

Department of Environmental Protection

RECEIVED

Division of Air Resource Management

AUG 27 2009

APPLICATION FOR AIR PERMIT - LONG FORM

BUREAU OF AIR REGULATION

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.

**D.E.P
SOUTHWEST DISTRICT**

JUL 23 2009

To ensure accuracy, please see form instructions.

Identification of Facility

1. Facility Owner/Company Name: CF Industries, Inc.		TAMPA
2. Site Name: Plant City Phosphate Complex		
3. Facility Identification Number: 0570005		
4. Facility Location... Street Address or Other Locator: 10608 Paul Buchman Highway City: Plant City County: Hillsborough Zip Code: 33565		
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: P.O. 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@cfifl.com		

Application Processing Information (DEP Use)

1. Date of Receipt of Application: 7/23/09	3. PSD Number (if applicable): 355A
2. Project Number(s): 0570005-035-AC	4. Siting Number (if applicable):

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 application is submitted for a construction permit to install an additional acid clarifier in each the "A" and "B" Phosphoric Acid Plants (EU Nos. 004 and 009).

APPLICATION INFORMATION

Owner/Authorized Representative Statement

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

1. Owner/Authorized Representative Name : Ronald L. Brunk, Superintendent Environmental Affairs
2. Owner/Authorized Representative Mailing Address... Organization/Firm: CF Industries, Inc. Street Address: 10608 Paul Buchman Highway City: Plant City State: FL Zip Code: 33565
3. Owner/Authorized Representative Telephone Numbers... Telephone: (813) 364-5753 ext. Fax: (813) 788-9126
4. Owner/Authorized Representative E-mail Address: rbrunk@cfifl.com
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 <u>23 JUL 09</u> 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:			
2. Application Responsible Official Qualification (Check one or more of the following options, as applicable):			
<input type="checkbox"/> For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C.			
<input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively.			
<input type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.			
<input type="checkbox"/> The designated representative at an Acid Rain source, CAIR source, or Hg Budget 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 E-mail Address:			
6. Application Responsible Official Certification:			
<i>I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.</i>			
_____ Signature		_____ Date	

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: 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 checked="" type="checkbox"/>, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.</i> <i>(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.</i> Signature: _____ (seal) Date: <u>7/20/2009</u>

* Attach any exception to certification statement.

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: <u>10/05</u>
2. Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: <u>10/05</u>
3. Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: <u>10/05</u>

Additional Requirements for Air Construction Permit Applications

1. Area Map Showing Facility Location: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable (existing permitted facility)
2. Description of Proposed Construction, Modification, or Plantwide Applicability Limit (PAL): <input checked="" type="checkbox"/> Attached, Document ID: <u>Attachment 1</u>
3. Rule Applicability Analysis: <input checked="" type="checkbox"/> Attached, Document ID: <u>Attachment 1</u>
4. List of Exempt Emissions Units: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable (no exempt units at facility)
5. Fugitive Emissions Identification: <input checked="" type="checkbox"/> Attached, Document ID: <u>Attachment 1</u> <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 NA

1. List of Insignificant Activities: (Required for initial/renewal applications only) <input type="checkbox"/> Attached, Document ID: _____ <input 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 type="checkbox"/> Attached, Document ID: _____ <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 type="checkbox"/> 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.
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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 type="checkbox"/> Not Applicable
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5. Verification of Risk Management Plan Submission to EPA: (If applicable, required for initial/renewal applications only) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

6. Requested Changes to Current Title V Air Operation Permit: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
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EMISSIONS UNIT INFORMATION

Section [1] of [2]

EU 004: "A" Phosphoric 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 004: "A" Phosphoric 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.)
- 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:
"A" Phosphoric Acid Plant

3. Emissions Unit Identification Number: **004**

4. Emissions Unit Status Code: A	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: 28
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8. Federal Program Applicability: (Check all that apply)
- Acid Rain Unit
 - CAIR Unit
 - Hg Budget Unit

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

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:

EMISSIONS UNIT INFORMATION

Section [1] of [2]

EU 004: "A" Phosphoric Acid Plant

Emissions Unit Control Equipment/Method: Control 1 of 1

1. Control Equipment/Method Description:

Wet cyclonic scrubber followed by a packed bed scrubber with "Kimre" or equivalent packing.

2. Control Device or Method Code: **013, 085**

EMISSIONS UNIT INFORMATION

Section [1] of [2]

EU 004: "A" Phosphoric 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: 004		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: V		6. Stack Height: 85 feet		7. Exit Diameter: 5.0 feet	
8. Exit Temperature: 120 °F		9. Actual Volumetric Flow Rate: 49,900 acfm		10. Water Vapor: 8.2 %	
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:					

EMISSIONS UNIT INFORMATION

Section [1] of [2]

EU 004: "A" Phosphoric Acid Plant

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Chemical Manufacturing; Phosphoric Acid: Wet Process; Reactor		
2. Source Classification Code (SCC): 3-01-016-01		3. SCC Units: Tons Processed
4. Maximum Hourly Rate: 70.8	5. Maximum Annual Rate: 620,208	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: Max. annual rate based on 1,699 tons/day P₂O₅ input.		

EMISSIONS UNIT INFORMATION

Section [1] of [2]

EU 004: "A" Phosphoric Acid Plant

POLLUTANT DETAIL INFORMATION

Page [1] of [1] Fluorides

**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: FL		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 0.85 lb/hour 3.7 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.012 lb/ton equivalent P₂O₅ feed Reference: BACT		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: F = 0.012 lb/ton x 70.8 tph = 0.85 lb/hr X 8760 hrs x ton/2000 lbs = 3.7 tpy			
11. Potential, Fugitive, and Actual Emissions Comment:			

EMISSIONS UNIT INFORMATION

Section [1] of [2]
 EU 004: "A" Phosphoric Acid Plant

POLLUTANT DETAIL INFORMATION

Page [1] of [1] Fluorides

**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 3

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.012 lb/ton P₂O₅ input	4. Equivalent Allowable Emissions: 0.85 lb/hour 3.7 tons/year
5. Method of Compliance: EPA Method 13A or 13B	
6. Allowable Emissions Comment (Description of Operating Method): BACT (PSD-FL-355).	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.40 lb/ton P₂O₅ input	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: EPA Method 13A or 13B	
6. Allowable Emissions Comment (Description of Operating Method): Rule 62-296.403(2), F.A.C. Allowable emissions applies to the entire facility.	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.02 lb/ton P₂O₅ input	4. Equivalent Allowable Emissions: 1.42 lb/hour tons/year
5. Method of Compliance: EPA Method 13A or 13B	
6. Allowable Emissions Comment (Description of Operating Method): 40 CFR 63.602(a)	

EMISSIONS UNIT INFORMATION

Section [1] of [2]
EU 004: "A" Phosphoric 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 3

1. Parameter Code: Mass Flow Rate	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Continuous monitoring of phosphorus-bearing feed material to the process. 40 CFR 63.605(a)(1) Continuous monitoring of rock slurry flow and periodic monitoring of slurry percent-solids, percent-P₂O₅ and specific gravity.	

Continuous Monitoring System: Continuous Monitor 2 of 3

1. Parameter Code: PRS	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Continuous monitoring of pressure drop across the scrubbing system. 40 CFR 63.605(c)(1)	

EMISSIONS UNIT INFORMATION

Section [1] of [2]

EU 004: "A" Phosphoric 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 checked="" type="checkbox"/> Attached, Document ID: <u>Attachment 2</u> <input type="checkbox"/> Previously Submitted, Date _____
2. Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____
3. Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date <u>3/06</u>
4. Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records: <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> Not Applicable <p>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.</p>
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 009: "B" Phosphoric 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 009: "B" Phosphoric 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.)

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:
"B" Phosphoric Acid Plant

3. Emissions Unit Identification Number: **009**

4. Emissions Unit Status Code: A	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: 28
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8. Federal Program Applicability: (Check all that apply)

Acid Rain Unit

CAIR Unit

Hg Budget Unit

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

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:

EMISSIONS UNIT INFORMATION

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EU 009: "B" Phosphoric Acid Plant

Emissions Unit Control Equipment/Method: Control 1 of 1

1. Control Equipment/Method Description:

Packaged bed scrubber with "Kimre" or equivalent packing.

2. Control Device or Method Code: **013**

EMISSIONS UNIT INFORMATION

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EU 009: "B" Phosphoric Acid Plant

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 2,530 TPD as 100% P₂O₅ input
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:

EMISSIONS UNIT INFORMATION

Section [2] of [2]

EU 009: "B" Phosphoric 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: 009		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: V	6. Stack Height: 119 feet	7. Exit Diameter: 4.0 feet	
8. Exit Temperature: 116 °F	9. Actual Volumetric Flow Rate: 34,300 acfm	10. Water Vapor: 8.4 %	
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:			

EMISSIONS UNIT INFORMATION

Section [2] of [2]

EU 009: "B" Phosphoric Acid Plant

D. SEGMENT (PROCESS/FUEL) INFORMATION**Segment Description and Rate:** Segment 1 of 1

1. Segment Description (Process/Fuel Type): Chemical Manufacturing; Phosphoric Acid: Wet Process; Reactor		
2. Source Classification Code (SCC): 3-01-016-01		3. SCC Units: Tons Processed
4. Maximum Hourly Rate: 105.4	5. Maximum Annual Rate: 923,304	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: Max. annual rate based on maximum daily rate of 2,530 tons/day 100% P₂O₅.		

**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: FL		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 1.26 lb/hour 5.5 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.012 lb/ton equivalent P₂O₅ feed Reference: BACT		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: F= 0.012 lb/ton x 105.4 tph = 1.26 lb/hr X 8760 hrs x ton/2000 lbs = 5.5 tpy			
11. Potential, Fugitive, and Actual Emissions Comment:			

**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 3

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.012 lb/ton P₂O₅ input	4. Equivalent Allowable Emissions: 1.26 lb/hour 5.5 tons/year
5. Method of Compliance: EPA Method 13A or 13B	
6. Allowable Emissions Comment (Description of Operating Method): BACT (PSD-FL-355).	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.40 lb/ton P₂O₅ input	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: EPA Method 13A or 13B	
6. Allowable Emissions Comment (Description of Operating Method): Rule 62-296.403(2), F.A.C. Allowable emission applies to the entire facility.	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.02 lb/ton P₂O₅ input	4. Equivalent Allowable Emissions: 2.11 lb/hour tons/year
5. Method of Compliance: EPA 13A or 13B	
6. Allowable Emissions Comment (Description of Operating Method): 40 CFR 63.602(a)	

EMISSIONS UNIT INFORMATION

Section [2] of [2]
 EU 009: "B" Phosphoric 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 3

1. Parameter Code: Mass Flow Rate	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Continuous monitoring of the mass flow of phosphorous-bearing feed material to the process. 40 CFR 63.605(a)(1) Continuous monitoring of rock slurry flow and periodic monitoring of slurry percent-solids, percent-P₂O₅ and specific gravity.	

Continuous Monitoring System: Continuous Monitor 2 of 3

1. Parameter Code: PRS	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Continuous monitoring of pressure drop across the scrubbing system. 40 CFR 63.605(c)(1)	

EMISSIONS UNIT INFORMATION

Section [2] of [2]

EU 009: "B" Phosphoric Acid Plant

H. CONTINUOUS MONITOR INFORMATION (CONTINUED)

Continuous Monitoring System: Continuous Monitor 3 of 3

1. Parameter Code: FLOW	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: Continuous monitoring of scrubbing liquid flow rate. 40 CFR 63.605(c)(2)	

EMISSIONS UNIT INFORMATION

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EU 009: "B" Phosphoric 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 checked="" type="checkbox"/> Attached, Document ID: Attachment 2 <input type="checkbox"/> Previously Submitted, Date _____
2. Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____
3. Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date 3/06
4. Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records: <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> Not Applicable Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7. Other Information Required by Rule or Statute: <input type="checkbox"/> Attached, Document ID: Attachment 1 <input type="checkbox"/> Not Applicable

ATTACHMENT 1

INSTALLATION OF CLARIFIER TANKS AND AUXILIARY EQUIPMENT IN "A" AND "B" PHOSPHORIC ACID PLANTS

PROJECT BACKGROUND

CF Industries, Inc. proposes to install two new 80ft diameter acid clarifier tanks, one in "A" Phosphoric Acid Plant and one in "B" Phosphoric Acid Plant in order to facilitate maintenance activity for various tanks and to maintain adequate acid clarification capacity. Auxiliary equipment and the necessary piping will be installed to allow for acid feed, product acid, cleaning and acid sludge transfers. The auxiliary equipment will include flocculent storage, flocculent and acid mixing, clarifier product pump tanks, clarifier product tanks and sludge tanks.

Piping will be installed to allow the transfer and processing of phosphoric acid varying in strength from around 26 to 54 percent, in order to maintain flexibility in operations and meet market demands. Updated process flow diagrams are presented in Attachment 2.

AIR EMISSIONS

The proposed clarifiers will be ducted to the existing scrubbing systems. Using damper controls, the additional air flow from the clarifiers are expected to be offset by a reduction in the air pulled from the other tanks. Consequently, no change in the air flow to the existing scrubber system is expected.

As both phosphoric acid plants are currently subject to the terms of construction permit PSD-FL-355, there will be no net changes in the fluoride emissions since the actual emissions can be assumed to be equal to the allowable emissions. Although minor, there are some unquantifiable fugitive fluoride emissions from the phosphoric acid plant due to the nature of the operations.

There will be no changes to the existing plants' production rates as a result of the proposed project.

RULE APPLICABILITY

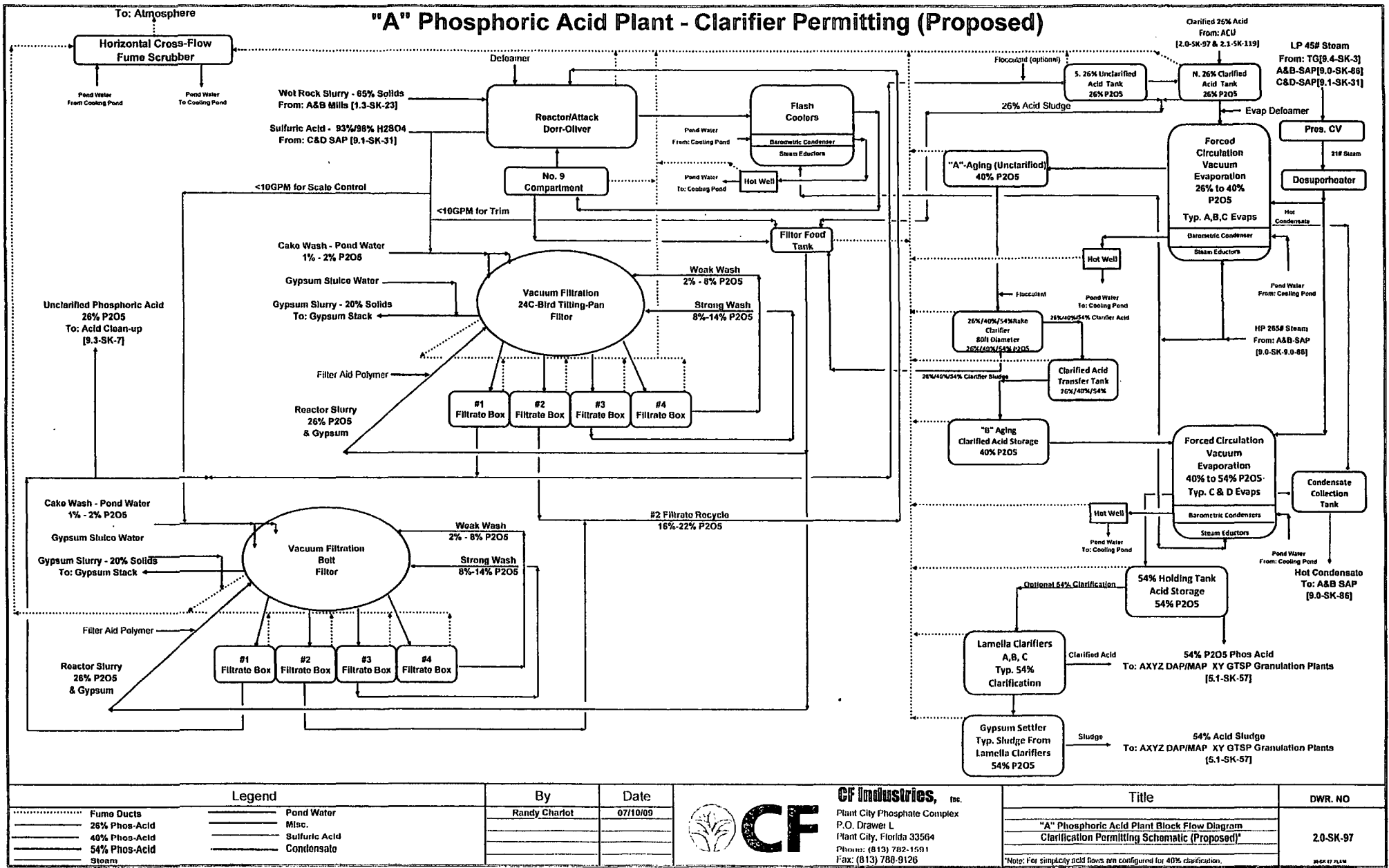
Since the new clarifier tanks are being installed in the phosphoric acid plants and will be controlled by the phosphoric acid plant scrubbing systems, these tanks are subject to the general phosphate processing rule requirements pursuant to Rule 62-296.403(1), FAC, for wet process phosphoric acid production and auxiliary equipment which limits fluoride emissions to 0.02 lb/ton P₂O₅ input. The proposed project will be in compliance with this standard since the current plants' fluoride emissions are limited to 0.012 lb/ton P₂O₅ input, established under a BACT determination (PSD-FL-355).

The proposed project is not a modification, as defined in Rule 62-210, FAC, as it will not result in any increase in actual fluoride emissions. Consequently, it is not subject to new source review requirements.

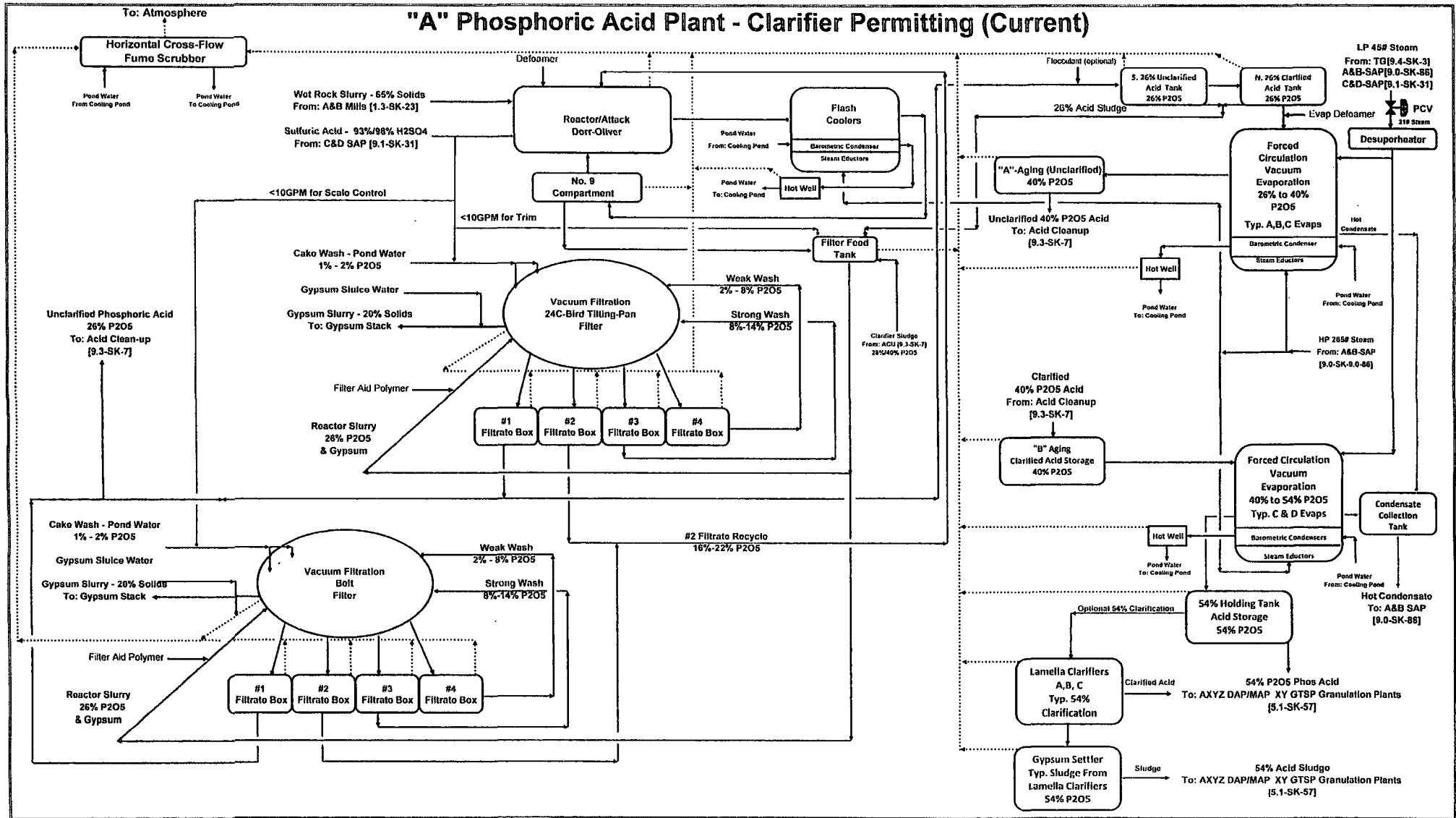
ATTACHMENT 2

UPDATED PROCESS FLOW DIAGRAMS

"A" Phosphoric Acid Plant - Clarifier Permitting (Proposed)

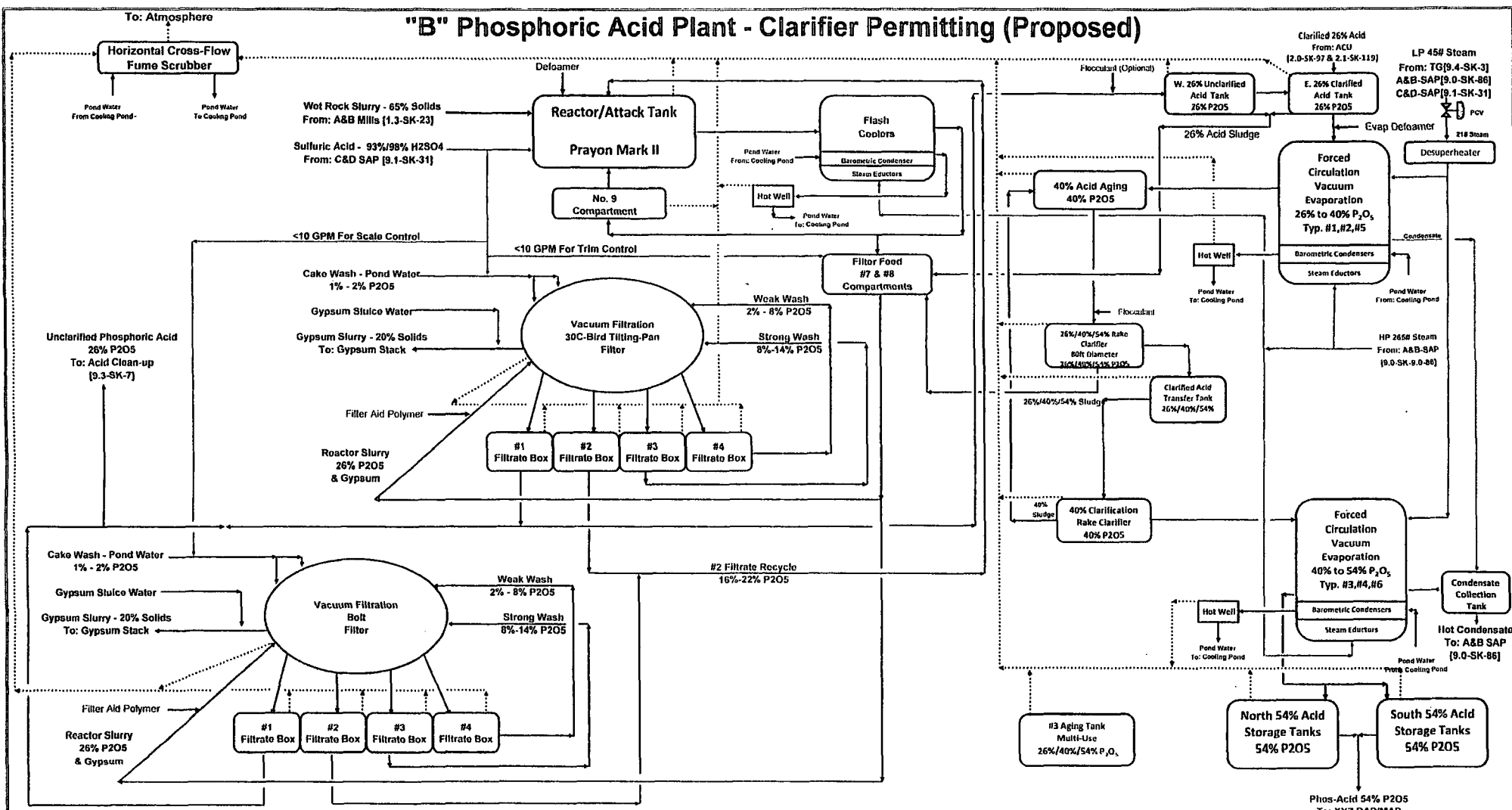


"A" Phosphoric Acid Plant - Clarifier Permitting (Current)



Legend		By	Date	CF Industries, Inc.	Title	DWR. NO
.....	Fume Ducts	Randy Charlot	06/19/09	Plant City Phosphate Complex P.O. Drawer L Plant City, Florida 33564 Phone: (813) 782-1591 Fax: (813) 788-9126	"A" Phosphoric Acid Plant Block Flow Diagram Clarification Permitting Schematic (Current)	2.0-SK-97
-----	26% Phos-Acid					
=====	40% Phos-Acid					
=====	54% Phos-Acid					
-----	Steam					
-----	Pond Water					
-----	Misc.					
-----	Sulfuric Acid					
-----	Condensate					

"B" Phosphoric Acid Plant - Clarifier Permitting (Proposed)



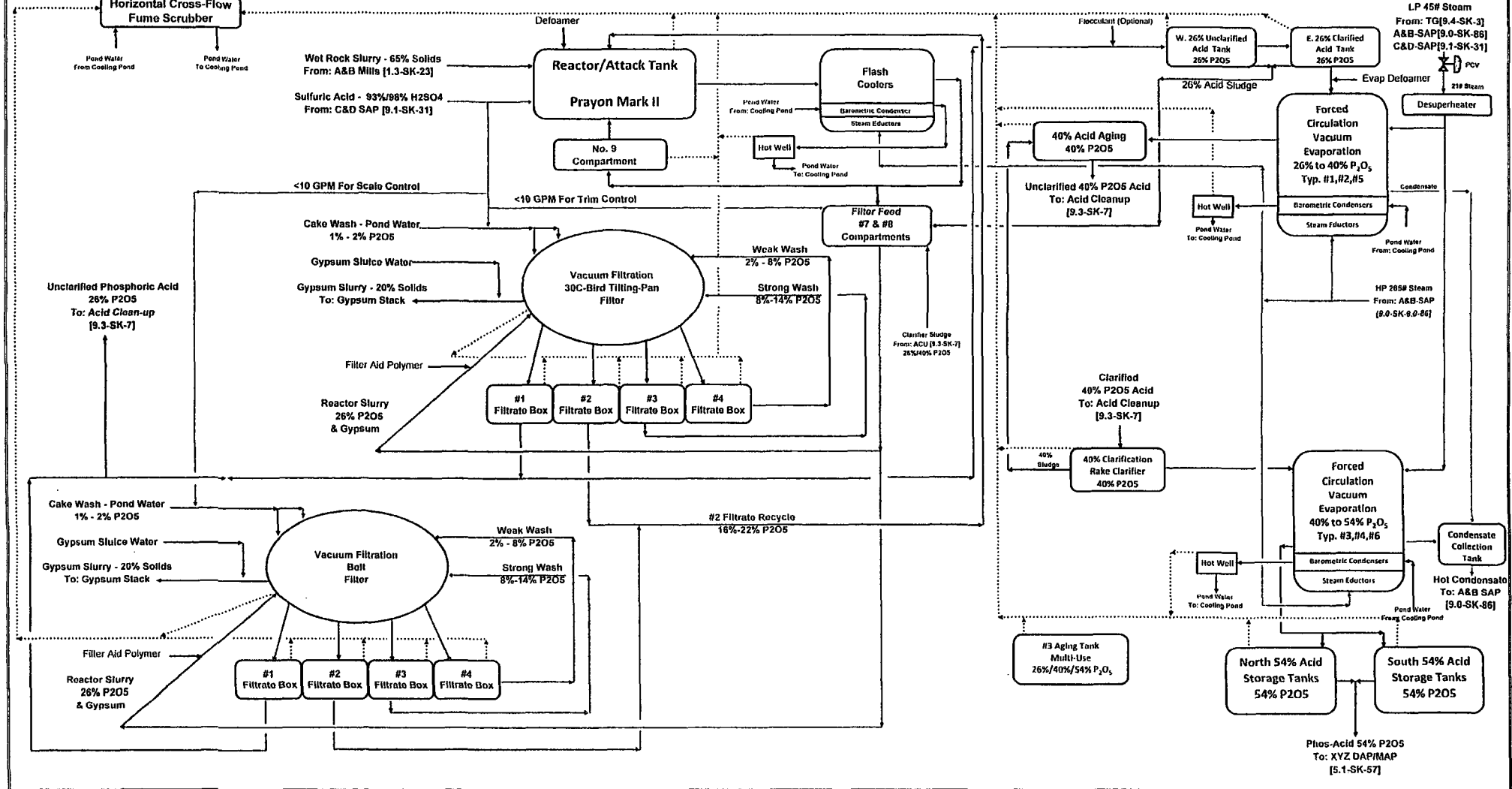
Legend	
-----	Fume Ducts
=====	26% Phos-Acid
-----	40% Phos-Acid
-----	54% Phos-Acid
-----	Steam (21# & 265#)
-----	Pond Water
-----	Misc.
-----	Sulfuric Acid
-----	Condensate

By	Date
Randy Charlot	7/10/09

CF Industries, Inc.
 Plant City Phosphate Complex
 P.O. Drawer L
 Plant City, Florida 33564
 Phone: (813) 782-1591
 Fax: (813) 715-0851

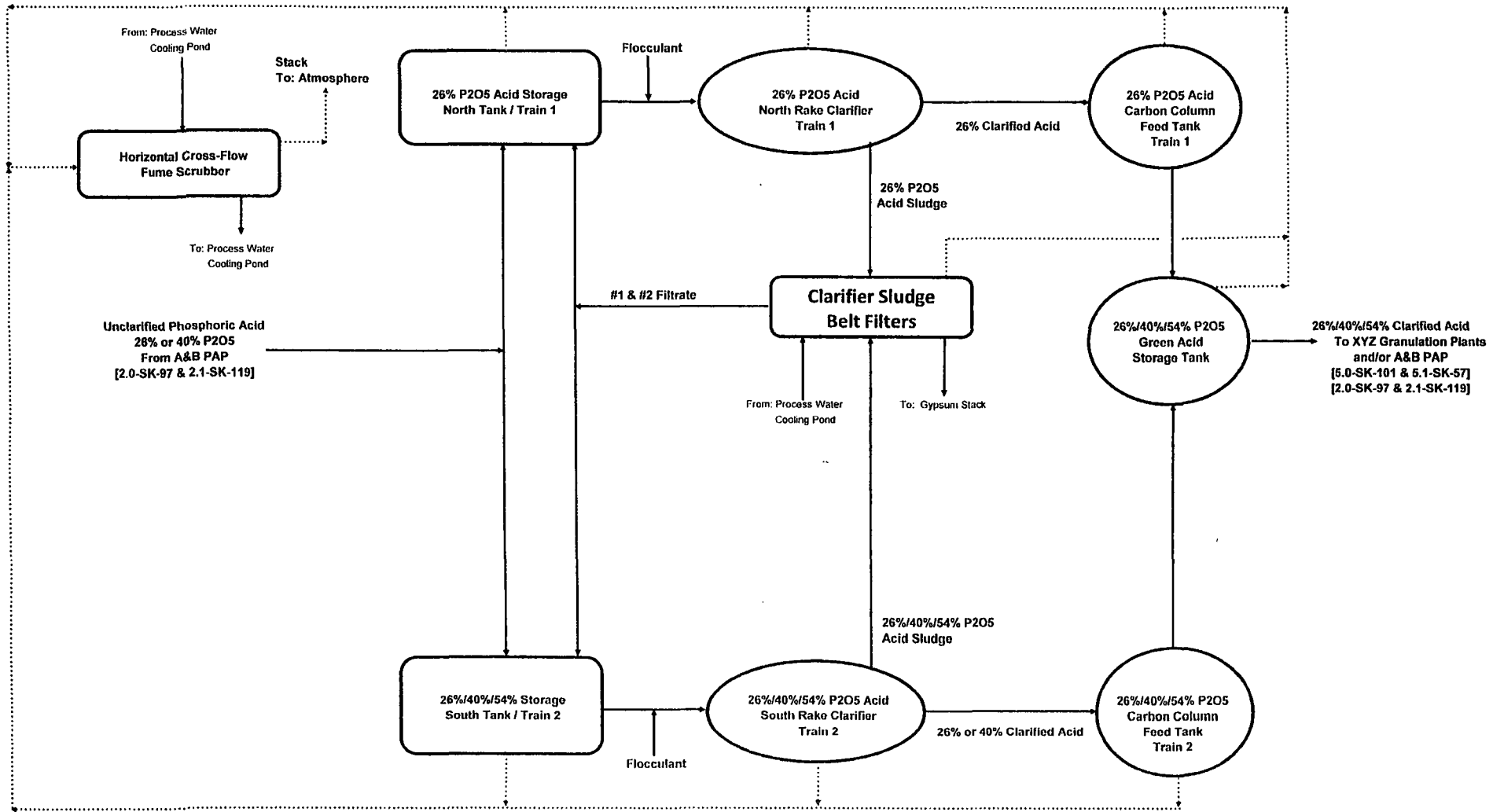
Title	DWR. NO
"B" Phosphoric Acid Plant Block Flow Diagram Clarifier Permitting Schematic (Proposed)*	2.1-SK-119
*Note: For multiphase acid flows are configured for 40% clarifiers.	

"B" Phosphoric Acid Plant - Clarifier Permitting (Current)



Legend		By	Date		CF Industries, Inc. Plant City Phosphate Complex P.O. Drawer L Plant City, Florida 33564 Phone: (813) 782-1501 Fax: (813) 715-0851	Title	DWR. NO
----- Fume Ducts	----- Pond Water	Randy Charlot	6/19/09			"B" Phosphoric Acid Plant Block Flow Diagram Clarifier Permitting Schematic (Current)	2.1-SK-119
===== 26% Phos-Acid	----- Misc.						
===== 40% Phos-Acid	----- Sulfuric Acid						
===== 54% Phos-Acid	----- Condensate						
----- Steam (21# & 265#)							

Acid Clarification Unit - Clarifier Permitting (Proposed)



Legend	Rev. By	Date	CF Industries Central Florida Phosphate Operations	Title	DWR. NO
<ul style="list-style-type: none"> ———— 28% P₂O₅ Phosphoric Acid ———— 40% P₂O₅ Phosphoric Acid Fume Collection System ———— Process Water ———— Other 	Randy Charlot	7/17/09	P.O. Drawer L Plant City, Florida 33564	Phone: (813) 782-1501 Fax: (813) 715-0851	Acid Clarification Block Flow Diagram Clarifier Permitting Schematic (Proposed)
					9.3-SK-7
					91 SK.7.3L3W