activities (as described) are routine repairs. The following discussion briefly summarizes important considerations.

- *Age of Equipment:* Boiler No. 4 was installed as a refurbished unit in 1985/1986 and has acquired only 15 years of operation.
- *PSD Permitting:* Boiler No. 4 was originally constructed under a PSD permit in 1985. The unit last underwent PSD review in 1999-2001 to allow use as a backup unit to Boiler No. 7, which supports the sugar refinery operation. The permit includes BACT limits for CO, NO_x, PM, SO₂, and VOC.
- *Nature of Repair:* USSC considers the repairs to be routine due to the harsh operating conditions. Repairs can be made during the normal down time of the upcoming off-season. Only minimal replacement materials are necessary to complete the repair. Only steam components will be replaced, not the entire emissions unit.
- *Frequency of Repair Activities:* Due to the erosive nature of the bagasse fuel, the sugar industry generally performs more frequent and extensive tubing repairs compared to other industries and fuels (for example, a coal-fired boiler). The sugar industry also operates on a seasonal schedule that provides regular down time for performing such maintenance. Although the scheduled repair activities appear more extensive than usual, the repairs are typical of annual maintenance performed during the off-season for this industry.
- *Costs:* Replacement equipment costs are estimated to be \$90,000. Labor costs to perform the repairs are estimated to be \$510,000. The operating budget will support all repair costs. In comparison, a new boiler of similar size is estimated to be approximately \$8 million.
- *Capacity:* The boiler has been able to achieve a steaming rate of at least 90% during recent compliance tests. Based on annual operating reports, the boiler has not experienced declining use (averaging about 4000 hours per year). The repair will not improve the capacity and is not expected to increase utilization of the unit.

For this specific case, the Department does not consider the proposed maintenance to be a modification of the emissions unit. This conclusion is primarily based on the age of the unit, the expected life of the unit, previous and recent PSD preconstruction reviews, and the nature of the repair. For this unit, the repair is expected to result in no changes to the emissions or future utilization. Therefore, no permit is required to perform the repair. United States Sugar Corporation is encouraged to inform the Department of future similar substantial repair activities. The Department emphasizes that this review is specific to the proposed activities, the unique circumstances of the facility, and the permitting and operational history of the given emission unit. If you should have any questions, please contact the project engineer, Jeff Koerner, at 850/921-9536.

Sincerely,



C. H. Fancy, Chief
Bureau of Air Regulation

cc: Mr. Peter Briggs, USSC
Mr. Don Griffin, USSC
Mr. David Buff, Golder Associates Inc.

Mr. Ron Blackburn, SD
Mr. Gregg Worley, EPA Region 4
Mr. John Bunyak, NPS

Golder Associates Inc.

6241 NW 23rd Street, Suite 500
Gainesville, FL 32653-1500
Telephone (352) 336-5600
Fax (352) 336-6603



March 13, 2002

0037653

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

RECEIVED

MAR 14 2002

Attention: Mr. Al Linero, Chief, New Source Review

SUBJECT: UNITED STATES SUGAR CORPORATION
CLEWISTON MILL
BOILER NO. 4 REPAIRS

BUREAU OF AIR REGULATION

Dear Mr. Linero:

United States Sugar Corporation (U.S. Sugar) operates the Clewiston sugar mill located in Hendry County, Florida. Boiler No. 4 at the mill provides process steam to the sugar mill during the sugar cane processing season and also acts as a backup source of steam for the sugar refinery during the off-season. U.S. Sugar is planning repairs to Boiler No. 4 in the upcoming off-season (starting in May) that are normal and routine and do not meet the requirement for new source review (NSR). A description of the boiler and its operation and the planned repairs to the boiler are described below:

Boiler No. 4 was originally permitted for the Clewiston mill in 1985 and began operating in 1986. This was an existing coal-fired boiler that was converted to bagasse/oil-firing. The conversion included new steam generating bank tubes; new superheater; and the air heater and economizer were retubed.

The boiler is presently permitted to generate up to 300,000 lb/hr steam at 600 psig. A brief permitting history is presented below:

- Initial construction and prevention of significant deterioration (PSD) permit: January 14, 1985
- Construction permit to increase the steam rate: February, 17, 1987
- Construction /PSD permit to increase CO emission limit: August 9, 1995
- Construction /PSD permit to increase operating days: November 22, 1999
- Revision of 1999 PSD permit to increase sulfur content of fuel oil in off-season: March 8, 2001

Two repair issues currently exist with the Boiler No. 4 operation. The first issue is with the main bank of steam generating tubes. The main bank tubes were new in 1985 when the boiler was converted to bagasse firing. A portion of these tubes has been worn due to excessive flue gas velocities and the sand in the bagasse fuel. The excessive velocities are due to the center baffle, which creates too small of an opening for the flue gases. This causes excessive velocity under the baffle, resulting in impingement of sand on the tubes in the inlet and outlet areas of the baffle. The baffle opening needs to be enlarged (rebuilt), and about 60 percent of the generating bank tubes, which accounts for 40 percent of the boiler heating surface, need to be replaced.

The second issue is with the roof tubes. A portion of these tubes has been worn due to corrosion surrounding the weldment of the buckstay to the tube (the buckstay is an expansion connection that holds the tubes in place). This was caused by moisture migration during extended periods of downtime (i.e., during the sugar processing off-season). This is another condition that is unique to the Florida sugar industry, where extended periods of boiler downtime in high humidity environment occur each year. All 64 roof tubes, which is equivalent to 4 percent of the boiler heating surface, need to be replaced.

As a result of these issues, U. S. Sugar plans to initiate repairs on Boiler No. 4. The repairs are routine maintenance due to the unique operating environment of bagasse boilers (i.e., sand in the fuel, extended boiler downtime, etc.). Fossil fuel boilers do not experience similar wear and maintenance issues, due to the characteristics of fossil fuel and continuous operation throughout the year. It is not a life extension project. Boiler No. 4 is only about 15 years old in its converted state, and is not near the end of its useful life.

This project affects only the steam side of the boiler. The gas side (i.e., emissions) is not affected by this project. The maximum heat input rate, steam production rate, or any other aspect of the boiler will not be changed by the planned repairs. The boiler has been able to achieve at least 90 percent of its permitted 24-hour average steam rate capacity during recent compliance testing. Performing the repairs will prevent future wear on the generating bank tubes and repair the damaged tubes.

The planned repairs to Boiler No. 4 are labor intensive. The total cost of the project is approximately \$600,000, of which 85 percent are labor costs. By contrast, the total cost of a new boiler of comparable size to Boiler No. 4 is approximately \$8 million. All costs for the project are coming out of the operating budget.

U. S. Sugar believes that due to the nature of these activities, the activities qualify under the routine maintenance, repair and replacement exemptions under the Department's air rules. To assist in this determination, we have addressed EPA's five-factor criteria for assessing whether a project qualifies as routine maintenance, replacement or repair (see Table 1 attached). As such, we believe that no air construction permit is required prior to commencing these repairs on the boiler. The Department's written concurrence that no air construction permit is required for this activity is requested.

If the Department deems that the proposed activities are not routine maintenance, repair or replacement, the recent PSD permit issued for the boiler should be considered. Boiler No. 4 was subject to PSD review and a best available control technology (BACT) determination as recent as 1999. Construction was completed under this PSD permit and compliance testing was conducted in November 2000. Correlation testing to determine CO and O₂ operating ranges was also completed in November 2000. As a result, Boiler No. 4 did not begin normal operations under the new PSD permit until November 2000.

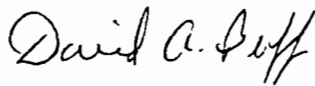
According to the Department's PSD rules, actual emissions must be compared to future potential emissions to determine if a modification to a source has occurred. In general, actual emissions as of a particular date shall equal the average rate, in tons per year, at which the emissions unit actually emitted the pollutant during a 2-year period preceding the particular date, and which is representative of normal operation of the emissions unit [Rule 62-210.200(12)(a), F.A.C.]. For any emissions unit, which has not begun normal operations on a particular date, actual emissions shall equal the potential emissions of the emissions unit on that date [Rule 62-210.200(12)(c), F.A.C.].

We believe that under these provisions, Boiler No. 4 has not yet had a 2-year period of normal operations, since compliance testing under the new permit was not completed until November 2000. In this case, the actual emissions from Boiler No. 4 (for PSD purposes) would equal the potential emissions, and there would be no increase in emissions from Boiler No. 4 under the PSD rules. Therefore, PSD review would not be triggered. We request that the Department consider this in their determination.

Please call me at (352) 336-5600 if you have any questions concerning this request, or need additional information.

Sincerely,

GOLDER ASSOCIATES INC.



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

DB/nav

cc: Don Griffin
Peter Briggs

L031302\L031302b

Table 1.
United States Sugar Corporation
Repairs for Boiler No. 4
March 13, 2002

Criteria Based on EPA May 23, 2000 Guidance	U. S. Sugar's Boiler No. 4 Repairs
Nature	
1. Whether major components of the facility are being modified or replaced	1. A major component of the facility is not being modified or replaced. Only 44% of the heating surface of the generating section of the boiler is being replaced. This repair consists only of tubes, supports, and a baffle.
2. Whether the unit is of considerable size, function, or importance to the operation of the facility	2. Boiler No. 4 is important to operation of the facility. It is equivalent to 26% of the mills' steam generating capacity.
3. Whether the source itself has characterized the change as non-routine	3. U. S. Sugar considers this project to be routine: the operating environment is harsh. Accelerated wear and corrosion are caused by sand in bagasse fuel and extended downtime. Cost is coming out of operating budget.
a. Is the repair/replacement common in the industry?	a. Unknown. Sand in the fuel may be unique to U. S. Sugar because the cane for Clewiston is grown on sand lands. Biomass fuels are more erosive than fossil fuels.
4. Whether the change could be performed during full functioning of the facility or while it was in full working order	4. Boiler No. 4 needs to be off-line to perform the repair. Boiler No. 4 is routinely off-line during the off-season.
5. Whether the materials, equipment and resources necessary to carry out the planned activity are already on site	5. Other than the replacement tubes themselves, the materials, equipment and resources to carry out the planned activity are already on site.
Extent	
1. Whether an entire emissions unit will be replaced	1. The entire emissions unit will not be replaced. Replacement of only 44% of heating surface of the generating section of the boiler - 617 generating tubes out of 1,075; 64 roof tubes out of 64; and the center tile baffle.
2. Whether the change will take significant time to perform	2. The change can occur within a short amount of time, during the off-season when the unit does not run continuously. The tubes and baffle will be replaced during the same time period when normal maintenance on the boiler is performed. All work to be finished in three months.
3. Whether the collection of activities, taken as a whole, constitutes a non-routine effort, notwithstanding that individual elements could be routine	3. In our operating environment these repairs taken as a whole are considered routine.
4. Whether the change requires the addition of parts to existing equipment	4. No addition of parts are used - only in kind replacement.
a. Does repair/replacement involve improved design/materials?	a. No

Table 1.
United States Sugar Corporation
Repairs for Boiler No. 4
March 13, 2002

Criteria Based on EPA May 23, 2000 Guidance	U. S. Sugar's Boiler No. 4 Repairs
Purpose	
1. Whether the purpose of the effort is to extend the useful life of the units; similarly, whether the source proposes to replace a unit at the end of its useful life	1. The purpose is not to "extend the useful life" of the boiler. Conversely, without repair or replacement, the unit's normal life would be shortened. The replacement and repair of the tubes will not extend the life of the unit. The purpose of replacing the tubes and baffle is to repair damage due to erosion and corrosion, resulting from sand in the bagasse fuel and extended downtime.
2. Whether the modification will keep the unit operating in its present condition, or whether it will allow enhanced operation (e.g., will it permit increased capacity, operating rate, utilization, or fuel adaptability)	2. The replacement will not allow enhanced operation in anyway. The tube replacement and baffle will have the same primary function as the existing components. There will be no increase in maximum steam rate. Annual operation is dependent upon, and limited by, the amount of sugar cane harvested and refined sugar produced. There is continuous economic incentive to decrease (not increase) boiler usage. The steam needs of the sugar mill and refinery remain the same, regardless of an individual boiler's operation. Boiler No. 4 will operate as it has in the past.
a. Does repair/replacement enhance efficiency?	a. No.
b. Does repair/replacement make the unit more attractive to run from an economic standpoint?	b. No.
c. Does repair/replacement increase capacity of unit?	c. No.
d. Does repair/replacement allow for less frequent maintenance?	d. Potentially, due to reduced tube erosion due to lower gas velocity.
Frequency	
1. Whether the change is performed frequently in a typical unit's life	1. It is expected that in similar bagasse boilers burning similar fuel that the repair frequency is normal and routine.
a. Has the affected unit performed the repair/replacement frequently at its facility?	a. Portions of the generating tubes are repaired frequently.
Cost	
1. Whether the change will be costly, both in absolute terms and relative to the cost of replacing the unit	1. Project cost is approximately \$600,000, but only about 15% of this total cost is in parts. Total project cost is less than 7.5 percent of a new boiler cost, while the parts cost is less than 1% of a new boiler. The cost of a new boiler is estimated at \$8 million.
a. Is the relative cost of the proposed replacement high in comparison to the cost of a typical identical replacement of a worn part?	a. No, the cost is the same.
2. Whether a significant amount of the cost of the change is included in the source's capital expenses, or whether the change can be paid for out of the operating budget (i.e., whether the costs are reasonably reflective of the costs originally projected during the source's or unit's design phase as necessary to maintain the day-to-day operation of the source)	2. 100% of costs are being paid out of the operating budget. No portion of the costs will be capitalized.

Golder Associates Inc.

6241 NW 23rd Street, Suite 500
Gainesville, FL 32653-1500
Telephone (352) 336-5600
Fax (352) 336-6603



March 13, 2002

0037653

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

RECEIVED

MAR 14 2002

Attention: Mr. Al Linero, Chief, New Source Review

SUBJECT: UNITED STATES SUGAR CORPORATION
CLEWISTON MILL
BOILER NO. 4 REPAIRS

BUREAU OF AIR REGULATION

Dear Mr. Linero:

United States Sugar Corporation (U.S. Sugar) operates the Clewiston sugar mill located in Hendry County, Florida. Boiler No. 4 at the mill provides process steam to the sugar mill during the sugar cane processing season and also acts as a backup source of steam for the sugar refinery during the off-season. U.S. Sugar is planning repairs to Boiler No. 4 in the upcoming off-season (starting in May) that are normal and routine and do not meet the requirement for new source review (NSR). A description of the boiler and its operation and the planned repairs to the boiler are described below:

Boiler No. 4 was originally permitted for the Clewiston mill in 1985 and began operating in 1986. This was an existing coal-fired boiler that was converted to bagasse/oil-firing. The conversion included new steam generating bank tubes; new superheater; and the air heater and economizer were retubed.

The boiler is presently permitted to generate up to 300,000 lb/hr steam at 600 psig. A brief permitting history is presented below:

- Initial construction and prevention of significant deterioration (PSD) permit: January 14, 1985
- Construction permit to increase the steam rate: February, 17, 1987
- Construction /PSD permit to increase CO emission limit: August 9, 1995
- Construction /PSD permit to increase operating days: November 22, 1999
- Revision of 1999 PSD permit to increase sulfur content of fuel oil in off-season: March 8, 2001

Two repair issues currently exist with the Boiler No. 4 operation. The first issue is with the main bank of steam generating tubes. The main bank tubes were new in 1985 when the boiler was converted to bagasse firing. A portion of these tubes has been worn due to excessive flue gas velocities and the sand in the bagasse fuel. The excessive velocities are due to the center baffle, which creates too small of an opening for the flue gases. This causes excessive velocity under the baffle, resulting in impingement of sand on the tubes in the inlet and outlet areas of the baffle. The baffle opening needs to be enlarged (rebuilt), and about 60 percent of the generating bank tubes, which accounts for 40 percent of the boiler heating surface, need to be replaced.

The second issue is with the roof tubes. A portion of these tubes has been worn due to corrosion surrounding the weldment of the buckstay to the tube (the buckstay is an expansion connection that holds the tubes in place). This was caused by moisture migration during extended periods of downtime (i.e., during the sugar processing off-season). This is another condition that is unique to the Florida sugar industry, where extended periods of boiler downtime in high humidity environment occur each year. All 64 roof tubes, which is equivalent to 4 percent of the boiler heating surface, need to be replaced.

As a result of these issues, U. S. Sugar plans to initiate repairs on Boiler No. 4. The repairs are routine maintenance due to the unique operating environment of bagasse boilers (i.e., sand in the fuel, extended boiler downtime, etc.). Fossil fuel boilers do not experience similar wear and maintenance issues, due to the characteristics of fossil fuel and continuous operation throughout the year. It is not a life extension project. Boiler No. 4 is only about 15 years old in its converted state, and is not near the end of its useful life.

This project affects only the steam side of the boiler. The gas side (i.e., emissions) is not affected by this project. The maximum heat input rate, steam production rate, or any other aspect of the boiler will not be changed by the planned repairs. The boiler has been able to achieve at least 90 percent of its permitted 24-hour average steam rate capacity during recent compliance testing. Performing the repairs will prevent future wear on the generating bank tubes and repair the damaged tubes.

The planned repairs to Boiler No. 4 are labor intensive. The total cost of the project is approximately \$600,000, of which 85 percent are labor costs. By contrast, the total cost of a new boiler of comparable size to Boiler No. 4 is approximately \$8 million. All costs for the project are coming out of the operating budget.

U. S. Sugar believes that due to the nature of these activities, the activities qualify under the routine maintenance, repair and replacement exemptions under the Department's air rules. To assist in this determination, we have addressed EPA's five-factor criteria for assessing whether a project qualifies as routine maintenance, replacement or repair (see Table 1 attached). As such, we believe that no air construction permit is required prior to commencing these repairs on the boiler. The Department's written concurrence that no air construction permit is required for this activity is requested.

If the Department deems that the proposed activities are not routine maintenance, repair or replacement, the recent PSD permit issued for the boiler should be considered. Boiler No. 4 was subject to PSD review and a best available control technology (BACT) determination as recent as 1999. Construction was completed under this PSD permit and compliance testing was conducted in November 2000. Correlation testing to determine CO and O₂ operating ranges was also completed in November 2000. As a result, Boiler No. 4 did not begin normal operations under the new PSD permit until November 2000.

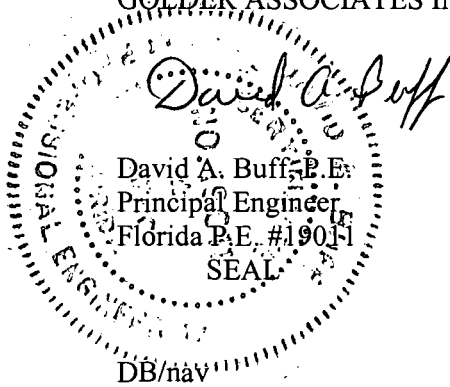
According to the Department's PSD rules, actual emissions must be compared to future potential emissions to determine if a modification to a source has occurred. In general, actual emissions as of a particular date shall equal the average rate, in tons per year, at which the emissions unit actually emitted the pollutant during a 2-year period preceding the particular date, and which is representative of normal operation of the emissions unit [Rule 62-210.200(12)(a), F.A.C.]. For any emissions unit, which has not begun normal operations on a particular date, actual emissions shall equal the potential emissions of the emissions unit on that date [Rule 62-210.200(12)(c), F.A.C.].

We believe that under these provisions, Boiler No. 4 has not yet had a 2-year period of normal operations, since compliance testing under the new permit was not completed until November 2000. In this case, the actual emissions from Boiler No. 4 (for PSD purposes) would equal the potential emissions, and there would be no increase in emissions from Boiler No. 4 under the PSD rules. Therefore, PSD review would not be triggered. We request that the Department consider this in their determination.

Please call me at (352) 336-5600 if you have any questions concerning this request, or need additional information.

Sincerely,

GOLDER ASSOCIATES INC.



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

DB/nav

cc: Don Griffin
Peter Briggs

L031302\L031302b

**Table 1.
United States Sugar Corporation
Repairs for Boiler No. 4
March 13, 2002**

Criteria Based on EPA May 23, 2000 Guidance	U. S. Sugar's Boiler No. 4 Repairs
Nature	
1. Whether major components of the facility are being modified or replaced	1. A major component of the facility is not being modified or replaced. Only 44% of the heating surface of the generating section of the boiler is being replaced. This repair consists only of tubes, supports, and a baffle.
2. Whether the unit is of considerable size, function, or importance to the operation of the facility	2. Boiler No. 4 is important to operation of the facility. It is equivalent to 26% of the mills' steam generating capacity.
3. Whether the source itself has characterized the change as non-routine	3. U. S. Sugar considers this project to be routine: the operating environment is harsh. Accelerated wear and corrosion are caused by sand in bagasse fuel and extended downtime. Cost is coming out of operating budget.
a. Is the repair/replacement common in the industry?	a. Unknown. Sand in the fuel may be unique to U. S. Sugar because the cane for Clewiston is grown on sand lands. Biomass fuels are more erosive than fossil fuels.
4. Whether the change could be performed during full functioning of the facility or while it was in full working order	4. Boiler No. 4 needs to be off-line to perform the repair. Boiler No. 4 is routinely off-line during the off-season.
5. Whether the materials, equipment and resources necessary to carry out the planned activity are already on site	5. Other than the replacement tubes themselves, the materials, equipment and resources to carry out the planned activity are already on site.
Extent	
1. Whether an entire emissions unit will be replaced	1. The entire emissions unit will not be replaced. Replacement of only 44% of heating surface of the generating section of the boiler - 617 generating tubes out of 1,075; 64 roof tubes out of 64; and the center tile baffle.
2. Whether the change will take significant time to perform	2. The change can occur within a short amount of time, during the off-season when the unit does not run continuously. The tubes and baffle will be replaced during the same time period when normal maintenance on the boiler is performed. All work to be finished in three months.
3. Whether the collection of activities, taken as a whole, constitutes a non-routine effort, notwithstanding that individual elements could be routine	3. In our operating environment these repairs taken as a whole are considered routine.
4. Whether the change requires the addition of parts to existing equipment	4. No addition of parts are used - only in kind replacement.
a. Does repair/replacement involve improved design/materials?	a. No

Table 1.
United States Sugar Corporation
Repairs for Boiler No. 4
March 13, 2002

Criteria Based on EPA May 23, 2000 Guidance

U. S. Sugar's Boiler No. 4 Repairs

Purpose

1. Whether the purpose of the effort is to extend the useful life of the units; similarly, whether the source proposes to replace a unit at the end of its useful life

2. Whether the modification will keep the unit operating in its present condition, or whether it will allow enhanced operation (e.g., will it permit increased capacity, operating rate, utilization, or fuel adaptability)

- a. Does repair/replacement enhance efficiency?
- b. Does repair/replacement make the unit more attractive to run from an economic standpoint?
- c. Does repair/replacement increase capacity of unit?
- d. Does repair/replacement allow for less frequent maintenance?

1. The purpose is not to "extend the useful life" of the boiler. Conversely, without repair or replacement, the unit's normal life would be shortened. The replacement and repair of the tubes will not extend the life of the unit. The purpose of replacing the tubes and baffle is to repair damage due to erosion and corrosion, resulting from sand in the bagasse fuel and extended downtime.

 2. The replacement will not allow enhanced operation in anyway. The tube replacement and baffle will have the same primary function as the existing components. There will be no increase in maximum steam rate. Annual operation is dependent upon, and limited by, the amount of sugar cane harvested and refined sugar produced. There is continuous economic incentive to decrease (not increase) boiler usage. The steam needs of the sugar mill and refinery remain the same, regardless of an individual boiler's operation. Boiler No. 4 will operate as it has in the past.
-
- a. No.
 - b. No.

 - c. No.
 - d. Potentially, due to reduced tube erosion due to lower gas velocity.

Frequency

1. Whether the change is performed frequently in a typical unit's life

- a. Has the affected unit performed the repair/replacement frequently at its facility?

1. It is expected that in similar bagasse boilers burning similar fuel that the repair frequency is normal and routine.

- a. Portions of the generating tubes are repaired frequently.

Cost

1. Whether the change will be costly, both in absolute terms and relative to the cost of replacing the unit

- a. Is the relative cost of the proposed replacement high in comparison to the cost of a typical identical replacement of a worn part?

2. Whether a significant amount of the cost of the change is included in the source's capital expenses, or whether the change can be paid for out of the operating budget (i.e., whether the costs are reasonably reflective of the costs originally projected during the source's or unit's design phase as necessary to maintain the day-to-day operation of the source)

1. Project cost is approximately \$600,000, but only about 15% of this total cost is in parts. Total project cost is less than 7.5 percent of a new boiler cost, while the parts cost is less than 1% of a new boiler. The cost of a new boiler is estimated at \$8 million.
 - a. No, the cost is the same.

2. 100% of costs are being paid out of the operating budget. No portion of the costs will be capitalized.