

Golder Associates Inc.

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



TRANSMITTAL LETTER

**To: Jeff Koerner
FDEP**

**Date: February 27, 2007
Project No.: 07387532-0100**

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FEB 28 2007

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BUREAU OF AIR REGULATION

Per: ECB/DB

Quantity	Item	Description
3	Bound Copies	Application for Air Construction Permit

Remarks: For your records.

**Cc: R. Blackburn
D. Griffin (2 copies)**

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FEB 28 2007

BUREAU OF AIR REGULATION

**APPLICATION FOR
AIR CONSTRUCTION PERMIT
BAGACILLO SYSTEM
UNITED STATES SUGAR CORPORATION
CLEWISTON, FLORIDA**

**Prepared For:
United States Sugar Corporation
111 Ponce de Leon Avenue
Clewiston, Florida 33440**

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

February 2007

07387532

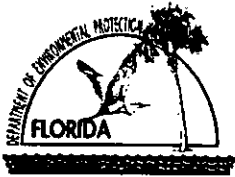
DISTRIBUTION:

4 Copies – FDEP

2 Copies – United States Sugar Corporation

1 Copy – Golder Associates Inc.

APPLICATION FOR AIR PERMIT – LONG FORM



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 at a facility operating under a federally enforceable state air operation permit (FESOP) or Title V air permit. Also 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
- Where the applicant proposes to establish, revise, or renew a plantwide applicability limit (PAL).

Air Operation Permit – Use this form to apply for:

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

Air Construction Permit & 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: United States Sugar Corporation	
2. Site Name: Clewiston Mill	
3. Facility Identification Number: 0510003	
4. Facility Location...: Street Address or Other Locator: W.C. Owens Ave. and S.R. 832 City: Clewiston County: Hendry Zip Code: 33440	
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: Neil Smith, Vice President and General Manager, Sugar Manufacturing	
2. Application Contact Mailing Address... Organization/Firm: United States Sugar Corporation Street Address: 111 Ponce de Leon Avenue City: Clewiston State: FL Zip Code: 33440	
3. Application Contact Telephone Numbers... Telephone: (863) 902-2703 ext. Fax: (863) 902-2729	
4. Application Contact Email Address: nsmith@ussugar.com	

Application Processing Information (DEP Use)

1. Date of Receipt of Application: 2/28/07	3. PSD Number (if applicable):
2. Project Number(s): 0510003-041-AC	4. Siting Number (if applicable):

APPLICATION INFORMATION

Purpose of Application

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

Air Construction Permit

- Air construction permit.
- Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL).
- Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL), and separate air construction permit to authorize construction or modification of one or more emissions units covered by the PAL.

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

Application to replace the existing bagacillo cyclone with a new bagacillo extraction and transport system. The new bagacillo extraction and transport system will include two dual high-efficiency cyclones in series for the B-tandem system, two dual high-efficiency cyclones in series for the C-tandem system, and one primary cyclone followed by a high-efficiency cyclone for the product transfer system. The first cyclone in series for each system serves as inherent process equipment. The second cyclone in series for each system has its own stack and serves as the particulate matter control device.

Owner/Authorized Representative Statement

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

1. Owner/Authorized Representative Name :
Neil Smith, Vice President and General Manager, Sugar Manufacturing
2. Owner/Authorized Representative Mailing Address...
Organization/Firm: United States Sugar Corporation
Street Address: 111 Ponce de Leon Avenue
City: Clewiston State: FL Zip Code: 33440
3. Owner/Authorized Representative Telephone Numbers...
Telephone: (863) 902-2703 ext. Fax: (863) 902-2729
4. Owner/Authorized Representative Email Address: nsmith@ussugar.com
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
_____ Date

APPLICATION INFORMATION

Application Responsible Official Certification

Complete if applying for an initial/revised/renewal Title V permit or concurrent processing of an air construction permit and a revised/renewal Title V permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

1. Application Responsible Official Name:
2. Application Responsible Official Qualification (Check one or more of the following options, as applicable): <input type="checkbox"/> For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C. <input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively. <input type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. <input type="checkbox"/> The designated representative at an Acid Rain source.
3. Application Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
4. Application Responsible Official Telephone Numbers... Telephone: () - ext. Fax: () -
5. Application Responsible Official Email Address:
6. Application Responsible Official Certification: <i>I, the undersigned, am a responsible official of the Title V source 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 applicable requirements identified in this application to which the Title V source 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. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.</i> _____ Signature Date

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: David A. Buff Registration Number: 19011
2. Professional Engineer Mailing Address... Organization/Firm: Golder Associates Inc.** Street Address: 6241 NW 23rd Street, Suite 500 City: Gainesville State: FL Zip Code: 32653
3. Professional Engineer Telephone Numbers... Telephone: (352) 336-5600 ext. 545 Fax: (352) 336-6603
4. Professional Engineer Email Address: dbuff@golder.com
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> Signature: <u>David A. Buff</u> Date: <u>2/27/07</u> (seal)

* Attach any exception to certification statement.

** Board of Professional Engineers Certificate of Authorization #00001670

FACILITY INFORMATION

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone 17 East (km) 506.1 North (km) 2956.9		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) 26/44/06 Longitude (DD/MM/SS) 80/56/19	
3. Governmental Facility Code: 0	4. Facility Status Code: A	5. Facility Major Group SIC Code: 20	6. Facility SIC(s): 2061 2062
7. Facility Comment :			

Facility Contact

1. Facility Contact Name: Neil Smith, Vice President and General Manager, Sugar Manufacturing
2. Facility Contact Mailing Address... Organization/Firm: United States Sugar Corporation Street Address: 111 Ponce de Leon Avenue City: Clewiston State: FL Zip Code: 33440
3. Facility Contact Telephone Numbers: Telephone: (863) 902-2703 ext. Fax: (863) 902-2729
4. Facility Contact Email Address: nsmith@ussugar.com

Facility Primary Responsible Official

Complete if an "application responsible official" is identified in Section I. that is not the facility "primary responsible official."

1. Facility Primary Responsible Official Name:
2. Facility Primary Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Facility Primary Responsible Official Telephone Numbers... Telephone: () - ext. Fax: () -
4. Facility Primary Responsible Official Email Address:

FACILITY INFORMATION

Facility Regulatory Classifications

Check all that would apply *following* completion of all projects and implementation of all other changes proposed in this application for air permit. Refer to instructions to distinguish between a "major source" and a "synthetic minor source."

1. <input type="checkbox"/> Small Business Stationary Source	<input type="checkbox"/> Unknown
2. <input type="checkbox"/> Synthetic Non-Title V Source	
3. <input checked="" type="checkbox"/> Title V Source	
4. <input checked="" type="checkbox"/> Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5. <input type="checkbox"/> Synthetic Minor Source of Air Pollutants, Other than HAPs	
6. <input checked="" type="checkbox"/> Major Source of Hazardous Air Pollutants (HAPs)	
7. <input type="checkbox"/> Synthetic Minor Source of HAPs	
8. <input checked="" type="checkbox"/> One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9. <input type="checkbox"/> One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10. <input checked="" type="checkbox"/> One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11. <input type="checkbox"/> Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	
12. Facility Regulatory Classifications Comment:	
<p>One or more emission units potentially subject to NESHAP for asbestos removal in the event that the facility may wish to perform asbestos removal in the future.</p>	

FACILITY INFORMATION

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
Particulate Matter Total – PM	A	N
Particulate Matter – PM ₁₀	A	N
Sulfur Dioxide – SO ₂	A	N
Nitrogen Oxides – NO _x	A	N
Carbon Monoxide – CO	A	N
Sulfuric Acid Mist – SAM	A	N
Total Hazardous Air Pollutants – HAP	A	N
Volatile Organic Compounds – VOC	A	N
Acetaldehyde – H001	A	N
Acrolein – H006	A	N
Benzene – H017	A	N
Chlorine – H038	A	N
P-Cresol – H052	A	N
Formaldehyde – H095	A	N
Hydrogen Chloride – H106	A	N
Manganese Compounds – H113	A	N
Mercury – H114	B	N
Naphthalene – H132	A	N
Phenol – H144	A	N
Polycyclic Organic Matter – H151	A	N
Styrene – H163	A	N
Toluene – H169	A	N
Dibenzofuran – H058	A	N
Ammonia – NH ₃	B	N

FACILITY INFORMATION

B. EMISSIONS CAPS

Facility-Wide or Multi-Unit Emissions Caps

1. Pollutant Subject to Emissions Cap	2. Facility Wide Cap [Y or N]? (all units)	3. Emissions Unit ID No.s Under Cap (if not all units)	4. Hourly Cap (lb/hr)	5. Annual Cap (ton/yr)	6. Basis for Emissions Cap

7. Facility-Wide or Multi-Unit Emissions Cap Comment:

FACILITY INFORMATION

C. FACILITY ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Facility Plot Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <u>USSC-FI-C1</u> <input type="checkbox"/> Previously Submitted, Date: _____
2. Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: <u>May 2005</u>
3. Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: <u>May 2005</u>

Additional Requirements for Air Construction Permit Applications

1. Area Map Showing Facility Location: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable (existing permitted facility)
2. Description of Proposed Construction, Modification, or Plantwide Applicability Limit (PAL): <input checked="" type="checkbox"/> Attached, Document ID: <u>Attachment A</u>
3. Rule Applicability Analysis: <input checked="" type="checkbox"/> Attached, Document ID: <u>Attachment A</u>
4. List of Exempt Emissions Units (Rule 62-210.300(3), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable (no exempt units at facility)
5. Fugitive Emissions Identification: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
6. Air Quality Analysis (Rule 62-212.400(7), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
7. Source Impact Analysis (Rule 62-212.400(5), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
8. Air Quality Impact since 1977 (Rule 62-212.400(4)(e), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
9. Additional Impact Analyses (Rules 62-212.400(8) and 62-212.500(4)(e), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

FACILITY INFORMATION

Additional Requirements for FESOP Applications

1. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.):
 Attached, Document ID: _____ Not Applicable (no exempt units at facility)

Additional Requirements for Title V Air Operation Permit Applications

1. List of Insignificant Activities (Required for initial/renewal applications only):
 Attached, Document ID: _____ Not Applicable (revision application)

2. Identification of Applicable Requirements (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought):
 Attached, Document ID: _____
 Not Applicable (revision application with no change in applicable requirements)

3. Compliance Report and Plan (Required for all initial/revision/renewal applications):
 Attached, Document ID: _____
Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing.

4. List of Equipment/Activities Regulated under Title VI (If applicable, required for initial/renewal applications only):
 Attached, Document ID: _____
 Equipment/Activities On site but Not Required to be Individually Listed
 Not Applicable

5. Verification of Risk Management Plan Submission to EPA (If applicable, required for initial/renewal applications only):
 Attached, Document ID: _____ Not Applicable

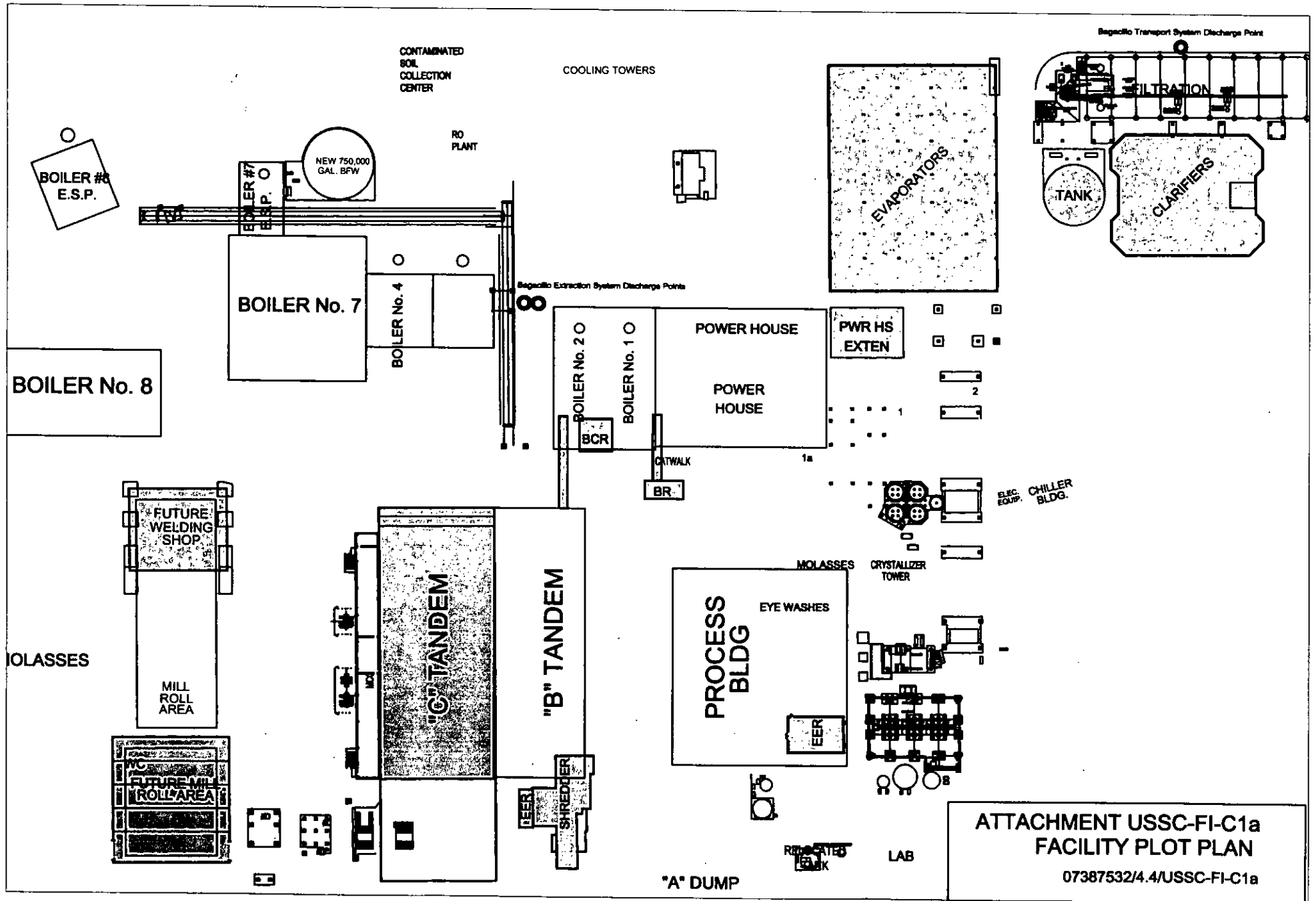
6. Requested Changes to Current Title V Air Operation Permit:
 Attached, Document ID: _____ Not Applicable

Additional Requirements Comment

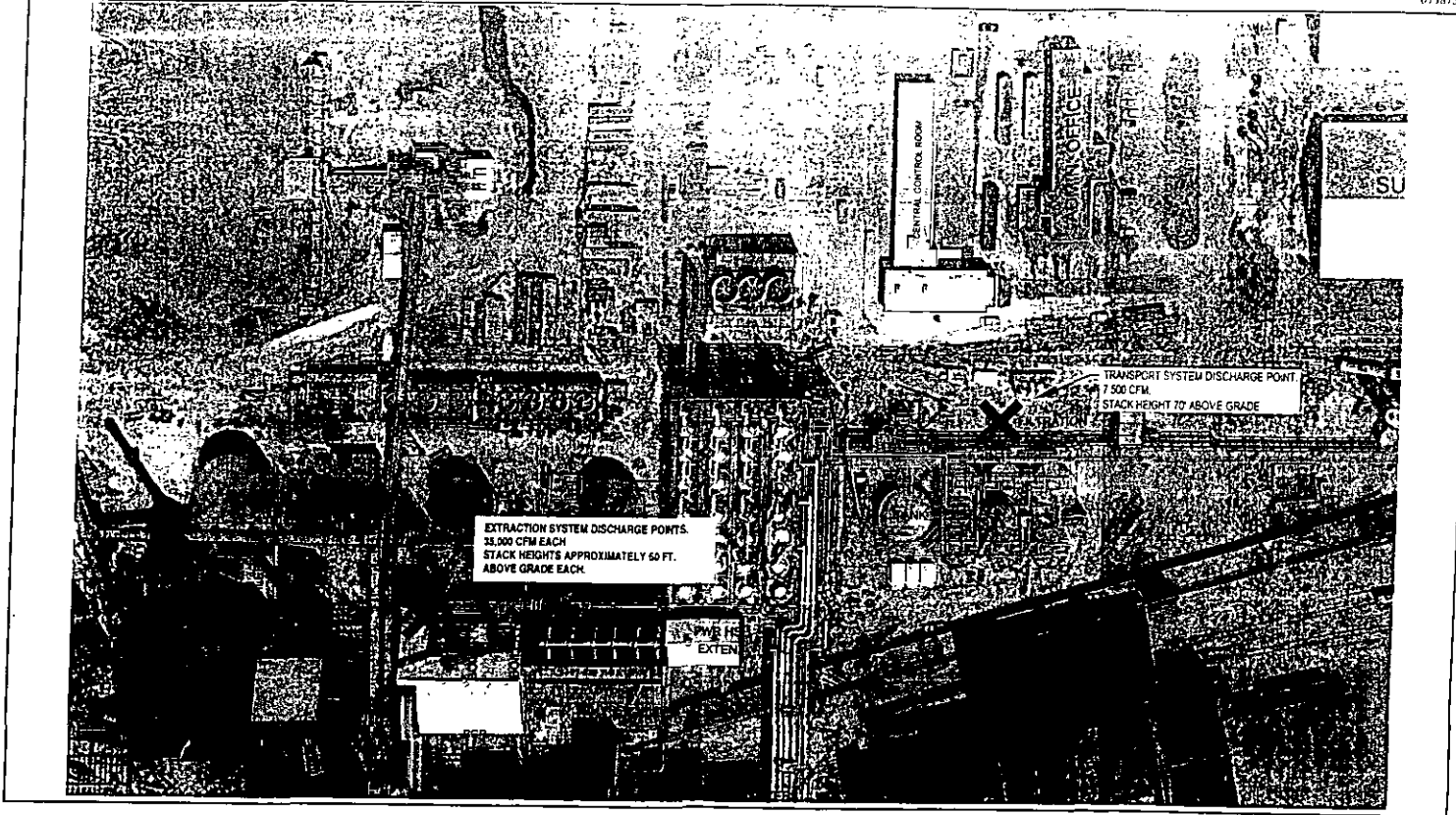
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ATTACHMENT USSC-FI-C1

FACILITY PLOT PLAN



ATTACHMENT USSC-FI-C1a
 FACILITY PLOT PLAN
 07387532/4.4/USSC-FI-C1a



Attachment USSC-FI-C1b
 Facility Plot Plan
 073875324-4/USSC-FI-C1b
 Source: Golder, 2006.

REV.	SCALE
DESIGN	
CADD	
CHECK	
REVIEW	



EMISSIONS UNIT INFORMATION

Section [1]

Bagacillo Extraction and Transport System

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]

Bagacillo Extraction and Transport System

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: **Bagacillo Extraction and Transport System**

3. Emissions Unit Identification Number:

4. Emissions Unit Status Code: C	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: 20	8. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
--------------------------------------------	--------------------------------	--------------------------	------------------------------------------------------	----------------------------------------------------------------------------------------------

9. Package Unit:
Manufacturer: _____ Model Number: _____

10. Generator Nameplate Rating: _____ MW

11. Emissions Unit Comment:
The new bagacillo extraction and transport system will include two dual high-efficiency cyclones in series for the B-tandem extraction system, two dual high-efficiency cyclones in series for the C-tandem extraction system, and one primary cyclone followed by a high-efficiency cyclone for the product transfer system. The first cyclone in series for each system serves as inherent process equipment. The second cyclone in series for each system has its own stack and serves as the particulate matter control device.

EMISSIONS UNIT INFORMATION

Section [1]

Bagacillo Extraction and Transport System

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

High Efficiency Cyclones (3)

2. Control Device or Method Code(s): 007

EMISSIONS UNIT INFORMATION

Section [1]

Bagacillo Extraction and Transport System

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:	35,000 lb/hr bagacillo	
2. Maximum Production Rate:		
3. Maximum Heat Input Rate:	million Btu/hr	
4. Maximum Incineration Rate:	pounds/hr tons/day	
5. Requested Maximum Operating Schedule:	24 hours/day	7 days/week
	29 weeks/year	4,800 hours/year
6. Operating Capacity/Schedule Comment:	<p>Maximum throughput rate based on 17,500 lb/hr bagacillo captured from B- and C-tandems each.</p> <p>Maximum annual operation of the bagacillo extraction and transport system is 4,800 hr/yr (200 days per year).</p>	

EMISSIONS UNIT INFORMATION

Section [1]

Bagacillo Extraction and Transport System

C. EMISSION POINT (STACK/VENT) INFORMATION

(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: HE Cyclone 1, HE Cyclone 2, HE Cyclone 3		2. Emission Point Type Code: 3	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: HE Cyclone 1 (B-Tandem) HE Cyclone 2 (C-Tandem) HE Cyclone 3 (Product Transfer)			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: V	6. Stack Height: 60 feet	7. Exit Diameter: 6 feet	
8. Exit Temperature: 71 °F	9. Actual Volumetric Flow Rate: 35,000 acfm	10. Water Vapor: 1.5 %	
11. Maximum Dry Standard Flow Rate: 34,280 dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Stack parameters are based on manufacturer specifications for the B-tandem extraction and C-tandem extraction stacks. Stack height and flow rate for the product transfer stack: 70 feet, 7,500 acfm, and 7,346 dscfm. Temperature and moisture remain the same.			

EMISSIONS UNIT INFORMATION

Section [1]

Bagacillo Extraction and Transport System

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Miscellaneous Manufacturing Industries; Miscellaneous Industrial Processes; Other Not Classified; Bagacillo		
2. Source Classification Code (SCC): 3-99-999-94		3. SCC Units: Pounds Processed
4. Maximum Hourly Rate: 35,000	5. Maximum Annual Rate: 168,000,000	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: Maximum hourly rate based on bagacillo transported by both B- and C-tandem systems. Maximum annual rate based on operating 200 days per year (4,800 hr/yr).		

Segment Description and Rate: Segment ____ of ____

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):		3. SCC Units:
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

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: PM		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 2 lb/hour 4.8 tons/year		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: 2 lb/hr Reference: Manufacturer's Data		7. Emissions Method Code: 2	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Potential emissions based on the manufacturer's guarantee with an applied safety factor of 2. The safety factor is applied to address the uncertainty in the bagacillo particle size distribution. Maximum annual emissions based on operating 200 days a year (4,800 hr/yr).			
11. Potential Fugitive and Actual Emissions Comment:			

**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 ____ 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):	

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):	

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):	

**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: PM₁₀		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 2 lb/hour 4.8 tons/year		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: 2 lb/hr Reference: Manufacturer's Data		7. Emissions Method Code: 2	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Potential emissions based on the manufacturer's guarantee with an applied safety factor of 2. The safety factor is applied to address the uncertainty in the bagacillo particle size distribution. Maximum annual emissions based on operating 200 days a year (4,800 hr/yr).			
11. Potential Fugitive and Actual Emissions Comment:			

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 ____ 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):	

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):	

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):	

EMISSIONS UNIT INFORMATION

Section [1]

Bagacillo Extraction and Transport System

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE20	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 20 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment: Rule 62-296.320(4)(b), F.A.C.	

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

EMISSIONS UNIT INFORMATION
 Section [1]
 Bagacillo Extraction and Transport System

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

Section [1]

Bagacillo Extraction and Transport System

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: USSC-EU1-I1 <input type="checkbox"/> Previously Submitted, Date _____
2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____
3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: USSC-EU1-I3 <input type="checkbox"/> Previously Submitted, Date _____
4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> Not Applicable Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7. Other Information Required by Rule or Statute <input checked="" type="checkbox"/> Attached, Document ID: Attachment A <input type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [1]

Bagacillo Extraction and Transport System

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(4)(d), F.A.C., and Rule 62-212,500(4)(f), F.A.C.) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

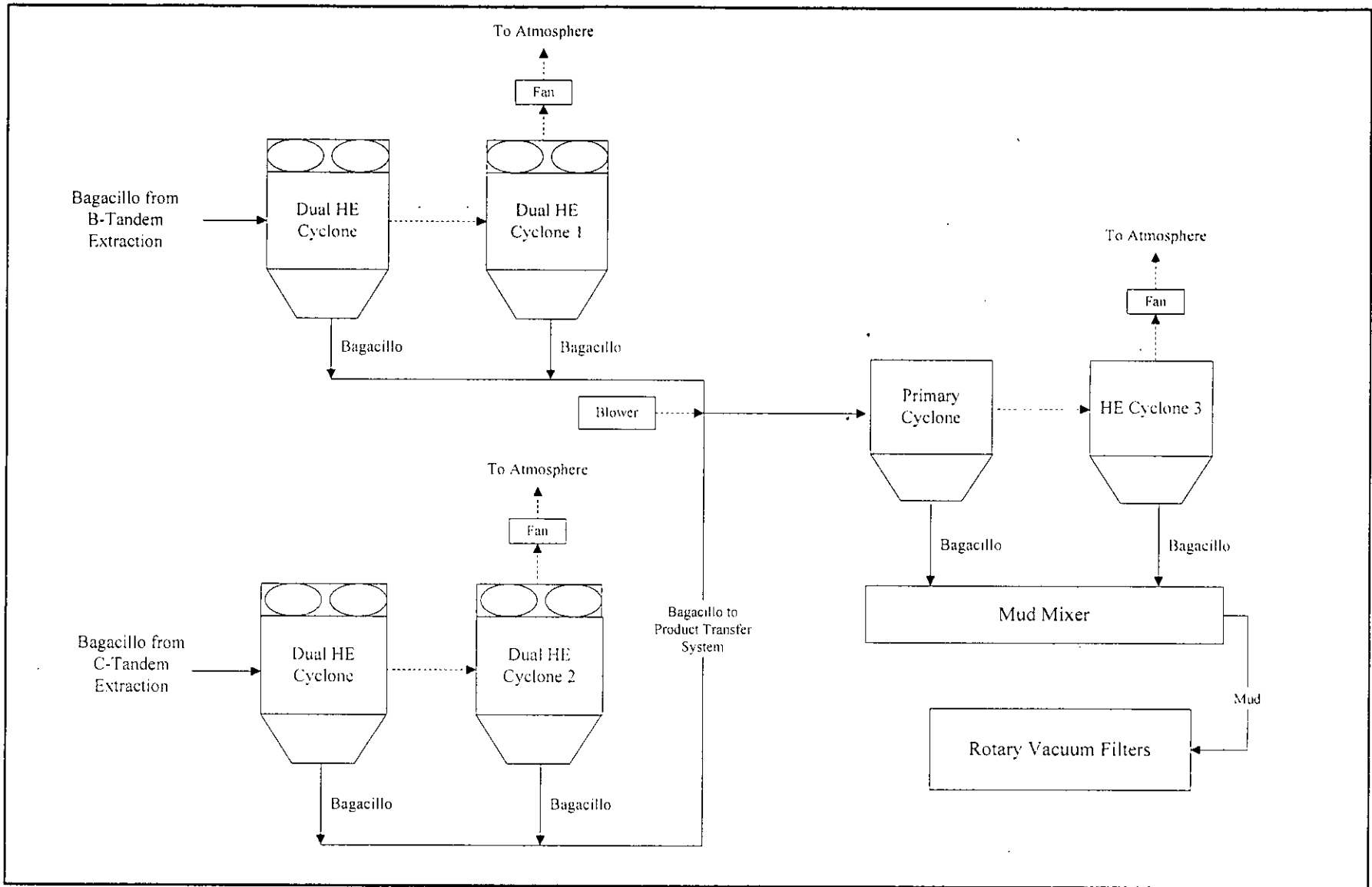
1. Identification of Applicable Requirements <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
3. Alternative Methods of Operation <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
5. Acid Rain Part Application <input type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input type="checkbox"/> Copy Attached, Document ID: _____ <input type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Not Applicable


EMISSIONS UNIT INFORMATION
Section [1]
Bagacillo Extraction and Transport System

Additional Requirements Comment

ATTACHMENT USSC-EU1-II

FACILITY PLOT PLAN



<p>Attachment USSC-EU1-11 Bagacillo Extraction and Transport System Flow Diagram U.S. Sugar Clewiston</p>	<p>Process Flow Legend Solid/Liquid Flow ———→ Gas Flow - - - - -→</p>	<p>Filename: 07387532/4.4/USSC-EU1-11 Date: February 2007</p>	
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ATTACHMENT USSC-EU1-13

DETAILED DESCRIPTION OF CONTROL EQUIPMENT

ATTACHMENT USSC-EU1-I3a

DETAILED DESCRIPTION OF CONTROL EQUIPMENT

Control Equipment Parameters for the
Dual HE Cyclone 1
B-Tandem Extraction System

Manufacturer and Model No.	Rader Model 16 "HE"
Stack Height (ft)	60
Inlet Gas Temp (°F)	71
Inlet Gas Flow Rate (acfm)	35,000
(dscfm)	34,280
Inlet Dust Loading	50 lb/hr
Outlet Dust Loading *	0.6 lb/hr

Note: All values are based on manufacturer's design information.
All values represent typical operating conditions.

* Based on manufacturer's guarantee with a safety factor of 2 applied.

ATTACHMENT USSC-EUI-13b

DETAILED DESCRIPTION OF CONTROL EQUIPMENT

Control Equipment Parameters for the
Dual HE Cyclone 2
C-Tandem Extraction System

Manufacturer and Model No.	Rader Model 16 "HE"
Stack Height (ft)	60
Inlet Gas Temp (°F)	71
Inlet Gas Flow Rate (acfm) (dscfm)	35,000 34,280
Inlet Dust Loading	50 lb/hr
Outlet Dust Loading *	0.6 lb/hr

Note: All values are based on manufacturer's design information.
All values represent typical operating conditions.

* Based on manufacturer's guarantee with a safety factor of 2 applied.

ATTACHMENT USSC-EU1-I3c

DETAILED DESCRIPTION OF CONTROL EQUIPMENT

Control Equipment Parameters for the
HE Cyclone 3
Product Transfer System

Manufacturer and Model No.	Rader Model 11 "HE"
Stack Height (ft)	70
Inlet Gas Temp (°F)	71
Inlet Gas Flow Rate (acfm) (dscfm)	7,500 7,346
Inlet Dust Loading	50 lb/hr
Outlet Dust Loading *	0.7 lb/hr

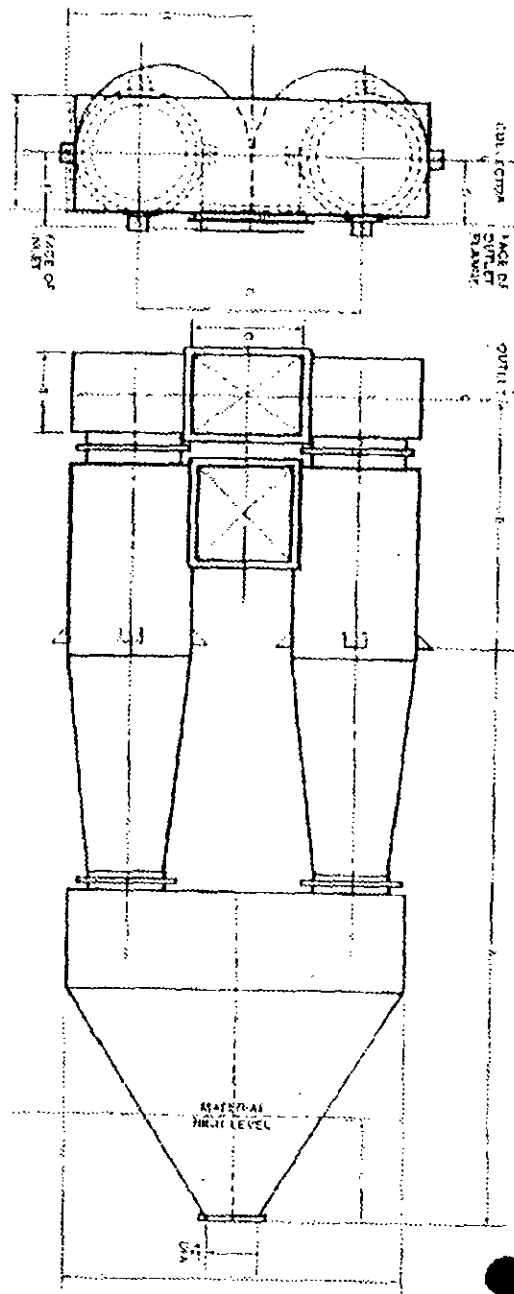
Note: All values are based on manufacturer's design information.
All values represent typical operating conditions.

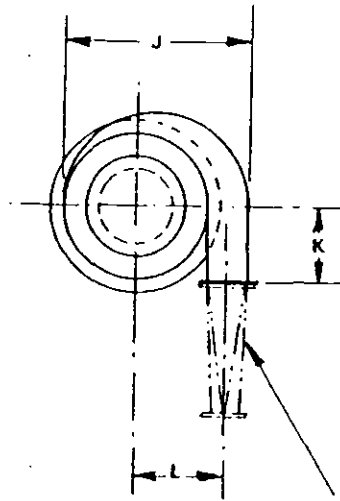
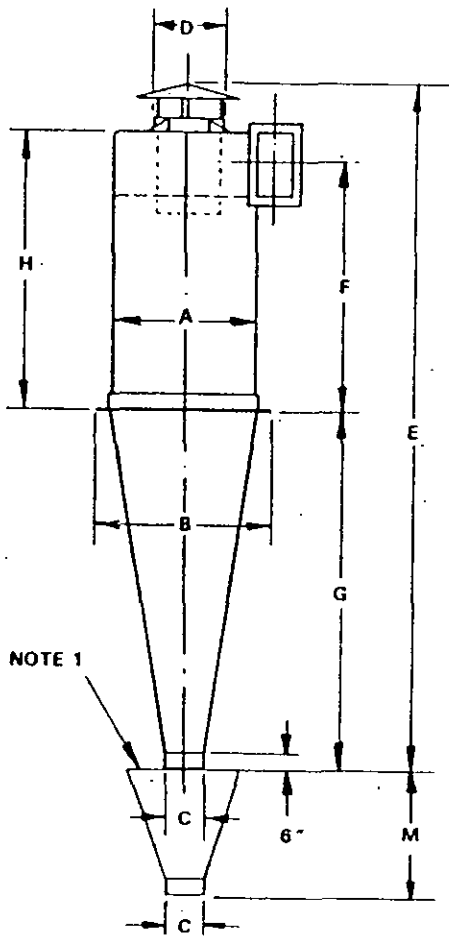
* Based on manufacturer's guarantee with a safety factor of 2 applied.

Model 16 HE Dual Cyclone

Dimensions	Inches
A	340
B	260
C	115
D	76
E	33
G	36
H	95
J	190

RADER
COMPANIES





NOTE 1

NOTE 2

NOTE:

1. VORTEX BREAKER IS REQUIRED EXCEPT WHEN DISCHARGING DIRECTLY INTO A SEALED BIN. FOR DIMENSIONS REFER TO DRAWING C-101671. VORTEX BREAKER IS NOT A STORAGE HOPPER.
2. FOR INLET TRANSITION DIMENSIONS SEE DRAWING C-101672. REQUIRED ON ALL CYCLONE INSTALLATIONS.

SIZE	A	B	C	D	E	F	G	H	J	K	L	M	WT. (lbs.)
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													

NOTE: DIMENSIONS ARE IN INCHES.

RADER
COMPANIES

SCALE

DRWN. JG

CKD.

DATE 10/78

TITLE

HIGH EFFICIENCY CYCLONE

DIMENSIONS FOR ESTIMATING ONLY
IN FEET/INCHES UNLESS NOTED
APPLY FOR CERTIFIED PRINTS.

A- 100951



RADER COMPANIES, INC.
1225 Old Alpharetta Road, Suite 260
Alpharetta, Georgia 30005
Phone: 770-777-8000
Fax: 770-751-3804

February 9, 2007

Tony Saward
US Sugar Corp.
111 Ponce de Leon Ave.
Clewiston, FL 33440

Re: **RADER PROPOSAL A07-1008-3 PNU**

Dear Tony:

I would like to offer the following revised proposal, to provide two Bagacillo collection systems and a pneumatic conveying system. This proposal is based on the listed design parameters and includes the equipment as outlined on the attached pages. This proposal is subject to modification and escalation once the final equipment location and pipe routings are determined.

I appreciate the opportunity to offer this proposal and your consideration of our offering. Please give me a call if I can offer further assistance with this project.

Best Regards,

R Burns

Rick burns
Product Sales Manager



MATERIAL SPECIFICATIONS

Product: Bagacillo Density: 4-10#/ft³ Maximum Size: 20mm x 2.5mm
Particle Size Distribution (provided via email on 2/6/07 by Tony Saward)
PTL Lab Report ID 56479

PRIMARY COLLECTION SYSTEM

Collection Rate: 8.75 TPH per hood (Two infeed points are included)
Air Flow: 35,000 CFM
Horizontal: 250 Vertical: 30 Degree of Bends: 270
Particulate Emissions: 0.30 #/hour per system

COLLECTION POINTS (B-TANDEM & C6)

All hoods and piping from the two collection points to the primary cyclone are by US Sugar.

FITTINGS & ELBOWS (Low Pressure)

The following components are provided with this package:

- Six (6) 40" x 90 degree low pressure flat-back elbows
- Mild steel construction
- AR replaceable back and outlet transition

PRIMARY CYCLONES

Four (4) Rader model Dual16 "HE" high efficiency cyclone with the following features:

- Heavy duty 1/4" AR Plate construction
- Common vortex breaking hopper
- Common scroll outlet

COLLECTING COVEYORS

Two (2) 24" diameter x 40 ft. collecting screw conveyors with the following features:

- Standard AR construction u-trough
- Full length cover
- 4" schedule 80 screw pipe
- AR screw flights



- 15 HP motor
- Screw conveyor direct drive

CENTRIFUGAL FAN

Two (2) Centrifugal fans including the following features:

- Arrangement 1 with a unitary base
- 250 HP motor
- V-belt drives
- Shaft seal
- Split housing
- Access door
- Drain with plug
- Flanged inlet & outlet
- OSHA drive and shaft guards
- Inlet box with manual damper (locking quadrant)

PRODUCT TRANSFER SYSTEM

Conveying Rate: 17.5 TPH
Horizontal: 1200 Vertical: 70 Degree of Bends: 900
Particulate Emissions: 0.35 #/hour

BLOWER ASSEMBLY

One (1) heavy-duty, rotary, positive displacement blower package including the following features:

- Fabricated steel support base
- Air intake screen
- V-belt drive with belt guard
- Weighted type relief valve
- Pressure Gauge
- Inlet silencer - chamber-absorption type, all welded
- Outlet silencer - chamber-absorption type, all welded
- 250 HP, 1800 RPM, motor with motor slide base
- Outlet spool and flex connector



FEEDER ASSEMBLY

Three (3) Rader 30x30 and One (1) Rader 20x20, Model "ESW" feeder with the following features:

- Heavy duty feeder housing which has been stress relieved
- Hard chrome plated bore with a minimum .005" thickness
- Closed end rotor with helixed vanes and hardfaced #410 stainless steel tips
- Anti-dusting baffle to diffuse blowby
- Adjustable brass sealing rings between the housing and rotor end plates
- Packing glands
- Outboard flange mounted, double row, spherical roller bearings
- One piece alloy shaft mounted with taper lock bushings
- Top shear knife with integral top knife guard
- Torque arm bracket
- Sub-knife wear bar (Hard chromed, 0.04" - 0.06" thickness)
- Hinged inspection/knife access door
- Safety interlock switch for top knife door
- Hand hole inspection door in ends of housing
- AGMA Class 2 helical gear, shaft mounted, speed reducer with anti-friction bearings, taperlock bushing, V-belt drive, and guard
- 7.5 HP on the 30x30 ESW and 3 HP on the 20x20 ESW, 1800 RPM, duty motor 460/3/60
- Fabricated steel base (This is provided on the infeed points only)
- Low profile tee injector for connecting feeder to pipeline. Tee is fabricated of mild steel and is welded inside and out. A door is provided on the side of the tee for access to the bottom knife of the feeder. (This is provided on the infeed points only)

FITTINGS

Ten (10) Size: 14" O.D. x 90 Degree, Rader high efficiency Mark III flatback elbows with replaceable cast R35 segmented backs, and cast R35 square-to-round outlet transition, companion flanges, and gaskets.

Two (2) expansion joints flanged both ends with companion flanges and gaskets.

Six (6) cleanouts, flanged at both ends, with companion flanges and gaskets.



PRIMARY CYCLONE

One (1) Rader Model 84 ELC heavy-duty long cone cyclone with the following features:

- Mild steel body and cone
- A.R. plate inlet impact liner
- 180° A.R. plate body liner
- A.R. cone liner
- Scroll outlet
- Support is not included

HE CYCLONE

One (1) Rader model 11 "HE" high efficiency cyclone with the following features:

- Heavy duty 1/4" AR Plate construction
- Vortex breaking hopper
- Scroll outlet

CONTROLS

One (1) Rader NEMA 4 cabinet with the following features:

- Micro PLC
- Set point display panel
- Pressure transducer
- Motor starters are not included.

PERFORMANCE GUARANTEE

Rader guarantees that the equipment offered herein will perform in accordance with the stated capacity and particulate emissions. If system performance comes in question a performance test should be conducted by a third party certified stack emission testing firm. This testing should be performed simultaneously on the inlet and the outlet of the collection equipment. Test methods utilized should be best practice isokinetic testing procedures to determine inlet and outlet loading and particle size distributions. If testing is determined to be necessary to prove performance it should be done within 30 days of start-up and not to exceed 90 days from shipment.



PAINTING

All mild steel fabricated external surfaces will be prepared and painted as per Rader's paint specification, consisting of:

- Surface Preparation SSPC-SP1-82, 2-89 & 3-89 (Wire brush & degrease)
- One (1) primer coat of Sherwin Williams Kem-Flash 500 (or equal), 1.5-2.0 mils DFT (color is Red Oxide)
- One (1) top coat of Sherwin Williams CC-B21 (or equal), 1.5-2.0 mils DFT (color is Laser Blue)

EXCLUSIONS

- Structural supports
- Walkways and access platforms to equipment
- General arrangement drawings
- Delivery of equipment F.O.B. mill site
- Installation labor, material, and tools
- Nuts, bolts, washers for equipment field assembly
- Storage of equipment
- Foundations, Anchor bolts, and Grouting
- Instrument wiring interconnections
- Touch-up painting
- All performance testing and compliance reporting

SCHEDULE

- Preliminary equipment drawings and loadings for approval 4-6 weeks from date of receipt of purchase order.
- Equipment drawings certified for construction 2-3 weeks from receipt of approved drawings.
- Delivery of equipment 14-16 weeks from certified for construction.

START- UP, TRAINING, & COMMISSIONING TECHNICAL ASSISTANCE

Rader service engineers and commissioning technicians: \$800.00 per day, plus travel and living expenses. Overtime work performed outside the normal eight (8) hour working day and Saturday will be charged at \$125.00 per hour. Expenses for lodging and travel such as air fare, car expenses or car rental will be charged at cost prices substantiated by proper documents.



PRICING

Primary Collection System equipment package

Product Transfer System equipment package.

Freight

Exworks

Rader Companies, Inc. will honor the above pricing for a period of 30 days from the date of this proposal. Thereafter, we reserve the right to review and amend this document as deemed necessary.

PAYMENT TERMS

25% with order

25% with Approval Drawings

25% with Certified Drawings

25% with Equipment ready to ship

Federal and State taxes are extra

GENERAL TERMS & CONDITIONS

The proposal is based on Rader standard terms and conditions.

I will be pleased to review and negotiate the wording and conditions of the inquiry documents to agree on mutually acceptable terms and conditions.

ATTACHMENT A

ATTACHMENT A
SUPPLEMENTAL INFORMATION FOR
CONSTRUCTION PERMIT APPLICATION

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. A Title V permit renewal application was submitted in May 2005.

U.S. Sugar harvests sugarcane 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. After the sugarcane is brought to the Mill, it is sent through a series of grinding mills to extract the raw sugar juice. The remaining sugarcane fiber from the grinding process is termed "bagasse", and is used for fuel in the on-site steam boilers. There are currently two series of grinding mills at Clewiston: the B-tandem and the C-tandem. The B-tandem has been in existence for many years, while the C-tandem was started up in the fall of 2006. The A-tandem was shutdown along with the startup of the C-tandem.

As part of the raw sugar manufacturing process, "bagacillo" is extracted from the bagasse material stream, at a point along the conveying system between the last grinding mill and the boilers. The bagacillo consists of finer bagasse material, and is extracted by means of an air system. The bagacillo is then transported pneumatically by this air stream, where it passes through a cyclone collector which drops out the bagacillo from the air stream. The bagacillo is then used as filter media on the mud filters which are part of the raw sugar manufacturing process. Emissions of particulate matter (PM) with an aerodynamic particle size diameter of 10 microns or less (PM_{10}) from the cyclone collector have been measured at 0.2 to 0.3 lb/hr.

U.S. Sugar is proposing to replace the current bagacillo extraction system and cyclone with a new bagacillo extraction and transport system. The new extraction and transport system will include two dual high efficiency cyclones in series for the B-tandem extraction system, two dual high efficiency cyclones in series for the C-tandem extraction system, and one primary cyclone followed by a high efficiency cyclone for the product transfer system. The first cyclone in series for each system serves as inherent process equipment. The second cyclone in series for each system serves to control PM emissions to the atmosphere.

Both the B- and C-tandems will have a bagacillo primary extraction system located on the bagasse conveying system exiting each tandem. The bagacillo separator for each tandem will contain a kicker that allows the heavier material (i.e., bagasse) to drop out and be returned to the bagasse conveyor for use in the Mill boilers. The lighter material (i.e., bagacillo) will be pneumatically conveyed to primary extraction system cyclones. Approximately 17,500 pounds per hour (lb/hr) of bagacillo will be extracted from the bagasse stream of the B-tandem, and approximately 17,500 lb/hr of bagacillo will be extracted from the bagasse stream of the C-tandem.

Bagacillo extracted from the B-tandem will enter two dual high efficiency cyclones in series, the first of which has a collection efficiency of 99.71-percent, and the second has a collection efficiency of 99.4-percent. PM emissions emitted to the atmosphere, based on these efficiencies and the manufacturer's estimates, are approximately 0.3 lb/hr.

Similarly, bagacillo extracted from the C-tandem will enter two dual high efficiency cyclones in series, the first of which has a collection efficiency of 99.71-percent and the second has a collection efficiency of 99.4-percent. PM emissions emitted to the atmosphere, based on these efficiencies and the manufacturer's estimates, are approximately 0.3 lb/hr. The bagacillo that is removed by the B- and C-tandem extraction cyclones will then enter the bagacillo product transport system.

A total of 35,000 lb/hr of bagacillo will be transported through approximately 1,200 feet of piping by the product transfer system. The bagacillo will be used as filter cake on the rotary vacuum filters in the raw sugar manufacturing process. The product transfer system will contain a primary cyclone that has a PM removal efficiency of 99.86-percent. The remaining 50 lb/hr of bagacillo will then enter a high efficiency cyclone, which has a PM removal efficiency of 99.3-percent. PM emissions emitted to the atmosphere, based on these efficiencies and the manufacturer's estimates, are approximately 0.35 lb/hr. Total PM emissions from the three high efficiency cyclones, as estimated by the manufacturer, are 0.95 lb/hr.

A safety factor of two (2) was applied to the manufacturer's PM emission estimates to account for uncertainty in the information related to the bagacillo particle size distribution. The only bagacillo particle size distribution currently available is for the existing bagacillo system. This distribution may not be representative of the particle size distribution for the new system. Therefore, a conservative safety factor was applied. With the applied safety factor, total PM emissions from the three high efficiency cyclone are 2 lb/hr and 4.8 tons per year.

The first cyclone in series for each system (i.e., B-tandem extraction, C-tandem extraction, and product transfer) is used solely as process equipment. The second cyclone in series at each location is used as control equipment. Annual operation of the bagacillo extraction and transport system will be limited to 200 days or 4,800 hours. In addition, the three high efficiency cyclones are subject to Rule 62-296.320(4)(b) of the Florida Administrative Code (F.A.C.), which regulates visible emissions to no more than 20-percent opacity using Environmental Protection Agency (EPA) Method 9. Details of the high efficiency cyclones, including emissions estimates, are included in this application for an air construction permit.