

ORIGINAL: CLAIR  
XC: PAT C  
HUR-FYI  
3/21

# UNITED STATES SUGAR CORPORATION

Post Office Box 1207 • Clewiston, Florida 33440-1207  
Telephone 863/983-8121

March 18, 2002

**RECEIVED**  
MAR 21 2002  
DIVISION OF AIR  
RESOURCES MANAGEMENT

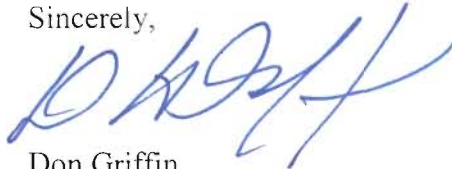
Mr. Howard Rhodes  
Florida Department of Environmental Protection  
Department of Air Resources Management  
2600 Blair Stone Road, MS 5500  
Tallahassee, FL 32399-2400

Dear Mr. Rhodes:

On January 25, 2002 United States Sugar Corporation was granted an emergency order (OGC No. 02-0115) to lease, install and operate 3 diesel generators at the Clewiston Mill. These generators were to replace the generating capacity lost when #5 Generator suffered a catastrophic failure.

This is to advise you that the #5 Generator at Clewiston was returned to normal service on March 18, 2002 and the 3 leased generators will be returned to the vendor on March 20, 2002.

If you have any questions or need additional information please call.

Sincerely,  
  
Don Griffin  
United States Sugar Corporation  
Project Manager/Specialty Sugar

DG: kcb

Cc: Mr. Ron Blackburn, FDEP  
Mr. William A. Raiola  
Mr. Peter Briggs  
Ms. Lisa Gefen

BEFORE THE STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

In re:

EMERGENCY AUTHORIZATION FOR OPERATION,  
OF DIESEL ENGINE-ELECTRIC GENERATORS  
AT THE CLEWISTON U.S. SUGAR COMPLEX MADE  
NECESSARY THE FAILURE OF A STEAM GENERATOR

OGC NO. 02-0115

EMERGENCY FINAL ORDER

Under Section 120.569(2)(n) of the Florida Statutes, the State of Florida Department of Environmental Protection (the Department) enters the following Emergency Final Order, including findings of fact and conclusions of law, in response to a request from U. S. Sugar Corporation. Based on the request and after investigation into the circumstances, the Department makes the following Findings of Facts and Conclusions of Laws.

FINDINGS OF FACT

1. U. S. Sugar is a large grower and processor of sugar cane.
2. The sugar cane season in Florida occurs between the months of October and April.
3. During the sugar cane season, the company continually harvests sugar cane, transports it to its nearby Clewiston and Bryant mills, presses the cane, and evaporates the liquid to make raw sugar.

4. The company uses the residual vegetative matter (bagasse) as a source of fuel in a number of steam boilers. Low pressure steam powers much of the mill operation.

5. The company operates a refinery (raw sugar to white sugar) at the Clewiston mill but not at the Bryant mill. The refinery is one of only two sugar refineries in the state of Florida.

6. The refinery processes approximately 75 percent of the raw sugar produced at the Clewiston mill. The rest of the raw sugar is sold on the market.

7. High pressure steam from the Clewiston mill is used to produce electric power through steam-driven electrical generators. The No. 5 "Turbo generator" supplies the refinery at the Clewiston mill with up to 6 megawatts (MW) of electrical power.

8. On January 19, No. 5 Turbo generator experienced a catastrophic failure requiring the immediate shutdown of the generator, resulting in the shutdown of the refinery and the immediate layoff of 80 people at the mill.

9. Replacement power cannot be purchased from the electrical grid because sufficient transmission lines or substations do not exist to allow import of additional energy into the facility.

10. Repair of the No. 5 Turbo generator could take six weeks to three months.

11. On January 22, 2002 the company requested an Emergency Order to allow installation of backup diesel engine-electrical generators.

12. The Department finds that the failure of the No. 5 Turbo generator was not due to poor operation or maintenance.

13. US Sugar employs 480 people at the Clewiston mill and the company is the largest employer in Clewiston, Florida, a small isolated, agricultural community of about 7000 residents.

14. If the No. 5 Turbo generator outage exceeds six weeks, existing on-site capacity will be exhausted and the mill will reduce its throughput by approximately 36 percent.

15. This will extend the harvest season resulting in the loss of 147 people engaged in agricultural operations.

16. The total loss of wages to U. S. Sugar employees of a six week shutdown will amount to approximately \$1,122,000.

17. The cumulative effect of these layoffs will affect the local economy because of the reduced income of a substantial number of residents.

18. The failure of the No. 5 Turbo generator directly resulted in the layoff of 80 people at the mill for at least six weeks and will cause the loss of 147 people engaged in agricultural operations for at least six weeks.

19. Temporary installation and operation of three nominal 1.5 megawatt diesel engine-electrical generators can allow the company to restart the refining operation, recall to employment those employees affected by the shutdown, and avoid layoffs of agricultural workers.

20. Use of 0.05 percent sulfur fuel oil in the diesel engine-electrical generators will mitigate impacts on ambient air quality.

### CONCLUSIONS OF LAW

1. Section 120.569(2)(n) of the Florida Statutes grants the Department the authority to issue an emergency final order if the agency head or designee finds that an immediate danger to the public health, safety or welfare so requires.

2. Based on the findings recited above, I find that a three month delay in refinery operation will have an immediate, adverse impact on the welfare of a significant number of residents of a small, isolated, agricultural community.

3. I conclude that the emergency caused by the failure of the No. 5 Turbo generator requires an immediate, but temporary, order of the Department to protect the public health, safety and welfare.

### THEREFORE, IT IS ORDERED:

1. U. S. Sugar may lease, install, and operate until April 30, 2002 between two and four diesel engine-electrical generators with a combined

nominal electrical capacity of 6 megawatts at the Clewiston mill for the sole purpose of providing electricity such that the mill and refinery can return to the same level of operation experienced prior to failure of the No. 5 Turbo generator.

2. By February 1, 2002 U. S. Sugar shall submit a complete air construction permit application in accordance with Rules 62-4, 62-210, 62-212, Florida Administrative Code, and any other applicable rules based on the type of units installed, to provide for more permanent back-up power generation at the Clewiston refinery. Failure to submit the application before March 1, 2002 shall result in immediate expiration of this order.

3. The Department issues this Emergency Final Order solely to address the emergency created by the failure of the No. 5 Turbo generator. This order shall not be construed to authorize any activity within the jurisdiction of the Department except in accordance with the express terms of this order. This order will allow the company to produce electrical energy for its refinery operations, recall employees that have been laid off, and avoid further layoffs due to impacts on other operations at the Clewiston mill.

4. Nothing in this order shall eliminate the necessity for obtaining any other federal, state, or local permits or other authorizations that may be required.

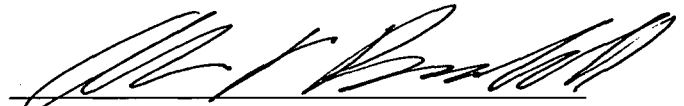
5. This Emergency Final Order shall take effect immediately and expire on April 30, 2002 or when the permit is issued, or when the No. 5 Turbo generator is returned to service, whichever comes first, unless modified or extended by further order. However, if the owner or operator of the Clewiston mill fails to make application for permit before March 1, 2002, as required by paragraph 2, above, this order shall expire March 1, 2002.

NOTICE OF RIGHTS

Any party adversely affected by this Emergency Final Order is entitled to judicial review under Section 120.569(2)(1) of the Florida Statutes. The Florida Rules of Appellate Procedure govern the review proceedings. Such proceedings are commenced by filing one copy of a notice of appeal with the Agency Clerk of the Department of Environmental Protection and a second copy, accompanied by filing fees prescribed by law, with the First District Court of Appeal or with the district court of appeal in the appellate district in which the party resides. The notice of appeal must be filed within thirty days of rendition of the order to be reviewed.

DONE AND ORDERED on this 25<sup>th</sup> day of January 2002 in Tallahassee, Leon County, Florida.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENT PROTECTION



Allan F. Bedwell  
Deputy Secretary

3900 Commonwealth Boulevard  
Tallahassee, Florida 32399-3000  
Telephone: 850/488-1554



CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this ORDER was sent by facsimile and by U. S. mail before the close of business on 1/25/02 to the person(s) listed:

William Raiola, V.P. Sugar Processing, USSC

Don Griffin, USSC

Peter Briggs, USSC

David Buff, P.E., Golder Associates

Timothy Smith, Esq., Akerman Senterfitt

Clerk Stamp

**FILING AND ACKNOWLEDGEMENT**

**FILED**, on this date, pursuant to Section 120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Victoria Gibson January 25, 2002  
Clerk Date

## Gibson, Victoria

---

**From:** Blackburn, Ron  
**Sent:** Tuesday, January 29, 2002 7:28 AM  
**To:** Gibson, Victoria  
**Subject:** US Sugar FAX - Info

Vickie:

Was out yesterday. Got the FAX and the information from you folks.  
Thanks to all. By the way our FAX Number is (941) 332-6969 SC 748-6969.

Thanks Vickie.

Take care.

Ron



Florida  
Department of  
Environmental Protection

Jeb Bush  
Governor

**Twin Towers Office Building**  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

David Struhs  
Secretary

F A X T R A N S M I T T A L S H E E T

DATE: 1/25/02

TO: Ron Blackburn

PHONE: \_\_\_\_\_

FAX: 5C 748 6969

FROM: A / Lihero

PHONE: 850-921-9523

Division of Air Resources Management

FAX: 850.922.6979

RE: U.S. Sugar

CC: \_\_\_\_\_

Total number of pages including cover sheet: 9

**Message**

Emergency Order

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Department of  
Environmental Protection

Jeb Bush  
Governor

Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

David Struhs  
Secretary

F A X T R A N S M I T T A L S H E E T

DATE: 1/25/02  
TO: Ron Blackburn  
PHONE: \_\_\_\_\_

FAX: 509 941-3269

FROM: Al Leno

PHONE: 850-921-9532

Division of Air Resources Management

FAX: 850.922.6979

RE: Emergency Authorization for Operation on USSC  
CC: \_\_\_\_\_

Total number of pages including cover sheet: (9)

Message

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✓  
1/25/02 @ 2:55 pm -VA

# United States Sugar Corporation

---

Post Office Box 1207 • Clewiston, Florida 33440-1207  
Telephone 863/902-2703  
Fax 863/902-2729

Facsimile to: 850-922-6979  
Hard Copy Overnight Mail

**RECEIVED**

JAN 25 2002

**DIVISION OF AIR  
RESOURCES MANAGEMENT**

January 24, 2002

Howard Rhodes  
Director, Division of Air Resources Management  
Florida Department of Environmental Protection  
2600 Blair Stone Road, MS 5500  
Tallahassee, Florida 32399-2400

RE: UNITED STATES SUGAR CORPORATION  
CLEWISTON MILL: TEMPORARY DIESEL GENERATORS  
REQUEST FOR EMERGENCY ORDER

Dear Mr. Rhodes:

On January 22, 2002, the Department received a request from United States Sugar Corporation (U. S. Sugar) for an Emergency Order to operate several temporary diesel electric generators at its Clewiston mill. The purpose of this letter is to articulate additional particular facts regarding United States Sugar Corporation's (U. S. Sugar's) request for authorization. The request is being made under Section 120.569(2)(n) of the Florida Statutes and rules 62-110.107(2) and 62-210.700 of the Florida Administrative Code. The statute refers to "an immediate danger to the public health, safety, or welfare which requires an immediate final order." The rule citation refers to "an imminent or currently existing serious threat to the public health, safety, welfare or environment." Described below are the particular facts that U. S. Sugar believes meets the regulatory criteria for an emergency situation.

1. The most significant and immediate impact is to the public welfare. The disruption in operations at the Clewiston mill has caused the immediate layoff of 80 people at the mill. Clewiston is a community of about 7,000 residents. The majority of tax revenue and a large percentage of personal income result directly or indirectly from U. S. Sugar operations. U.S. Sugar is the largest employer in the community (employing approximately 480 people at Clewiston's mill alone) and has laid off nearly 20% of this work force already, because of the failure of the turbo generator. The economic impact on the community will be severe (direct loss of approximately \$72,000 in weekly wages).

If the turbo generator outage exceeds six weeks, then existing on-site storage capacity will be exhausted and the mill will be required to reduce its throughput by approximately 36%. This will extend the harvest season resulting in the loss of 147 people engaged in our agricultural operations (direct loss of approximately \$115,000 in weekly wages.)

The total loss of wages to U. S. Sugar employees will amount to approximately \$1.122 Million, six weeks for refinery workers @ \$72,000/week and six weeks for agricultural workers at \$115,000/week.

The cumulative effect of these layoffs at U.S. Sugar would surely lead to cutbacks by other businesses in and around Clewiston, because of the reduced income of so many residents joining the ranks of the unemployed.

Discussion with General Electric indicates that repair of the turbo generator could take up to two months. Unless an alternative source of electrical energy is implemented quickly, the Clewiston refinery will stay shutdown, and/or the sugar mill will need to reduce raw sugar production by approximately 36 percent. Thus, substantial further layoffs are likely if the emergency temporary authorization for installing and operating the backup generators cannot be obtained.

2. Please note a turbo generator such as the one that failed is designed to last a very long time (>20 years). U. S. Sugar has performed all required inspections and maintenance for the turbo generator at issue and did nothing to cause or contribute to its sudden and catastrophic failure. In addition to the routine maintenance, the rotor on the turbo generator was sent to GE as late as last year for repairs and inspection.

The Department's consideration of this information is appreciated. If granted, please forward the final Emergency Order to my attention at:

United States Sugar Corporation  
111 Ponce DeLeon Avenue  
Clewiston, FL 33440

Please call me at (863) 902-2703 if you have any questions concerning this request, or need further information.

Sincerely,

UNITED STATES SUGAR CORPORATION



William A. Raiola  
Vice President, Sugar Processing

cc: Lisa Gefen  
Donald Griffin  
Peter Briggs  
Time Smith  
A. Linero (LINERO\_A@dep.state.fl.us)  
David Buff, Golder Associates

# United States Sugar Corporation

---

Post Office Box 1207 - Clewiston, Florida 33440-1207

Telephone 863/902-2703

Fax 863/902-2729

**FAXED**  
1-24-02

Facsimile to: 850-922-6979

Hard Copy Overnight Mail

January 24, 2002

Howard Rhodes  
Director, Division of Air Resources Management  
Florida Department of Environmental Protection  
2600 Blair Stone Road, MS 5500  
Tallahassee, Florida 32399-2400

RE: UNITED STATES SUGAR CORPORATION  
CLEWISTON MILL: TEMPORARY DIESEL GENERATORS  
REQUEST FOR EMERGENCY ORDER

Dear Mr. Rhodes:

On January 22, 2002, the Department received a request from United States Sugar Corporation (U. S. Sugar) for an Emergency Order to operate several temporary diesel electric generators at its Clewiston mill. The purpose of this letter is to articulate additional particular facts regarding United States Sugar Corporation's (U. S. Sugar's) request for authorization. The request is being made under Section 120.569(2)(n) of the Florida Statutes and rules 62-110.107(2) and 62-210.700 of the Florida Administrative Code. The statute refers to "an immediate danger to the public health, safety, or welfare which requires an immediate final order." The rule citation refers to "an imminent or currently existing serious threat to the public health, safety, welfare or environment." Described below are the particular facts that U. S. Sugar believes meets the regulatory criteria for an emergency situation.

1. The most significant and immediate impact is to the public welfare. The disruption in operations at the Clewiston mill has caused the immediate layoff of 80 people at the mill. Clewiston is a community of about 7,000 residents. The majority of tax revenue and a large percentage of personal income result directly or indirectly from U. S. Sugar operations. U.S. Sugar is the largest employer in the community (employing approximately 480 people at Clewiston's mill alone) and has laid off nearly 20% of this work force already, because of the failure of the turbo generator. The economic impact on the community will be severe (direct loss of approximately \$72,000 in weekly wages).

If the turbo generator outage exceeds six weeks, then existing on-site storage capacity will be exhausted and the mill will be required to reduce its throughput by approximately 36%. This will extend the harvest season resulting in the loss of 147 people engaged in our agricultural operations (direct loss of approximately \$115,000 in weekly wages.)

The total loss of wages to U. S. Sugar employees will amount to approximately \$1.122 Million, six weeks for refinery workers @ \$72,000/week and six weeks for agricultural workers at \$115,000/week.

The cumulative effect of these layoffs at U.S. Sugar would surely lead to cutbacks by other businesses in and around Clewiston, because of the reduced income of so many residents joining the ranks of the unemployed.

Discussion with General Electric indicates that repair of the turbo generator could take up to two months. Unless an alternative source of electrical energy is implemented quickly, the Clewiston refinery will stay shutdown, and/or the sugar mill will need to reduce raw sugar production by approximately 36 percent. Thus, substantial further layoffs are likely if the emergency temporary authorization for installing and operating the backup generators cannot be obtained.

2. Please note a turbo generator such as the one that failed is designed to last a very long time (>20 years). U. S. Sugar has performed all required inspections and maintenance for the turbo generator at issue and did nothing to cause or contribute to its sudden and catastrophic failure. In addition to the routine maintenance, the rotor on the turbo generator was sent to GE as late as last year for repairs and inspection.

The Department's consideration of this information is appreciated. If granted, please forward the final Emergency Order to my attention at:

United States Sugar Corporation  
111 Ponce DeLeon Avenue  
Clewiston, FL 33440

Please call me at (863) 902-2703 if you have any questions concerning this request, or need further information.

Sincerely,

UNITED STATES SUGAR CORPORATION



William A. Raiola  
Vice President, Sugar Processing

cc: Lisa Gefen  
Donald Griffin  
Peter Briggs  
Time Smith  
A. Linero (LINERO\_A@dep.state.fl.us)  
David Buff, Golder Associates



**AKERMAN SENTERFITT**

ATTORNEYS AT LAW

CITRUS CENTER

255 SOUTH ORANGE AVENUE

POST OFFICE BOX 231

ORLANDO, FLORIDA 32802-0231

PHONE (407) 843-7860 • FAX (407) 843-6610

<http://www.akerman.com>

January 22, 2002

**BY FACSIMILE**

Mr. Howard Rhodes  
Director, Division of Air Resources Management  
**FLORIDA DEPARTMENT OF  
ENVIRONMENTAL PROTECTION**  
3900 Commonwealth Boulevard, MS 5500  
Tallahassee, FL 32301-3000

**Re: UNITED STATES SUGAR CORPORATION  
CLEWISTON MILL: EMERGENCY NEED FOR BACKUP  
DIESEL GENERATORS  
REQUEST FOR EMERGENCY ORDER [14307/123246]**

Dear Mr. Rhodes:

As we discussed by telephone this afternoon, United States Sugar Corporation (U.S. Sugar) has been thrust into an emergency condition because of the unanticipated breakdown of equipment at its Clewiston sugar mill and refinery. Last Saturday, the No. 5 Turbogenerator at the mill experienced a catastrophic failure that required the immediate shutdown of this electrical generator. As a result, U.S. Sugar is requesting an Emergency Order from the Department to allow three temporary emergency diesel generators to be brought on-site within the next 7 days to replace the lost power. The specifics of this request are provided below.

The No. 5 Turbogenerator at the Clewiston mill uses steam from the five on-site boilers to supply the on-site sugar refinery with up to 6 megawatts (MW) of electrical energy. Last Saturday, this turbogenerator experienced a catastrophic failure that required the immediate shutdown of the generator. As a result, power was lost to the sugar refinery and the refinery was also shut down. Replacement power cannot be purchased from the electrical grid because sufficient transmission lines or substations do not exist to allow import of additional energy into the facility. As a result, the refinery remains shut down, with the temporary layoff of approximately 100 people, pending the Department's decision on this request. Please note that the company performed all required inspections and maintenance for the turbogenerator at issue and did nothing to cause or contribute to its sudden and catastrophic failure.

Discussion with General Electric indicates that repair of the turbogenerator could take up to 3 months. Unless an alternative source of electrical energy is implemented quickly, the Clewiston

{OR468194;1}

AKERMAN, SENTERFITT & EIDSON, P.A.

FORT LAUDERDALE • JACKSONVILLE • MIAMI • TALLAHASSEE • TAMPA • WEST PALM BEACH

Mr. Howard Rhodes  
January 22, 2002  
Page 2

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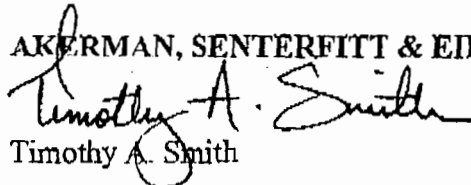
sugar mill will need to be completely shut down, since the storage capacity of raw sugar is limited at Clewiston. Shutting down the sugar mill for a significant time period would represent a severe disruption to the sugar cane processing season, resulting in loss of much of the crop and catastrophic economic consequences to the whole Clewiston community. A delay of the harvest and processing of the crop will result in its biochemical degradation, dramatically reducing its sucrose content and causing severe economic hardship to the company. To deal with this economic blow, the company would have to reduce its workforce, to survive in already difficult economic times. It is not just this one company that would suffer the economic hardship. U.S. Sugar is the largest employer in the community and is having to lay off nearly 20% of the work force immediately, with substantial further layoffs sure to come if the emergency temporary authorization for installing and operating the the backup generators cannot be obtained. The cumulative effect of these layoffs at U.S. Sugar would likely lead to cutbacks by other businesses in and around Clewiston, because of the reduced income of so many residents joining the ranks of the unemployed. We believe that this community-wide hardship represents "an imminent, serious threat to the public . . . welfare," as provided by rule 62-110.107(2) of the Florida Administrative Code.

As a result, U. S. Sugar is requesting an Emergency Order from the Department in order to abate this emergency, to allow us to install a replacement turbogenerator unit with no increase in the amount of any emissions regulated by our existing permit. We believe that such an order is authorized under section 120.569(2)(n) of the Florida Statutes and rules 62-110.107(2) and 62-210.700 of the Florida Administrative Code. In addition, the company would urge that its proposed emissions from the backup units would be de minimis, well below PSD significant emission rates, as explained in the backup letter from David Buff that we will submit tomorrow. The point is not whether the company would qualify for an exemption under rule 62-4.040, however, but that the company's proposed change poses no significant risk to the environment, while the emergency conditions described above warrant issuance of an emergency order to deal with or prevent those conditions, without delay.

Please call me at (407) 419-8585 if you have any questions concerning this request, or need further information.

Sincerely,

AKERMAN, SENTERFITT & EIDSON, P.A.

  
Timothy A. Smith

cc: Lisa Gefen, Esq.  
Pat Comer, Esq.



Florida  
Department of  
Environmental Protection

Jeb Bush  
Governor

Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

David Struhs  
Secretary

F A X T R A N S M I T T A L S H E E T

DATE: 1/25/02

TO: William Raiola, Vice President of Sugar Processing, USSC

PHONE: 863-902-2711

FAX: 863-902-2729

FROM: Al Linero

PHONE: 850-921-9523

**Division of Air Resources Management**

FAX: **850.922.6979**

RE: Emergency Authorization for Operation

CC: \_\_\_\_\_

Total number of pages including cover sheet: (9)

**Message**

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Governor

Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

David Struhs  
Secretary

F A X T R A N S M I T T A L S H E E T

DATE: 1/25/02

TO: Don Dierfen - USSC

PHONE: 863-902-2711

FAX: 863-902-2729

FROM: Al Leno

PHONE: 850-921-9523

Division of Air Resources Management

FAX: 850.922.6979

RE: Emergency Authorization for Operation

CC: \_\_\_\_\_

Total number of pages including cover sheet: (9)

Message

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Jeb Bush  
Governor

Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

David Struhs  
Secretary

F A X T R A N S M I T T A L S H E E T

DATE: 1/25/02  
TO: Peter Briggs - USSC  
PHONE: 863-902-2711 FAX: 863-983-0223  
FROM: Al Lenero PHONE: 950-921-9523  
Division of Air Resources Management FAX: 850.922.6979  
RE: Emergency Authorization for Operation  
CC: \_\_\_\_\_

Total number of pages including cover sheet: (9)

Message

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1:35 pm at 1/25/02 - Va



Florida  
Department of  
Environmental Protection

Jeb Bush  
Governor

Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

David Struhs  
Secretary

F A X T R A N S M I T T A L S H E E T

DATE: 1/25/02

TO: Timothy Smith, Esquire

PHONE: 407-843-7860

FAX: 407-843-6610

FROM: Al Livers

PHONE: 850-921-9523

Division of Air Resources Management

FAX: 850.922.6979

RE: Emergency Authorization for Operation - USSC

CC: \_\_\_\_\_

Total number of pages including cover sheet: (9)

Message

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✓ 1/25/02 @ 1:50 pm - VS



Florida  
Department of  
Environmental Protection

Buff's  
fax (352)  
336-6603

Jeb Bush  
Governor

Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

David Struhs  
Secretary

F A X T R A N S M I T T A L S H E E T

DATE: 1/25/02

TO: David Buff, P.E.

PHONE: \_\_\_\_\_

FAX: 352-336-6603

FROM: Al Leno

PHONE: 850-921-9523

Division of Air Resources Management

FAX: 850.922.6979

RE: Emergency Authorization for Operation - USSC

CC: \_\_\_\_\_

Total number of pages including cover sheet: (9)

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PS Form 3800, January 2001 See Reverse for Instructions

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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

2 Article 7001 0320 0001 3692 9113

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Bureau of Air Regulation, NSR  
2600 Blair Stone Rd., MS 5505  
Tallahassee, FL 32399-2400

BUREAU OF AIR REGULATION

MAR 27 2002

RECEIVED





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. 7, Off-Season Repairs  
Air Permit No. PSD-FL-208

Dear Mr. Raiola:

On March 8<sup>th</sup>, U.S. Sugar Corporation (USSC) met with Department representatives in Tallahassee to discuss significant maintenance and repair of the Boiler No. 7 superheater, 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. 7 began operation in 1997 at the Clewiston mill to provide process steam for the sugar refinery. The permitted capacity is 385,000 pounds of steam per hour while firing bagasse as the primary fuel. Distillate oil is used as an auxiliary fuel. The new boiler was permitted in accordance with the PSD preconstruction review requirements.

### Scheduled Maintenance Activities

*Problem:* After experiencing leaks in the superheater section of the boiler, USSC had a metallurgical analysis performed on several tube samples. The analysis showed tube damage resulting from both short-term and long-term overheating. Temperature measurements in the superheater indicate a continuous temperature of about 900° F and peaks above 1000° F. The superheater tubes are made of SA-178A and SA-309T1 materials. ASME recommends against using these materials above 800° F for prolonged periods because the carbide may be converted to graphite.

*Expected Cause:* USSC believes that the higher-than-design operating temperatures are caused by poor steam distribution to the superheater do to a high-pressure drop across the elements. The condition worsens at partial steam loads, which is required by this boiler to support the refinery operations.

*Repair:* USSC plans to replace the entire superheater section with tube materials specified as SA-213T11, a material rated for continuous operation at 950° F.

### Conclusion

The Department agrees that the proposed repair (as described) is a routine replacement necessary to

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correct a design flaw. The following discussion briefly summarizes important considerations.

- *Age of Equipment:* Boiler No. 7 has only 5 years of operational experience. It is not at the end of its expected useful life.
- *PSD Permitting:* Boiler No. 7 was originally constructed in accordance with the PSD preconstruction review program in 1996. This permit includes BACT limits for CO, NO<sub>x</sub>, PM, SO<sub>2</sub>, and VOC.
- *Nature and Frequency of Repair:* Although tube replacement is not uncommon, the complete replacement of the superheater tubing is not routine. However, USSC considers the repair to be "routine" with respect to a suitable correction of a design flaw. It is important to note that only the superheater will be replaced, not the entire emissions unit.
- *Costs:* Replacement material costs are estimated to be \$ 114,000. Labor costs to perform the repairs are estimated to be \$ 354,000. The operating budget will support all repair costs. In comparison, a new boiler of similar size is estimated to be approximately \$10 million.
- *Capacity:* The boiler achieved a steaming rate of 86% during compliance tests conducted in 2002. Based on annual operating reports, the boiler has not experienced declining use (averaging about 6400 hours per year). Although the repair will regain the original design thermal efficiency, it is not expected to increase utilization of this unit.

For this specific case, the Department does not consider the superheater tubing replacement 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, the fact that PSD preconstruction review performed for the original installation, and the purpose of the replacement being the correction of a design flaw. 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 Environmental Protection  
2600 Blair Stone Road, MS 5500  
Tallahassee, FL 32399-2400

Attention: Mr. Al Linero, P.E., New Source Review Section

SUBJECT: UNITED STATES SUGAR CORPORATION  
CLEWISTON MILL  
BOILER NO. 7 SUPERHEATER

Dear Mr. Linero:

United States Sugar Corporation (U.S. Sugar) operates the Clewiston sugar mill located in Hendry County, Florida. Boiler No. 7 at the mill provides process steam to the sugar mill during the sugar processing season. This boiler also provides steam to the sugar refinery during the off-season. U.S. Sugar is planning to replace the superheater section of Boiler No. 7 due to superheater tube failures caused by a design flaw. A description of the boiler, operation of the superheater, and U.S. Sugar's proposed plan are presented below.

Boiler No. 7 is a bagasse/oil-fired boiler originally permitted in 1996. The boiler was subject to prevention of significant deterioration (PSD) review and a best available control technology (BACT) determination at the time of original permitting. The boiler was constructed and began operating in 1997. Initial compliance tests on the boiler were conducted in November 1997.

The superheater on Boiler No. 7 is an integral part of the boiler. In the superheater section, steam from the boiler is heated above the saturation temperature by means of additional steam tubes located downstream of the furnace. The gases exiting the furnace pass over the steam tubes, transferring heat. At this point, the design steam in the superheater is at about 750 degrees Fahrenheit (°F). The furnace exit gas temperature is about 1,700°F, while the superheater exit gas temperature is about 1,500°F. This process recovers heat in the flue gases that would otherwise be lost out the stack, increasing the thermal efficiency of the boiler.

Last summer, the boiler began experiencing tube leaks in the superheater section of the boiler. U.S. Sugar investigated these leaks and sent tube samples for metallurgical analysis. The analysis showed that the tubes had experienced damage from long-term overheating, as well as damage from short-term high temperature events. Further temperature measurements in the superheater showed that superheater metal temperatures of some elements were continuously running at about 900°F, with peaks as high as 1,000°F. The Boiler No. 7 superheater tubes are made of SA-178A and SA-209T1 materials, and ASME does not recommend using this material above 800°F for prolonged periods because the carbide phase may be converted to graphite.

It is believed that these higher-than-design temperatures are caused by poor steam distribution to the superheater due to a pressure drop across the elements. This condition becomes worse when the

boiler is operated at half its design capacity for refinery support during the off-crop season. This condition cannot be avoided and, therefore, proper design should be undertaken.

As a result of these design flaws, U.S. Sugar desires to replace the entire superheater section. To install an element that will withstand the higher temperatures, the materials of construction will be changed to SA-213T11. This material is rated for 950°F for continuous operation.

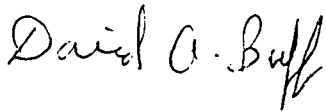
U.S. Sugar considers this activity to be solely a correction of a design flaw in a new boiler. It is not a life extension project. Boiler No. 7 is only about 5 years old and is nowhere near the end of its useful life.

The maximum heat input rate, steam production rate, or any other aspect of the boiler will not be changed by the superheater replacement. Due to the design flaws and operational problems with the existing superheater, some boiler efficiency has been lost. Replacing the superheater should bring the boiler back to the original intended design efficiency. This means that steam will be produced more efficiently, requiring less pounds of bagasse to produce a pound of steam.

U.S. Sugar believes that due to the nature of this activity, no air construction permit is required prior to commencing installation of the new superheater section of the boiler. FDEP's written concurrence that no air construction permit is required for this activity is requested. 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\L031302a

**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 Environmental Protection  
2600 Blair Stone Road, MS 5500  
Tallahassee, FL 32399-2400

Attention: Mr. Al Linero, P.E., New Source Review Section

SUBJECT: UNITED STATES SUGAR CORPORATION  
CLEWISTON MILL  
BOILER NO. 7 SUPERHEATER

Dear Mr. Linero:

United States Sugar Corporation (U.S. Sugar) operates the Clewiston sugar mill located in Hendry County, Florida. Boiler No. 7 at the mill provides process steam to the sugar mill during the sugar processing season. This boiler also provides steam to the sugar refinery during the off-season. U.S. Sugar is planning to replace the superheater section of Boiler No. 7 due to superheater tube failures caused by a design flaw. A description of the boiler, operation of the superheater, and U.S. Sugar's proposed plan are presented below.

Boiler No. 7 is a bagasse/oil-fired boiler originally permitted in 1996. The boiler was subject to prevention of significant deterioration (PSD) review and a best available control technology (BACT) determination at the time of original permitting. The boiler was constructed and began operating in 1997. Initial compliance tests on the boiler were conducted in November 1997.

The superheater on Boiler No. 7 is an integral part of the boiler. In the superheater section, steam from the boiler is heated above the saturation temperature by means of additional steam tubes located downstream of the furnace. The gases exiting the furnace pass over the steam tubes, transferring heat. At this point, the design steam in the superheater is at about 750 degrees Fahrenheit (°F). The furnace exit gas temperature is about 1,700°F, while the superheater exit gas temperature is about 1,500°F. This process recovers heat in the flue gases that would otherwise be lost out the stack, increasing the thermal efficiency of the boiler.

Last summer, the boiler began experiencing tube leaks in the superheater section of the boiler. U.S. Sugar investigated these leaks and sent tube samples for metallurgical analysis. The analysis showed that the tubes had experienced damage from long-term overheating, as well as damage from short-term high temperature events. Further temperature measurements in the superheater showed that superheater metal temperatures of some elements were continuously running at about 900°F, with peaks as high as 1,000°F. The Boiler No. 7 superheater tubes are made of SA-178A and SA-209T1 materials, and ASME does not recommend using this material above 800°F for prolonged periods because the carbide phase may be converted to graphite.

It is believed that these higher-than-design temperatures are caused by poor steam distribution to the superheater due to a pressure drop across the elements. This condition becomes worse when the

boiler is operated at half its design capacity for refinery support during the off-crop season. This condition cannot be avoided and, therefore, proper design should be undertaken.

As a result of these design flaws, U.S. Sugar desires to replace the entire superheater section. To install an element that will withstand the higher temperatures, the materials of construction will be changed to SA-213T11. This material is rated for 950°F for continuous operation.

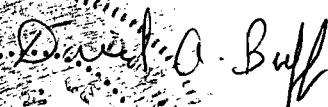
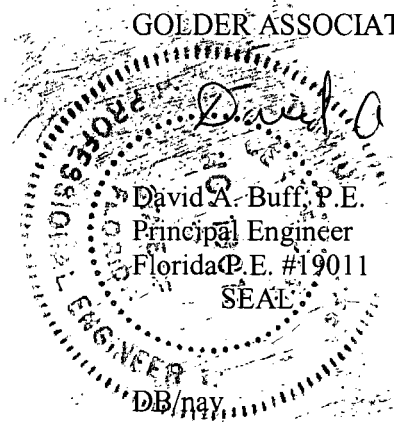
U.S. Sugar considers this activity to be solely a correction of a design flaw in a new boiler. It is not a life extension project. Boiler No. 7 is only about 5 years old and is nowhere near the end of its useful life.

The maximum heat input rate, steam production rate, or any other aspect of the boiler will not be changed by the superheater replacement. Due to the design flaws and operational problems with the existing superheater, some boiler efficiency has been lost. Replacing the superheater should bring the boiler back to the original intended design efficiency. This means that steam will be produced more efficiently, requiring less pounds of bagasse to produce a pound of steam.

U.S. Sugar believes that due to the nature of this activity, no air construction permit is required prior to commencing installation of the new superheater section of the boiler. FDEP's written concurrence that no air construction permit is required for this activity is requested. 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/nay

cc: Don Griffin  
Peter Briggs

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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

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BUREAU OF AIR REGULATION

APR 10 2002

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Jeb Bush  
Governor

# Department of Environmental Protection

Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

David B. Struhs  
Secretary

April 5, 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 – Bryant Sugar Mill  
Boiler No. 5, Off-Season Repairs  
Air Permit No. PSD-FL-009

Dear Mr. Raiola:

On March 8<sup>th</sup>, U.S. Sugar Corporation (USSC) met with Department representatives in Tallahassee to discuss the maintenance and repair of components in Boiler No. 5, which is scheduled for the upcoming sugar mill off-season. On April 1<sup>st</sup>, 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. 5 was permitted in 1978 in accordance with the PSD preconstruction review requirements. It was a new boiler constructed to provide process steam for milling operation at the Bryant facility in 1979. Based on the Title V permit, the maximum capacity of the boiler is:

- 1-hour Maximum Rate: 323, 189 lb/hour of steam at 850 psig and 900° F (671 MMBtu/hour), and
- 24-hour Maximum Rate: 280,804 lb/hour of steam at 850 psig and 900° F (583 MMBtu/hour).

#### Scheduled Maintenance Activities

USSC has identified several tube failures in the superheater section of Boiler No. 5. The failures are due to the abrasive nature of the bagasse fuel, which contains sand after harvesting. During the upcoming sugarcane milling off-season (May through September), USSC plans to replace all of the tubes in the superheater section. This represents approximately 18% of the boiler tube-heating surface.

#### Conclusion

The Department agrees that the proposed activity (as described) is a routine replacement. The following items briefly summarize important considerations.

- *Age of Equipment:* Boiler No. 5 was installed as a new unit in 1979 and has acquired only 22 years of operation.
- *PSD Permitting:* Boiler No. 5 was constructed as a new unit subject to PSD preconstruction review.
- *Nature of Repair:* USSC considers the repairs routine due to the specific operating conditions for this mill. Repairs can be made during the normal down time of the upcoming off-season. Only

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minimal "like-kind" 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 abrasive nature of bagasse as a fuel, damaged boiler tubing is frequently repaired in the off-season. The sugar industry also operates on a seasonal schedule that provides regular down time for performing such maintenance. Although the scheduled repair is more extensive than usual, USSC estimates replacement of superheater tubes at a minimum of 15-year intervals.
- *Costs:* USSC estimates tube component costs at \$130,000 and labor costs for the repairs at \$36,000. The operating budget will support all repair costs. USSC estimates a new boiler of similar size to cost 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 3900 hours per year). The repair will not increase the unit's capacity and is not likely 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 29, 2002

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APR 01 2002

BUREAU OF AIR REGULATION

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

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

SUBJECT: UNITED STATES SUGAR CORPORATION - BRYANT MILL  
BOILER NO. 5 SUPERHEATER REPAIRS

Dear Mr. Linero:

United States Sugar Corporation (U. S. Sugar) operates the Bryant sugar mill located in Palm Beach County, Florida. Boiler No. 5 at the mill provides process steam to the sugar mill during the sugar cane processing season. U. S. Sugar is planning repairs to the superheater section of Boiler No. 5 in the upcoming off-season (starting in May). These repairs are considered to be normal and routine, and therefore do not trigger a new source review (NSR) under the prevention of significant deterioration (PSD) regulations. A description of Boiler No. 5, its operation, and the planned repairs to the superheater section of the boiler are described below.

Boiler No. 5 was originally permitted for the Bryant mill in 1978 and began operating in 1979. This was a newly constructed boiler by Bigelow. The boiler is presently permitted to generate up to 280,804 lb/hr steam (24-hour average) at 850 psig and 900°F. A brief permitting history is presented below:

- Initial construction and PSD permit: September 1978 (AC50-5177; PSD-FL-009);
- Construction permit to increase the steam rate: May 2, 1988 (AC50-137573; PSD-FL-009 modification);
- Construction permit to replace scrubber and stack: July 13, 1992 (AC50-213702); and
- Revision of 1988 AC/PSD permit to extend seasonal operation: October 1, 1999.

The superheater tubes in the superheater section of Boiler No. 5 are in need of replacement. The superheater tubes were new in 1979 when the boiler was constructed. A number of these tubes have failed over the years due to sand and other abrasives in the bagasse fuel. The tube failures, when they have occurred, also affected other adjacent tubes due to the failed tube contacting and/or impacting adjacent tubes. Therefore, the entire superheater section of the boiler is in need of replacement. The superheater tubes represent about 18 percent of the total boiler tube heating surface.

As a result of this problem, U. S. Sugar plans to initiate repairs to the superheater tubes on Boiler No. 5. The repairs are routine maintenance due to the unique operating environment of bagasse boilers (i.e., sand and abrasives in the fuel). Fossil fuel boilers do not experience similar wear and maintenance issues, due to the characteristics of fossil fuel. It is not a life extension project. Boiler No. 5 is only about 20 years old, 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 consistently operated in the 225,000 to 250,000 lb/hr steam production range over the last 10 years, based on compliance test data.

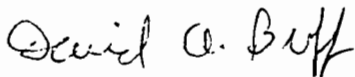
The total cost of the project is approximately \$166,000, of which \$130,000 is in materials and \$36,000 in labor. By contrast, the total cost of a new boiler of comparable size to Boiler No. 5 is approximately \$8 million. All costs for the project are coming out of the operating budget.

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, Golder has addressed EPA's five-factor criteria for assessing whether a project qualifies as routine maintenance, replacement, or repair (see Table 1 attached). As such, Golder believes 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.

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/jkw

cc: Don Griffin  
Peter Briggs

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**Table 1.**  
**United States Sugar Corporation**  
**Superheater Repair for Bryant Boiler No. 5**  
**March 29, 2002**

<b>Criteria Based on EPA May 23, 2000 Guidance</b>	<b>U. S. Sugar's Bryant Boiler No. 5 Superheater Repair</b>
<b><u>Nature</u></b>	
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 18% of the heating surface of the boiler is being replaced. This repair consists only of superheater tubes.
2. Whether the unit is of considerable size, function, or importance to the operation of the facility	2. Boiler No. 5 is important to operation of the facility. It is equivalent to 33% of the Bryant 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 erosion are caused by sand and other abrasives in bagasse fuel. Total cost is derived out of operating budget.
a. Is the repair/replacement common in the industry?	a. Unknown. Sand/abrasives in the fuel may be unique to U. S. Sugar because the cane for Bryant is grown on sand lands and muck/sand lands that contain a significant amount of abrasives (stones, rocks, mineral ash, etc.). This is also true at the Clewiston mill. 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. 5 needs to be off-line to perform the repair. Boiler No. 5 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 superheater tubes themselves, the materials, equipment and resources to carry out the planned activity are already on site.
<b><u>Extent</u></b>	
1. Whether an entire emissions unit will be replaced	1. The entire emissions unit will not be replaced. Replacement of only 18% of heating surface of the boiler.
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 is completely shutdown. The superheater tubes 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 U. S. Sugar's 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 - only in kind replacement.
a. Does repair/replacement involve improved design/materials?	a. No.

United States Sugar Corporation  
Superheater Repair for Bryant Boiler No. 5  
March 29, 2002

---

Criteria Based on EPA May 23, 2000 Guidance

U. S. Sugar's Bryant Boiler No. 5 Superheater Repair

---

**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 superheater tubes will not extend the life of the unit. The purpose of replacing the superheater tubes is to repair damage due to wear and erosion, resulting from sand/abrasives in the bagasse fuel.

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 superheater tubes replacement will have the same primary function as the existing tubes. There will be no increase in maximum steam rate. Annual operation is dependent upon, and limited by, the amount of sugar cane harvested. There is continuous economic incentive to decrease (not increase) boiler usage. The steam needs of the sugar mill remain the same, regardless of an individual boiler's operation. Boiler No. 5 will operate as it has in the past.

- 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?

- a. No.
- b. No.
- c. No.
- d. No.

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**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. Expected frequency of 15 years or less.

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**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 \$166,000, with \$130,000 in materials and \$36,000 in labor. Total project cost is less than 3 percent of a new boiler cost. 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.