Golder Associates Inc.

6241 NW 23rd Street, Suite 500
Gainesville, FL USA 32653
Telephone (352) 336-5600
Fax (352) 336-6603
www.golder.com

October 12, 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
APPLICATION FOR A NEW LIME SYSTEM

Dear Mr. Jeff Koerner:

Please find enclosed four (4) copies of the new lime system application for the Clewiston Mill. If you have any questions, please do not hesitate to call me at (352) 336-5600.

Sincerely,

GOLDER ASSOCIATES INC.

David A. Buff

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

cc: Don Griffin
Peter Briggs

APPLICATION FOR AIR CONSTRUCTION PERMIT FOR NEW LIME SYSTEM UNITED STATES SUGAR CORPORATION

CLEWISTON MILL

Prepared For:
United States Sugar Corporation
Clewiston, Florida

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

October 2005

0537579

DISTRIBUTION:
4 Copies – FDEP
2 Copies – USSC
2 Copies – Golder Associates Inc.

APPLICATION – 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 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: **United States Sugar Corporation**	
2. Site Name: **U.S. Sugar 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? ☐ Yes ☒ No	6. Existing Title V Permitted Facility? ☒ Yes ☐ No

Application Contact

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

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	10-13-05
2. Project Number(s):	0510003-034-AC
3. PSD Number (if applicable):	
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 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

Air Construction Permit application to install two new lime storage silos, each with a baghouse for control of PM/PM_{10} emissions. The lime is stored for use in the clarification process to clarify raw sugar cane juice. An additional baghouse will be installed on the railcar unloading system to control PM/PM_{10} emissions as the lime is transported from the railcar to the collection bin.

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Proc. Fee
	Lime System	AC1F	

Application Processing Fee

Check one: ☐ Attached - Amount: _____ ☒ Not Applicable

APPLICATION INFORMATION

Owner/Authorized Representative Statement

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

1. Owner/Authorized Representative Name :
   William A. Raiola, Senior Vice President, Sugar Processing Operations
2. Owner/Authorized Representative Mailing Address...
   Organization/Firm: **United States Sugar Corporation**
   Street Address: **111 Ponce DeLeon Ave.**
   City: **Clewiston** State: **FL** Zip Code: **33440**
3. Owner/Authorized Representative Telephone Numbers...
   Telephone: **(863) 983-8121** ext. Fax: **(863) 902-2729**
4. Owner/Authorized Representative Email Address: **braiola@ussugar.com**
5. Owner/Authorized Representative Statement:

   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.

   Signature Date 10/10/05

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):

   ☐ 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.

   ☐ For a partnership or sole proprietorship, a general partner or the proprietor, respectively.

   ☐ For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.

   ☐ 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, 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.

   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: **32653-1500**
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, the undersigned, hereby certify, except as particularly noted herein, that:*

(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

(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.

(3) If the purpose of this application is to obtain a Title V air operation permit (check here ☐, 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.

(4) If the purpose of this application is to obtain an air construction permit (check here ☒, 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 ☐, 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.

(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 ☐, 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.

David A. Buff — Signature

10/12/05 — Date

(seal)

* Attach any exception to certification statement.

** Board of Professional Engineers Certificate of Authorization #00001670

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: **Wiliam A. Raiola, Senior Vice President, Sugar Processing Operations**
2. Facility Contact Mailing Address... Organization/Firm: **United States Sugar Corporation** Street Address: **111 Ponce DeLeon Ave.** City: **Clewiston** State: **FL** Zip Code: **33440**
3. Facility Contact Telephone Numbers: Telephone: **(863) 983-8121** ext. Fax: **(863) 902-2729**
4. Facility Contact Email Address: **braiola@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. ☐ Small Business Stationary Source	☐ Unknown
2. ☐ Synthetic Non-Title V Source	
3. ☒ Title V Source	
4. ☒ Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5. ☐ Synthetic Minor Source of Air Pollutants, Other than HAPs	
6. ☒ Major Source of Hazardous Air Pollutants (HAPs)	
7. ☐ Synthetic Minor Source of HAPs	
8. ☒ One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9. ☐ One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10. ☒ One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11. ☐ Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	
12. Facility Regulatory Classifications Comment:	

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
Sulfur Dioxide - SO_2	A	N
Nitrogen Oxides - NO_x	A	N
Carbon Monoxide - CO	A	N
Particulate Matter - PM_{10}	A	N
Sulfuric Acid Mist - SAM	A	N
Total Hazardous Air Pollutants - HAPs	A	N
Volatile Organic Compounds - VOC	A	N
Acetaldehyde - H001	A	N
Benzene - H017	A	N
Formaldehyde - H095	A	N
Phenol - H144	A	N
Polycyclic Organic Matter - H151	A	N
Styrene - H163	A	N
Toluene - H169	A	N
Naphthalene - H132	A	N
Dibenzofuran - H058	A	N

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:

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) ☒ Attached, Document ID: **USSC-FI-C1** ☐ 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) ☒ Attached, Document ID: **USSC-FI-C2** ☐ Previously Submitted, Date:____
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) ☐ Attached, Document ID:_____ ☐ Previously Submitted, Date:_____

Additional Requirements for Air Construction Permit Applications

1. Area Map Showing Facility Location: ☐ Attached, Document ID:_____ ☒ Not Applicable (existing permitted facility)
2. Description of Proposed Construction or Modification: ☒ Attached, Document ID: **Attachment A**
3. Rule Applicability Analysis: ☒ Attached, Document ID: **Attachment A**
4. 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)
5. Fugitive Emissions Identification (Rule 62-212.400(2), F.A.C.): ☐ Attached, Document ID:____ ☒ Not Applicable
6. Preconstruction Air Quality Monitoring and Analysis (Rule 62-212.400(5)(f), F.A.C.): ☐ Attached, Document ID:____ ☒ Not Applicable
7. Ambient Impact Analysis (Rule 62-212.400(5)(d), F.A.C.): ☐ Attached, Document ID:____ ☒ Not Applicable
8. Air Quality Impact since 1977 (Rule 62-212.400(5)(h)5., F.A.C.): ☐ Attached, Document ID:____ ☒ Not Applicable
9. Additional Impact Analyses (Rules 62-212.400(5)(e)1. and 62-212.500(4)(e), F.A.C.): ☐ Attached, Document ID:____ ☒ Not Applicable
10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.): ☐ Attached, Document ID:____ ☒ 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

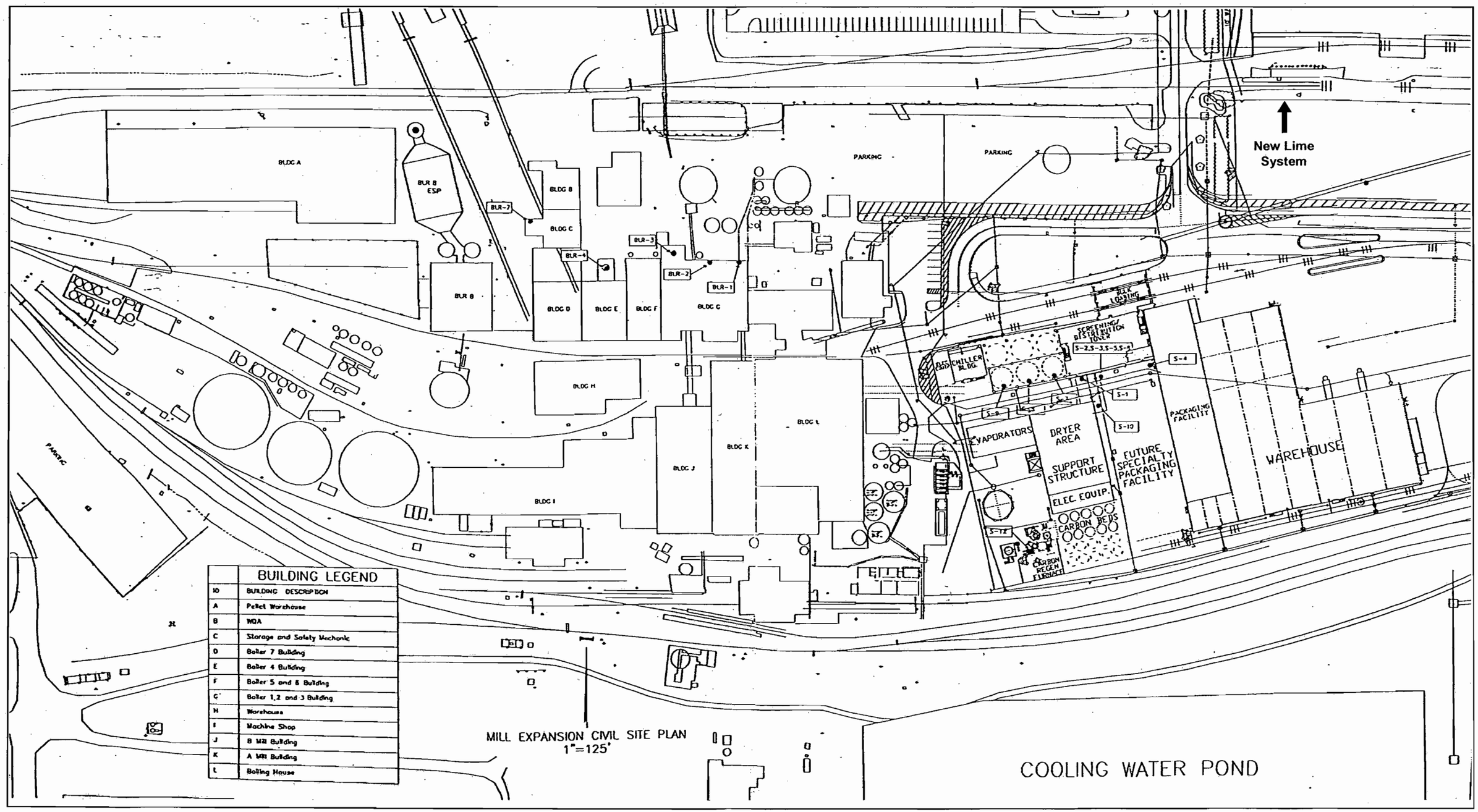
5. Verification of Risk Management Plan Submission to EPA (If applicable, required for initial/renewal applications only) :
   ☐ Attached, Document ID:____ ☒ Not Applicable

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

Additional Requirements Comment

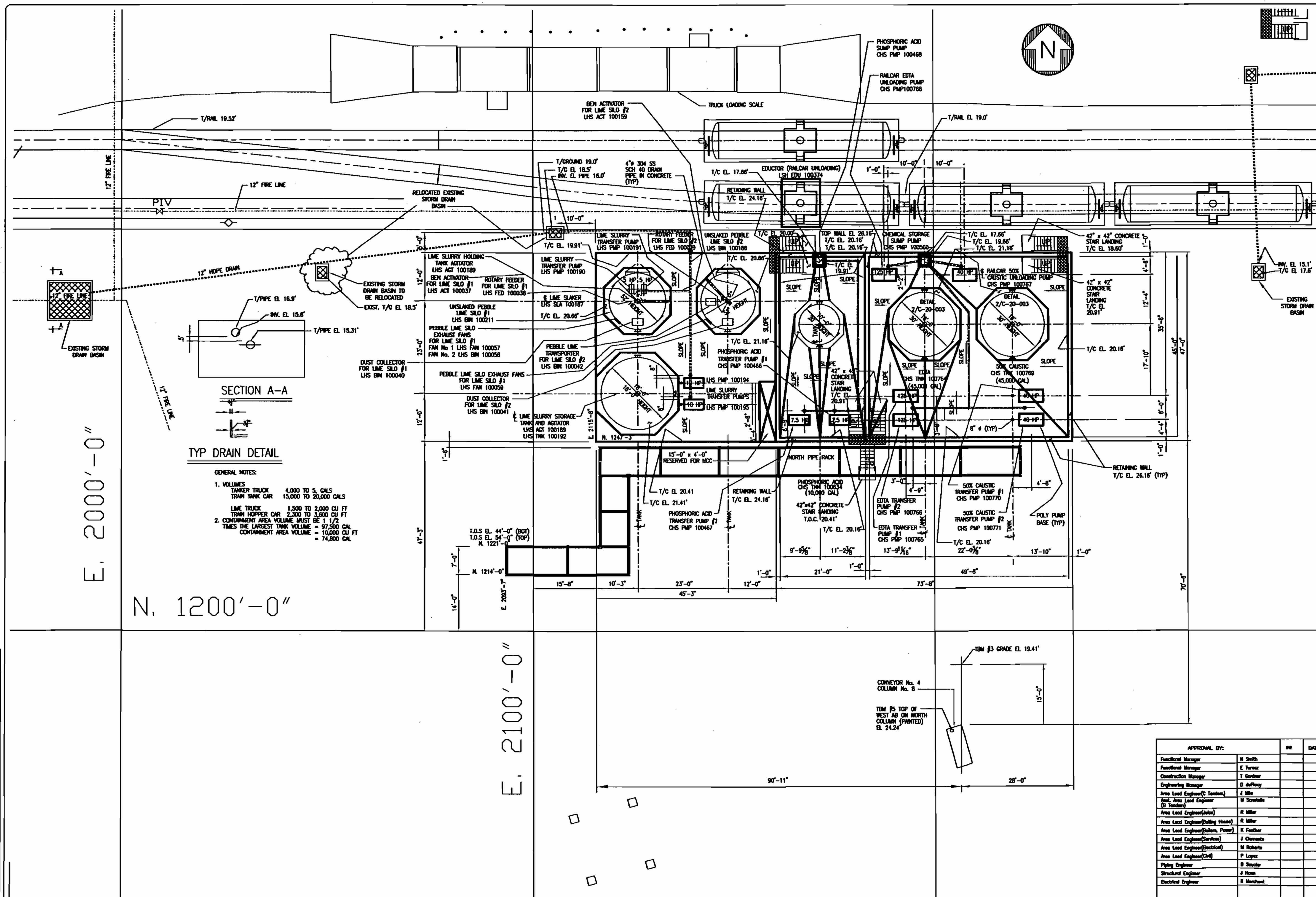
ATTACHMENT USSC-FI-C1a,b

FACILITY PLOT PLANS



Attachment USSC-FI-C1a.
Facility Plot Plan
U.S. Sugar Corporation, Clewiston Mill
Clewiston, Florida

Golder Associates



N
T/RAIL 19.52'
TRUCK LOADING SCALE
T/RAIL EL 19.0'
12" FIRE LINE
PIV
12" HDPE DRAIN
RELOCATED EXISTING STORM DRAIN BASIN
EXISTING STORM DRAIN BASIN TO BE RELOCATED
EXIST. T/C EL 18.5'
EXISTING STORM DRAIN BASIN
T/PIPE EL 16.9'
INV. EL 15.6'
T/PIPE EL 15.31'
SECTION A-A
TYP DRAIN DETAIL
BEN ACTIVATOR FOR LIME SILO #2 LHS ACT 100159
PHOSPHORIC ACID SUMP PUMP CHS PMP 100468
RAILCAR EDTA UNLOADING PUMP CHS PMP100768
EDUCTOR (RAILCAR UNLOADING) LSH EDU 100374
RETAINING WALL T/C EL 24.16'
LIME SLURRY TRANSFER PUMP LHS PMP 100191
ROTARY FEEDER FOR LIME SILO #2 LHS FED 100039
UNSLAKED PEBBLE LIME SILO #2 LHS BIN 100186
CHEMICAL STORAGE SUMP PUMP CHS PMP 100560
LIME SLURRY HOLDING TANK AGITATOR LHS AGT 100189
BEN ACTIVATOR FOR LIME SILO #1 LHS ACT 100037
ROTARY FEEDER FOR LIME SILO #1 LHS FED 100038
UNSLAKED PEBBLE LIME SILO #1 LHS BIN 100211
PEBBLE LIME SILO EXHAUST FANS FOR LIME SILO #1 FAN No 1 LHS FAN 100057 FAN No. 2 LHS BIN 100058
DUST COLLECTOR FOR LIME SILO #1 LHS BIN 100040
PEBBLE LIME SILO EXHAUST FANS FOR LIME SILO #1 LHS FAN 100059
DUST COLLECTOR FOR LIME SILO #2 LHS BIN 100041
LIME SLURRY STORAGE TANK AND AGITATOR LHS AGT 100189 LHS TNK 100192
LIME SLAKER LHS SLA 100187
PEBBLE LIME TRANSPORTER FOR LIME SILO #2 LHS BIN 100042
PHOSPHORIC ACID TRANSFER PUMP #1 CHS PMP 100466
LIME SLURRY TRANSFER PUMPS
RAILCAR 50% CAUSTIC UNLOADING PUMP CHS PMP 100767
EDTA CHS TNK 100764 (45,000 GAL)
50% CAUSTIC CHS TNK 100769 (45,000 GAL)
42" x 42" CONCRETE STAIR LANDING T/C EL 18.60'
RETAINING WALL T/C EL 26.16' (TYP)
POLY PUMP BASE (TYP)
50% CAUSTIC TRANSFER PUMP #1 CHS PMP 100770
50% CAUSTIC TRANSFER PUMP #2 CHS PMP 100771
EDTA TRANSFER PUMP #2 CHS PMP 100766
EDTA TRANSFER PUMP #1 CHS PMP 100765
PHOSPHORIC ACID CHS TNK 100634 (10,000 GAL)
PHOSPHORIC ACID TRANSFER PUMP #2 CHS PMP 100467
NORTH PIPE RACK
15'-0" x 4'-0" RESERVED FOR MCC
T.O.S EL 44'-0" (BOT)
T.O.S EL 54'-0" (TOP)
N. 1221'-0"
N. 1214'-0"
E. 2000'-0"
N. 1200'-0"
E. 2100'-0"
TBM #3 GRADE EL 19.41'
CONVEYOR No. 4 COLUMN No. 8
TBM #5 TOP OF WEST AB ON NORTH COLUMN (PAINTED) EL 24.24'
EXISTING STORM DRAIN BASIN
INV. EL 15.1'
T/C EL 17.6'

GENERAL NOTES:

1. VOLUMES

TANKER TRUCK	4,000 TO 5, GALS
TRAIN TANK CAR	15,000 TO 20,000 GALS
LIME TRUCK	1,500 TO 2,000 CU FT
TRAIN HOPPER CAR	2,300 TO 3,600 CU FT

2. CONTAINMENT AREA VOLUME MUST BE 1 1/2 TIMES THE LARGEST TANK VOLUME = 97,500 GAL
CONTAINMENT AREA VOLUME = 10,000 CU FT
= 74,800 GAL

APPROVAL BY:		INI	DATE
Functional Manager	H Smith		
Functional Manager	E Tercez		
Construction Manager	T Gardner		
Engineering Manager	D dePlacy		
Area Lead Engineer(C Tandem)	J Mile		
Asst. Area Lead Engineer (B Tandem)	M Sonstelie		
Area Lead Engineer(Juice)	R Miller		
Area Lead Engineer(Boiling House)	R Miller		
Area Lead Engineer(Boilers, Power)	K Feather		
Area Lead Engineer(Services)	J Clements		
Area Lead Engineer(Electrical)	M Roberts		
Area Lead Engineer(Civil)	P Lopez		
Piping Engineer	B Saucier		
Structural Engineer	J Horn		
Electrical Engineer	R Merchant		

UNITED STATES SUGAR CORPORATION

Nº	NAME	DATE	APP	DESCRIPTION
BB	JMC	9-10-03	B	INCREASED TANK LHS TNK 100192 FROM 14'Ø X 20' TALL TO 18'Ø X 18' TALL

REVISIONS

REFERENCE DRAWINGS

UNITED STATES SUGAR CORP.
Clewiston, Florida

PROJECT
BREAKTHROUGH
CI180104

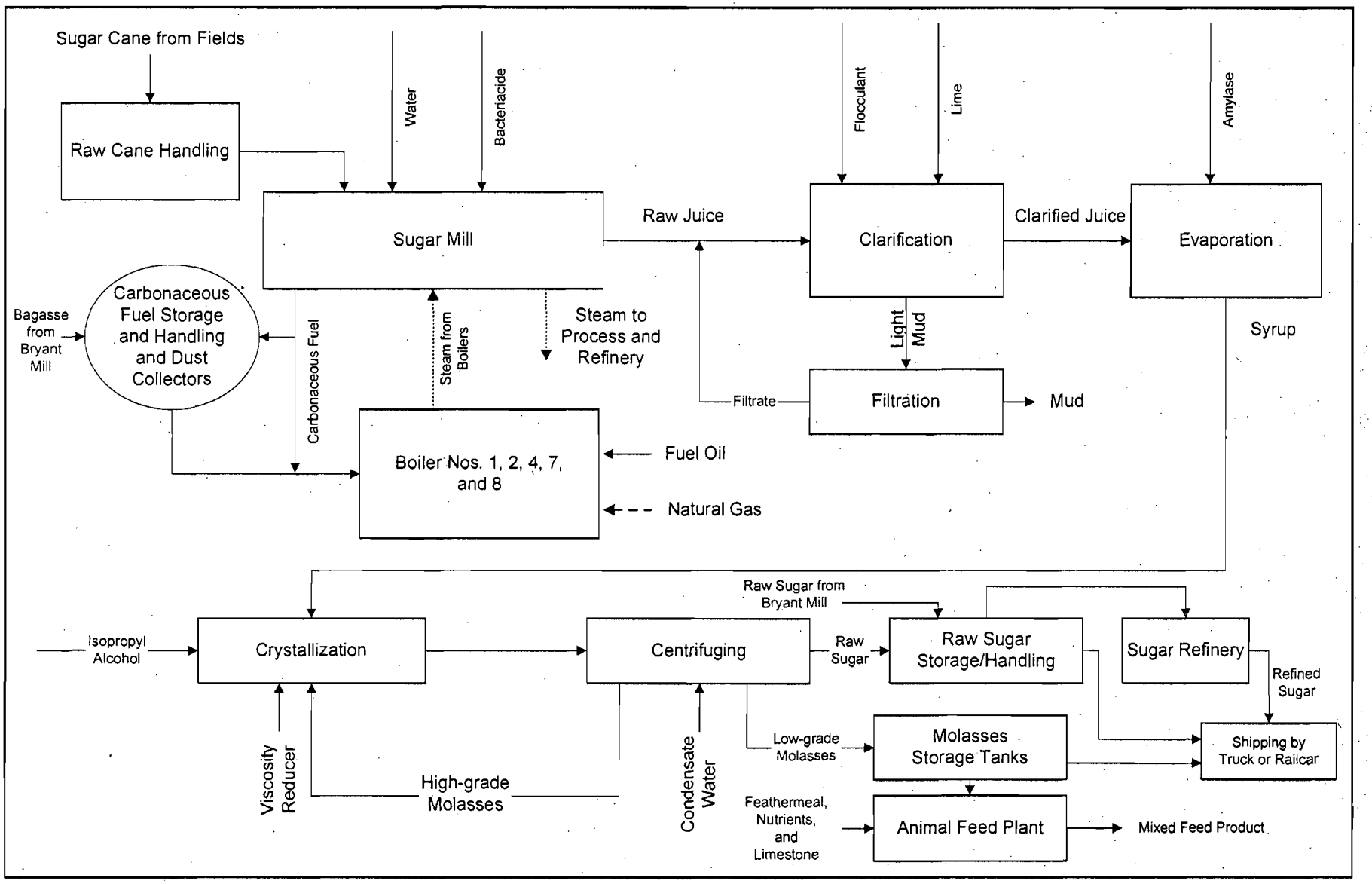
CHEMICAL STORAGE AND PREP. LOCATION PLAN

SEAL

DRAWN BY:	INI
DESIGNED BY:	INI
CHECKED BY:	INI
APPROVED BY:	
SCALE	3/32"=1'-0"
DATE	0/0/00
DRAWING NO.	G-20-001
REVISION	BB

ATTACHMENT USSC-FI-C2

PROCESS FLOW DIAGRAM



Attachment USSC-FI-C2 Process Flow Diagram U.S. Sugar Corporation Clewiston Mill, Florida	**Process Flow Legend** Solid/Liquid ——→ Steam ·····→ Gaseous – – – –→	Clewiston Sugar Mill Facility Filename: USSC-FI-C2.vsd Date: 06/28/05 Golder Associates

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] of [1]
Lime 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:
Lime unloading and storage in two lime silos.

3. Emissions Unit Identification Number:

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
C			**20**	☐ Yes ☒ No

9. Package Unit:
Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:
Unloading and storage for lime used to clarify raw sugar juice in the Boiling House.

EMISSIONS UNIT INFORMATION
Section [1] of [1]
Lime System

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:
   Baghouse on top of each storage silo (2): Smoot Model No. 60BV16
   Baghouse for railcar unloading (1): Smoot Model No. 60FR14

2. Control Device or Method Code(s): **017**

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: **5,000 TPY**	
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
52 weeks/year	**8,760** hours/year
6. Operating Capacity/Schedule Comment: **Represents total lime throughput through the lime 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: **Lime Silo #1 and #2**	2. Emission Point Type Code: **1**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **H**	6. Stack Height: **65** feet	7. Exit Diameter: **0.67** feet
8. Exit Temperature: **75**°F	9. Actual Volumetric Flow Rate: **476** acfm	10. Water Vapor: **1** %
11. Maximum Dry Standard Flow Rate: **465** 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: **Horizontal discharge of dust collector located on top of each lime silo. Exit temperature is at ambient conditions. Dust collector for railcar unloading has the equivalent exit diameter, exit temperature, moisture content and flow rates.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): **Industrial Processes; Mineral Products; Bulk Materials Storage Bins; Minerals; Lime**		
2. Source Classification Code (SCC): **3-05-102-98**	3. SCC Units: **Tons Processed**	
4. Maximum Hourly Rate: **38**	5. Maximum Annual Rate: **5,000**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **Lime unloading and storage. Lime may be unloaded into the silos via railcar or truck. Maximum hourly rate is based on one 25 ton truck unloading in approximately 45 minutes and one 180,000 lb railcar unloading at 10,000 lb/hr. Maximum annual rate is based on the total throughput to the lime system.**		

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:		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	017	NA	NS
PM_{10}	017	NA	NS

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: **0.24** lb/hour **1.05** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.02 gr/dscf** Reference: **Design rate**	7. Emissions Method Code: **2**

8. Calculation of Emissions:

465 dscfm * 0.02 gr/dscf * 60 min/hr ÷ 7,000 gr/lb = 0.08 lb/hr from each baghouse

0.08 lb/hr * 8,760 hr/yr ÷ 2,000 lb/ton = 0.35 TPY from each baghouse

Total of 3 baghouses : 0.08 lb/hr x 3 = 0.24 lb/hr
0.35 TPY x 3 = 1.05 TPY

See Attachment USSC-EU1-D10.

9. Pollutant Potential/Estimated Fugitive Emissions Comment:

The maximum dry standard flow rate of each baghouse is 465 dscfm. Potential emissions take into account emissions from both silos and railcar unloading.

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: **PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **0.24** lb/hour **1.05** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.02 gr/dscf** Reference: **Design rate**	7. Emissions Method Code: **2**

8. Calculation of Emissions:

465 dscfm * 0.02 gr/dscf * 60 min/hr ÷ 7,000 gr/lb = 0.08 lb/hr from each baghouse

0.08 lb/hr * 8,760 hr/yr ÷ 2,000 lb/ton = 0.35 TPY from each baghouse

Total of 3 baghouses : 0.08 lb/hr x 3 = 0.24 lb/hr
0.35 TPY x 3 = 1.05 TPY

See Attachment USSC-EU1-D10.

9. Pollutant Potential/Estimated Fugitive Emissions Comment:

The maximum dry standard flow rate of each baghouse is 465 dscfm. Potential emissions take into account emissions from both silos and railcar unloading.

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):	

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: ☒ Rule ☐ 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, F.A.C.**	

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

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:	☐ Rule ☐ 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:	☐ Rule ☐ 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] of [1]
Lime 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)
   ☒ Attached, Document ID: **USSC-EU1-I1** ☐ 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)
   ☐ Attached, Document ID: ____ ☐ 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)
   ☒ Attached, Document ID: **USSC-EU1-I3** ☐ 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)
   ☐ Attached, Document ID: ____ ☐ Previously Submitted, Date ____
   ☒ 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)
   ☐ Attached, Document ID: ____ ☐ Previously Submitted, Date ____
   ☒ Not Applicable

6. Compliance Demonstration Reports/Records
   ☐ Attached, Document ID: ____
   Test Date(s)/Pollutant(s) Tested: ____
   ☐ Previously Submitted, Date: ____
   Test Date(s)/Pollutant(s) Tested: ____
   ☐ To be Submitted, Date (if known): ____
   Test Date(s)/Pollutant(s) Tested: ____
   ☒ 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
   ☐ Attached, Document ID: ____ ☒ Not Applicable

EMISSIONS UNIT INFORMATION
Section [1] of [1]
Lime System

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: ____ ☒ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: ____ ☒ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: ____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

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

EMISSIONS UNIT INFORMATION
Section [1] of [1]
Lime System

Additional Requirements Comment

ATTACHMENT USSC-EU1-D10

EMISSIONS CALCULATIONS

ATTACHMENT USSC-EU1-D10

CALCULATION OF EMISSIONS

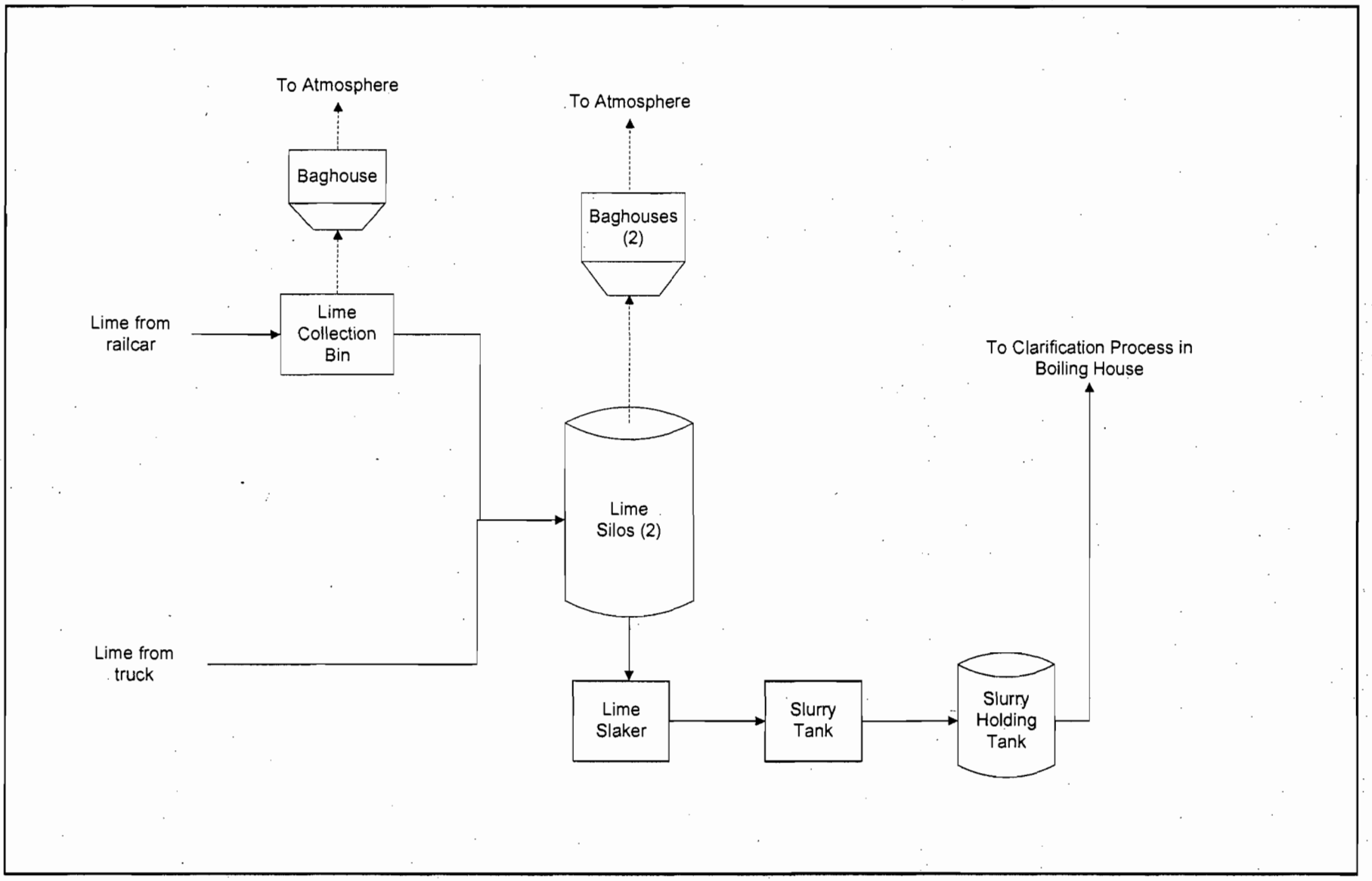
Summary of PM/PM_{10} Maximum Potential Emission Rate for Railcar Unloading and Each Lime Storage Silo

Source	Control Equipment	Exhaust Flow (dscfm)	Exhaust Grain Loading (gr/dscf)	Operating Hours (hr/yr)	PM/PM_{10} Emission Rate	
					lb/hour	TPY
Lime Silo #1	Baghouse	465	0.02	8,760	0.08	0.35
Lime Silo #2	Baghouse	465	0.02	8,760	0.08	0.35
Railcar Unloading	Baghouse	466	0.02	8,760	0.08	0.35

Note: dscfm = dry standard cubic feet per minute.
gr/dscf = grains per dry standard cubic feet.
lb/hr = pounds per hour.
TPY = tons per year.

ATTACHMENT USSC-EU1-I1

PROCESS FLOW DIAGRAM



Attachment USSC-EU1-I1 Lime System Flow Diagram U.S. Sugar Clewiston	**Process Flow Legend** Solid/Liquid Flow ——→ Gas Flow - - - - →	Filename: USSC-EU1-I1 Date: 10/5/2005 Golder Associates

ATTACHMENT USSC-EU1-I3

CONTROL EQUIPMENT PARAMETERS FOR THE LIME SYSTEM

ATTACHMENT USSC-EU1-I3a

CONTROL EQUIPMENT PARAMETERS FOR EACH LIME SILO BAGHOUSE AT U.S. SUGAR CLEWISTON

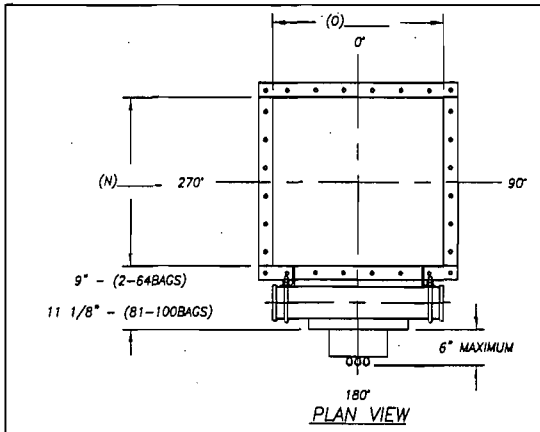
Manufacturer and Model No.	Smoot Model 60BV16
Outlet Gas Temp (°F)	75
Outlet Gas Flow Rate (acfm)	476
Exhaust Gas Moisture Content (%)	1.0
Outlet Gas Flow Rate (scfm)	465
Cleaning Method	Reverse Pulse
No. of bags	16
Bag Material	16 oz. Polyester Singed Fabric
Total Area of Filter Media (sq. ft)	116
Air to Cloth Ratio	4.10
Manufacturer's Guaranteed Outlet Loading (grains/acf)	0.02

Pollutants	Outlet Loading
Particulate Matter (lb/hr)	0.080

Note: Parameters based on manufacturers design specifications as shown on the following page.

Sample calculations:

Outlet loading rate (lb/hr) = outlet gas flow rate (acfm) X outlet loading rate (grains/acf) ÷ 7000 grains/lb X 60 min/hr



PLAN VIEW

WHEN ORDERING A SMOOT BIN VENT, USE THE NUMBERING SYSTEM BELOW:

A4- ___ BBRBV ___ - B - C - D - E - F - G - H - J - K

BAG LENGTH | NO. OF BAGS

MODEL DASH NO.	NEMA RATTING
B1	NEMA 4
B2	NEMA 4X, SS
B3	NEMA 7/9 (XP)

MODEL DASH NO.	MATERIAL OF CONSTRUCTION
D1	CARBON STEEL
D2	CARBON STEEL - EPOXY COATED PRODUCT CONTACT ONLY
D3	304 STAINLESS STEEL PRODUCT CONTACT ONLY
D4	304 STAINLESS STEEL

MODEL DASH NO.	DP GAUGE/SWITCH
E1	NO DP GAUGE OR SWITCH
E2	DP GAUGE ONLY
E3	DP GAUGE & SWITCH
E4	4-20Ma DP GAUGE & X-MITTER w/TIMER BOARD

MODEL DASH NO.	EXHAUST OPTIONS
K1	STUB EXHAUST
K2	WEATHER EXHAUST w/ SCREEN
K3.__	FAN

MODEL DASH NO.	BAG CATCH GRID
C1	WITHOUT BAG CATCH
C2	WITH BAG CATCH

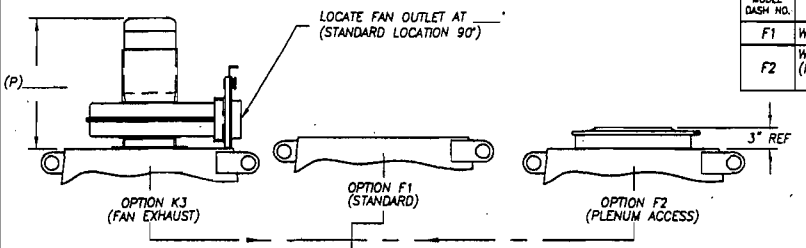
MODEL DASH NO.	FILTER HEAD ACCESS
F1	W/O PLENUM ACCESS
F2	WITH PLENUM ACCESS (NOT AVAILABLE ON OPTION K3)

MODEL DASH NO.	TIMER BOARD & ENCLOSURES
G1	NO TIMER BOARD
G2	TIMER BOARD - SHIPPED LOOSE
G3	TIMER BOARD & ENCLOSURE - SHIPPED LOOSE
G4	TIMER BOARD & ENCLOSURE - MOUNTED TO FILTER (STANDARD WITH OPTION E-4)

MODEL DASH NO.	BAG MATERIAL
H1	POLYESTER
H2	NOMEX
H3	TETRATEX
H4	GORE-TEX ®

MODEL DASH NO.	BAG CAGE
J1	GALVANIZED
J2	304 SS
J3	EPOXY COATED

K3 SUB NO.	MODEL NO.	MOTOR HP
1	PB-9	0.5
2		0.75
3		1
4	PB-10A	0.75
5		1
6		1.5
7		2
8	PB-12A	1
9		1.5
10		2
11		3
12		5
13	PB-14A	2
14		3
15		5
16	PB-15A	3
17		5
18		7.5
19		10
20		15

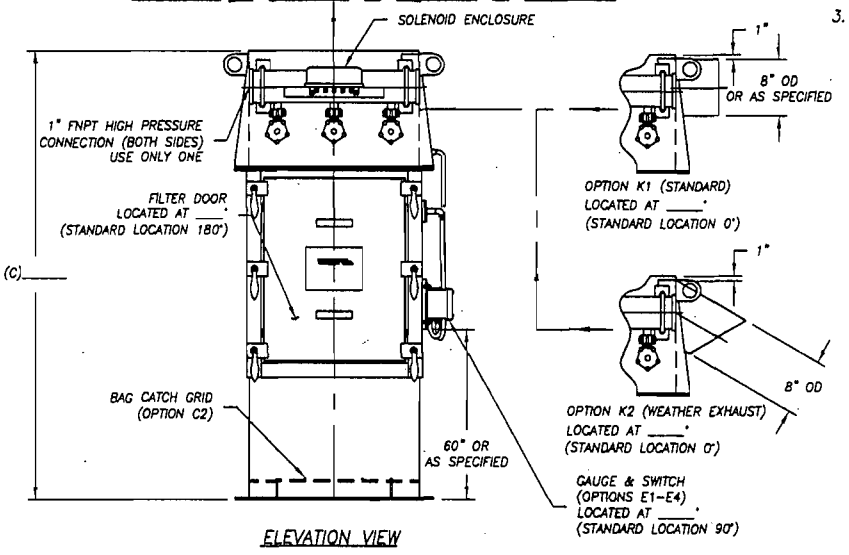


NOTE:

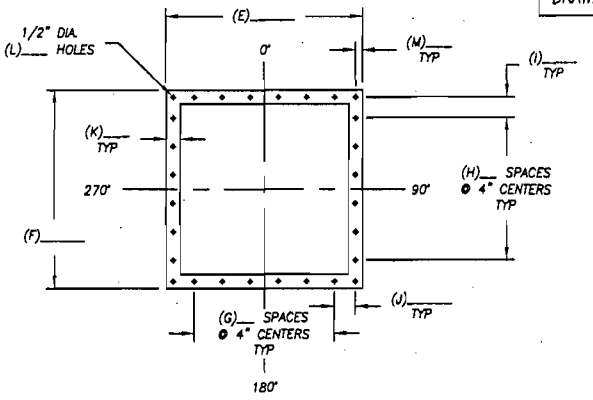
1. FILTER CONTAINS (A)_____SqFt OF FILTER MEDIA.
2. FILTER REQUIRES (B)_____SCFM OF HIGH PRESSURE SUPPLY AIR AT 80-100PSIG.
3. ESTIMATED WEIGHT (D)_____ lbs.

CUSTOMER: _____
CUSTOMER PO NO.: _____
SMOOT JOB NO.: _____
ITEM NO.: _____
QTY.: _____
ISSUE: _____

USE THIS DRAWING WITH DRAWING #4-9_2 (DIMENSIONAL INFO.)



ELEVATION VIEW



FLANGE DETAIL

C.F. # 21.1.1-4-A
REV. 0 8/9/01

SMOOT
Division of Magnum Systems
Kansas City, Kansas

BIN VENT FILTER
BOTTOM BAG REMOVAL
CUSTOMER DRAWING

DATE	3/28/01	DWG. NO.	4-9_1
DWN. BY	ELB	APPROVED	
SCALE	NONE		SHEET 1 OF 2

ATTACHMENT USSC-EU1-I3b

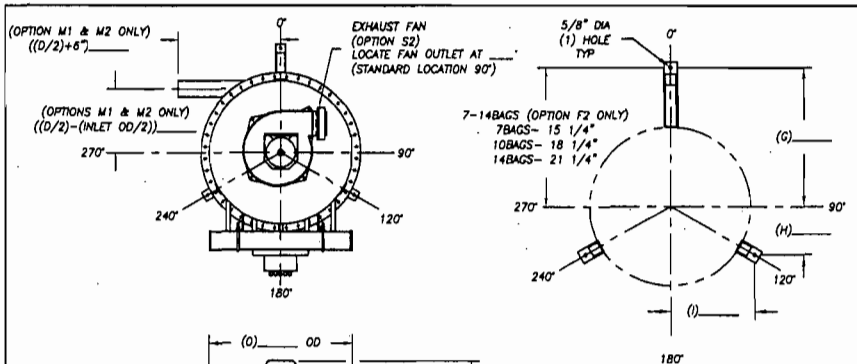
CONTROL EQUIPMENT PARAMETERS FOR THE RAILCAR UNLOADING BAGHOUSE AT U.S. SUGAR CLEWISTON

Manufacturer and Model No.	Smoot Model 60FR14
Outlet Gas Temp (°F)	75
Outlet Gas Flow Rate (acfm)	477
Exhaust Gas Moisture Content (%)	1.0
Outlet Gas Flow Rate (scfm)	466
No. of bags	14
Bag Material	16 oz. Polyester Singed Fabric
Total Area of Filter Media (sq. ft)	104
Air to Cloth Ratio	4.9
Manufacturer's Guaranteed Outlet Loading (grains/acf)	0.02

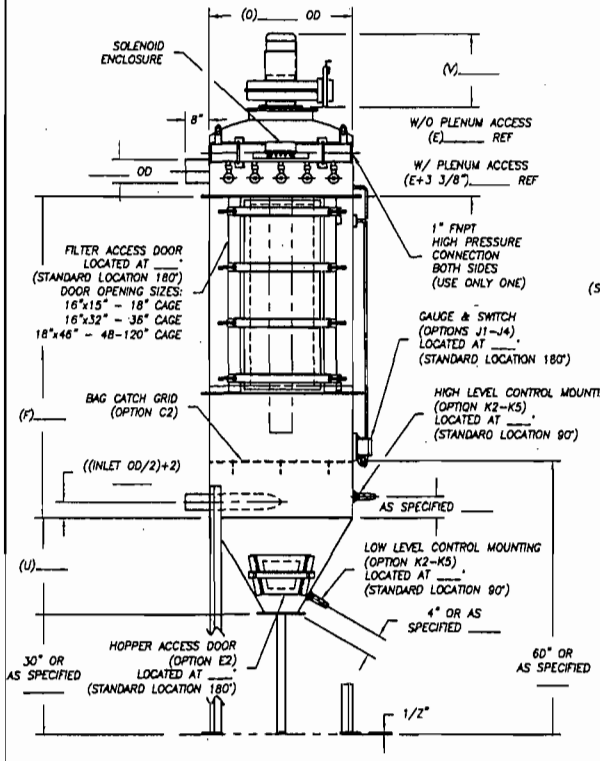
Pollutants	Outlet Loading
Particulate Matter (lb/hr)	0.080

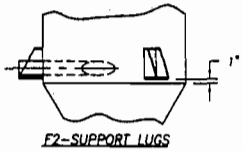
Note: Parameters based on manufacturers design specifications as shown on the following page.

Sample calculations:
Outlet loading rate (lb/hr) = outlet gas flow rate (acfm) X outlet loading rate (grains/acf) ÷ 7000 grains/lb X 60 min/hr



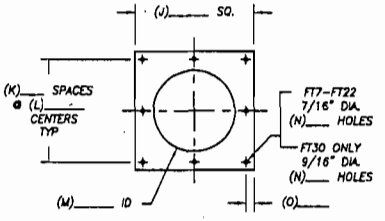
BASE PAD LAYOUT



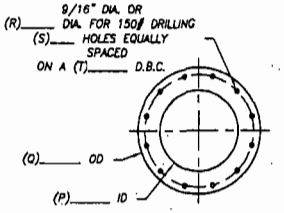


F2-SUPPORT LUGS

LOCATED AT ___°, ___°, ___°
(STANDARD LOCATION 0°, 120°, 240°)

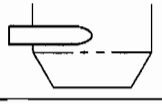


SQ. DISCHARGE FLANGE
(OPTION G1)

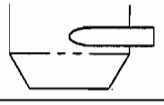


RD. DISCHARGE FLANGE
(OPTION G2)

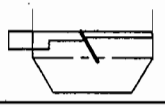
M1-CCW TANGENTIAL INLET
LOCATED AT ___°
(STANDARD LOCATION 0°)



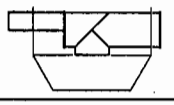
M2-CW TANGENTIAL INLET
LOCATED AT ___°
(STANDARD LOCATION 0°)



M3-DEFLECTOR INLET
LOCATED AT ___°
(STANDARD LOCATION 270°)



M4-TARGET BOX INLET
LOCATED AT ___°
(STANDARD LOCATION 270°)



WHEN ORDERING A SMOOT FILTER RECEIVER, PLEASE USE THE NUMBERING SYSTEM BELOW.

A2_____- B___- C___- D___- E___- F___- G___- H___- J___- K___- L___- M___- N___-P___-Q___-R___-S___.__

FILTER MODEL # (SEE SHEET 2)

MODEL DASH #	ELECTRICAL ENCLOSURE TYPE
B1	NEMA 4, CARBON STEEL
B2	NEMA 4X, STAINLESS STEEL
B3	NEMA 7/9, EXPLOSION PROOF

MODEL DASH #	BAG CATCH GRID
C1	WITHOUT BAG CATCH
C2	WITH BAG CATCH

MODEL DASH #	PLENUM ACCESS
D1	WITHOUT PLENUM ACCESS
D2	WITH PLENUM ACCESS (STANDARD WITH OPTION R2)

MODEL DASH #	HOPPER ACCESS
E1	WITHOUT HOPPER ACCESS
E2	WITH HOPPER ACCESS

MODEL DASH #	FILTER SUPPORT
F1	FILTER SUPPORT LEGS
F2	FILTER SUPPORT LUGS

MODEL DASH #	DISCHARGE TYPE
G1	SQ. FLANGE
G2	ROUND FLANGE

MODEL DASH #	MATERIAL OF CONSTRUCTION
H1	CARBON STEEL
H2	CARBON STEEL - EPOXY COATED PRODUCT CONTACT ONLY
H3	304 STAINLESS STEEL PRODUCT CONTACT ONLY
H4	STAINLESS STEEL

MODEL DASH #	DP GAUGE/ SWITCH
J1	NO DP GAUGE OR SWITCH
J2	DP GAUGE ONLY
J3	DP GAUGE & SWITCH
J4	4-20Ma DP GAUGE & X-MITTER w/ TIMER BOARD

MODEL DASH #	LEVEL CONTROL MOUNTING
K1	WITHOUT LEVEL CONTROL
K2	PROXIMITY (1) EA. (M30x1.5)
K3	PADDLE (1) EA. (2 1/2" FNPT)
K4	PROBE (1) EA. (3/4" FNPT)
K5	ENGINEERING/CUSTOMER TO SPECIFY

NOTE: LEVEL INDICATOR NOT INCLUDED

MODEL DASH #	CAGE TYPE
L1	GALVANIZED
L2	EPOXY COATED
L3	304 STAINLESS STEEL

MODEL DASH #	INLET TYPE
M1	CCW TANGENTIAL
M2	CW TANGENTIAL
M3	DEFLECTOR
M3	TARGET BOX

MODEL DASH #	BAG TYPE
N1	POLYESTER BAG
N2	NOMEX BAG
N3	TETRATEX BAG
N4	GORE-TEX BAG
N5	45 PLEAT CARTRIDGE (POLYESTER)

MODEL DASH #	TIMER BOARD & ENCLOSURES
P1	NO TIMER BOARD
P2	TIMER BOARD - SHIPPED LOOSE
P3	TIMER BOARD & ENCLOSURE - SHIPPED LOOSE
P4	TIMER BOARD & ENCLOSURE - MOUNTED TO FILTER (STANDARD WITH OPTION J4)

MODEL DASH #	EXHAUST OPTIONS	
S1.0	TUBE STUB	
S2.___	FAN	
FAN SUB #	MODEL NUMBER	MOTOR HP
1	HPB	1.5
2	PB-10A	2.0
3	PB-12A	2.0
4	PB-14A	5.0
5	PB-15A	7.5
6	ENGINEERING TO SPECIFY	

SELECT FAN USING CHART ON DRAWING 2-99_2

NOMINAL SIZE	MODEL DASH # INLET		MODEL DASH # OUTLET	
	11 GA	SCH 40	11 GA	SCH 40
2	Q1	Q8	R1	R8
3	Q2	Q9	R2	R9
4	Q3	Q10	R3	R10
5	Q4	Q11	R4	R11
6	Q5	Q12	R5	R12
8	Q6	Q13	R6	R13
10	Q7	Q14	R7	R14

NOTE:
1. FILTER CONTAINS (A)_____SqFt OF FILTER MEDIA.
2. FILTER REQUIRES (B)_____SCFM OF HIGH PRESSURE SUPPLY AIR AT 80-100 PSIG.
3. ESTIMATED WEIGHT:
   - ESTIMATED EMPTY WEIGHT = (C)_____ lbs.
   - STORAGE CAPACITY = _____ CuFt
   - PRODUCT DENSITY = _____ lbs/CuFt
   - ESTIMATED FULL WEIGHT = _____ lbs.

USE THIS DRAWING WITH DRAWING #2-99_2 (DIMENSIONAL INFO.)

C.F. # 21.1.1-4-A
REV. 0 4/16/01
PAGE 1 OF 2

CUSTOMER: _____
CUSTOMER PO NO.: _____
SMOOT JOB NO.: _____
ITEM NO.: _____
QTY.: _____
ISSUE: _____

SMOOT
Division of Magnum Systems
Kansas City, Kansas

ROUND FILTER RECEIVER
BOTTOM BAG REMOVAL
CUSTOMER DRAWING
SHEET 1 OF 2

DATE 4/16/01
DWN. BY ELB
SCALE NONE
DWG. NO. 2-99_1
APPROVED _____

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. 0510003-014-AV. U.S. Sugar harvests sugar cane and transports it to the Clewiston Mill, where the cane is processed into raw sugar in the mill. U.S. Sugar sells some of the raw sugar and the remainder of the raw sugar is refined into white sugar.

Lime is used in the clarification process in the U.S. Sugar Boiling House to clarify raw sugar cane juice. The combination of lime and flocculants produces clarified juice that undergoes evaporation, crystallization, and centrifugation to form raw sugar. This raw sugar is then sent through the refinery process to produce refined sugar.

Lime will be delivered by railcar and truck and off-loaded into two new storage silos. Lime from the trucks will be transported to the silos via a blower system at a rate of 33 tons per hour (TPH) (i.e., 45 minutes to unload a 25 ton truck). Loading of the silos via railcar is accomplished though a transport system that feeds lime into the transport air stream at a rate of 10,000 pounds per hour (lb/hr). It will take approximately 18 hours to unload an 180,000 pound railcar. The lime from the railcar enters a vacuum-type unloading system that transports the lime from the railcar to a collection bin. The collection bin has a baghouse to filter the transport air. A rotary air lock then feeds the lime into the air stream from a transporter blower, which transports the lime to the silos. Each silo contains a dust collector.

Total throughput of lime into the system is approximately 5,000 tons per year (TPY). Unloading of the silos is accomplished via gravity bottom drop into a lime slaker where the lime is mixed with water and pumped to a lime slurry storage tank and agitator.

U.S. Sugar will install a bin vent filter (Smoot Model No. 60BV16) on each lime silo to reduce particulate matter (PM) emissions associated with loading and unloading of the silos. A filter-receiver (Smoot Model No. 60FR14) will be installed on the railcar unloading system to reduce PM emissions associated with unloading the railcars.

Maximum PM and particulate matter less than 10 microns in diameter (PM_{10}) emissions from each baghouse are 0.08 lb/hr and 0.35 TPY. Total PM/PM_{10} emissions from all three baghouses are 0.24 lb/hr and 1.05 TPY. The PM/ PM_{10} emissions are based on a maximum dry standard flow rate from each baghouse of 465 dry standard cubic feet per minute (dscfm) and a design grain loading rate of 0.02 grains per dry standard cubic feet (gr/dscf) per baghouse. Hours of operation are assumed continuous. Details of each bin vent filter, including emissions estimates, are included in this application for an air construction permit.