

**Golder Associates Inc.**

6241 NW 23rd Street, Suite 500  
Gainesville, FL USA 32653  
Telephone (352) 336-5600  
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www.golder.com



August 4, 2005

0537579

Florida Department of Environmental Protection  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400

Attention: Mr. Jeff Koerner, Air Permitting South

RE: UNITED STATES SUGAR CORPORATION  
CLEWISTON MILL (FACILITY NO. 0510003)  
AMENDMENT OF CARBON MONOXIDE LIMIT  
BOILER NO. 8 0510003-030-AE

Dear Mr. Jeff Koerner:

Please find enclosed four (4) copies of the carbon monoxide amendment application for the Clewiston Mill Boiler No. 8. If you have any questions, please do not hesitate to call me at (352) 336-5600.

Sincerely,

GOLDER ASSOCIATES INC.

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

cc: Ron Blackburn, FDEP SW District  
Don Griffin  
Peter Briggs

Enclosures

DB/CB/jej

RECEIVED

AUG 05 2005

BUREAU OF AIR REGULATION



**AMENDMENT  
OF  
CARBON MONOXIDE LIMIT  
CLEWISTON MILL BOILER NO. 8  
*UNITED STATES SUGAR CORPORATION*  
CLEWISTON, FLORIDA**

**Prepared For:  
United States Sugar Corporation  
111 Ponce DeLeon Ave.  
Clewiston, Florida 33440**

**Prepared By:  
Golder Associates Inc.  
6241 NW 23rd Street, Suite 500  
Gainesville, Florida 32653-1500**

**August 2005  
0237619**

**DISTRIBUTION:  
4 Copies – FDEP  
2 Copies – U.S. Sugar  
2 Copies – Golder Associates Inc.**



# Department of Environmental Protection

## Division of Air Resource Management

### APPLICATION FOR AIR PERMIT - LONG FORM

#### I. APPLICATION INFORMATION

**Air Construction Permit** – Use this form to apply for an air construction permit for a proposed project:

- subject to prevention of significant deterioration (PSD) review, nonattainment area (NAA) new source review, or maximum achievable control technology (MACT) review; or
- where the applicant proposes to assume a restriction on the potential emissions of one or more pollutants to escape a federal program requirement such as PSD review, NAA new source review, Title V, or MACT; or
- at an existing federally enforceable state air operation permit (FESOP) or Title V permitted facility.

**Air Operation Permit** – Use this form to apply for:

- an initial federally enforceable state air operation permit (FESOP); or
- an initial/revised/renewal Title V air operation permit.

**Air Construction Permit & Revised/Renewal Title V Air Operation Permit (Concurrent Processing Option)**  
– Use this form to apply for both an air construction permit and a revised or renewal Title V air operation permit incorporating the proposed project.

To ensure accuracy, please see form instructions.

#### Identification of Facility

1. Facility Owner/Company Name: <b>United States Sugar Corporation</b>	
2. Site Name: <b>Clewiston Mill</b>	
3. Facility Identification Number: <b>0510003</b>	
4. Facility Location...: Street Address or Other Locator: <b>W.C. Owens Ave. and S.R. 832</b> City: <b>Clewiston</b> County: <b>Hendry</b> Zip Code: <b>33440</b>	
5. Relocatable Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Existing Title V Permitted Facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

#### Application Contact

1. Application Contact Name: <b>William A. Raiola, Sr. Vice President, Sugar Processing Operations</b>	
2. Application Contact Mailing Address... Organization/Firm: <b>United States Sugar Corporation</b> Street Address: <b>111 Ponce de Leon Avenue</b> City: <b>Clewiston</b> State: <b>Florida</b> Zip Code: <b>33440</b>	
3. Application Contact Telephone Numbers... Telephone: <b>(863) 983-8121</b> ext.                      Fax: <b>(863) 902-2729</b>	
4. Application Contact Email Address: <b>braiola@ussugar.com</b>	

#### Application Processing Information (DEP Use)

1. Date of Receipt of Application:	
2. Project Number(s):	<i>0510003-030-Ac</i>
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

## FACILITY INFORMATION

### Purpose of Application

**This application for air permit is submitted to obtain: (Check one)**

#### **Air Construction Permit**

Air construction permit.

#### **Air Operation Permit**

- Initial Title V air operation permit.  
 Title V air operation permit revision.  
 Title V air operation permit renewal.  
 Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.  
 Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

#### **Air Construction Permit and Revised/Renewal Title V Air Operation Permit (Concurrent Processing)**

- Air construction permit and Title V permit revision, incorporating the proposed project.  
 Air construction permit and Title V permit renewal, incorporating the proposed project.

**Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C.**

**In such case, you must also check the following box:**

- I hereby request that the department waive the processing time requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.

### Application Comment


**To amend Clewiston Mill Permit No. 0510003-024-AC/PSD-FL-333A. It is requested that the CO limit for Clewiston Boiler No. 8 be amended to include the appropriate MACT limit only.**



## FACILITY INFORMATION

### Owner/Authorized Representative Statement

**Complete if applying for an air construction permit or an initial FESOP.**

1. Owner/Authorized Representative Name : <b>William A. Raiola, Senior Vice President, Sugar Processing Operations</b>
2. Owner/Authorized Representative Mailing Address... Organization/Firm: <b>United States Sugar Corporation</b> Street Address: <b>111 Ponce de Leon Avenue</b> City: <b>Clewiston</b> State: <b>Florida</b> Zip Code: <b>33440</b>
3. Owner/Authorized Representative Telephone Numbers... Telephone: <b>(863) 983-8121</b> ext. Fax: <b>(863)902-2729</b>
4. Owner/Authorized Representative Email Address: <b>braiola@ussugar.com</b>
5. Owner/Authorized Representative Statement:  <i>I, the undersigned, am the owner or authorized representative of the facility addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other requirements identified in this application to which the facility is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit.</i>   _____ Signature  August 4, 2005 _____ Date

# FACILITY INFORMATION

## Professional Engineer Certification

1. Professional Engineer Name: <b>David A. Buff</b> Registration Number: <b>19011</b>
2. Professional Engineer Mailing Address... Organization/Firm: <b>Golder Associates Inc.**</b> Street Address: <b>6241 NW 23<sup>rd</sup> Street, Suite 500</b> City: <b>Gainesville</b> State: <b>FL</b> Zip Code: <b>32653-1500</b>
3. Professional Engineer Telephone Numbers... Telephone: <b>(352) 336-5600</b> ext. <b>545</b> Fax: <b>(352) 336-6603</b>
4. Professional Engineer Email Address: <b>dbuff@golder.com</b>
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <i>(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and</i> <i>(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.</i> <i>(3) If the purpose of this application is to obtain a Title V air operation permit (check here <input type="checkbox"/>, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.</i> <i>(4) If the purpose of this application is to obtain an air construction permit (check here <input checked="" type="checkbox"/>, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.</i> <i>(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.</i>  <i>David A. Buff</i> _____ Signature  _____ Date  (seal)

\* Attach any exception to certification statement.

\*\* Board of Professional Engineers Certificate of Authorization #00001670

## EMISSIONS UNIT INFORMATION

Section [1]

Boiler No. 8

### III. EMISSIONS UNIT INFORMATION

**Title V Air Operation Permit Application** – For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

**Air Construction Permit or FESOP Application** – For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an “unregulated emissions unit” does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

**Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application** – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.



# EMISSIONS UNIT INFORMATION

Section [1]

Boiler No. 8

## A. GENERAL EMISSIONS UNIT INFORMATION

### Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)
- The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
- The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

### Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)
- This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
- This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
- This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:

**Boiler No. 8**

3. Emissions Unit Identification Number: **028**

4. Emissions Unit Status Code:  
**A**

5. Commence Construction Date:  
**NOV 2003**

6. Initial Startup Date:  
**MAR 2005**

7. Emissions Unit Major Group SIC Code:  
**20**

8. Acid Rain Unit?  
 Yes  
 No

9. Package Unit:  
Manufacturer:

Model Number:

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:

**Membrane wall, balanced-draft stoker boiler fired with carbonaceous fuel and distillate fuel oil (Grade No. 2) with a maximum sulfur content of 0.05 percent by weight. Fuel oil can include facility-generated, on-specification used oil.**



**EMISSIONS UNIT INFORMATION**

**POLLUTANT DETAIL INFORMATION**

Section [1]  
Boiler No. 8

Page [1] of [1]  
Carbon Monoxide - CO

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –  
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

**Potential/Estimated Fugitive Emissions**

**Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.**

1. Pollutant Emitted: <b>CO</b>	2. Total Percent Efficiency of Control:
3. Potential Emissions: <b>1,286.4 lb/hour      1,285 tons/year</b>	4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year	
6. Emission Factor: <b>400 ppmvd @ 7-percent O<sub>2</sub></b>  Reference: <b>MACT limit: 40 CFR 63, Subpart DDDDD, Table 1</b>	7. Emissions Method Code: <b>0</b>
8. Calculation of Emissions: <b>30-day rolling average based on 40 CFR 63, Subpart DDDDD:</b> <b>400 ppmvd @ 7-percent O<sub>2</sub> x 246,000 dscfm @ 7-percent O<sub>2</sub> x 60 min/hr x 2,116.8 lb<sub>f</sub>/ft<sup>2</sup></b> <b>÷ (1,545.6/28) ft-lb<sub>f</sub>/lb<sub>m</sub>-°R ÷ 528 °R = 428.8 lb/hr</b>  <b>Maximum hourly rate based on 3 times the 30-day rolling average limit:</b> <b>428.8 lb/hr x 3 = 1,286.4 lb/hr</b>  <b>Annual based on 30-day rolling average:</b> <b>428.8 lb/hr x 8,760 hr/yr ÷ 2,000 lb/ton = 1,878 TPY (excludes startup, shutdown and malfunction, and operating loads at less than 50% capacity)</b>  <b>Annual limit based on PSD-FL-333A:</b> <b>1,285 TPY (includes startup/shutdown/malfunction)</b>	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:  <b>Annual limit based on Permit No. 0510003-024-AC/PSD-FL-333A.</b>	

**EMISSIONS UNIT INFORMATION**

Section [1]  
Boiler No. 8

**POLLUTANT DETAIL INFORMATION**

Page [1] of [1]  
Carbon Monoxide - CO

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -  
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

**Allowable Emissions** Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour <b>1,285 tons/year</b>
5. Method of Compliance: <b>CO CEMS</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>BACT limit from PSD-FL-333A including periods of startup, shutdown, and malfunction.</b>	

**Allowable Emissions** Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: <b>RULE</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>400 ppmvd @ 7-percent O<sub>2</sub></b>	4. Equivalent Allowable Emissions: <b>428.8 lb/hour      1,878 tons/year</b>
5. Method of Compliance: <b>CO CEMS</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>MACT limit: 40 CFR 63, Subpart DDDDD, Table 1. Limit and hourly and annual equivalent emissions based on 30-day rolling average. Excluding startup, shutdown and malfunction, and operating periods at less than 50% capacity.</b>	

**Allowable Emissions** Allowable Emissions     of    

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour      tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

**ATTACHMENT A**

**SUPPLEMENTAL INFORMATION FOR  
CARBON MONOXIDE LIMIT AMENDMENT**

**ATTACHMENT A****SUPPLEMENTAL INFORMATION FOR  
CARBON MONOXIDE LIMIT AMENDMENT**

United States Sugar Corporation (U.S. Sugar) owns and operates a sugar mill and refinery located in Clewiston, Hendry County, Florida. The mill and refinery currently operate under Title V operating permit No. 0510003-017-AV, issued October 18, 2004. U.S. Sugar harvests sugar cane and transports it to the Clewiston Mill, where the cane is processed into raw sugar and molasses in the mill. U.S. Sugar sells some of the raw sugar, and the remainder of the raw sugar is refined into white sugar. Molasses is sold as cattle feed.

U.S. Sugar is requesting to amend the carbon monoxide (CO) limit for Clewiston Mill Boiler No. 8 contained in the current air construction permit for the boiler (Permit No. 0510003-024-AC/PSD-FL-333A, issued November 4, 2004). Boiler No. 8 is a membrane wall, balanced-draft stoker boiler that is fired with carbonaceous fuel and No. 2 fuel oil with a maximum sulfur content of 0.05 percent by weight. The current annual CO limit is based on a best available control technology (BACT) limit of 0.38 pounds per million British thermal units (lb/MMBtu) (12-month rolling average), which corresponds to 1,285 tons per year (TPY) and includes startup, shutdown and malfunction. The 0.38 lb/MMBtu limit was based on the proposed maximum achievable control technology (MACT) limit under 40 CFR 63, Subpart DDDDD, which was 400 parts per million by volume on a dry basis (ppmvd) at 3-percent O<sub>2</sub>, 30-day rolling average.

In February 2005, a MACT compliance application for Boiler No. 8 was submitted to Florida's Department of Environmental Protection (FDEP). In this application, a CO MACT limit based on the final Subpart DDDDD regulation, promulgated on September 13, 2004, was included. The final MACT CO limit is 400 ppmvd at 7-percent O<sub>2</sub> based on a 30-day rolling average and excludes startup, shutdown and malfunction, and operating loads at less than 50-percent capacity.

Because the original BACT limit was based on the proposed MACT limit, but is now more restrictive than the final CO limit under the MACT, U.S. Sugar proposes to replace the 0.38 lb/MMBtu limit with the MACT limit of 400 ppmvd at 7-percent O<sub>2</sub> (30-day rolling average that excludes startup, shutdown and malfunction, and operating loads at less than 50-percent capacity). The current annual CO limit of 1,285 TPY (including startup, shutdown and malfunction) will be retained. Average

hourly emissions based on 40 CFR 63, Subpart DDDDD for a 30-day rolling average are equivalent to 428.8 pounds per hour (lb/hr).

Boiler No. 8 is currently subject to two separate CO limits because the MACT limit of 400 ppmvd was not finalized at the time the BACT limit was set. However, these two separate limits are not necessary, and the appropriate limit is the MACT limit. This amendment application serves to incorporate the appropriate CO emission limit of 400 ppmvd at 7-percent O<sub>2</sub> into the current air constrictor permit (Permit No. 0510003-024-AC/PSD-FL-333A).