



Department of Environmental Protection

Division of Air Resource Management

APPLICATION FOR AIR PERMIT - LONG FORM

RECEIVED

MAY 23 2013

DIVISION OF AIR
RESOURCE MANAGEMENT

I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for an air construction permit:

- For any required purpose at a facility operating under a federally enforceable state air operation permit (FESOP) or Title V air operation permit;
- For a proposed project subject to prevention of significant deterioration (PSD) review, nonattainment new source review, or maximum achievable control technology (MACT);
- To assume a restriction on the potential emissions of one or more pollutants to escape a requirement such as PSD review, nonattainment new source review, MACT, or Title V; or
- 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, revised, or renewal Title V air operation permit.

To ensure accuracy, please see form instructions.

Identification of Facility

1. Facility Owner/Company Name: CF Industries, Inc.	
2. Site Name: Plant City Phosphate Complex.	
3. Facility Identification Number: 0570005	
4. Facility Location... Street Address or Other Locator: 660 E. County Line Road, PO Drawer L City: Plant City County: Hillsborough Zip Code: 33564	
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: Ronald L. Brunk, Superintendent Environmental Affairs	
2. Application Contact Mailing Address... Organization/Firm: CF Industries, Inc. Street Address: 660 E. County Line Road, PO Drawer L City: Plant City State: FL Zip Code: 33564	
3. Application Contact Telephone Numbers... Telephone: (813) 364-5753 ext. Fax: (813) 788-9126	
4. Application Contact E-mail Address: rbrunk@cfindustries.com	

Application Processing Information (DEP Use)

1. Date of Receipt of Application: 5-21-13	3. PSD Number (if applicable):
2. Project Number(s): 0570005-056-AC	4. Siting Number (if applicable):

0570005-057-A ✓

APPLICATION INFORMATION

Purpose of Application

This application for air permit is being 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

This permit application is submitted for maintenance work associated with the converters in "C" and "D" Sulfuric Acid Plants.

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Processing Fee
007	"C" Sulfuric Acid Plant	AC/AV	0
008	"D" Sulfuric Acid Plant	AC/AV	0

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 :
2. Owner/Authorized Representative Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Owner/Authorized Representative Telephone Numbers... Telephone: ext. Fax:
4. Owner/Authorized Representative E-mail Address:
5. Owner/Authorized Representative Statement: <i>I, the undersigned, am the owner or authorized representative of the corporation, partnership, or other legal entity submitting this air permit application. To the best of my knowledge, the statements made in this application are true, accurate and complete, and any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department.</i> _____ Signature _____ Date

APPLICATION INFORMATION

Application Responsible Official Certification

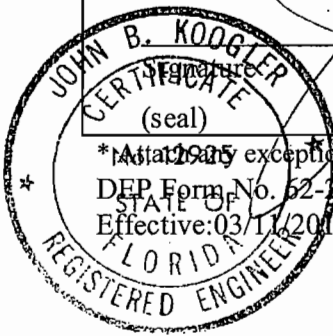
Complete if applying for an initial, revised, or renewal Title V air operation permit or concurrent processing of an air construction permit and revised or renewal Title V air operation permit. If there are multiple responsible officials, the “application responsible official” need not be the “primary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

1. Application Responsible Official Name: Herschel E Morris Vice President Phosphate Operations & General Manager
2. Application Responsible Official Qualification (Check one or more of the following options, as applicable): <input checked="" 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 or CAIR source.
3. Application Responsible Official Mailing Address... Organization/Firm: CF Industries, Inc. Street Address: 660 E. County Line Road, PO Drawer L City: Plant City State: FL Zip Code: 33564
4. Application Responsible Official Telephone Numbers... Telephone: (813) 782-1591 ext. Fax: (813) 788-9126
5. Application Responsible Official E-mail Address: hmorris@cfindustries.com
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 <u>5/20/13</u>

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: John B. Koogler, Ph.D., P.E. Registration Number: 12925
2. Professional Engineer Mailing Address... Organization/Firm: Koogler and Associates, Inc. Street Address: 4014 NW 13th Street City: Gainesville State: FL Zip Code: 32609
3. Professional Engineer Telephone Numbers... Telephone: (352) 377-5822 ext. Fax: (352) 377-7158
4. Professional Engineer E-mail Address: jkoogler@kooglerassociates.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 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 checked="" 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>



5/20/2013
Date

*At 12925 exception to certification statement.
DEP Form No. 62-110,900(1) – Form
STATE OF FLORIDA
Effective: 03/11/2010

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone 17 East (km) 388.0 North (km) 3116.0		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) 28/9/57 Longitude (DD/MM/SS) 82/8/27	
3. Governmental Facility Code: 0	4. Facility Status Code: A	5. Facility Major Group SIC Code: 28	6. Facility SIC(s): 2874
7. Facility Comment: This is a phosphate fertilizer manufacturing facility.			

Facility Contact

1. Facility Contact Name: Ronald L. Brunk, Superintendent Environmental Affairs
2. Facility Contact Mailing Address... Organization/Firm: CF Industries, Inc. Street Address: 660 E. County Line Road, PO Drawer L City: Plant City State: FL Zip Code: 33564
3. Facility Contact Telephone Numbers: Telephone: (813) 364-5753 ext. Fax: (813) 788-9126
4. Facility Contact E-mail Address: : rbrunk@cfindustries.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 E-mail 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: Title V source.	

FACILITY INFORMATION

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
Particulate Matter (PM)	A	N
Fluoride (FL)	B	N
Sulfur Dioxide (SO₂)	A	N
Sulfuric Acid Mist (SAM)	A	N
Nitrogen Oxides (NO_x)	A	N
Particulate Matter (PM₁₀)	A	N
Hydrogen Fluoride (H107)	A	N
Total HAPs (HAPs)	A	N

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 type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: 2010 _____
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: 2010 _____
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: 2010 _____

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: Attachment 1
3. Rule Applicability Analysis: <input checked="" type="checkbox"/> Attached, Document ID: Attachment 1
4. List of Exempt Emissions Units: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable (no exempt units at facility)
5. Fugitive Emissions Identification: <input checked="" type="checkbox"/> Attached, Document ID: Attachment 1 <input 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

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for FESOP Applications

NA

1. List of Exempt Emissions Units: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> 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) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> 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) <input checked="" type="checkbox"/> Attached, Document ID: <u>Attachment 1</u> <input type="checkbox"/> Not Applicable (revision application with no change in applicable requirements)
3. Compliance Report and Plan: (Required for all initial/revision/renewal applications) <input checked="" type="checkbox"/> Attached, Document ID: <u>Attachment 1</u> 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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Equipment/Activities Onsite but Not Required to be Individually Listed <input checked="" type="checkbox"/> Not Applicable
5. Verification of Risk Management Plan Submission to EPA: (If applicable, required for initial/renewal applications only) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
6. Requested Changes to Current Title V Air Operation Permit: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

FACILITY INFORMATION

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Facilities Subject to Acid Rain, CAIR, or Hg Budget Program

<p>1. Acid Rain Program Forms:</p> <p>Acid Rain Part Application (DEP Form No. 62-210.900(1)(a)):</p> <p><input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____</p> <p><input checked="" type="checkbox"/> Not Applicable (not an Acid Rain source)</p> <p>Phase II NO_x Averaging Plan (DEP Form No. 62-210.900(1)(a)1.):</p> <p><input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____</p> <p><input checked="" type="checkbox"/> Not Applicable</p> <p>New Unit Exemption (DEP Form No. 62-210.900(1)(a)2.):</p> <p><input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____</p> <p><input checked="" type="checkbox"/> Not Applicable</p>
<p>2. CAIR Part (DEP Form No. 62-210.900(1)(b)):</p> <p><input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____</p> <p><input checked="" type="checkbox"/> Not Applicable (not a CAIR source)</p>

Additional Requirements Comment

EMISSIONS UNIT INFORMATION

Section [1] of [2]

EU 007: "C" Sulfuric Acid Plant

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 an initial, revised or renewal 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. 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 an 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 or 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. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes 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 [2]

EU 007: "C" Sulfuric Acid Plant

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.)
<input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
<input type="checkbox"/> 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)			
<input checked="" type="checkbox"/> 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).			
<input type="checkbox"/> 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.			
<input type="checkbox"/> 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: "C" Sulfuric Acid Plant			
3. Emissions Unit Identification Number: 007			
4. Emissions Unit Status Code: A	5. Commence Construction Date: As needed.	6. Initial Startup Date: NA	7. Emissions Unit Major Group SIC Code: 28
8. Federal Program Applicability: (Check all that apply)			
<input type="checkbox"/> Acid Rain Unit			
<input type="checkbox"/> CAIR Unit			
9. Package Unit: Manufacturer:		Model Number:	
10. Generator Nameplate Rating: MW			
11. Emissions Unit Comment: A construction permit period of 2 years is requested.			

EMISSIONS UNIT INFORMATION

Section [1] of [2]

EU 007: "C" Sulfuric Acid Plant

Emissions Unit Control Equipment/Method: Control 1 of 2

- | |
|---|
| 1. Control Equipment/Method Description:
Sulfuric Acid Plant – Double Contact Process |
| 2. Control Device or Method Code: 044 |

Emissions Unit Control Equipment/Method: Control 2 of 2

- | |
|--|
| 1. Control Equipment/Method Description:
High-Efficiency Mist Eliminator |
| 2. Control Device or Method Code: 014 |

EMISSIONS UNIT INFORMATION

Section [1] of [2]

EU 007: "C" Sulfuric Acid Plant

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: 007		2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: NA			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: NA			
5. Discharge Type Code: V	6. Stack Height: 199 feet	7. Exit Diameter: 9.2 feet	
8. Exit Temperature: 165 °F	9. Actual Volumetric Flow Rate: * acfm	10. Water Vapor: <1%	
11. Maximum Dry Standard Flow Rate: 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: * flow varies from 124,000 to 105,000 acfm. Flow range determined by calculation based stoichiometric chemistry of process.			

EMISSIONS UNIT INFORMATION

Section [1] of [2]

EU 007: "C" Sulfuric Acid Plant

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Industrial Processes → Chemical Manufacturing → Sulfuric Acid (Contact Process) → Absorber/@ 99.5% Conversion		
2. Source Classification Code (SCC): 3-01-023-04	3. SCC Units: Tons 100% H₂SO₄	
4. Maximum Hourly Rate: 123.4*	5. Maximum Annual Rate: 949,000**	6. Estimated Annual Activity Factor: N/A
7. Maximum % Sulfur:	8. Maximum % Ash: N/A	9. Million Btu per SCC Unit: N/A
10. Segment Comment: * Design capacity of 2962 tons per day. Operating 24 hour/day = 123.4 ton per hour ** 2600 ton per day limit per BART permit, 0570005-034-AC		

EMISSIONS UNIT INFORMATION

Section [1] of [2]
 EU 007: "C" Sulfuric Acid Plant

POLLUTANT DETAIL INFORMATION

Page [1] of [3] SO2

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

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions: N/A
3. Allowable Emissions and Units: 303.3 lb/hr	4. Equivalent Allowable Emissions: lb/hour 1329 tons/year
5. Method of Compliance: SO₂ and O₂ CEMS and NSPS Subpart H calcs.	
6. Allowable Emissions Comment (Description of Operating Method): Method of Compliance is based on Permit No. 0570005-034-AC and 048-AV.	

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**
 (Optional for unregulated emissions units.)

Complete a Subsection F1 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 operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: SAM		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 10.1 lb/hour 44.2 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: 0.093 lb ton 100% H₂SO₄ @ 2600 tpd Reference: Permit No. 0570005-034-AC.		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): See Table 1 tons/year		8.b. Baseline 24-month Period: See Table 1 From: To:	
9.a. Projected Actual Emissions (if required): See Table 2 tons/year		9.b. Projected Monitoring Period: <input checked="" type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Based on Permit No. 0570005-034-AC, three-hour average as determined by stack test data. 10.1 lb/hr = 0.093 lb SAM/ ton 100% H₂SO₄ @ 2600 tpd 10.1 lb/hr x 8760 hr/yr x 1/2000 lb/ton = 44.2 tons/year			
11. Potential, Fugitive, and Actual Emissions Comment:			

EMISSIONS UNIT INFORMATION

Section [1] of [2]
 EU 007: "C" Sulfuric Acid Plant

POLLUTANT DETAIL INFORMATION

Page [2] of [3] SAM

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

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions: N/A
3. Allowable Emissions and Units: 0.093 lb/ton SAM 100% H₂SO₄	4. Equivalent Allowable Emissions: 10.1 lb/hour 44.2 tons/year
5. Method of Compliance: EPA Method 8 – annual	
6. Allowable Emissions Comment (Description of Operating Method): Method of Compliance based on Permit No. 0570005-034-AC and 048-AV.	

EMISSIONS UNIT INFORMATION

Section [1] of [2]
 EU 007: "C" Sulfuric Acid Plant

POLLUTANT DETAIL INFORMATION

Page [3] of [3] NOx

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**

(Optional for unregulated emissions units.)

Complete a Subsection F1 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 operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: NOx		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 11.9 lb/hour 52.1 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: 0.11 lb NOx/ton 100% H₂SO₄ Reference: Permit No. 0570005-034-AC		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): See Table 1 tons/year		8.b. Baseline 24-month Period: See Table 1 From: To:	
9.a. Projected Actual Emissions (if required): See Table 2 tons/year		9.b. Projected Monitoring Period: <input checked="" type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Based on Permit No. 0570005-034-AC, three-hour average as determined by stack test data. 11.9 lb/hr = 0.11 lb SAM/ ton 100% H₂SO₄ @ 2600 tpd 11.9 lb/hr x 8760 hr/yr x 1/2000 lb/ton = 52.1 tons/year			
11. Potential, Fugitive, and Actual Emissions Comment:			

EMISSIONS UNIT INFORMATION

Section [1] of [2]
 EU 007: "C" Sulfuric Acid Plant

POLLUTANT DETAIL INFORMATION

Page [3] of [3] NO_x

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

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions: N/A
3. Allowable Emissions and Units: 0.11 lb NO_x/ton 100% H₂SO₄	4. Equivalent Allowable Emissions: 11.9 lb/hour 52.1 tons/year
5. Method of Compliance: EPA Method 7E- annual	
6. Allowable Emissions Comment (Description of Operating Method): Method of Compliance based on Permit No. 0570005-034-AC and 048-AV.	

EMISSIONS UNIT INFORMATION

Section [1] of [2]

EU 007: "C" Sulfuric Acid Plant

G. VISIBLE EMISSIONS INFORMATION

Complete Subsection G 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: VE10	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 10 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: See Comment min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment: Visible emissions shall not exceed 10% opacity, except during start-up, shutdown, or malfunction, pursuant to Rule 62-210.700, F.A.C. Duration of excess emissions shall be minimized, but in no case exceed two hours in any 24-hour period unless specifically authorized by the Department for longer duration.	

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] of [2]

EU 007: "C" Sulfuric Acid Plant

H. CONTINUOUS MONITOR INFORMATION**Complete Subsection H if this emissions unit is or would be subject to continuous monitoring.****Continuous Monitoring System:** Continuous Monitor 1 of 2

1. Parameter Code: EM	2. Pollutant(s): SO2
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Dupont Model Number: 460-002-901	Serial Number:
5. Installation Date: 1991	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <u>Requirement:</u> Based on Rule 62-296.402, F.A.C. and Permit No. 0570005-034-AC.	

Continuous Monitoring System: Continuous Monitor 2 of 2

1. Parameter Code: EM	2. Pollutant(s): O2
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Yokogawa Model Number: ZR402G	Serial Number:
5. Installation Date: July 2004	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <u>Requirement</u> for NSPS Subpart H calculations	

EMISSIONS UNIT INFORMATION

Section [1] of [2]

EU 007: "C" Sulfuric Acid Plant

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 type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date <u>2010</u>
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: <u>NA</u> <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 type="checkbox"/> Attached, Document ID: <u>NA</u> <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 checked="" type="checkbox"/> Previously Submitted, Date <u>2010</u> <input 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 1 <input type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [1] of [2]

EU 007: "C" Sulfuric Acid Plant

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

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 (Rules 62-212.400(4)(d) and 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 checked="" type="checkbox"/> Attached, Document ID: Attachment 1
2. Compliance Assurance Monitoring: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

Additional Requirements Comment

EMISSIONS UNIT INFORMATION

Section [2] of [2]

EU 008: "D" Sulfuric Acid Plant

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 an initial, revised or renewal 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. 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 an 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 or 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. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes 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 [2] of [2]
EU 008: "D" Sulfuric Acid Plant

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.)
<input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
<input type="checkbox"/> 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)			
<input checked="" type="checkbox"/> 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).			
<input type="checkbox"/> 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.			
<input type="checkbox"/> 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: "D" Sulfuric Acid Plant			
3. Emissions Unit Identification Number: 008			
4. Emissions Unit Status Code: A	5. Commence Construction Date: As needed.	6. Initial Startup Date: NA	7. Emissions Unit Major Group SIC Code: 28
8. Federal Program Applicability: (Check all that apply)			
<input type="checkbox"/> Acid Rain Unit			
<input type="checkbox"/> CAIR Unit			
9. Package Unit: Manufacturer:		Model Number:	
10. Generator Nameplate Rating: MW			
11. Emissions Unit Comment: A construction permit period of 2 years is requested.			

EMISSIONS UNIT INFORMATION

Section [2] of [2]

EU 008: "D" Sulfuric Acid Plant

Emissions Unit Control Equipment/Method: Control 1 of 2

1. Control Equipment/Method Description:
Sulfuric Acid Plant – Double Contact Process

2. Control Device or Method Code: **044**

Emissions Unit Control Equipment/Method: Control 2 of 2

1. Control Equipment/Method Description:
High-Efficiency Mist Eliminator

2. Control Device or Method Code: **014**

EMISSIONS UNIT INFORMATION

Section [2] of [2]

EU 008: "D" Sulfuric Acid Plant

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:
2. Maximum Production Rate: 2600 TPD of 100% H₂SO₄
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:

EMISSIONS UNIT INFORMATION

Section [2] of [2]

EU 008: "D" Sulfuric Acid Plant

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: 008		2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: NA			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: NA			
5. Discharge Type Code: V	6. Stack Height: 199 feet	7. Exit Diameter: 9.2 feet	
8. Exit Temperature: 165 °F	9. Actual Volumetric Flow Rate: * acfm	10. Water Vapor: <1 %	
11. Maximum Dry Standard Flow Rate: 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: * flow varies from 124,000 to 105,000 acfm. Flow range determined by calculation based stoichiometric chemistry of process.			

EMISSIONS UNIT INFORMATION

Section [2] of [2]

EU 008: "D" Sulfuric Acid Plant

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Industrial Processes → Chemical Manufacturing → Sulfuric Acid (Contact Process) → Absorber/@ 99.5% Conversion		
2. Source Classification Code (SCC): 3-01-023-04		3. SCC Units: Tons 100% H₂SO₄
4. Maximum Hourly Rate: 123.4*	5. Maximum Annual Rate: 949,000**	6. Estimated Annual Activity Factor: N/A
7. Maximum % Sulfur:	8. Maximum % Ash: N/A	9. Million Btu per SCC Unit: N/A
10. Segment Comment: * Design capacity of 2962 tons per day. Operating 24 hour/day = 123.4 ton per hour ** 2600 ton per day limit per BART permit, 0570005-034-AC		

EMISSIONS UNIT INFORMATION

Section [2] of [2]
 EU 008: "D" Sulfuric Acid Plant

POLLUTANT DETAIL INFORMATION

Page [1] of [3] SO2

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS
 (Optional for unregulated emissions units.)**

Complete a Subsection F1 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 operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: SO2		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 303.3 lb/hour 1329 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: 303.3 lb/hr Reference: Permit No. 0570005-034-AC		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): See Table 1 tons/year		8.b. Baseline 24-month Period: See Table 1 From: To:	
9.a. Projected Actual Emissions (if required): See Table 2 tons/year		9.b. Projected Monitoring Period: <input checked="" type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Based on Permit No. 0570005-034-AC, 24-hour (daily) block CEMS average.			
11. Potential, Fugitive, and Actual Emissions Comment:			

EMISSIONS UNIT INFORMATION

Section [2] of [2]
 EU 008: "D" Sulfuric Acid Plant

POLLUTANT DETAIL INFORMATION

Page [1] of [3] SO2

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

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions: N/A
3. Allowable Emissions and Units: 303.3 lb/hr	4. Equivalent Allowable Emissions: lb/hour 1329 tons/year
5. Method of Compliance: SO₂ and O₂ CEMS and NSPS Subpart H calcs	
6. Allowable Emissions Comment (Description of Operating Method): Method of Compliance is based on Permit No. 0570005-034-AC and 048-V.	

EMISSIONS UNIT INFORMATION

Section [2] of [2]
 EU 008: "D" Sulfuric Acid Plant

POLLUTANT DETAIL INFORMATION

Page [2] of [3] SAM

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS
 (Optional for unregulated emissions units.)**

Complete a Subsection F1 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 operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: SAM		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 10.1 lb/hour 44.2 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: 0.093 lb ton 100% H₂SO₄ @ 2600 tpd Reference: Permit No. 0570005-034-AC.		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): See Table 1 tons/year		8.b. Baseline 24-month Period: See Table 1 From: To:	
9.a. Projected Actual Emissions (if required): See Table 2 tons/year		9.b. Projected Monitoring Period: <input checked="" type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Based on Permit No. 0570005-034-AC, three-hour average as determined by stack test data. 10.1 lb/hr = 0.093 lb SAM/ ton 100% H₂SO₄ @ 2600 tpd 10.1 lb/hr x 8760 hr/yr x 1/2000 lb/ton = 44.2 tons/year			
11. Potential, Fugitive, and Actual Emissions Comment:			

EMISSIONS UNIT INFORMATION

Section [2] of [2]
 EU 008: "D" Sulfuric Acid Plant

POLLUTANT DETAIL INFORMATION

Page [2] of [3] SAM

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

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions: N/A
3. Allowable Emissions and Units: 0.093 lb/ton SAM 100% H₂SO₄	4. Equivalent Allowable Emissions: 10.1 lb/hour 44.2 tons/year
5. Method of Compliance: EPA Method 8-annual	
6. Allowable Emissions Comment (Description of Operating Method): Method of Compliance based on Permit No. 0570005-034-AC and 048-AV.	

EMISSIONS UNIT INFORMATION

Section [2] of [2]
 EU 008: "D" Sulfuric Acid Plant

POLLUTANT DETAIL INFORMATION

Page [3] of [3] NOx

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS
 (Optional for unregulated emissions units.)**

Complete a Subsection F1 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 operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: NOx		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 11.9 lb/hour 52.1 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: 0.11 lb NOx/ton 100% H₂SO₄ Reference: Permit No. 0570005-034-AC		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): See Table 1 tons/year		8.b. Baseline 24-month Period: See Table 1 From: To:	
9.a. Projected Actual Emissions (if required): See Table 2 tons/year		9.b. Projected Monitoring Period: <input checked="" type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Based on Permit No. 0570005-034-AC, three-hour average as determined by stack test data. 11.9 lb/hr = 0.11 lb SAM/ ton 100% H₂SO₄ @ 2600 tpd 11.9 lb/hr x 8760 hr/yr x 1/2000 lb/ton = 52.1 tons/year			
11. Potential, Fugitive, and Actual Emissions Comment:			

EMISSIONS UNIT INFORMATION

Section [2] of [2]

EU 008: "D" Sulfuric Acid Plant

POLLUTANT DETAIL INFORMATION

Page [3] of [3]

NOx

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS****Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.****Allowable Emissions** Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions: N/A
3. Allowable Emissions and Units: 0.11 lb NOx/ton 100% H₂SO₄	4. Equivalent Allowable Emissions: 11.9 lb/hour 52.1 tons/year
5. Method of Compliance: EPA Method 7E-annual	
6. Allowable Emissions Comment (Description of Operating Method): Method of Compliance based on Permit No. 0570005-034-AC and 048-AV.	

EMISSIONS UNIT INFORMATION

Section [2] of [2]
EU 008: "D" Sulfuric Acid Plant

G. VISIBLE EMISSIONS INFORMATION

Complete Subsection G 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: VE10	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 10 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: See Comment min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment: Visible emissions shall not exceed 10% opacity, except during start-up, shutdown, or malfunction, pursuant to Rule 62-210.700, F.A.C. Duration of excess emissions shall be minimized, but in no case exceed two hours in any 24-hour period unless specifically authorized by the Department for longer duration.	

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 [2] of [2]
EU 008: "D" Sulfuric Acid Plant

H. CONTINUOUS MONITOR INFORMATION

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

Continuous Monitoring System: Continuous Monitor 1 of 2

1. Parameter Code: EM	2. Pollutant(s): SO2
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Dupont Model Number: 460-002-901	Serial Number:
5. Installation Date: 1991	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Requirement: Based on Rule 62-296.402, F.A.C. and Permit No. 0570005-034-AC.	

Continuous Monitoring System: Continuous Monitor 2 of 2

1. Parameter Code: EM	2. Pollutant(s): O2
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Yokogawa Model Number: ZR402G	Serial Number:
5. Installation Date: April 2005	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Requirement for NSPS Subpart H calculations	

EMISSIONS UNIT INFORMATION

Section [2] of [2]
EU 008: "D" Sulfuric Acid Plant

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 type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date <u>2010</u>
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: <u>NA</u> <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 type="checkbox"/> Attached, Document ID: <u>NA</u> <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 checked="" type="checkbox"/> Previously Submitted, Date <u>2010</u> <input 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: <u>Attachment 1</u> <input type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section **[2]** of **[2]**

EU 008: "D" Sulfuric Acid Plant

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

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 (Rules 62-212.400(4)(d) and 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 checked="" type="checkbox"/> Attached, Document ID: <u>Attachment 1</u>
2. Compliance Assurance Monitoring: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

Additional Requirements Comment

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ATTACHMENT 1

CONVERTERS MAINTENANCE PROJECT C & D SULFURIC ACID PLANTS

PROJECT BACKGROUND

There are four existing sulfuric acid plants at CF's Plant City facility. These sulfuric acid plants utilize converters in the process.

CF proposes to perform maintenance which includes the replacement of damaged and deteriorated internal components of the existing "C" and "D" Sulfuric Acid Plant converters including the posts (see Attachment 2), grids, division plates and support rings. The grid supports will be upgraded and the diameter of the new replacement posts will be increased from 3 to 4 inches to provide extra support to avoid the buckling problems currently encountered and in case of any future changes in the weight of the catalyst. Portions of the converter shells will be repaired or replaced as necessary.

Each unit's capacity is limited by an enforceable production limit of 2,600 TPD which was established by permit to avoid applicability of "Best Available Retrofit Technology." The units have operated at or near this maximum permitted production level since the limit was established. That limit will remain in effect.

As shown in Table 2, no increase in actual emissions is projected for future years as a result of the proposed project.

AIR EMISSIONS

Emissions calculations are presented in Tables 1, 2 and 3. The maintenance and replacement project being undertaken on the C and D Sulfuric Acid Plants will not result in a significant increase in emissions when the "baseline actual emissions" are compared to the "projected actual emissions" as provided for under Rules 62-212.400(2)(a)1 and 62-210.200(252), F.A.C. In determining the units' "projected actual emissions," consistent with these rules and as shown in Table 2, the applicant has properly excluded the portion of emissions following completion of the converter project that the units could have accommodated during the 24-month period used to establish the baseline actual emissions and that are unrelated to the project. An adjustment is made to the Future Actual Emissions to account for increases in SO₂ emissions that will be caused by the gradual pressure drop increases that will result in reduced air flows and also catalyst degradation over time, and which are unrelated to this project, and thus excluded from the Projected Actual Emissions.

Prior to September 1, 2010, these units were achieving sulfuric acid production rates much higher than the current, per-unit limit of 2,600 TPD. To avoid applicability of "Best Available Retrofit Technology," CF accepted the 2,600 TPD

limits for each of the units. The proposed project is not intended to regain any lost capacity because each of the units can easily achieve sulfuric acid production rates of 2,600 TPD. CF intends to operate the units in the future to achieve approximately 95 percent of the maximum permitted capacity, which on an annual basis is 901,550 tons of sulfuric acid production, per unit. CF therefore estimated its future "projected actual emissions" assuming a 95 percent capacity factor and an annual production level of 901,550 tons of sulfuric acid. The units were capable of achieving this production level during 2011 and 2012, and these are the years selected to establish baseline actual emissions. It should be noted that "C" SAP had an annual acid production rate of over 901,550 TPY in 2005, 2006, and 2007, and "D" SAP had an annual production rate over 901,550 TPY in 2011. Because the projected increase is unrelated to the proposed converter maintenance project, CF has excluded the emissions associated with the production increase from the calculation of "projected actual emissions."

Baseline actual SO₂ emissions are based on CEMs data and actual production rates. Future actual SO₂ emissions are based on two factors: (i) the projected production rate, which is discussed above; and (ii) the projected emission rate in lb/ton of sulfuric acid produced. The projected emission rate for "C" SAP and "D" SAP will not be impacted by the proposed converter maintenance project. For purposes of this application, we have used an emission factor of 2.8 lb/ton acid, which is equivalent to the emissions limit of 303.3 lb/hr at the permitted acid production rate of 2600 TPD. The actual future sulfur dioxide emissions rate for the "C" and "D" plants typically rise during an operating period (turn around to turn around) due to decreased catalyst activity and removal efficiency and increased dust loading in the converter, which causes increased pressure drop, reduced air flow, and a higher inlet concentration of sulfur dioxide to the converter. In addition, because the amount of dust loading is not uniform during each operating period and is not controllable by the operator, there will be variability in the sulfur dioxide emission rate from one operating period to another. These projected increases in sulfur dioxide emissions are unrelated to the proposed converter maintenance project, and CF therefore excluded those emissions, as discussed above, from the calculation of "projected actual emissions" for future years. Historical CEMs data are presented as Attachment 3 on a disk.

The baseline and future emission factors for sulfuric acid mist (SAM) and nitrogen oxides (NO_x) are based on the permitted emission rates, which are the most accurate emission factors for purposes of this analysis. The short-term emission limits are being used as the emission factors for SAM and NO_x, because changing out structural components in the converter will not affect short-term emission rates, and the use of a consistent factor before and after the project will ensure an appropriate comparison of baseline emissions to projected actual emissions, focusing on increases in production rates only. Also, these emissions factors are reasonable in view of the variability and extent of historical stack testing data documented in Table 3, per 62-210.370(2)(d)1, F.A.C. Emissions of these two pollutants are largely independent of turnaround cycle

and production capacity. The range of stack testing results is indicative of the independence. Because annual stack testing to determine SAM and NOx emission factors typically reflects just a 3-hour snapshot out of 8760 hours, and because test results have historically approached the permitted emission factors, CF proposes to use the SAM and NOx emission limits as the most accurate emission factors for the purposes of the emissions analyses for this particular project.

RULE APPLICABILITY

The proposed project is subject to Rule 62-210, 212, 213, 296 and 297, FAC, but is not subject to PSD review under Rule 62-212.400, FAC. Because the proposed project is not expected to result in any increase in air emissions, CF requests that the monitoring, reporting and recordkeeping not be required pursuant to Rule 62-212.300(1)(e), FAC, as these provisions apply only when the Department determines that the emissions could increase as a result of the project.

The applicable requirements are addressed in the current Title V permit, 0570005-048-AV.

The facility is operating in compliance with the requirements of the current air permits. It is anticipated that a compliance plan will not be required for the permitting of the proposed project.

TABLE 1 - BASELINE EMISSIONS
 EU 007, C SAP and EU008, D SAP - CF INDUSTRIES, PLANT CITY

SAP	YEAR	Actual 12-month Production (1)	Emission	Emission	Annual	Annual	Annual
			Factor (4) SAM lb/ton	Factor (4) NOX lb/ton	Emission Rate (2) SO2 tons/yr	Emission Rate (3) SAM tons/yr	Emission Rate (3) NOX tons/yr
C	2010	788,115	0.093	0.11	733.9		
	2011	854,166	0.093	0.11	626.0		
	2012	870,519	0.093	0.11	586.9		
	11-12 avg.	862,343	0.093	0.11	606.5	40.1	47.4
D	2010	766,193	0.093	0.11	866.4		
	2011	916,661	0.093	0.11	472.1		
	2012	879,912	0.093	0.11	583.0		
	11-12 avg.	898,287	0.093	0.11	527.6	41.8	49.4
C&D Total					1134.0	81.9	96.8

Notes:

1. Baseline based on 2011-2012 because new production limits and 24-hour SO2 limits began to apply on 9-1-2010.
2. SO2 emissions based on CEMS data and calculations per 0570005-048-AV, SC B.18.
3. SAM and NOx based on annual production rate and representative emission factors.
4. See Table 3 for representative SAM and NOx emission factors, considering stack test data.

TABLE 2 - PROJECTED ACTUAL EMISSIONS
EU 007, C SAP and EU008, D SAP - CF INDUSTRIES, PLANT CITY

EMISSIONS DESCRIPTION	C SAP lb/ton	D SAP lb/ton	SAP Projected Capacity 100% H2SO4 (5)	EU007			EU008		
				C SAP SO2 tpy	C SAP SAM tpy	C SAP NOX tpy	D SAP SO2 tpy	D SAP SAM tpy	D SAP NOX tpy
Present Potential to Emit (PTE)				1329	44.2	52.1	1329	44.2	52.1
Baseline Actual Emissions (1)				606.5	40.1	47.4	527.6	41.8	49.4
Future Actual Emissions (2)									
SO2	2.8	2.8	901550	1262.2			1262.2		
SAM (3)	0.093	0.093	901550		41.9			41.9	
NOX (3)	0.11	0.11	901550			49.6			49.6
Adjustment for increases not related to the project (4)				655.7	1.8	2.2	734.6	0.2	0.2
Projected Actual Emissions (4)				606.5	40.1	47.4	527.6	41.8	49.4
Net Emissions Increases due to project				0.0	0.0	0.0	0.0	0.0	0.0
PSD Significant Level				40	7	40	40	7	40
PSD Review Required?				NO	NO	NO	NO	NO	NO

NOTES:

- (1) Baseline emissions based on operations for 2011-2012, representative of operations restricted by 034-AC (see Table 1).
- (2) Identical emission factors are used for C and D since they are similar units. SO2 emissions are based on actual month of operation at average of 2.8 lb/ton 100% H2SO4; SAM and NOX values are from Table 3 and reflect allowable emissions EFs.
- (3) Unlike SO2, SAM and NOx emissions do not depend on turnaround cycle.
- (4) The proposed project is not expected to result in an emissions increase. The adjustment is the difference between future and baseline actual emissions that is unrelated to this project. The SO2 emissions increases are caused by gradual pressure drop increases that result in reduced air flows and also catalyst degradation over time.
- (5) Future Target Production = 2600 tpd x 365 day/yr x 95% = 901,550 tons per year (100% H2SO4). Actual historical production under previous permit was as high as 933,000 tpy. SO2 emissions significantly affected by turnaround cycles. Post 9-1-2010 data are not representative of emissions for full turnaround cycle. Highest potential emissions occur during the later part of the turnaround cycle which has not occurred for the current turnaround cycle.

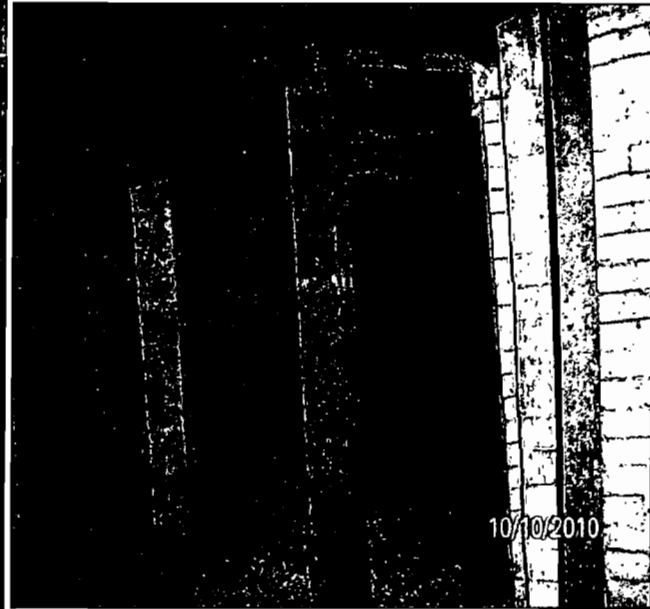
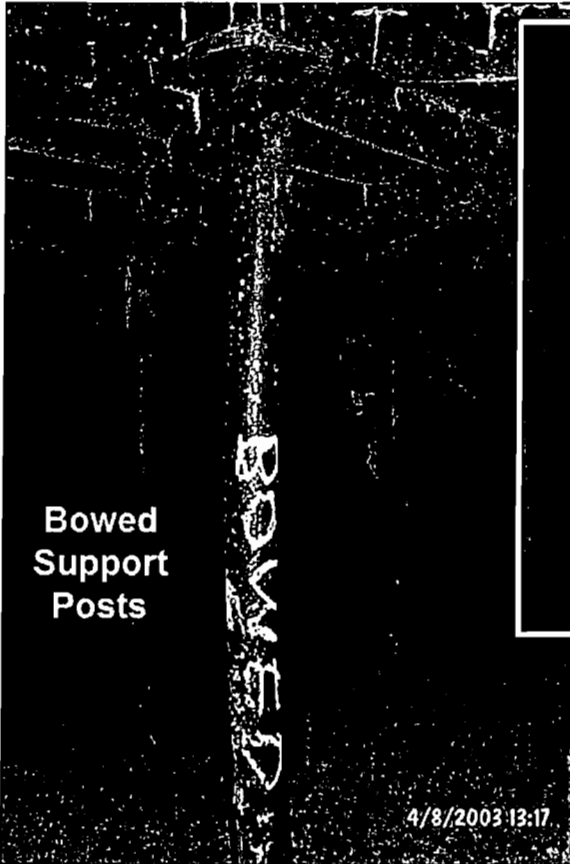
TABLE 3 - HISTORICAL STACK TEST DATA
 EU 007, C SAP and EU008, D SAP - CF INDUSTRIES, PLANT CITY

SAP	Date	TPD Acid	SO2(lb/ton)	SO2(lb/hr)	SAM(lb/ton)	SAM(lb/hr)	NOx(lb/ton)	NOx(lb/hr)
C	08-Jan-08	2,726	1.97	223.3	0.019	2.20	0.123	-
C	26-Mar-08	2,712	-	-	-	-	0.110	-
C	08-Apr-08	2,760	2.97	342.0	0.035	4.00	0.090	-
C	05-Mar-09	2,849	3.06	363.3	0.039	4.61	0.105	-
C	23-Apr-10	2,663	3.01	334.0	0.044	4.85	0.091	10.10
OPERATION UNDER 034-AC AFTER 9-1-2010; NO PLANT MODIFICATION								
C	25-Jan-11	2,585	-	-	0.041	4.45	0.070	7.54
C	26-Jan-12	2,550	-	-	0.044	4.69	0.089	9.42
C	06-Feb-13	2,560	-	-	0.045	4.78	0.090	9.63
Maximum					0.045		0.12	
D	10-Jan-08	2,467	2.77	285.0	0.071	7.30	0.093	-
D	02-Apr-08	2,807	2.67	312.7	0.023	2.67	0.080	-
D	17-Mar-09	2,671	2.97	330.6	0.026	2.93	0.095	-
D	12-Jan-10	2,550	3.15	335.0	0.049	5.17	0.073	7.76
OPERATION UNDER 034-AC AFTER 9-1-2010; NO PLANT MODIFICATION								
D	11-Jan-11	2,561	-	-	0.044	4.65	0.066	7.08
D	10-Jan-12	2,553	-	-	0.046	4.91	0.085	9.06
D	06-Feb-13	2,556	-	-	0.010	1.10	0.094	10.00
Maximum					0.071		0.10	
Highest SAM and NOX values since 2008 for C/D:					0.071		0.12	
Current Permit Limit:					0.093		0.11	
Factor used for Baseline and Future Actual Emissions (see Table 2)					0.093		0.11	

NOTE: (1) SO2 stack testing not needed after operating under 034-AC (CEMS requirement).

(2) The allowable emissions EFs for SAM and NOx are considered representative given the variability of stack test results.

ATTACHMENT 2
BOWED CONVERTER SUPPORT POSTS



In an attempt to reduce further bowing, most posts have been encased in angle iron or brick.

ATTACHMENT 3

SULFURIC ACID PLANTS C and D CEMS DATA

(PROVIDED ON DISK)