

**TITLE V RENEWAL  
APPLICATION FOR  
CARGILL FERTILIZER, LLC  
GREEN BAY FACILITY  
BARTOW, FL**

**Prepared for:**

**Cargill Fertilizer, LLC  
4390 CR 640 West  
Bartow, FL 33830**

**Prepared by:**

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

**June 2004  
0437550**

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**DISTRIBUTION:**

**4 Copies – FDEP  
2 Copies – Cargill Fertilizer, LLC  
1 Copy – Golder Associates Inc.**



## APPLICATION INFORMATION

### Purpose of Application

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

#### **Air Construction Permit**

Air construction permit.

#### **Air Operation Permit**

Initial Title V air operation permit.

Title V air operation permit revision.

Title V air operation permit renewal.

Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.

Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

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

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

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

**Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C. In such case, you must also check the following box:**

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

### Application Comment

Application is for renewal of Permit No. 1050053-012-AV.

**APPLICATION INFORMATION**

**Scope of Application**

<b>Emissions Unit ID Number</b>	<b>Description of Emissions Unit</b>	<b>Air Permit Type</b>	<b>Air Permit Proc. Fee</b>
004	Sulfuric Acid Plant No. 4		
005	Sulfuric Acid Plant No. 5		
038	Sulfuric Acid Plant No. 6		
007	South AP Fertilizer Plant		
013	Phosphoric Acid Plant No. 2		
016	Phosphoric Acid Plant No. 1 – North Train		
017	Phosphoric Acid Plant No. 1 – South Train		
014, 015	Phosphoric Acid Handling Tanks		
020	MAP/DAP Storage and Shipping Buildings		
029	North MAP/DAP Granulation Plant		
030-036, 039, 041	Molten Sulfur Storage and Handling System		
037	Phosphoric Acid Blend Tanks		
040	Phosphogypsum Stack		
	Facility-wide Unregulated Sources		

**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 Email Address:
5. Owner/Authorized Representative Statement:  <i>I, the undersigned, am the owner or authorized representative of the facility addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other requirements identified in this application to which the facility is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit.</i>  _____ Signature  _____ Date

# APPLICATION INFORMATION

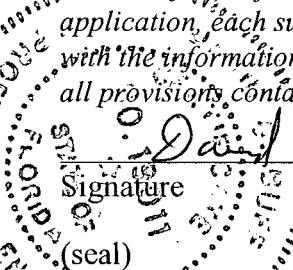
## Application Responsible Official Certification

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

1. Application Responsible Official Name: <b>Mr. E.O. Morris, Vice President</b>
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.
3. Application Responsible Official Mailing Address... Organization/Firm: <b>Cargill Fertilizer, LLC</b> Street Address: <b>8813 Highway 41 South</b> City: <b>Bartow</b> State: <b>FL</b> Zip Code: <b>33569</b>
4. Application Responsible Official Telephone Numbers... Telephone: <b>(813) 671-6158</b> ext. Fax: <b>(813) 671-6149</b>
5. Application Responsible Official Email Address: <b>ozzie_morris@cargill.com</b>
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: <u><i>E. O. Morris</i></u> Date: <u><i>6/25/04</i></u>

**APPLICATION INFORMATION**

**Professional Engineer Certification**

1. Professional Engineer Name: <b>David A. Buff</b> Registration Number: <b>19011</b>
2. Professional Engineer Mailing Address... Organization/Firm: <b>Golder Associates Inc.**</b> Street Address: <b>6241 NW 23<sup>rd</sup> Street, Suite 500</b> City: <b>Gainesville</b> State: <b>FL</b> Zip Code: <b>32653-1500</b>
3. Professional Engineer Telephone Numbers... Telephone: <b>(352) 336-5600</b> ext. <b>545</b> Fax: <b>(352) 336-6603</b>
4. Professional Engineer Email Address: <b>dbuff@golder.com</b>
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <i>(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and</i> <i>(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.</i> <i>(3) If the purpose of this application is to obtain a Title V air operation permit (check here <input checked="" 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 type="checkbox"/>, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.</i> <i>(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here: <input type="checkbox"/>, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.</i>   Signature: <u>David A. Buff</u> Date: <u>7/1/04</u>

Attach any exception to certification statement.  
Board of Professional Engineers Certificate of Authorization #00001670





## 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:	

**FACILITY INFORMATION**

**List of Pollutants Emitted by Facility**

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
PM	A	N
PM <sub>10</sub>	A	N
FL	A	N
SO <sub>2</sub>	A	N
NO <sub>x</sub>	A	N
H107- Hydrogen Fluoride	A	N
SAM	A	N
H161 – Radionuclides	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 checked="" type="checkbox"/> Attached, Document ID: <u>GB-FI-C1</u> <input type="checkbox"/> Previously Submitted, Date:_____
2.	Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <u>GB-FI-C2</u> <input type="checkbox"/> Previously Submitted, Date:_____
3.	Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <u>GB-FI-C3</u> <input type="checkbox"/> Previously Submitted, Date:_____

#### 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 or Modification: <input type="checkbox"/> Attached, Document ID:_____
3.	Rule Applicability Analysis: <input type="checkbox"/> Attached, Document ID:_____
4.	List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.): <input type="checkbox"/> Attached, Document ID:_____ <input checked="" type="checkbox"/> Not Applicable (no exempt units at facility)
5.	Fugitive Emissions Identification (Rule 62-212.400(2), F.A.C.): <input type="checkbox"/> Attached, Document ID:_____ <input checked="" type="checkbox"/> Not Applicable
6.	Preconstruction Air Quality Monitoring and Analysis (Rule 62-212.400(5)(f), F.A.C.): <input type="checkbox"/> Attached, Document ID:_____ <input checked="" type="checkbox"/> Not Applicable
7.	Ambient Impact Analysis (Rule 62-212.400(5)(d), 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(5)(h)5., F.A.C.): <input type="checkbox"/> Attached, Document ID:_____ <input checked="" type="checkbox"/> Not Applicable
9.	Additional Impact Analyses (Rules 62-212.400(5)(e)1. and 62-212.500(4)(e), F.A.C.): <input type="checkbox"/> Attached, Document ID:_____ <input checked="" type="checkbox"/> Not Applicable
10.	Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.): <input type="checkbox"/> Attached, Document ID:_____ <input checked="" type="checkbox"/> Not Applicable

## FACILITY INFORMATION

### Additional Requirements for FESOP Applications

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

### Additional Requirements for Title V Air Operation Permit Applications

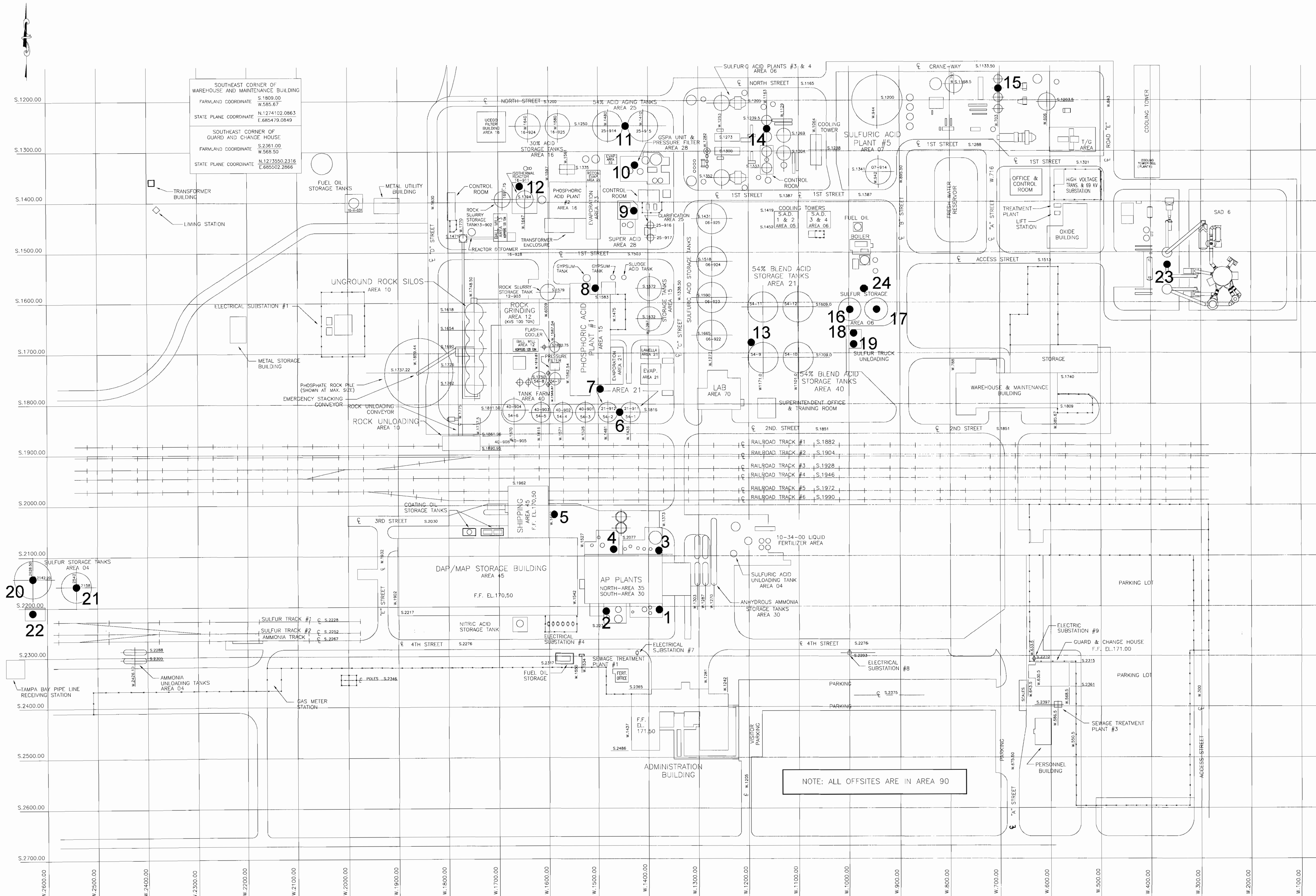
1. List of Insignificant Activities (Required for initial/renewal applications only):  
 Attached, Document ID: **GB-FI-CV1**  Not Applicable (revision application)
2. Identification of Applicable Requirements (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought):  
 Attached, Document ID: **GB-FI-CV2**  
 Not Applicable (revision application with no change in applicable requirements)
3. Compliance Report and Plan (Required for all initial/revision/renewal applications):  
 Attached, Document ID: **GB-FI-CV3**  
Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing.
4. List of Equipment/Activities Regulated under Title VI (If applicable, required for initial/renewal applications only):  
 Attached, Document ID: \_\_\_\_\_  
 Equipment/Activities On site but Not Required to be Individually Listed  
 Not Applicable
5. Verification of Risk Management Plan Submission to EPA (If applicable, required for initial/renewal applications only) :  
 Attached, Document ID: **GB-FI-CV5**  Not Applicable
6. Requested Changes to Current Title V Air Operation Permit:  
 Attached, Document ID: **GB-FI-CV6**  Not Applicable

### Additional Requirements Comment

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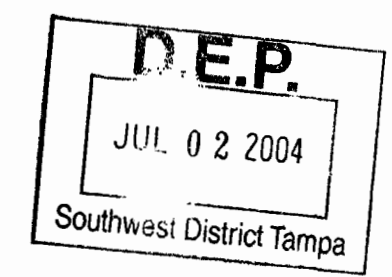
**D.E.P.**  
JUL 02 2004  
Southwest District Tampa

910-G-06



1. SOUTH DRY PRODUCTS-DRYER SCRUBBER STACK (STACK B)
2. SOUTH DRY PRODUCTS-REACTOR/GRANULATOR SCRUBBER STACK (STACK A)
3. NORTH DRY PRODUCTS-DRYER SCRUBBER STACK
4. NORTH DRY PRODUCTS-REACTOR/GRANULATOR SCRUBBER STACK
5. STORAGE AND SHIPPING STACK
6. PHOSPHORIC ACID STORAGE TANK VENT
7. NO.1 PHOSPHORIC ACID PLANT-SOUTH SCRUBBER STACK
8. NO.1 PHOSPHORIC ACID PLANT-NORTH SCRUBBER STACK
9. SUPER PHOSPHORIC ACID PLANT-THERMINOL HEATER STACK
10. GREEN SUPER AC PLANT-SCRUBBER STACK (NOT IN USE)
11. PHOSPHORIC ACID TANK VENT
12. NO.2 PHOSPHORIC ACID PLANT-SCRUBBER STACK
13. BLEND ACID TANK SCRUBBER
14. SULFURIC ACID PLANT NO.4 STACK
15. SULFURIC ACID PLANT NO.5 STACK
16. WEST SULFUR STORAGE TANK VENT
17. EAST SULFUR STORAGE TANK VENT
18. SULFUR UNLOADING PIT VENT
19. SULFUR UNLOADING PIT VENT
20. WEST SULFUR TANK VENT
21. EAST SULFUR TANK VENT
22. SULFUR PIT VENT
23. SULFURIC ACID PLANT NO.6 STACK
24. SULFUR PIT VENT

NOTE: ALL OFFSITES ARE IN AREA 90



**ATTACHMENT GB-FI-C1.**  
**Facility Plot Plan**

THIS DRAWING IS THE PROPERTY OF CARGILL FERTILIZER, INC. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN. IT IS NOT TO BE REPRODUCED OR DISTRIBUTED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION FROM CARGILL FERTILIZER, INC.	DRAWN BY: <i>K. ADAMS</i>	<p>Green Bay Facility 4300 CR 640 West Barrow, FL 32830 Telephone: (863) 533-1147</p>
	SCALE:	
	CHECK: _____ DATE: _____	
	APP: _____ DATE: _____	
<b>GREEN BAY FACILITY PLOT PLAN</b>		
0437550/4/4.4/GB-FI-C1.dwg		
DATE: <b>04/07/2003</b>	DISCIPLINE:	PROJECT:
CAD FILE: <b>190/G/016</b>	SHEET: <b>90</b>	REV: <b>G-016</b>
PLOT SCALE: <b>1:1</b>	DATE:	BY:
REVISION:	NO.:	DATE:
REVISION:	BY:	CK:
REVISION:	APP:	APP:

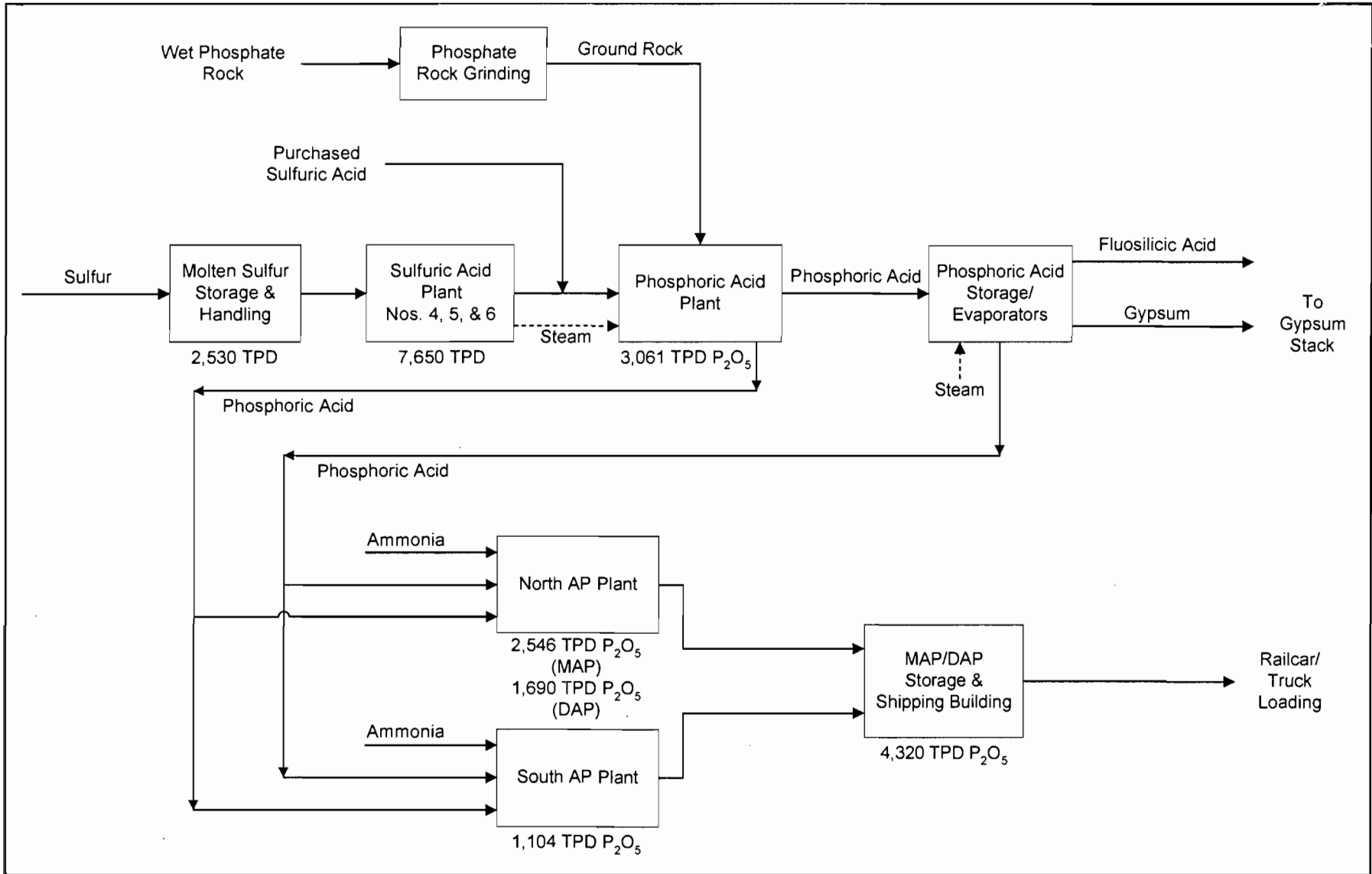


**ATTACHMENT GB-FI-C1**

**FACILITY PLOT PLAN**

**ATTACHMENT GB-FI-C2**  
**FACILITY FLOW DIAGRAM**

**D.E.P.**  
JUL 02 2004  
Southwest District Tampa



Attachment GB-FI-C2  
 Cargill - Green Bay  
 Facility Flow Diagram

**Process Flow Legend**

Solid/Liquid ———→  
 Gas - - - - -→  
 Steam - - - - -→

Filename: 0437550/4/4.GB-FI-C2.VSD

Date: 06/28/04



**ATTACHMENT GB-FI-C3**

**PRECAUTIONS TO PREVENT EMISSIONS  
OF UNCONFINED PARTICULATE MATTER**

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**ATTACHMENT GB-FI-C3**  
**PRECAUTIONS TO PREVENT EMISSIONS**  
**OF UNCONFINED PARTICULATE MATTER**

Fugitive particulate matter (PM) emissions may occur as a result of normal operation of the facility. The following is a list of precautions Cargill uses to prevent emissions of fugitive particulate matter.

1. Confine sand blasting when practical.
2. All outside fertilizer conveyor belts are covered.
3. Use street cleaning equipment periodically to remove dirt from paved areas.
4. Customarily use dust suppression agents on fertilizer products.
5. Posted speed limits on plant roads.
6. Fertilizer products are stored inside buildings.
7. Product material transfer points are enclosed.

**ATTACHMENT GB-FI-CV1**  
**LIST OF INSIGNIFICANT ACTIVITIES**

**ATTACHMENT GB-FI-CV1****LIST OF ACTIVITIES THAT MAY BE TREATED AS "TRIVIAL"**

The following types of activities and emissions units may be presumptively omitted from part 70 permit applications. Certain of these listed activities include qualifying statements intended to exclude many similar activities.

Combustion emissions from propulsion of mobile sources, except for vessel emissions from Outer Continental Shelf sources.

Air-conditioning units used for human comfort that do not have applicable requirements under title VI of the Act.

Ventilating units used for human comfort that do not exhaust air pollutants into the ambient air from any manufacturing/industrial or commercial process.

Non-commercial food preparation.

Consumer use of office equipment and products, not including printers or businesses primarily involved in photographic reproduction.

Janitorial services and consumer use of janitorial products.

Internal combustion engines used for landscaping purposes.

~~Laundry activities, except for dry cleaning and steam boilers.~~

Bathroom/toilet vent emissions.

~~Emergency (backup) electrical generators at residential locations.~~

Tobacco smoking rooms and areas.

~~Blacksmith forges.~~

Plant maintenance and upkeep activities (e.g., groundskeeping, general repairs, cleaning, painting, welding, plumbing, re-tarring roofs, installing insulation, and paving parking lots) provided these activities are not conducted as part of a manufacturing process, are not related to the source's primary business activity, and not otherwise triggering a permit modification.<sup>1</sup>

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<sup>1</sup> Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant owners/operators must still get a permit if otherwise required.

Repair or maintenance shop activities not related to the source's primary business activity, not including emissions from surface coating or de-greasing (solvent metal cleaning) activities, and not otherwise triggering a permit modification.

Portable electrical generators that can be moved by hand from one location to another<sup>2</sup>.

Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.

Brazing, soldering and welding equipment, and cutting torches related to manufacturing and construction activities that do not result in emission of HAP metals.<sup>3</sup>

Air compressors and pneumatically operated equipment, including hand tools.

Batteries and battery charging stations, except at battery manufacturing plants.

Storage tanks, vessels, and containers holding or storing liquid substances that will not emit any VOC or HAP.<sup>4</sup>

Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions, provided appropriate lids and covers are utilized.

~~Equipment used to mix and package, soaps, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions, provided appropriate lids and covers are utilized.~~

Drop hammers or hydraulic presses for forging or metalworking.

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<sup>2</sup> "Moved by hand" means that it can be moved without the assistance of any motorized or non-motorized vehicle, conveyance, or device.

<sup>3</sup> Brazing, soldering and welding equipment, and cutting torches related to manufacturing and construction activities that emit HAP metals are more appropriate for treatment as insignificant activities based on size or production level thresholds. Brazing, soldering, welding and cutting torches directly related to plant maintenance and upkeep and repair or maintenance shop activities that emit HAP metals are treated as trivial and listed separately in this appendix.

<sup>4</sup> Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids should be based on size limits such as storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.



~~Equipment used exclusively to slaughter animals, but not including other equipment at slaughterhouses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.~~

Vents from continuous emissions monitors and other analyzers.

Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.

~~Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.~~

Equipment used for surface coating, painting, dipping or spraying operations, except those that will emit VOC or HAP.

~~CO<sub>2</sub> lasers, used only on metals and other materials which do not emit HAP in the process.~~

Consumer use of paper trimmers/binders.

~~Electric or steam heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boilers delivering the steam.~~

~~Salt baths using nonvolatile salts that do not result in emissions of any regulated air pollutants.~~

~~Laser trimmers using dust collection to prevent fugitive emissions.~~

Bench-scale laboratory equipment used for physical or chemical analysis, but not lab fume hoods or vents.

Routine calibration and maintenance of laboratory equipment or other analytical instruments.

Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.

Hydraulic and hydrostatic testing equipment.

~~Environmental chambers not using hazardous air pollutant (HAP) gasses.~~

~~Shock chambers.~~

~~Humidity chambers.~~

~~Solar simulators.~~

Fugitive emission related to movement of passenger vehicles, provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.

Process water filtration systems and demineralizers.

Demineralized water tanks and demineralizer vents.

Boiler water treatment operations, not including cooling towers.

Oxygen scavenging (de-aeration) of water.

~~Ozone generators.~~

Fire suppression systems.

Emergency road flares.

Steam vents and safety relief valves.

Steam leaks.

Steam cleaning operations.

Steam sterilizers.

**ATTACHMENT GB-FI-CV2**  
**IDENTIFICATION OF APPLICABLE REQUIREMENTS**

# Title V Core List

Effective: 03/01/02

[**Note:** The Title V Core List is meant to simplify the completion of the "List of Applicable Regulations" for DEP Form No. 62-210.900(1), Application for Air Permit - Long Form. The Title V Core List is a list of rules to which all Title V Sources are presumptively subject. The Title V Core List may be referenced in its entirety, or with specific exceptions. The Department may periodically update the Title V Core List.]

## ***Federal: (description)***

40 CFR 61, Subpart M: NESHAP for Asbestos.

40 CFR 82: Protection of Stratospheric Ozone.

40 CFR 82, Subpart B: Servicing of Motor Vehicle Air Conditioners (MVAC).

40 CFR 82, Subpart F: Recycling and Emissions Reduction.

## ***State: (description)***

### **CHAPTER 62-4, F.A.C.: PERMITS, effective 06-01-01**

62-4.030, F.A.C.: General Prohibition.

62-4.040, F.A.C.: Exemptions.

62-4.050, F.A.C.: Procedure to Obtain Permits; Application

62-4.060, F.A.C.: Consultation.

62-4.070, F.A.C.: Standards for Issuing or Denying Permits; Issuance; Denial.

62-4.080, F.A.C.: Modification of Permit Conditions.

62-4.090, F.A.C.: Renewals.

62-4.100, F.A.C.: Suspension and Revocation.

62-4.110, F.A.C.: Financial Responsibility.

62-4.120, F.A.C.: Transfer of Permits.

62-4.130, F.A.C.: Plant Operation - Problems.

62-4.150, F.A.C.: Review

62-4.160, F.A.C.: Permit Conditions.

62-4.210, F.A.C.: Construction Permits.

62-4.220, F.A.C.: Operation Permit for New Sources.

### **CHAPTER 62-210, F.A.C.: STATIONARY SOURCES - GENERAL REQUIREMENTS, effective 06-21-01**

62-210.300, F.A.C.: Permits Required.

62-210.300(1), F.A.C.: Air Construction Permits.

62-210.300(2), F.A.C.: Air Operation Permits.

62-210.300(3), F.A.C.: Exemptions.

62-210.300(5), F.A.C.: Notification of Startup.

62-210.300(6), F.A.C.: Emissions Unit Reclassification.

62-210.300(7), F.A.C.: Transfer of Air Permits.

## **Title V Core List**

Effective: 03/01/02

62-210.350, F.A.C.: Public Notice and Comment.  
62-210.350(1), F.A.C.: Public Notice of Proposed Agency Action.  
62-210.350(2), F.A.C.: Additional Public Notice Requirements for Emissions Units Subject to Prevention of Significant Deterioration or Nonattainment-Area Preconstruction Review.  
62-210.350(3), F.A.C.: Additional Public Notice Requirements for Sources Subject to Operation Permits for Title V Sources.

62-210.360, F.A.C.: Administrative Permit Corrections.  
62-210.370(3), F.A.C.: Annual Operating Report for Air Pollutant Emitting Facility.  
62-210.400, F.A.C.: Emission Estimates.  
62-210.650, F.A.C.: Circumvention.  
62-210.700, F.A.C.: Excess Emissions

62-210.900, F.A.C.: Forms and Instructions.  
62-210.900(1), F.A.C.: Application for Air Permit - Title V Source, Form and Instructions.  
62-210.900(5), F.A.C.: Annual Operating Report for Air Pollutant Emitting Facility, Form and Instructions.  
62-210.900(7), F.A.C.: Application for Transfer of Air Permit - Title V and Non-Title V Source.

**CHAPTER 62-212, F.A.C.: STATIONARY SOURCES- PRECONSTRUCTION REVIEW,**  
effective 08-17-00

**CHAPTER 62-213, F.A.C.: OPERATION PERMITS FOR MAJOR SOURCES OF AIR POLLUTION,**  
effective 04-16-01

62-213.205, F.A.C.: Annual Emissions Fee.  
62-213.400, F.A.C.: Permits and Permit Revisions Required.  
62-213.410, F.A.C.: Changes Without Permit Revision.  
62-213.412, F.A.C.: Immediate Implementation Pending Revision Process.  
62-213.415, F.A.C.: Trading of Emissions Within a Source.  
62-213.420, F.A.C.: Permit Applications.  
62-213.430, F.A.C.: Permit Issuance, Renewal, and Revision.  
62-213.440, F.A.C.: Permit Content.  
62-213.450, F.A.C.: Permit Review by EPA and Affected States  
62-213.460, F.A.C.: Permit Shield.

62-213.900, F.A.C.: Forms and Instructions.  
62-213.900(1), F.A.C.: Major Air Pollution Source Annual Emissions Fee Form.  
62-213.900(7), F.A.C.: Statement of Compliance Form

## **Title V Core List**

Effective: 03/01/02

### **CHAPTER 62-296, F.A.C.: STATIONARY SOURCES - EMISSION STANDARDS, effective 03-02-99**

62-296.320(2), F.A.C.: Objectionable Odor Prohibited.

62-296.320(4)(c), F.A.C.: Unconfined Emissions of Particulate Matter

### **CHAPTER 62-297, F.A.C.: STATIONARY SOURCES - EMISSIONS MONITORING, effective 03-02-99**

62-297.310, F.A.C.: General Test Requirements.

62-297.330, F.A.C.: Applicable Test Procedures.

62-297.340, F.A.C.: Frequency of Compliance Tests.

62-297.345, F.A.C.: Stack Sampling Facilities Provided by the Owner of an Emissions Unit.

62-297.350, F.A.C.: Determination of Process Variables.

62-297.570, F.A.C.: Test Report.

62-297.620, F.A.C.: Exceptions and Approval of Alternate Procedures and Requirements.

#### **Miscellaneous:**

**CHAPTER 28-106, F.A.C.: Decisions Determining Substantial Interests**

**CHAPTER 62-110, F.A.C.: Exception to the Uniform Rules of Procedure, effective 07-01-98**

**CHAPTER 62-256, F.A.C.: Open Burning and Frost Protection Fires, effective 11-30-94**

**CHAPTER 62-257, F.A.C.: Asbestos Notification and Fee, effective 02-09-99**

**CHAPTER 62-281, F.A.C.: Motor Vehicle Air Conditioning Refrigerant Recovery and  
Recycling, effective 09-10-96**

**ATTACHMENT GB-FI-CV3**  
**COMPLIANCE REPORT AND PLAN**

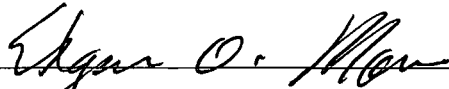
## ATTACHMENT GB-FI-CV3

~~COMPLIANCE REPORT AND PLAN~~

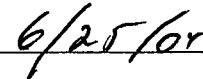
Cargill Fertilizer, LLC certifies that the Green Bay facility, as of the date of this application, is in compliance with each applicable requirement addressed in this Title V air permit application.

I, the undersigned, am the responsible official as defined in Chapter 62-213, F.A.C., of the Title V source for which this report is being submitted. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made and data contained in this report are true, accurate, and complete.

Compliance statements for this facility will be submitted on an annual basis to FDEP, before March 1<sup>st</sup> of each year.



Signature, Responsible Official

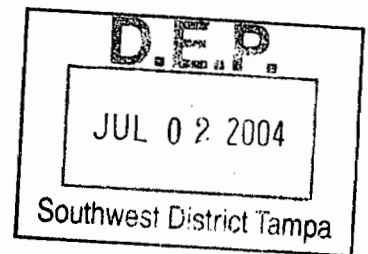


Date



**ATTACHMENT GB-FI-CV5**

**VERIFICATION OF RISK MANAGEMENT PLAN  
SUBMISSION TO EPA**



**ATTACHMENT GB-FI-CV5****VERIFICATION OF RISK MANAGEMENT PLAN  
SUBMISSION TO EPA**

-----Original Message-----

From: EPACDX@csc.com [<mailto:EPACDX@csc.com>]  
Sent: Friday, June 18, 2004 03:18 PM  
To: Abel, Taylor /rview  
Subject: Your CDX RMP\*WebRC Data Modifications

The corrections to your RMP Section 1. Registration Information that you made via the RMP\*WebRC tool were received on Fri Jun 18 15:17:35 EDT 2004

Thank you for choosing CDX RMP\*WebRC to update the vital information regarding your facility.

Your confirmation number is RMP000020040618151735CARGILLGREENBAY

-----Original Message-----

From: EPACDX@csc.com [<mailto:EPACDX@csc.com>]  
Sent: Friday, June 18, 2004 03:16 PM  
To: Abel, Taylor /rview  
Subject: Your CDX RMP\*WebRC Data Modifications

The corrections to your RMP Section 1. Registration Information that you made via the RMP\*WebRC tool were received on Fri Jun 18 15:16:06 EDT 2004

Thank you for choosing CDX RMP\*WebRC to update the vital information regarding your facility.

Your confirmation number is RMP000020040618151605CARGILLGREENBAY

-----Original Message-----

From: CDX.Registration@mgwwdc01.cargill.com  
[<mailto:CDX.Registration@mgwwdc01.cargill.com>]  
Sent: Friday, June 18, 2004 03:14 PM  
To: Abel, Taylor /rview  
Subject: CDX Registration Status Change for RMP\*WebRC ID 278485368

Congratulations, the Environmental Protection Agency's Central Data Exchange (CDX) registration system has processed a change to the registration status for Taylor Abel (CDX User Name = CARGILLGREENBAY). The registration status has changed to Active for RMP ID 278485368. If you have questions concerning this change in registration status, you may contact us by email at EPACDX@CSC.COM or by calling the CDX Technical Support Staff through our toll free telephone support on 888-890-1995 between 8:00 am to 6:00 pm (EST) Monday through Friday. CDX Registration Home Page  
[http://cdx.epa.gov/epa\\_home.asp](http://cdx.epa.gov/epa_home.asp)

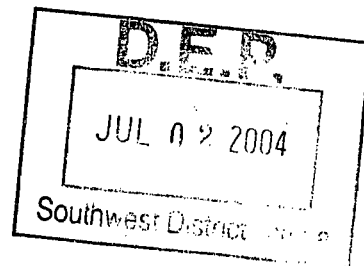
**ATTACHMENT GB-FI-CV6**

**REQUESTED CHANGES TO CURRENT  
TITLE V AIR OPERATION PERMIT**

**ATTACHMENT GB-FI-CV6**  
**REQUESTED CHANGES TO CURRENT**  
**TITLE V AIR OPERATION PERMIT**

Cargill Fertilizer, LLC is requesting the following changes to the current Title V Permit (No. 1050053-012-AV) at their Green Bay facility.

1. Removal of the fluoride (F) emission limit at the MAP/DAP Storage and Shipping Plant.  
DEP approved the removal of the F emission limit at the MAP/DAP Storage and Shipping Plant since GTSP is no longer stored in this building. The F limit was imposed due to GTSP storage and is therefore no longer appropriate since the building only transfers and stores MAP and DAP.
2. Removal of the nitrogen oxides (NO<sub>x</sub>) emission limit at the North MAP/DAP Fertilizer Plant.  
NO<sub>x</sub> limits were imposed in the Title V permit with the condition that if initial compliance testing showed less than 40.0 tons per year (TPY) of NO<sub>x</sub> emissions, then the annual testing would no longer be required and the emission limit would be removed. Two NO<sub>x</sub> tests were performed (March 2000 and April 2000). NO<sub>x</sub> emissions were determined to be zero during these tests. Therefore, Cargill requests that the NO<sub>x</sub> emission limit be removed from the Title V permit.



## EMISSIONS UNIT INFORMATION

Section [1] of [14]  
Sulfuric Acid Plant No. 4

### III. EMISSIONS UNIT INFORMATION

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

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

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

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

**EMISSIONS UNIT INFORMATION**

Section [1] of [14]  
Sulfuric Acid Plant No. 4

**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:  
**Sulfuric Acid Plant No. 4 (double absorption)**

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

4. Emissions Unit Status Code: <b>A</b>	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: <b>28</b>	8. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
--	--------------------------------	--------------------------	--	--

9. Package Unit:  
Manufacturer: \_\_\_\_\_ Model Number: \_\_\_\_\_

10. Generator Nameplate Rating: \_\_\_\_\_ MW

11. Emissions Unit Comment:  
**There exists a potential for fugitive emissions of PM/PM<sub>10</sub>/SO<sub>2</sub>/NO<sub>x</sub>/SAM to occur from this emissions unit. It is our understanding, based on past FDEP interpretations and permitting history, that these emissions are not regulated under federal/local/state emission standards. These fugitive emissions are addressed in Emission Unit Section 14.**

**EMISSIONS UNIT INFORMATION**

Section [1] of [14]

Sulfuric Acid Plant No. 4

**Emissions Unit Control Equipment**

1. Control Equipment/Method(s) Description:  
**Sulfuric Acid Plant - Double Contact Process**  
**Mist Eliminator - High Velocity**

2. Control Device or Method Code(s): **044, 014**

**EMISSIONS UNIT INFORMATION**

Section [1] of [14]  
Sulfuric Acid Plant No. 4

**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: <b>2,100 TPD 100% H<sub>2</sub>SO<sub>4</sub></b>		
3. Maximum Heat Input Rate:	million Btu/hr	
4. Maximum Incineration Rate:	pounds/hr tons/day	
5. Requested Maximum Operating Schedule:	<b>24 hours/day</b>	<b>7 days/week</b>
	<b>52 weeks/year</b>	<b>8,760 hours/year</b>
6. Operating Capacity/Schedule Comment:		



**EMISSIONS UNIT INFORMATION**

Section [1] of [14]

Sulfuric Acid Plant No. 4

**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: <b>14</b>		2. Emission Point Type Code: <b>1</b>	
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: <b>V</b>	6. Stack Height: <b>100</b> feet	7. Exit Diameter: <b>7.5</b> feet	
8. Exit Temperature: <b>173°F</b>	9. Actual Volumetric Flow Rate: <b>116,100</b> acfm	10. Water Vapor: <b>%</b>	
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: <b>Volumetric flow rate and temperature based on recent stack testing and maximum daily production rate.</b>			

**EMISSIONS UNIT INFORMATION**

Section [1] of [14]  
Sulfuric Acid Plant No. 4

**D. SEGMENT (PROCESS/FUEL) INFORMATION**

**Segment Description and Rate:** Segment 1 of 2

1. Segment Description (Process/Fuel Type): <b>Chemical Manufacturing; Sulfuric Acid; Contact Process; Absorber at 99.9% Conversion.</b>		
2. Source Classification Code (SCC): <b>3-01-023-01</b>		3. SCC Units: <b>Tons of 100% H<sub>2</sub>SO<sub>4</sub></b>
4. Maximum Hourly Rate: <b>87.5</b>	5. Maximum Annual Rate: <b>766,500</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: <b>Maximum rates based on the daily production rate (2,100 TPD).</b>		

**Segment Description and Rate:** Segment 2 of 2

1. Segment Description (Process/Fuel Type): <b>In-process Fuel Use; Natural Gas; General.</b>		
2. Source Classification Code (SCC): <b>3-90-006-89</b>		3. SCC Units: <b>Million Cubic Feet Burned</b>
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>1,000</b>
10. Segment Comment: <b>Natural gas usage results from cold startup of Sulfuric Acid Plant. Typically, the plant experiences one cold startup per year.</b>		



**EMISSIONS UNIT INFORMATION**

Section [1] of [14]  
Sulfuric Acid Plant No. 4

**POLLUTANT DETAIL INFORMATION**

Page [1] of [2]  
Sulfur Dioxide

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

(Optional for unregulated emissions units.)

**Potential/Estimated Fugitive Emissions**

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

1. Pollutant Emitted: <b>SO<sub>2</sub></b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>350 lb/hour                      1,533 tons/year</b>		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: <b>4 lb/ton 100% H<sub>2</sub>SO<sub>4</sub></b>  Reference: <b>Permit No. 1050053-012-AV</b>		7. Emissions Method Code: <b>0</b>	
8. Calculation of Emissions: <b>Hourly: 4 lb/ton 100% H<sub>2</sub>SO<sub>4</sub> x 87.5 TPH 100% H<sub>2</sub>SO<sub>4</sub> = 350 lb/hr</b>  <b>Annual: 350 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 1,533 TPY</b>			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

**EMISSIONS UNIT INFORMATION**

Section [1] of [14]  
Sulfuric Acid Plant No. 4

**POLLUTANT DETAIL INFORMATION**

Page [1] of [2]  
Sulfur Dioxide

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

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

**Allowable Emissions** Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>4 lb/ton 100% H<sub>2</sub>SO<sub>4</sub></b>	4. Equivalent Allowable Emissions: <b>350 lb/hour                      1,533 tons/year</b>
5. Method of Compliance: <b>Annual Stack Test with EPA Method 8.</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Based on Permit No. 1050053-012-AV, Rule 62-296.402(2)(b) and 40 CFR 60.82(a).</b>	

**Allowable Emissions** Allowable Emissions \_\_\_\_ of \_\_\_\_

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

**Allowable Emissions** Allowable Emissions \_\_\_\_ of \_\_\_\_

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

**EMISSIONS UNIT INFORMATION**

Section [1] of [14]  
Sulfuric Acid Plant No. 4

**POLLUTANT DETAIL INFORMATION**

Page [2] of [2]  
Sulfuric Acid Mist

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

(Optional for unregulated emissions units.)

**Potential/Estimated Fugitive Emissions**

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

1. Pollutant Emitted: <b>SAM</b>	2. Total Percent Efficiency of Control:
3. Potential Emissions: <b>13.1 lb/hour                      57.5 tons/year</b>	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: <b>0.15 lb/ton 100% H<sub>2</sub>SO<sub>4</sub></b>  Reference: <b>Permit No. 1050053-012-AV</b>	7. Emissions Method Code: <b>0</b>
8. Calculation of Emissions: <b>Hourly: 0.15 lb/ton 100% H<sub>2</sub>SO<sub>4</sub> x 87.5 TPH 100% H<sub>2</sub>SO<sub>4</sub> = 13.12 lb/hr</b>  <b>Annual: 13.12 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 57.5 TPY</b>	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

**EMISSIONS UNIT INFORMATION**

Section [1] of [14]  
Sulfuric Acid Plant No. 4

**POLLUTANT DETAIL INFORMATION**

Page [2] of [2]  
Sulfuric Acid Mist

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

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

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>RULE</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>0.15 lb/ton 100% H<sub>2</sub>SO<sub>4</sub></b>	4. Equivalent Allowable Emissions: <b>13.1 lb/hour      57.5 tons/year</b>
5. Method of Compliance: <b>Annual stack test using EPA Method 8.</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Based on Permit No. 1050053-012-AV, Rule 62-296.402(2)(c) and 40 CFR 60.83(a)(1).</b>	

Allowable Emissions Allowable Emissions \_\_\_\_ of \_\_\_\_

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

Allowable Emissions Allowable Emissions \_\_\_\_ of \_\_\_\_

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

**EMISSIONS UNIT INFORMATION**

Section [1] of [14]  
Sulfuric Acid Plant No. 4

**G. VISIBLE EMISSIONS INFORMATION**

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

**Visible Emissions Limitation:** Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: <b>VE10</b>	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: <b>10 %</b> Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: <b>Annual visible emissions test using DEP Method 9.</b>	
5. Visible Emissions Comment: <b>Permit No. 1050053-012-AV, Rule 62-296.402(2)(a), F.A.C., and 40 CFR 60.83(a)(2).</b>	

**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 [14]  
Sulfuric Acid Plant No. 4**H. CONTINUOUS MONITOR INFORMATION**

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

**Continuous Monitoring System:** Continuous Monitor 1 of 1

1. Parameter Code: <b>EM</b>	2. Pollutant(s): <b>SO<sub>2</sub></b>
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: <b>Ametek</b> Model Number: <b>4000</b> Serial Number: <b>7345</b>	
5. Installation Date: <b>1990</b>	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Rule 62-204.800(8)(b)11., F.A.C., and 40 CFR 60.84(a). Monitor was upgraded in 1999.</b>	

**Continuous Monitoring System:** Continuous Monitor \_\_\_\_ of \_\_\_\_

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

**EMISSIONS UNIT INFORMATION**

Section [1] of [14]  
Sulfuric Acid Plant No. 4

**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: <b>GB-EU1-11</b> <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 checked="" type="checkbox"/> Attached, Document ID: <b>GB-EU1-12</b> <input type="checkbox"/> Previously Submitted, Date _____
3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <b>GB-EU1-13</b> <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 checked="" type="checkbox"/> Attached, Document ID: <b>GB-EU1-14</b> <input type="checkbox"/> Previously Submitted, Date _____ <input 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 checked="" type="checkbox"/> Previously Submitted, Date: <b>05/05/2004</b> Test Date(s)/Pollutant(s) Tested: <b>SO<sub>2</sub>, SAM, VE</b> <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input 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 type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

## EMISSIONS UNIT INFORMATION

Section [1] of [14]  
Sulfuric Acid Plant No. 4

### Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.) <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: <b>GB-EU1-IV1</b> <input type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input checked="" type="checkbox"/> Attached, Document ID: <b>GB-EU1-IV2</b> <input 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
5. Acid Rain Part Application <input type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input type="checkbox"/> Copy Attached, Document ID: _____ <input type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable

**EMISSIONS UNIT INFORMATION**

Section [1] of [14]

Sulfuric Acid Plant No. 4

**Additional Requirements Comment**

**ATTACHMENT GB-EU1-I1**  
**PROCESS FLOW DIAGRAM**



**ATTACHMENT GB-EU1-I2**  
**FUEL ANALYSIS OR SPECIFICATION**

**ATTACHMENT GB-EU1-I2**  
**SULFURIC ACID PLANT NO. 4**  
**FUEL ANALYSIS**

Fuel	Density (lb/scf)	Moisture (%)	Weight % Sulfur	Weight % Nitrogen	Weight % Ash	Heat Capacity
Natural Gas	0.048	< 0.01	<0.001	0.62	--	1,000 Btu/scf



**ATTACHMENT GB-EU1-I3**

**DETAILED DESCRIPTION OF CONTROL EQUIPMENT**

**ATTACHMENT GB-EU1-I3****DETAILED DESCRIPTION OF CONTROL EQUIPMENT**

The control equipment for Sulfuric Acid Plant No. 4 consists of two systems in series. The first system is integral to the sulfuric acid production process and is the double-contact process where the SO<sub>2</sub> emissions from the sulfur combustion are absorbed by water in a tower. This process is at least 99-percent efficient at absorbing SO<sub>2</sub>. This is inherent process equipment and not considered control equipment. The second system, also integral to the process, is a high-velocity mist eliminator that causes moisture from the double-contact process to be removed from the air stream by impingement on fibers. This process is at least 90-percent efficient at removing SAM from the air stream, hence recovering product and preventing corrosion of downstream equipment.

**ATTACHMENT GB-EU1-I4**  
**PROCEDURES FOR STARTUP AND SHUTDOWN**

## BEST OPERATIONAL START-UP PRACTICES FOR SULFURIC ACID PLANTS

1. Only one sulfuric acid plant at a facility should be started up and burning sulfur at a time. There are times when it will be acceptable for more than one sulfuric acid plant to be in the start-up mode at the same time, provided the following condition is met. It is not acceptable to initiate sulfur burning at one sulfuric acid plant when another plant at the same facility is emitting  $\text{SO}_2$  at a rate in excess of the emission limits imposed by the permit or rule, as determined by the CEMs. Emission rates for the immediately preceding 20 minutes.

2. A plant start-up must be at the lowest practicable operating rate, not to exceed 70 percent of the designated operating rate, until the  $\text{SO}_2$  monitor indicates compliance. Because production rate is difficult to measure during start-up, if a more appropriate indicator (such as blower pressure, furnace temperature, gas strength, blower speed, number of sulfur guns operating, etc.) can be documented, tested and validated, the Department will accept this in lieu of directly documenting the operating rate. Implementation requires the development of a suitable list of surrogate parameters to demonstrate and document the reduced operating rate on a plant-by-plant basis. Documentation that the plant is conducting start-up at the reduced rate is the responsibility of the owner or operator.

3. Sulfuric acid plants are authorized to emit excess emissions from start-up for a period of three consecutive hours provided best operational practices, in accordance with this agreement, to minimize emissions are followed. No plant shall be operated (with sulfur as fuel) out of compliance for more than three consecutive hours. Thereafter, the plant shall be shut down. The plant shall be shut down (cease burning sulfur) if, as indicated by the continuous emission monitoring system, the plant is not in compliance within three hours of start-up. Restart may occur as soon as practicable following any needed repairs or adjustments, provided the corrective action is taken and properly documented.

### 4. Cold Start-Up Procedures.

#### a. Converter.

(1) The inlet and outlet temperature at the first two masses of catalyst shall be sufficiently high to provide immediate ignition when  $\text{SO}_2$  enters the masses. In no event shall the inlet temperature to the first mass be less than  $800^\circ\text{F}$  or the outlet temperature to the first two masses be less than  $700^\circ\text{F}$ .

These temperatures are the desired temperatures at the time the use of auxiliary fuel is terminated.

(2) The gas stream entering the converter shall contain  $\text{SO}_2$  at a level less than normal, and sufficiently low to promote catalytic conversion to  $\text{SO}_3$ .

b. Absorbing Towers.

The concentration, temperature and flow of circulating acid shall be as near to normal conditions as reasonably can be achieved. In no event shall the concentration be less than 96 percent  $\text{H}_2\text{SO}_4$ .

5. Warm Restart.

a. Converter.

The inlet and outlet temperatures of the first two catalyst masses should be sufficiently high to ensure conversion. One of the following three conditions must be met:

(1) The first two catalyst masses inlet and outlet temperatures must be at a minimum of  $700^\circ\text{F}$ ; or

(2) Two of the four inlet and outlet temperatures must be greater than or equal to  $800^\circ\text{F}$ ; or

(3) The inlet temperature of the first catalyst must be greater than or equal to  $600^\circ\text{F}$  and the outlet temperature greater than or equal to  $800^\circ\text{F}$ . Also, the inlet and outlet temperatures of the second catalyst must be greater than or equal to  $700^\circ\text{F}$ .

Failure to meet one of the above conditions, requires use of cold start-up procedures.

To allow for technological improvements or individual plant conditions, alternative conditions will be considered by the Department in appropriate cases.

b. Absorbing Towers.

The concentration, temperature and flow of circulating acid shall be as near to normal conditions as reasonably can be achieved. In no event shall the concentration be less than 96 percent  $\text{H}_2\text{SO}_4$ .

The parties jointly agree: for the purposes of Rule 17-2.250, the foregoing practices constitute "best operational practices" for the start-up of sulfuric acid plants.

The Department will not seek to incorporate these practices into permits for existing facilities during the first 18 months after implementation. After the expiration of this 18-month period, which is a typical catalyst cycle, the Department may seek to modify the permits, in accordance with Rule 17-4.080 and other applicable laws, to incorporate appropriate site-specific start-up procedures as enforceable permit conditions.

These Sulfuric Acid Plant Best Operation Start-Up Practices will be made available in the control room at all times.

Since these specific procedures are undergoing evaluation, the Department will not consider these practices to be the only means of demonstrating best operating procedures. If a company chooses to use another method, it will be its responsibility to demonstrate that it constitutes best operational practices in accordance with 17-2.250, F.A.C.

*Steve Smallwood 10-24-89* *CH Lane* *10-24-89*

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Steve Smallwood, P.E. Date  
 Director, Division of Air  
 Resources Management  
 Department of Environmental  
 Regulation  
 Twin Towers Office Building  
 2600 Blair Stone Road  
 Tallahassee, FL 32399-2400

Farmland Industries, Inc. Date

**ATTACHMENT GB-EU1-IV1**  
**IDENTIFICATION OF APPLICABLE REQUIREMENTS**



**ATTACHMENT GB-EU1-IV1****LIST OF APPLICABLE REQUIREMENTS  
SULFURIC ACID PLANTS**

- 40 CFR 60.7—NSPS General Provisions-Notification and Record Keeping
- 40 CFR 60.8—NSPS General Provisions-Performance Tests
- 40 CFR 60.11—NSPS General Provisions-Standards and Maintenance Requirements
- 40 CFR 60.12—NSPS General Provisions-Circumvention
- 40 CFR 60.13(a)—NSPS General Provisions-Monitoring Requirements
- 40 CFR 60.13(b)—NSPS General Provisions-Monitoring Requirements
- 40 CFR 60.13(c)(2)—NSPS General Provisions-Monitoring Requirements
- 40 CFR 60.13(d)(1) —NSPS General Provisions-Monitoring Requirements
- 40 CFR 60.13(e)(2) —NSPS General Provisions-Monitoring Requirements
- 40 CFR 60.13(f) —NSPS General Provisions-Monitoring Requirements
- 40 CFR 60.13(i) —NSPS General Provisions-Monitoring Requirements
- 40 CFR 60.13(j) —NSPS General Provisions-Monitoring Requirements
- 40 CFR 60.19—NSPS General Provisions-Notification and Reporting Requirements
- 40 CFR 60.82—NSPS for SAPs-SO<sub>2</sub> Standards
- 40 CFR 60.83—NSPS for SAPs-SAM Standard
- 40 CFR 60.84—NSPS for SAPs-Emission Monitoring
- 40 CFR 60.85—NSPS for SAPs-Test Methods and Procedures
- 62.204.800(8)(b)11.—Reference to NSPS
- 62.212.400(7)(b)—PSD
- 62.296.402(1)—SAP Plants
- 62.296.402(3)—Test Methods
- 62.296.402(4)—CEM
- 62.296.402(5)—Quarterly Reporting
- 62.297.310—General Compliance Test Requirements
- 62.297.401—Compliance Test Methods
- 62.297.520(2)—Continuous Monitor Performance Specifications

**ATTACHMENT GB-EU1-IV2**  
**COMPLIANCE ASSURANCE MONITORING**

**ATTACHMENT GB-EU1-IV2**  
**COMPLIANCE ASSURANCE MONITORING**  
**SULFURIC ACID PLANT NO. 4**

Based on the information presented below, Cargill believes the mist eliminators should be considered inherent process equipment, and therefore, not subject to CAM requirements. EPA has developed a three-part test to determine if certain equipment can be classified as inherent process equipment (IPE), as opposed to a "control device." These criteria are addressed below.

**Sulfuric Acid Mist**

The Sulfuric Acid Plant No. 4 uses a mist eliminator to reduce sulfuric acid mist emissions. The mist eliminators serve the dual purpose of recovering acid for use in the production of phosphoric acid and prevention of corrosion of the stack and other facility equipment.

The first criteria is if the primary purpose of the control equipment is to control air pollution. EPA performed a series of stack tests to develop the NSPS, Subpart H. The background document describing development of Subpart H indicates that many of the facilities tested already used mist eliminators even before there was a sulfuric acid mist (SAM) emission limit. Since there was no SAM emission limit for these facilities to meet, it is reasonable to assume the mist eliminators were installed for reasons other than pollution control, including acid recovery and corrosion control.

The second criteria is, how the cost savings from product recovery compare to the cost of the equipment, in cases where the equipment is recovering product. The permitted SAM emission rate is 0.15 lb/ton of sulfuric acid produced. At the permitted production rate of 2,100 TPD of acid, the permitted SAM emission rate is 315 lb/day. EPA's published emission factor for uncontrolled SAM emissions from sulfuric acid plants is 0.35 lb/ton of sulfuric acid produced. Using this emission factor, uncontrolled SAM emissions are calculated to be 735 lb/day. The difference between the controlled and uncontrolled emission rate, 420 lb/day, is an indication of the minimum amount of sulfuric acid recovered using the mist eliminators. Sulfuric acid is valued at approximately \$30 per ton. This equates to approximately \$2,300 per year on direct product savings.

The third criteria is whether the equipment would be installed if no air quality requirements were in place. The annual capital and operating cost of the mist eliminators is \$130,000 including the cost of the mist eliminators and their maintenance. However, these mist eliminators prevent the costly corrosion of downstream process and facility equipment. The corrosion protection afforded through capture of SAM

far exceeds the value of acid recovered and itself justifies the capital and operating expenses of the mist eliminators. As a result, the mist eliminators would be present absent pollution control regulations.

**Sulfur Dioxide**

The Sulfuric Acid Plant No. 4 has a federally enforceable emission limit for SO<sub>2</sub>. However, there is no control device for SO<sub>2</sub>. Therefore CAM does not apply for SO<sub>2</sub>. Refer to Attachment A for applicability analysis.

## EMISSIONS UNIT INFORMATION

Section [2] of [14]  
Sulfuric Acid Plant No. 5

### III. EMISSIONS UNIT INFORMATION

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

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

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

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

**EMISSIONS UNIT INFORMATION**

Section [2] of [14]  
Sulfuric Acid Plant No. 5

**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:  
**Sulfuric Acid Plant No. 5 (double absorption)**

3. Emissions Unit Identification Number: **005**

4. Emissions Unit Status Code: <b>A</b>	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: <b>28</b>	8. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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9. Package Unit:  
Manufacturer: \_\_\_\_\_ Model Number: \_\_\_\_\_

10. Generator Nameplate Rating: \_\_\_\_\_ MW

11. Emissions Unit Comment:  
**There exists a potential for fugitive emissions of PM/PM<sub>10</sub>/SO<sub>2</sub>/NO<sub>x</sub>/SAM to occur from this emissions unit. It is our understanding, based on past FDEP interpretations and permitting history, that these emissions are not regulated under federal/local/state emission standards. These fugitive emissions are addressed in Emission Unit Section 14.**

**EMISSIONS UNIT INFORMATION**

Section [2] of [14]  
Sulfuric Acid Plant No. 5

**Emissions Unit Control Equipment**

1. Control Equipment/Method(s) Description:  
**Sulfuric Acid Plant - Double Contact Process**  
**Mist Eliminator - High Velocity**

2. Control Device or Method Code(s): **044, 014**

**EMISSIONS UNIT INFORMATION**

Section [2] of [14]  
Sulfuric Acid Plant No. 5

**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:	<b>2,800 TPD 100% H<sub>2</sub>SO<sub>4</sub></b>	
3. Maximum Heat Input Rate:	million Btu/hr	
4. Maximum Incineration Rate:	pounds/hr tons/day	
5. Requested Maximum Operating Schedule:	<b>24 hours/day</b>	<b>7 days/week</b>
	<b>52 weeks/year</b>	<b>8,760 hours/year</b>
6. Operating Capacity/Schedule Comment:		



**EMISSIONS UNIT INFORMATION**

Section [2] of [14]  
Sulfuric Acid Plant No. 5

**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: <b>15</b>		2. Emission Point Type Code: <b>1</b>	
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: <b>V</b>	6. Stack Height: <b>150 feet</b>	7. Exit Diameter: <b>8.0 feet</b>	
8. Exit Temperature: <b>176°F</b>	9. Actual Volumetric Flow Rate: <b>109,700 acfm</b>	10. Water Vapor: <b>%</b>	
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: <b>Volumetric flow rate and temperature based on recent stack testing and maximum daily production rate.</b>			

**EMISSIONS UNIT INFORMATION**

Section [2] of [14]  
Sulfuric Acid Plant No. 5

**D. SEGMENT (PROCESS/FUEL) INFORMATION**

**Segment Description and Rate:** Segment 1 of 2

1. Segment Description (Process/Fuel Type): <b>Chemical Manufacturing; Sulfuric Acid; Contact Process; Absorber at 99.9% Conversion.</b>		
2. Source Classification Code (SCC): <b>3-01-023-01</b>		3. SCC Units: <b>Tons of 100% H<sub>2</sub>SO<sub>4</sub></b>
4. Maximum Hourly Rate: <b>116.7</b>	5. Maximum Annual Rate: <b>1,022,000</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: <b>Maximum hourly rate based on the daily production rate (2,800 TPD) divided by 24 hr/day. Maximum annual rate based on daily production rate (2,800 TPD) multiplied by 365 days per year.</b>		

**Segment Description and Rate:** Segment 2 of 2

1. Segment Description (Process/Fuel Type): <b>In-process Fuel Use; Natural Gas; General.</b>		
2. Source Classification Code (SCC): <b>3-90-006-89</b>		3. SCC Units: <b>Million Cubic Feet Burned</b>
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>1,000</b>
10. Segment Comment: <b>Natural gas usage results from cold startup of Sulfuric Acid Plant. Typically, the plant experiences one cold startup per year.</b>		



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

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

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

1. Pollutant Emitted: <b>SO<sub>2</sub></b>	2. Total Percent Efficiency of Control:
3. Potential Emissions: <b>467 lb/hour                      2,044 tons/year</b>	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: <b>4 lb/ton 100% H<sub>2</sub>SO<sub>4</sub></b>  Reference: <b>Permit No. 1050053-012-AV</b>	7. Emissions Method Code: <b>0</b>
8. Calculation of Emissions: <b>Hourly: 4 lb/ton 100% H<sub>2</sub>SO<sub>4</sub> x 116.7 TPH 100% H<sub>2</sub>SO<sub>4</sub> = 466.8 lb/hr</b>  <b>Annual: 466.8 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 2,044 TPY</b>	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

**EMISSIONS UNIT INFORMATION**

Section [2] of [14]  
Sulfuric Acid Plant No. 5

**POLLUTANT DETAIL INFORMATION**

Page [1] of [2]  
Sulfur Dioxide

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

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

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>4 lb/ton 100% H<sub>2</sub>SO<sub>4</sub></b>	4. Equivalent Allowable Emissions: <b>467 lb/hour            2,044 tons/year</b>
5. Method of Compliance: <b>Annual Stack Test with EPA Method 8.</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Based on Permit No. 1050053-012-AV, Rule 62-296.402(2)(b) and 40 CFR 60.82(a).</b>	

Allowable Emissions Allowable Emissions \_\_\_\_ of \_\_\_\_

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

Allowable Emissions Allowable Emissions \_\_\_\_ of \_\_\_\_

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

**EMISSIONS UNIT INFORMATION**

Section [2] of [14]  
Sulfuric Acid Plant No. 5

**POLLUTANT DETAIL INFORMATION**

Page [2] of [2]  
Sulfuric Acid Mist

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

(Optional for unregulated emissions units.)

**Potential/Estimated Fugitive Emissions**

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

1. Pollutant Emitted: <b>SAM</b>	2. Total Percent Efficiency of Control:
3. Potential Emissions: <b>17.5 lb/hour                      76.7 tons/year</b>	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: <b>0.15 lb/ton 100% H<sub>2</sub>SO<sub>4</sub></b>  Reference: <b>Permit No. 1050053-012-AV</b>	7. Emissions Method Code: <b>0</b>
8. Calculation of Emissions: <b>Hourly: 0.15 lb/ton 100% H<sub>2</sub>SO<sub>4</sub> x 116.7 TPH 100% H<sub>2</sub>SO<sub>4</sub> = 17.5 lb/hr</b>  <b>Annual: 17.5 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 76.7 TPY</b>	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

**EMISSIONS UNIT INFORMATION**

Section [2] of [14]  
Sulfuric Acid Plant No. 5

**POLLUTANT DETAIL INFORMATION**

Page [2] of [2]  
Sulfuric Acid Mist

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

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

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>RULE</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>0.15 lb/ton 100% H<sub>2</sub>SO<sub>4</sub></b>	4. Equivalent Allowable Emissions: <b>17.5 lb/hour      76.7 tons/year</b>
5. Method of Compliance: <b>Annual stack test using EPA Method 8.</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Based on Permit No. 1050053-012-AV, Rule 62-296.402(c) and 40 CFR 60.83(a)(1).</b>	

Allowable Emissions Allowable Emissions \_\_\_\_ of \_\_\_\_

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

Allowable Emissions Allowable Emissions \_\_\_\_ of \_\_\_\_

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

**EMISSIONS UNIT INFORMATION**

Section [2] of [14]  
Sulfuric Acid Plant No. 5

**G. VISIBLE EMISSIONS INFORMATION**

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

**Visible Emissions Limitation:** Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: <b>VE10</b>	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: <b>10 %</b> Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: <b>Annual visible emissions test using EPA Method 9.</b>	
6. Visible Emissions Comment: <b>Based on 40 CFR 60.83(a)(2), Rule 62-296.402(2)(a), and Permit No. 1050053-012-AV.</b>	

**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 [14]  
 Sulfuric Acid Plant No. 5

**H. CONTINUOUS MONITOR INFORMATION**

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

**Continuous Monitoring System:** Continuous Monitor 1 of 2

1. Parameter Code: <b>EM</b>	2. Pollutant(s): <b>SO<sub>2</sub></b>
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: <b>Ametek</b> Model Number: <b>4600</b> Serial Number: <b>46019009S</b>	
5. Installation Date: <b>1999</b>	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Based on Rule 204.800(8)(b)11., F.A.C., and 40 CFR 60.84(a).</b>	

**Continuous Monitoring System:** Continuous Monitor 2 of 2

1. Parameter Code: <b>EM</b>	2. Pollutant(s): <b>O<sub>2</sub></b>
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: <b>Ametek</b> Model Number: <b>Series 2000 Controller</b> Serial Number: <b>C127647</b>	
5. Installation Date: <b>1995</b>	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Based on Rule 204.800(8)(b)11., F.A.C., and 40 CFR 60.84(d).</b>	

**EMISSIONS UNIT INFORMATION**

Section [2] of [14]  
Sulfuric Acid Plant No. 5

**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: <b>GB-EU2-I1</b> <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 checked="" type="checkbox"/> Attached, Document ID: <b>GB-EU2-I2</b> <input type="checkbox"/> Previously Submitted, Date _____
3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <b>GB-EU2-I3</b> <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 checked="" type="checkbox"/> Attached, Document ID: <b>GB-EU1-I4</b> <input type="checkbox"/> Previously Submitted, Date _____ <input 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 checked="" type="checkbox"/> Previously Submitted, Date: <b>06/21/2004</b> Test Date(s)/Pollutant(s) Tested: <b>SO<sub>2</sub>, SAM, NO<sub>x</sub>, VE</b> <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input 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: _____ <input checked="" type="checkbox"/> Not Applicable

## EMISSIONS UNIT INFORMATION

Section [2] of [14]  
Sulfuric Acid Plant No. 5

### Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.) <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

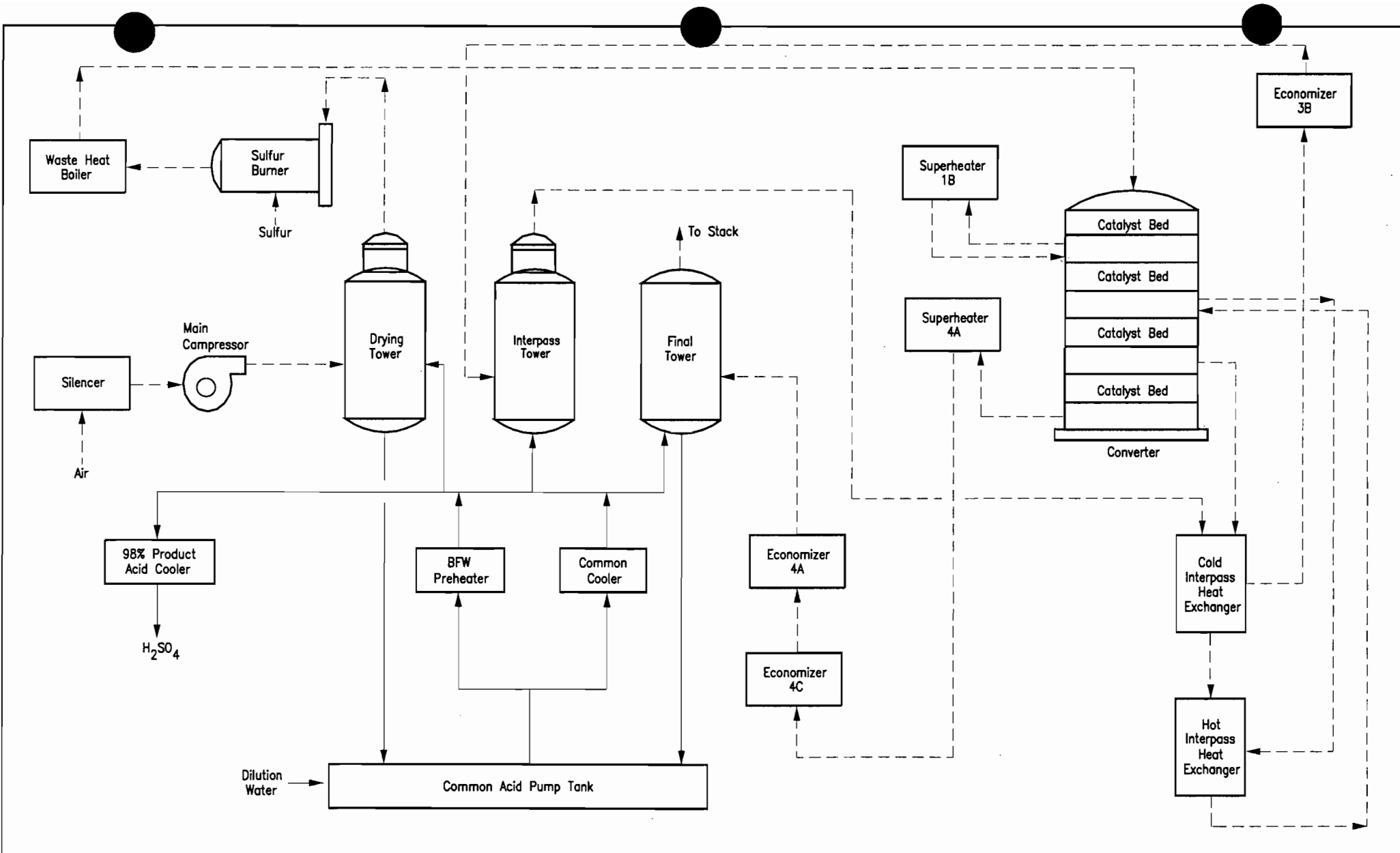
1. Identification of Applicable Requirements <input checked="" type="checkbox"/> Attached, Document ID: <u>GB-EU1-IV1</u> <input type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input checked="" type="checkbox"/> Attached, Document ID: <u>GB-EU2-IV2</u> <input type="checkbox"/> Not 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
5. Acid Rain Part Application <input type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input type="checkbox"/> Copy Attached, Document ID: _____ <input type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable

**EMISSIONS UNIT INFORMATION**

Section [2] of [14]  
Sulfuric Acid Plant No. 5

Additional Requirements Comment

**ATTACHMENT GB-EU2-11**  
**PROCESS FLOW DIAGRAM**



- - - - -> Gas Flow  
 ————> Sulfuric Acid/Liquid Flow

Attachment GB-EU2-11  
 Sulfuric Acid Plant No. 5  
 Process Flow Diagram  
 Cargill Green Bay

EMISSION UNIT:	H <sub>2</sub> SO <sub>4</sub> Plants
PROCESS AREA:	H <sub>2</sub> SO <sub>4</sub> Production
FILENAME:	0437550\4\4.4\GB-EU2-11.dwg
LATEST REVISION:	06/30/04

**ATTACHMENT GB-EU2-12**  
**FUEL ANALYSIS OR SPECIFICATION**

**ATTACHMENT CR-EU2-I2**  
**SULFURIC ACID PLANT NO. 5**  
**FUEL ANALYSIS**

Fuel	Density (lb/scf)	Moisture (%)	Weight % Sulfur	Weight % Nitrogen	Weight % Ash	Heat Capacity
Natural Gas	0.048	< 0.01	<0.001	0.62	--	1,000 Btu/scf



**ATTACHMENT GB-EU2-I3**

**DETAILED DESCRIPTION OF CONTROL EQUIPMENT**

**ATTACHMENT GB-EU2-13****DETAILED DESCRIPTION OF CONTROL EQUIPMENT**

The control equipment for Sulfuric Acid Plant No. 6 consists of two systems in series. The first system is integral to the sulfuric acid production process and is the double-contact process where the SO<sub>2</sub> emissions from the sulfur combustion are absorbed by water in a tower. This process is at least 99-percent efficient at absorbing SO<sub>2</sub>. This is inherent process equipment and not considered control equipment. The second system, also integral to the process, is a high-velocity mist eliminator that causes moisture from the double-contact process to be removed from the air stream by impingement on fibers. This process is at least 90-percent efficient at removing SAM from the air stream, hence recovering product and preventing corrosion of downstream equipment.

**ATTACHMENT GB-EU2-IV2**  
**COMPLIANCE ASSURANCE MONITORING**

**ATTACHMENT GB-EU2-IV2****COMPLIANCE ASSURANCE MONITORING  
SULFURIC ACID PLANT NO. 5**

Based on the information presented below, Cargill believes the mist eliminators should be considered inherent process equipment, and therefore, not subject to CAM requirements. EPA has developed a three-part test to determine if certain equipment can be classified as inherent process equipment (IPE), as opposed to a "control device." These criteria are addressed below.

**Sulfuric Acid Mist**

The Sulfuric Acid Plant No. 5 uses a mist eliminator to reduce sulfuric acid mist emissions. The mist eliminators serve the dual purpose of recovering acid for use in the production of phosphoric acid and prevention of corrosion of the stack and other facility equipment.

The first criteria is if the primary purpose of the control equipment is to control air pollution. EPA performed a series of stack tests to develop the NSPS, Subpart H. The background document describing development of Subpart H indicates that many of the facilities tested already used mist eliminators even before there was a sulfuric acid mist (SAM) emission limit. Since there was no SAM emission limit for these facilities to meet, it is reasonable to assume the mist eliminators were installed for reasons other than pollution control, including acid recovery and corrosion control.

The second criteria is, how the cost savings from product recovery compare to the cost of the equipment, in cases where the equipment is recovering product. The permitted SAM emission rate is 0.15 lb/ton of sulfuric acid produced. At the permitted production rate of 2,100 TPD of acid, the permitted SAM emission rate is 315 lb/day. EPA's published emission factor for uncontrolled SAM emissions from sulfuric acid plants is 0.35 lb/ton of sulfuric acid produced. Using this emission factor, uncontrolled SAM emissions are calculated to be 735 lb/day. The difference between the controlled and uncontrolled emission rate, 420 lb/day, is an indication of the minimum amount of sulfuric acid recovered using the mist eliminators. Sulfuric acid is valued at approximately \$30 per ton. This equates to approximately \$2,300 per year on direct product savings.

The third criteria is whether the equipment would be installed if no air quality requirements were in place. The annual capital and operating cost of the mist eliminators is \$130,000 including the cost of the mist eliminators and their maintenance. However, these mist eliminators prevent the costly corrosion of downstream process and facility equipment. The corrosion protection afforded through capture of SAM far exceeds the value of acid recovered and itself justifies the capital and operating expenses of the mist eliminators. As a result, the mist eliminators would be present absent pollution control regulations.

**Sulfur Dioxide**

The Sulfuric Acid Plant No. 5 has a federally enforceable emission limit for SO<sub>2</sub>. However, there is no control device for SO<sub>2</sub>. Therefore CAM does not apply for SO<sub>2</sub>. Refer to Attachment A for applicability analysis.

## EMISSIONS UNIT INFORMATION

Section [3] of [14]  
Sulfuric Acid Plant No. 6

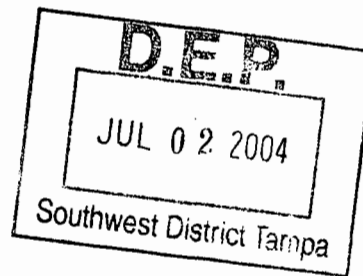
### III. EMISSIONS UNIT INFORMATION

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

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

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

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



**EMISSIONS UNIT INFORMATION**

Section [3] of [14]  
Sulfuric Acid Plant No. 6

**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:  
**Sulfuric Acid Plant No. 6 (double absorption)**

3. Emissions Unit Identification Number: **038**

4. Emissions Unit Status Code: <b>A</b>	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: <b>28</b>	8. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
--	--------------------------------	--------------------------	--	--

9. Package Unit:  
Manufacturer: \_\_\_\_\_ Model Number: \_\_\_\_\_

10. Generator Nameplate Rating: \_\_\_\_\_ MW

11. Emissions Unit Comment:  
**There exists a potential for fugitive emissions of PM/PM<sub>10</sub>/SO<sub>2</sub>/NO<sub>x</sub>/SAM to occur from this emissions unit. It is our understanding, based on past FDEP interpretations and permitting history, that these emissions are not regulated under federal/local/state emission standards. These fugitive emissions are addressed in Emission Unit Section 14.**

**EMISSIONS UNIT INFORMATION**

Section [3] of [14]  
Sulfuric Acid Plant No. 6

**Emissions Unit Control Equipment**

1. Control Equipment/Method(s) Description:  
**Sulfuric Acid Plant - Double Contact Process  
Mist Eliminator - High Velocity**

2. Control Device or Method Code(s): **044, 014**



**EMISSIONS UNIT INFORMATION**

Section [3] of [14]  
Sulfuric Acid Plant No. 6

**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:	<b>2,750 TPD 100% H<sub>2</sub>SO<sub>4</sub></b>	
3. Maximum Heat Input Rate:	million Btu/hr	
4. Maximum Incineration Rate:	pounds/hr tons/day	
5. Requested Maximum Operating Schedule:	<b>24 hours/day</b>	<b>7 days/week</b>
	<b>52 weeks/year</b>	<b>8,760 hours/year</b>
6. Operating Capacity/Schedule Comment:	<b>Maximum production rate is a 24-hour average.</b>	

**EMISSIONS UNIT INFORMATION**

Section [3] of [14]  
Sulfuric Acid Plant No. 6

**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: <b>23</b>		2. Emission Point Type Code: <b>1</b>	
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: <b>V</b>	6. Stack Height: <b>150 feet</b>	7. Exit Diameter: <b>9.0 feet</b>	
8. Exit Temperature: <b>170°F</b>	9. Actual Volumetric Flow Rate: <b>112,700 acfm</b>	10. Water Vapor: <b>%</b>	
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: <b>Volumetric flow rate and temperature based on recent stack testing and maximum daily production rate.</b>			

**EMISSIONS UNIT INFORMATION**

Section [3] of [14]  
 Sulfuric Acid Plant No. 6

**D. SEGMENT (PROCESS/FUEL) INFORMATION****Segment Description and Rate:** Segment 1 of 2

1. Segment Description (Process/Fuel Type): <b>Chemical Manufacturing; Sulfuric Acid; Contact Process; Absorber at 99.9% Conversion.</b>		
2. Source Classification Code (SCC): <b>3-01-023-01</b>		3. SCC Units: <b>Tons of 100% H<sub>2</sub>SO<sub>4</sub></b>
4. Maximum Hourly Rate: <b>114.58</b>	5. Maximum Annual Rate: <b>1,003,750</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: <b>Maximum hourly rate based on the daily production rate (2,750 TPD) divided by 24 hr/day.</b>		

**Segment Description and Rate:** Segment 2 of 2

1. Segment Description (Process/Fuel Type): <b>In-process Fuel Use; Natural Gas; General.</b>		
2. Source Classification Code (SCC): <b>3-90-006-89</b>		3. SCC Units: <b>Million Cubic Feet Burned</b>
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>1,000</b>
10. Segment Comment: <b>Natural gas usage results from cold startup of Sulfuric Acid Plant. Typically, the plant experiences one cold startup per year.</b>		



**EMISSIONS UNIT INFORMATION**

Section [3] of [14]  
Sulfuric Acid Plant No. 6

**POLLUTANT DETAIL INFORMATION**

Page [1] of [3]  
Sulfur Dioxide

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

(Optional for unregulated emissions units.)

**Potential/Estimated Fugitive Emissions**

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

1. Pollutant Emitted: <b>SO<sub>2</sub></b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>401.0 lb/hour                      1,757 tons/year</b>		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: <b>3.5 lb/ton 100% H<sub>2</sub>SO<sub>4</sub></b>  Reference: <b>Current Permit Limit</b>		7. Emissions Method Code: <b>0</b>	
8. Calculation of Emissions: <b>Hourly: 3.5 lb/ton 100% H<sub>2</sub>SO<sub>4</sub> x 114.58 TPH 100% H<sub>2</sub>SO<sub>4</sub> = 401.0 lb/hr</b>  <b>Annual: 401.0 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 1,757 TPY</b>			
9. Pollutant Potential/Estimated Fugitive Emissions Comment: <b>Emission limit is based on a 3-hour average. The averaging time is based on the run time of the specified test method (Permit No. 1050053-012-AV).</b>			

**EMISSIONS UNIT INFORMATION**

Section [3] of [14]  
Sulfuric Acid Plant No. 6

**POLLUTANT DETAIL INFORMATION**

Page [1] of [3]  
Sulfur Dioxide

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

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

**Allowable Emissions** Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>3.5 lb/ton 100% H<sub>2</sub>SO<sub>4</sub></b>	4. Equivalent Allowable Emissions: <b>401.0 lb/hour      1,757 tons/year</b>
5. Method of Compliance: <b>Annual Stack Test with EPA Method 8.</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Based on current permit limit. Emission limit is based on a 3-hour average. The averaging time is based on the run time of the specified test method (Permit No. 1050053-012-AV).</b>	

**Allowable Emissions** Allowable Emissions \_\_\_\_ of \_\_\_\_

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

**Allowable Emissions** Allowable Emissions \_\_\_\_ of \_\_\_\_

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

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

(Optional for unregulated emissions units.)

**Potential/Estimated Fugitive Emissions**

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

1. Pollutant Emitted: <b>SAM</b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>17.2 lb/hour                      75 tons/year</b>		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: <b>0.15 lb/ton 100% H<sub>2</sub>SO<sub>4</sub></b>  Reference: <b>Permit No. 1050053-012-AV</b>		7. Emissions Method Code: <b>0</b>	
8. Calculation of Emissions: <b>Hourly: 0.15 lb/ton 100% H<sub>2</sub>SO<sub>4</sub> x 114.58 TPH 100% H<sub>2</sub>SO<sub>4</sub> = 17.2 lb/hr</b>  <b>Annual: 17.2 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 75 TPY</b>			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

**EMISSIONS UNIT INFORMATION**

Section [3] of [14]  
Sulfuric Acid Plant No. 6

**POLLUTANT DETAIL INFORMATION**

Page [2] of [3]  
Sulfuric Acid Mist

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

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

**Allowable Emissions** Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>RULE</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>0.15 lb/ton 100% H<sub>2</sub>SO<sub>4</sub></b>	4. Equivalent Allowable Emissions: <b>17.2 lb/hour      75 tons/year</b>
5. Method of Compliance: <b>Annual stack test using EPA Method 8.</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Based on Permit No. 1050053-012-AV, 40 CFR 60.83(1), and Rule 62-296.402(2)(c), F.A.C.</b>	

**Allowable Emissions** Allowable Emissions \_\_\_\_ of \_\_\_\_

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

**Allowable Emissions** Allowable Emissions \_\_\_\_ of \_\_\_\_

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



**EMISSIONS UNIT INFORMATION**

Section **[3]** of **[14]**  
Sulfuric Acid Plant No. 6

**POLLUTANT DETAIL INFORMATION**

Page **[3]** of **[3]**  
Nitrogen Oxides

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

(Optional for unregulated emissions units.)

**Potential/Estimated Fugitive Emissions**

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

1. Pollutant Emitted: <b>NO<sub>x</sub></b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>13.8 lb/hour                      60 tons/year</b>		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: <b>0.12 lb/ton 100% H<sub>2</sub>SO<sub>4</sub></b>  Reference: <b>Permit No. 1050053-012-AV</b>		7. Emissions Method Code: <b>0</b>	
8. Calculation of Emissions: <b>Hourly: 0.12 lb/ton 100% H<sub>2</sub>SO<sub>4</sub> x 114.58 TPH 100% H<sub>2</sub>SO<sub>4</sub> = 13.8 lb/hr</b>  <b>Annual: 13.8 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 60 TPY</b>			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

**EMISSIONS UNIT INFORMATION**

Section [3] of [14]  
Sulfuric Acid Plant No. 6

**POLLUTANT DETAIL INFORMATION**

Page [3] of [3]  
Nitrogen Oxides

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

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

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>RULE</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>0.12 lb/ton 100% H<sub>2</sub>SO<sub>4</sub></b>	4. Equivalent Allowable Emissions: <b>13.8 lb/hour      60 tons/year</b>
5. Method of Compliance: <b>Annual stack test with EPA Method 7E.</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Based on Permit No. 1050053-012-AV.</b>	

Allowable Emissions Allowable Emissions \_\_\_\_ of \_\_\_\_

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

Allowable Emissions Allowable Emissions \_\_\_\_ of \_\_\_\_

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

**EMISSIONS UNIT INFORMATION**

Section [3] of [14]  
Sulfuric Acid Plant No. 6

**G. VISIBLE EMISSIONS INFORMATION**

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

**Visible Emissions Limitation:** Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: <b>VE10</b>	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: <b>10 %</b> Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: <b>Annual visible emissions test using EPA Method 9.</b>	
7. Visible Emissions Comment: <b>40 CFR 60.83(a)(2) and Rule 62-296.402(2)(a), Permit No. 1050053-019-AC/PSD-FL-243.</b>	

**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 [3] of [14]  
Sulfuric Acid Plant No. 6

**H. CONTINUOUS MONITOR INFORMATION**

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

**Continuous Monitoring System:** Continuous Monitor 1 of 2

1. Parameter Code: <b>EM</b>	2. Pollutant(s): <b>SO<sub>2</sub></b>
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: <b>Ametek</b> Model Number: <b>4600B</b> Serial Number: <b>8128</b>	
5. Installation Date: <b>1998</b>	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Based on Rule 204.800(8)(b)11, F.A.C., and 40 CFR 60.84(a).</b>	

**Continuous Monitoring System:** Continuous Monitor 2 of 2

1. Parameter Code: <b>EM</b>	2. Pollutant(s): <b>O<sub>2</sub></b>
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: <b>Ametek</b> Model Number: <b>Series 2000</b> Serial Number: <b>10200754</b>	
5. Installation Date: <b>1998</b>	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Based on Rule 204.800(8)(b)11, F.A.C., and 40 CFR 60.84(a).</b>	

**EMISSIONS UNIT INFORMATION**

Section [3] of [14]  
Sulfuric Acid Plant No. 6

**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: <b>GB-EU3-11</b> <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 checked="" type="checkbox"/> Attached, Document ID: <b>GB-EU3-12</b> <input type="checkbox"/> Previously Submitted, Date _____
3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <b>GB-EU3-13</b> <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 checked="" type="checkbox"/> Attached, Document ID: <b>GB-EU1-14</b> <input type="checkbox"/> Previously Submitted, Date _____ <input 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 checked="" type="checkbox"/> Previously Submitted, Date: <b>05/14/2003</b> Test Date(s)/Pollutant(s) Tested: <b>SO<sub>2</sub>, SAM, NO<sub>x</sub>, VE</b> <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input 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: _____ <input checked="" type="checkbox"/> Not Applicable

**EMISSIONS UNIT INFORMATION**

**Section [3] of [14]  
No. 6 Sulfuric Acid Plant**

**Additional Requirements for Air Construction Permit Applications**

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.) <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: <b>GB-EU1-IV1</b> <input type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input checked="" type="checkbox"/> Attached, Document ID: <b>GB-EU3-IV2</b> <input 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
5. Acid Rain Part Application <input type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input type="checkbox"/> Copy Attached, Document ID: _____ <input type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable

**EMISSIONS UNIT INFORMATION**

Section [3] of [14]

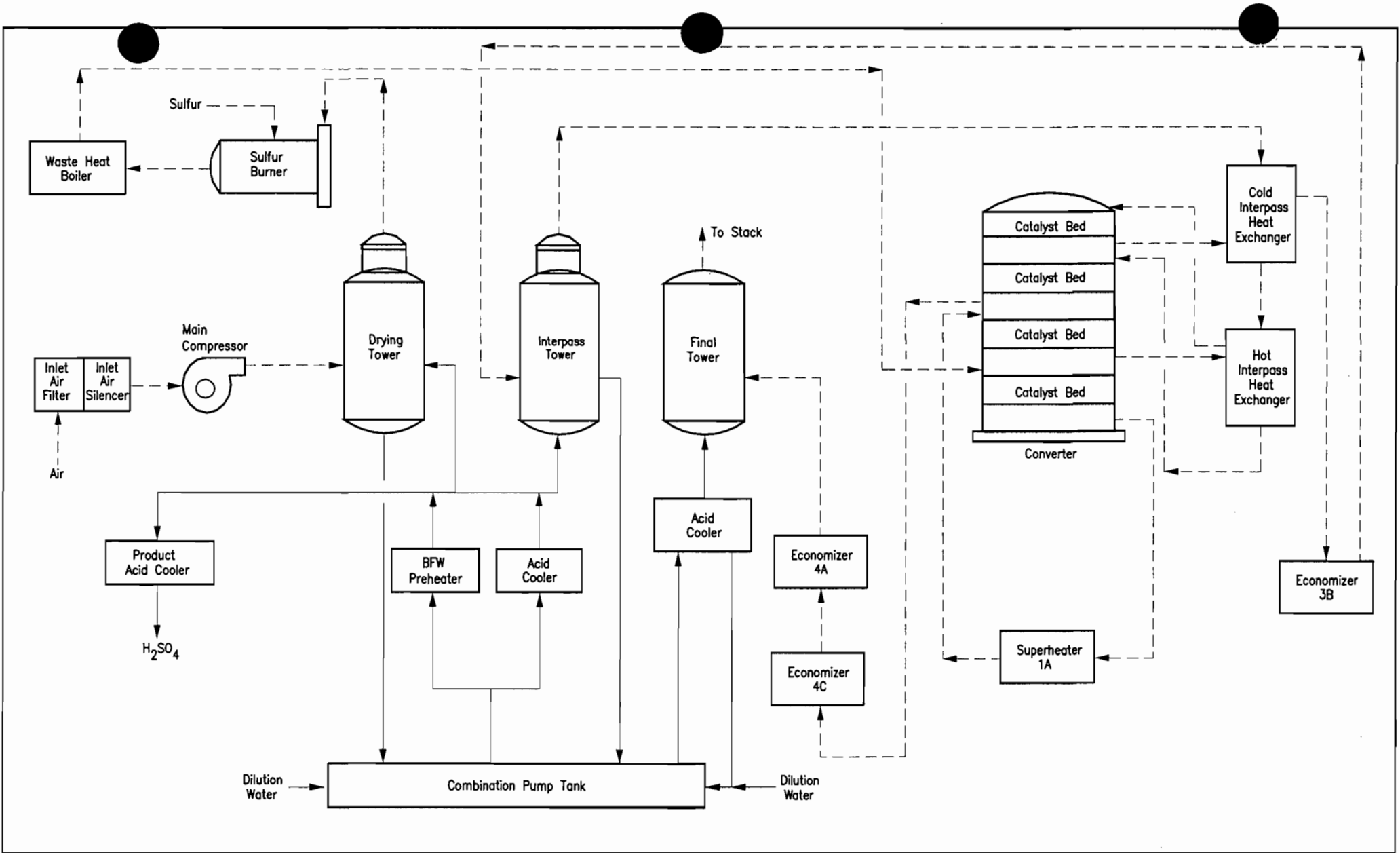
No. 6 Sulfuric Acid Plant

**Additional Requirements Comment**

**ATTACHMENT GB-EU3-I1**

**PROCESS FLOW DIAGRAM**





- - - - -> Gas Flow  
 —————> Sulfuric Acid/Liquid Flow

Attachment GB-EU3-11  
 Sulfuric Acid Plant No. 6  
 Process Flow Diagram  
 Cargill Green Bay

EMISSION UNIT:	$H_2SO_4$ Plants
PROCESS AREA:	$H_2SO_4$ Production
FILENAME:	0437550\4\4.4\GB-EU3-11.dwg
LATEST REVISION:	06/30/04

**ATTACHMENT GB-EU3-I2**  
**FUEL ANALYSIS OR SPECIFICATION**

**ATTACHMENT GB-EU3-I2**  
**SULFURIC ACID PLANT NO. 6**  
**FUEL ANALYSIS**

Fuel	Density (lb/scf)	Moisture (%)	Weight % Sulfur	Weight % Nitrogen	Weight % Ash	Heat Capacity
Natural Gas	0.048	< 0.01	<0.001	0.62	--	1,000 Btu/scf

**ATTACHMENT GB-EU3-I3**

**DETAILED DESCRIPTION OF CONTROL EQUIPMENT**

**ATTACHMENT GB-EU3-I3****DETAILED DESCRIPTION OF CONTROL EQUIPMENT**

The control equipment for Sulfuric Acid Plant No. 6 consists of two systems in series. The first system is integral to the sulfuric acid production process and is the double-contact process where the SO<sub>2</sub> emissions from the sulfur combustion are absorbed by water in a tower. This process is at least 99-percent efficient at absorbing SO<sub>2</sub>. This is inherent process equipment and not considered control equipment. The second system, also integral to the process, is a high-velocity mist eliminator that causes moisture from the double-contact process to be removed from the air stream by impingement on fibers. This process is at least 90-percent efficient at removing SAM from the air stream, hence recovering product and preventing corrosion of downstream equipment.

**ATTACHMENT GB-EU3-IV2**  
**COMPLIANCE ASSURANCE MONITORING**

**ATTACHMENT GB-EU3-IV2**  
**COMPLIANCE ASSURANCE MONITORING**  
**SULFURIC ACID PLANT NO. 6**

Based on the information presented below, Cargill believes the mist eliminators should be considered inherent process equipment, and therefore, not subject to CAM requirements. EPA has developed a three-part test to determine if certain equipment can be classified as inherent process equipment (IPE), as opposed to a "control device." These criteria are addressed below.

**Sulfuric Acid Mist**

The Sulfuric Acid Plant No. 6 uses a mist eliminator to reduce sulfuric acid mist emissions. The mist eliminators serve the dual purpose of recovering acid for use in the production of phosphoric acid and prevention of corrosion of the stack and other facility equipment.

The first criteria is if the primary purpose of the control equipment is to control air pollution. EPA performed a series of stack tests to develop the NSPS, Subpart H. The background document describing development of Subpart H indicates that many of the facilities tested already used mist eliminators even before there was a sulfuric acid mist (SAM) emission limit. Since there was no SAM emission limit for these facilities to meet, it is reasonable to assume the mist eliminators were installed for reasons other than pollution control, including acid recovery and corrosion control.

The second criteria is, how the cost savings from product recovery compare to the cost of the equipment, in cases where the equipment is recovering product. The permitted SAM emission rate is 0.15 lb/ton of sulfuric acid produced. At the permitted production rate of 2,100 TPD of acid, the permitted SAM emission rate is 315 lb/day. EPA's published emission factor for uncontrolled SAM emissions from sulfuric acid plants is 0.35 lb/ton of sulfuric acid produced. Using this emission factor, uncontrolled SAM emissions are calculated to be 735 lb/day. The difference between the controlled and uncontrolled emission rate, 420 lb/day, is an indication of the minimum amount of sulfuric acid recovered using the mist eliminators. Sulfuric acid is valued at approximately \$30 per ton. This equates to approximately \$2,300 per year on direct product savings.

The second criteria is, how the cost savings from product recovery compare to the cost of the equipment, in cases where the equipment is recovering product. The annual capital and operating cost of the mist eliminators is \$130,000 including the cost of the mist eliminators and their maintenance. However, these mist eliminators prevent the costly corrosion of downstream process and facility equipment. The corrosion protection afforded through capture of SAM far exceeds the value of acid

recovered and itself justifies the capital and operating expenses of the mist eliminators. As a result, the mist eliminators would be present absent pollution control regulations.

**Sulfur Dioxide**

The Sulfuric Acid Plant No. 6 has a federally enforceable emission limit for SO<sub>2</sub>. However, there is no control device for SO<sub>2</sub>. Therefore CAM does not apply for SO<sub>2</sub>. Refer to Attachment A for applicability analysis.

**Nitrogen Oxides**

The Sulfuric Acid Plant No. 6 has a federally enforceable emission limit for NO<sub>x</sub>. However, there is no control device for NO<sub>x</sub>. Therefore, CAM does not apply for NO<sub>x</sub>. Refer to Attachment A for applicability analysis.



## EMISSIONS UNIT INFORMATION

Section [4] of [14]  
South AP 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 Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

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

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

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

**EMISSIONS UNIT INFORMATION**

Section [4] of [14]  
 South AP 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:  
**South AP Plant (Ammoniated Phosphates Fertilizers Manufacturing)**

3. Emissions Unit Identification Number: **007**

4. Emissions Unit Status Code: <b>A</b>	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: <b>28</b>	8. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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9. Package Unit:  
 Manufacturer: \_\_\_\_\_ Model Number: \_\_\_\_\_

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:

**EMISSIONS UNIT INFORMATION**

Section [4] of [14]  
South AP Plant

**Emissions Unit Control Equipment**

1. Control Equipment/Method(s) Description:

**053 - Four Venturi/Cyclonic Scrubbers**

**141 - Two Tail-Gas Scrubbers**

2. Control Device or Method Code(s): **053, 141**



**EMISSIONS UNIT INFORMATION**

Section [4] of [14]  
 South AP 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: <b>AP Plants</b>		2. Emission Point Type Code: <b>4</b>	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: <b>Stack A</b> <b>Stack B</b>			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: <b>F</b>	6. Stack Height: <b>129.5 feet</b>	7. Exit Diameter: <b>8.0 feet</b>	
8. Exit Temperature: <b>107°F</b>	9. Actual Volumetric Flow Rate: <b>150,000 acfm</b>	10. Water Vapor: <b>%</b>	
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: <b>Stack/vent information represents Stack B. Parameters for Stack A are 130.0 ft height, 6.0 ft diameter, 40,000 acfm, and 191°F exit temperature.</b>			

**EMISSIONS UNIT INFORMATION**

Section [4] of [14]  
 South AP Plant

**D. SEGMENT (PROCESS/FUEL) INFORMATION**

**Segment Description and Rate:** Segment 1 of 4

1. Segment Description (Process/Fuel Type): <b>Chemical Manufacturing; Ammonium Phosphates; Ammoniator/Granulator</b>		
2. Source Classification Code (SCC): <b>3-01-030-02</b>		3. SCC Units: <b>Tons P<sub>2</sub>O<sub>5</sub> Produced</b>
4. Maximum Hourly Rate: <b>46</b>	5. Maximum Annual Rate: <b>402,960</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: <b>Maximum hourly rate is based on a maximum daily P<sub>2</sub>O<sub>5</sub> input rate of 1,104 TPD.</b>		

**Segment Description and Rate:** Segment 2 of 4

1. Segment Description (Process/Fuel Type): <b>In-Process Fuel Use; Distillate Oil; Phosphate Fertilizer Dryer</b>		
2. Source Classification Code (SCC): <b>3-90-005-99</b>		3. SCC Units: <b>1000 Gallons Burned</b>
4. Maximum Hourly Rate: <b>0.429</b>	5. Maximum Annual Rate: <b>3,758</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: <b>0.5</b>	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>140</b>
10. Segment Comment: <b>Maximum hourly rate is based on heat input rate of 60 MMBtu/hr.</b>		

**EMISSIONS UNIT INFORMATION**

Section [4] of [14]  
 South AP Plant

**D. SEGMENT (PROCESS/FUEL) INFORMATION**

**Segment Description and Rate: Segment 3 of 4**

1. Segment Description (Process/Fuel Type): <b>In-Process Fuel Use; Natural Gas; Phosphate Fertilizer Dryer</b>		
2. Source Classification Code (SCC): <b>3-90-006-99</b>		3. SCC Units: <b>Million Cubic Feet Burned</b>
4. Maximum Hourly Rate: <b>0.06</b>	5. Maximum Annual Rate: <b>525.6</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>1,000</b>
10. Segment Comment: <b>Maximum hourly rate is based on heat input rate of 60.0 MMBtu/hr.</b>		

**Segment Description and Rate: Segment 4 of 4**

1. Segment Description (Process/Fuel Type): <b>In-Process Fuel Use; Liquefied Petroleum Gas; Phosphate Fertilizer Dryer</b>		
2. Source Classification Code (SCC): <b>3-90-010-99</b>		3. SCC Units: <b>Thousand Gallons Burned</b>
4. Maximum Hourly Rate: <b>0.663</b>	5. Maximum Annual Rate: <b>5,808</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: <b>*</b>	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>90.5</b>
10. Segment Comment: <b>Maximum hourly rate is based on heat input rate of 60 MMBtu/hr.</b>  <b>*Maximum sulfur content = 15 grains/100 ft<sup>3</sup>.</b>		





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

(Optional for unregulated emissions units.)

**Potential/Estimated Fugitive Emissions**

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

1. Pollutant Emitted: <b>PM</b>	2. Total Percent Efficiency of Control:
3. Potential Emissions: <b>46.8 lb/hour                      205 tons/year</b>	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: <b>46.8 lb/hr</b>  Reference: <b>Permit No. 1050053-012-AV</b>	7. Emissions Method Code: <b>3</b>
8. Calculation of Emissions: <b>46.8 lb/hr x 8,760 hr/yr ÷ 2,000 lb/ton = 205 TPY</b>	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: <b>Represents total emissions from Stacks A and B combined. Emissions based on Process Weight Table.</b>	

**EMISSIONS UNIT INFORMATION**

Section [4] of [14]  
 South AP Plant

**POLLUTANT DETAIL INFORMATION**

Page [1] of [2]  
 Particulate Matter - Total

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

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

**Allowable Emissions** Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>46.8 lb/hr</b>	4. Equivalent Allowable Emissions: <b>46.8 lb/hour                      205 tons/year</b>
5. Method of Compliance: <b>Annual stack emission test using EPA Method 5.</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Permit No. 1050053-012-AV, Rule 62-296.320(4) and Rule 62-296.700(2)(b).</b>	

**Allowable Emissions** Allowable Emissions \_\_\_\_\_ of \_\_\_\_\_

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

**Allowable Emissions** Allowable Emissions \_\_\_\_\_ of \_\_\_\_\_

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

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

(Optional for unregulated emissions units.)

**Potential/Estimated Fugitive Emissions**

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

1. Pollutant Emitted: <b>FL</b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>2.76 lb/hour                      12.09 tons/year</b>		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: <b>0.06 lb/ton P<sub>2</sub>O<sub>5</sub></b>  Reference: <b>Permit No. 1050053-012-AV</b>		7. Emissions Method Code: <b>0</b>	
8. Calculation of Emissions: <b>Hourly: 0.06 lb/ton P<sub>2</sub>O<sub>5</sub> x 46 ton/hr P<sub>2</sub>O<sub>5</sub> = 2.76 lb/hr</b>  <b>Annual: 2.76 lb/hr x 8,760 hr/yr ÷ 2,000 lb/ton = 12.09 TPY</b>			
9. Pollutant Potential/Estimated Fugitive Emissions Comment: <b>Represents total emissions from Stacks A and B combined.</b>			

**EMISSIONS UNIT INFORMATION**

Section [4] of [14]  
 South AP Plant

**G. VISIBLE EMISSIONS INFORMATION**

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

**Visible Emissions Limitation:** Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: <b>VE20</b>	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: <b>20 %</b> Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: <b>Annual VE test using DEP Method 9.</b>	
5. Visible Emissions Comment: <b>Rule 62-296.320(4)(b), F.A.C. and Permit No. 1050053-012-AV. Applies to both Stacks A and B.</b>	

**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 [4] of [14]  
 South AP Plant

**H. CONTINUOUS MONITOR INFORMATION**

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

**Continuous Monitoring System:** Continuous Monitor 1 of 16

1. Parameter Code: <b>PRS</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: <b>Rosemount</b> Model Number: <b>1117913</b> Serial Number: <b>002A22A1AB4F5</b>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Pressure drop across R/G Venturi/Cyclonic (Primary and Secondary) Scrubbers. Based on MACT (40 CFR 63, Subpart BB) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**Continuous Monitoring System:** Continuous Monitor 2 of 16

1. Parameter Code: <b>PRS</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: <b>Foxboro</b> Model Number: <b>IDP10-T26C21F-M2L1B1V</b> Serial Number: <b>03390290</b>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Pressure drop across Dryer (Primary) Venturi/Cyclonic Scrubber. Based on MACT (40 CFR 63, Subpart BB) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**EMISSIONS UNIT INFORMATION**

Section [4] of [14]  
 South AP Plant

**H. CONTINUOUS MONITOR INFORMATION**

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

**Continuous Monitoring System:** Continuous Monitor 3 of 16

1. Parameter Code: <b>PRS</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: <b>Rosemount</b> Model Number: <b>1117911</b> Serial Number: <b>CD2A22A1AB4F5</b>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Pressure drop across Screens and Mills (Primary) Venturi/Cyclonic Scrubber. Based on MACT (40 CFR 63, Subpart BB) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**Continuous Monitoring System:** Continuous Monitor 4 of 16

1. Parameter Code: <b>PRS</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: <b>Siemens</b> Model Number: <b>7MF443-1FA22-1NC1-Z</b> Serial Number: <b>1X-R721-9003437</b>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Pressure drop across Cooler (Primary) Venturi/Cyclonic Scrubber. Based on MACT (40 CFR 63, Subpart BB) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**EMISSIONS UNIT INFORMATION**

Section [4] of [14]  
 South AP Plant

**H. CONTINUOUS MONITOR INFORMATION**

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

**Continuous Monitoring System:** Continuous Monitor 5 of 16

1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other	
4. Monitor Information... Manufacturer: <b>Foxboro</b> Model Number: <b>I/A Series</b> Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Scrubbing media flow (recovery solution) of R/G Scrubber. Based on MACT (40 CFR 63, Subpart BB) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**Continuous Monitoring System:** Continuous Monitor 6 of 16

1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other	
4. Monitor Information... Manufacturer: <b>Moore</b> Model Number: <b>341DDASAAB1N113</b> Serial Number: <b>00016284</b>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Water flow of R/G Tailgas Scrubber. Based on MACT (40 CFR 63, Subpart BB) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	





**EMISSIONS UNIT INFORMATION**Section [4] of [14]  
South AP Plant**H. CONTINUOUS MONITOR INFORMATION**

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

**Continuous Monitoring System:** Continuous Monitor 9 of 16

1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: <b>Brooks</b> Model Number: <b>MAG3580 Series 3585 C2 8401</b> Serial Number: <b>9602-21-464-2-2</b>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Scrubbing media flow (recovery solution) of Cooler Venturi/Cyclonic Scrubber. Based on MACT (40 CFR 63, Subpart BB) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**Continuous Monitoring System:** Continuous Monitor 10 of 16

1. Parameter Code: <b>Fan Amperage</b>	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: <b>R/G Scrubber fan. Based on MACT (40 CFR 63, Subpart BB) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**EMISSIONS UNIT INFORMATION**

Section [4] of [14]  
 South AP Plant

**H. CONTINUOUS MONITOR INFORMATION**

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

**Continuous Monitoring System:** Continuous Monitor 11 of 16

1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: <span style="float: right;">Serial Number:</span>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Mass flow of phosphorous-bearing feed material to process. Based on 40 CFR 63.625(a).</b>	

**Continuous Monitoring System:** Continuous Monitor 12 of 16

1. Parameter Code: <b>Fan Amperage</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: <span style="float: right;">Serial Number:</span>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Dryer Primary Venturi/Cyclonic Scrubber fan. Based on MACT (40 CFR 63, Subpart BB) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**EMISSIONS UNIT INFORMATION**

Section [4] of [14]  
South AP Plant

**H. CONTINUOUS MONITOR INFORMATION**

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

**Continuous Monitoring System:** Continuous Monitor 13 of 16

1. Parameter Code: <b>Fan Amperage</b>	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: <b>Screens and mills Venturi/Cyclonic Scrubber fan. Based on MACT (40 CFR 63, Subpart BB) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**Continuous Monitoring System:** Continuous Monitor 14 of 16

1. Parameter Code: <b>Fan Amperage</b>	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: <b>Cooler Venturi/Cyclonic Scrubber fan. Based on MACT (40 CFR 63, Subpart BB) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**EMISSIONS UNIT INFORMATION**

Section [4] of [14]  
 South AP Plant

**H. CONTINUOUS MONITOR INFORMATION**

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

**Continuous Monitoring System:** Continuous Monitor 15 of 16

1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: <b>Foxboro</b> Model Number: <b>IDP10-T26821F-M2L1B1V</b> Serial Number: <b>03410164</b>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Water flow of Cross-flow Tailgas Scrubber. Based on MACT (40 CFR 63, Subpart BB) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**Continuous Monitoring System:** Continuous Monitor 16 of 16

1. Parameter Code: <b>PRS</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: <b>Foxboro</b> Model Number: <b>IDP10-T26A21F-M2L1B1V</b> Serial Number: <b>04200126</b>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Pressure drop across Cross-flow Tailgas Scrubber. Based on MACT (40 CFR 63, Subpart BB) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**EMISSIONS UNIT INFORMATION**

Section [4] of [14]  
South AP 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: <b>GB-EU4-I1</b> <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 checked="" type="checkbox"/> Attached, Document ID: <b>GB-EU4-I2</b> <input type="checkbox"/> Previously Submitted, Date _____
3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <b>GB-EU4-I3</b> <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 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 checked="" type="checkbox"/> Previously Submitted, Date: <b>04/29/04</b> Test Date(s)/Pollutant(s) Tested: <b>PM, F, VE</b> <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input 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 type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

**EMISSIONS UNIT INFORMATION**

Section [4] of [14]  
South AP Plant

**Additional Requirements for Air Construction Permit Applications**

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.) <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: <b>GB-EU4-IV1</b> <input type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input checked="" type="checkbox"/> Attached, Document ID: <b>GB-EU4-IV2</b> <input type="checkbox"/> Not Applicable
3. Alternative Methods of Operation <input checked="" type="checkbox"/> Attached, Document ID: <b>GB-EU4-IV3</b> <input type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
5. Acid Rain Part Application <input type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input type="checkbox"/> Copy Attached, Document ID: _____ <input type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable

**EMISSIONS UNIT INFORMATION**

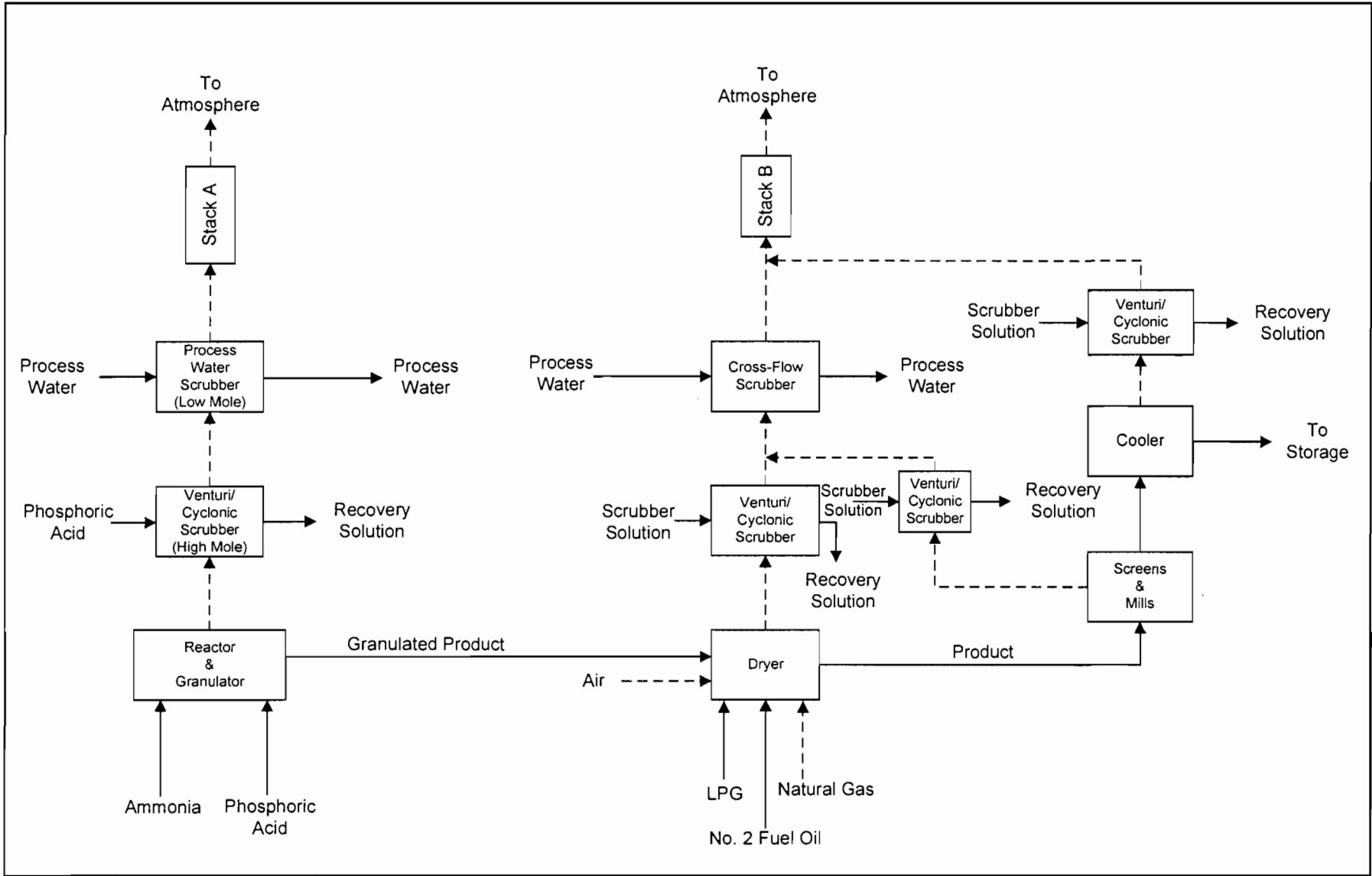
Section [4] of [14]

South AP Plant

**Additional Requirements Comment**



**ATTACHMENT GB-EU4-I1**  
**PROCESS FLOW DIAGRAM**





Attachment GB-EU4-11  
 South DAP Fertilizer Plant  
 Process Flow Diagram  
 Cargill - Green Bay

**Process Flow Legend**

Material/Liquid Flow   
 Gas Flow 

Filename: 0437550/4/4.4/GB-EU4-11

Date: 06/17/04



**ATTACHMENT GB-EU4-I2**  
**FUEL ANALYSIS OR SPECIFICATION**

**ATTACHMENT GB-EU4-I2**  
**SOUTH AP PLANT FUEL ANALYSIS**

Fuel	Density	Moisture (%)	Weight % Sulfur	Weight % Nitrogen	Weight % Ash	Heat Capacity
Natural Gas	0.048 lb/scf	<0.01	<0.001	0.62	--	1,000 Btu/scf
No. 2 Fuel Oil	6.83 lb/gal	<0.01	0.05	0.006	<0.01	135,000 Btu/gal
LPG	4.20 lb/gal	0	(15 grains/100 ft <sup>3</sup> )	0	0	90,500 Btu/gal

**ATTACHMENT GB-EU4-I3**

**DETAILED DESCRIPTION OF CONTROL EQUIPMENT**

Attachment GB-EU4-13 (a). Control Equipment Parameters and PM and F Removal Efficiency Derivation for South AP Plant RG Venturi (Primary High Mole) Scrubber at Cargill Green Bay

Manufacturer and Model No.	Farmland Industries RG Venturi Scrubber (Primary High Mole)		
Outlet Gas Temperature	200	°F	
Outlet Gas Flow Rate	25,000	acfm	
Pressure Drop Across Device - Minimum	16	inches of H <sub>2</sub> O	
Water flow rate - minimum	1,305	gpm	
Water flow rate - maximum	2,234	gpm	
Fan amperage - minimum	16	amps	
Fan amperage - maximum	31	amps	
Maximum Permitted Production Rate <sup>a</sup>	46.0	tons P <sub>2</sub> O <sub>5</sub> per hour	
	Loading		Control
	Inlet (lb/hr)	Permitted <sup>a</sup> (lb/hr)	Efficiency <sup>c</sup> (%)
Particulate Matter <sup>b</sup>	276.0	46.8	83.0
Fluoride <sup>b</sup>	184.0	12.03	93.5

<sup>a</sup>Values obtained from Permit No. 1050053-012-AV.

<sup>b</sup>Inlet data calculated from AP-42 Table 8.5.2-1 using efficiency factor in footnote c.

<sup>c</sup>Control efficiency for entire emission unit.

Attachment GB-EU4-13 (b).

Control Equipment Parameters and PM and F Removal Efficiency Derivation for  
South AP Plant Dryer Venturi/Cyclonic Scrubber at Cargill Green Bay

Manufacturer and Model No.	Airetron Dryer Venturi/Cyclonic Scrubber		
Outlet Gas Temperature	144	°F	
Outlet Gas Flow Rate	60,000	acfm	
Pressure Drop Across Device - Minimum	6	inches of H <sub>2</sub> O	
Recovery solution flow rate - minimum	776	gpm	
Recovery solution flow rate - maximum	1,547	gpm	
Fan amperage - minimum	37	amps	
Fan amperage - maximum	60	amps	
Maximum Permitted Production Rate <sup>a</sup>	46.0	tons P <sub>2</sub> O <sub>5</sub> per hour	
	Loading		Control
	Inlet	Permitted <sup>a</sup>	Efficiency <sup>c</sup>
	(lb/hr)	(lb/hr)	(%)
Particulate Matter <sup>b</sup>	276.0	46.8	83.0
Fluoride <sup>b</sup>	184.0	12.03	93.5

<sup>a</sup>Values obtained from Permit No. 1050053-012-AV.

<sup>b</sup>Inlet data calculated from AP-42 Table 8.5.2-1 using efficiency factor in footnote c.

<sup>c</sup>Control efficiency for entire emission unit.

Attachment GB-EU4-I3 (c).

Control Equipment Parameters and PM and F Removal Efficiency Derivation for  
South AP Plant Screens & Mills Venturi/Cyclonic Scrubber at Cargill Green Bay

Manufacturer and Model No.	Airetron Screens & Mills Venturi/Cyclonic Scrubber		
Outlet Gas Temperature	116	°F	
Outlet Gas Flow Rate	29,000	acfm	
Pressure Drop Across Device - Minimum	14	inches of H <sub>2</sub> O	
Recovery solution flow rate - minimum	864	gpm	
Recovery solution flow rate - maximum	1,874	gpm	
Fan amperage - minimum	21	amps	
Fan amperage - maximum	102	amps	
Maximum Permitted Production Rate <sup>a</sup>	46.0	tons P <sub>2</sub> O <sub>5</sub> per hour	
	Loading		Control
	Inlet	Permitted <sup>a</sup>	Efficiency <sup>c</sup>
	(lb/hr)	(lb/hr)	(%)
Particulate Matter <sup>b</sup>	276.0	46.8	83.0
Fluoride <sup>b</sup>	184.0	12.03	93.5

<sup>a</sup>Values obtained from Permit No. 1050053-012-AV.

Attachment GB-EU4-I3 (d).

Control Equipment Parameters and PM and F Removal Efficiency Derivation for  
South AP Plant Cooler Venturi Scrubber at Cargill Green Bay

Manufacturer and Model No.	Turner Equipment Cooler Venturi Scrubber		
Outlet Gas Temperature	95	°F	
Outlet Gas Flow Rate	57,000	acfm	
Pressure Drop Across Device - Minimum	12	inches of H <sub>2</sub> O	
Recovery solution flow rate - minimum	701	gpm	
Recovery solution flow rate - maximum	1,518	gpm	
Fan amperage - minimum	29	amps	
Fan amperage - maximum	59	amps	
Maximum Permitted Production Rate <sup>a</sup>	46.0	tons P <sub>2</sub> O <sub>5</sub> per hour	
	Loading		Control
	Inlet (lb/hr)	Permitted <sup>a</sup> (lb/hr)	Efficiency <sup>c</sup> (%)
Particulate Matter <sup>b</sup>	276.0	46.8	83.0
Fluoride <sup>b</sup>	184.0	12.03	93.5

<sup>a</sup>Values obtained from Permit No. 1050053-012-AV.

<sup>b</sup>Inlet data calculated from AP-42 Table 8.5.2-1 using efficiency factor in footnote c.

<sup>c</sup>Control efficiency for entire emission unit.



Attachment GB-EU4-13 (c).

Control Equipment Parameters and PM and F Removal Efficiency Derivation for  
South AP Plant RG (Low Mole) Tailgas Scrubber at Cargill Green Bay

Manufacturer and Model No.	Farmland Industries RG (Low Mole) Tailgas Scrubber		
Outlet Gas Temperature	162	°F	
Outlet Gas Flow Rate	80,000	acfm	
Pressure Drop Across Device - Minimum	4	inches of H <sub>2</sub> O	
Gas-to-Liquid Ratio	10	ACF/gal	
Maximum Permitted Production Rate <sup>a</sup>	46.0	tons P <sub>2</sub> O <sub>5</sub> per hour	
	Loading		Control
	Inlet (lb/hr)	Permitted <sup>a</sup> (lb/hr)	Efficiency <sup>c</sup> (%)
Particulate Matter <sup>b</sup>	276.0	46.8	83.0
Fluoride <sup>b</sup>	184.0	12.03	93.5

<sup>a</sup>Values obtained from Permit No. 1050053-012-AV.

<sup>b</sup>Inlet data calculated from AP-42 Table 8.5.2-1 using efficiency factor in footnote c.

<sup>c</sup>Control efficiency for entire emission unit.

Attachment GB-EU4-I3 (f).

Control Equipment Parameters and PM and F Removal Efficiency Derivation for  
South AP Plant Dryer and Screens & Mills Cross-Flow Tailgas Scrubber  
at Cargill Green Bay

Manufacturer and Model No.	Farmland Hydro Dryer and Screens & Mills Crossflow Tailgas Scrubber		
Outlet Gas Temperature	135	°F	
Outlet Gas Flow Rate	80,000	acfm	
Pressure Drop Across Device - Minimum	2	inches of H <sub>2</sub> O	
Water flow rate - minimum	304	gpm	
Water flow rate - maximum	541	gpm	
Maximum Permitted Production Rate <sup>a</sup>	46.0	tons P <sub>2</sub> O <sub>5</sub> per hour	
	Loading		Control
	Inlet	Permitted <sup>a</sup>	Efficiency <sup>c</sup>
	(lb/hr)	(lb/hr)	(%)
Particulate Matter <sup>b</sup>	276.0	46.8	83.0
Fluoride <sup>b</sup>	184.0	12.03	93.5

<sup>a</sup>Values obtained from Permit No. 1050053-012-AV.

<sup>b</sup>Inlet data calculated from AP-42 Table 8.5.2-1 using efficiency factor in footnote c.

<sup>c</sup>Control efficiency for entire emission unit.

**ATTACHMENT GB-EU4-IV1**

**IDENTIFICATION OF APPLICABLE REQUIREMENTS**

**ATTACHMENT GB-EU4-IV1  
IDENTIFICATION OF APPLICABLE REQUIREMENTS  
SOUTH AP PLANT**

List of Applicable Regulations

40 CFR 63, Subpart A—General Provisions
40 CFR 63.620(a) NESHAPS for Phosphate Fertilizer Plants
40 CFR 63.620(b)(1) NESHAPS for Phosphate Fertilizer Plants
40 CFR 63.620(e) NESHAPS for Phosphate Fertilizer Plants
40 CFR 63.622(a) Standards for existing DAP/MAP Plants
40 CFR 63.624 Wet Scrubber operating requirements
40 CFR 63.625(a) Monitoring requirements
40 CFR 63.625(b) Monitoring requirements
40 CFR 63.625(c) Monitoring requirements
40 CFR 63.625(f) Monitoring requirements
40 CFR 63.626(a)(1) Performance tests and compliance
40 CFR 63.626(b) Performance tests and compliance
40 CFR 63.626(c) Performance tests and compliance
40 CFR 63.627(a) Notification, recordkeeping, and reporting
40 CFR 63.627(b) Notification, recordkeeping, and reporting
40 CFR 63.627(c) Notification, recordkeeping, and reporting
40 CFR 63.628 Applicability of general provisions
40 CFR 63.630(a) Compliance dates
40 CFR 63.631 Exemption from NSPS
62-212.400(7)(b) PSD
62-296.320(b) General VE Standard
62-296.403 Phosphate processing
62-297.310 Compliance Testing
62-297.401 Compliance Test Methods

**ATTACHMENT GB-EU4-IV2**  
**COMPLIANCE ASSURANCE MONITORING**

**ATTACHMENT GB-EU4-IV2**  
**COMPLIANCE ASSURANCE MONITORING**  
**SOUTH AP FERTILIZER PLANT**

The South AP Fertilizer Plant utilizes four venturi acid scrubbers to reduce particulate matter (PM) emissions and two secondary cross-flow pond water scrubbers to control fluoride (F) emissions. The acid scrubbers are used to recover ammonia and product (PM), therefore these scrubbers would be considered inherent process equipment. As such, CAM does not apply for the four venturi acid scrubbers at the South AP Fertilizer Plant. Since the two secondary cross-flow pond water scrubbers are used to control only F emissions and not PM emissions, CAM does not apply for PM for the South AP Fertilizer Plant (i.e., there is no control equipment for PM emissions).

CAM does not apply for F since the South AP Fertilizer Plant is subject to 40 CFR 63, Subpart BB. Cargill received approval for an alternative MACT monitoring plant (File NO. 03-C-AP) for the sources subject to 40 CFR 63, Subparts AA and BB on January 22, 2004.

Refer to Attachment A for the applicability analysis for the South AP Fertilizer Plant.

**ATTACHMENT GB-EU4-IV3**  
**ALTERNATIVE METHODS OF OPERATION**

**ATTACHMENT GB-EU4-IV3**  
**ALTERNATIVE METHODS OF OPERATION**

The South AP Fertilizer Plant dryer is permitted to burn natural gas, liquefied petroleum gas, or No. 2 fuel oil at a maximum heat input rate of 60.0 MMBtu/hr.



## EMISSIONS UNIT INFORMATION

Section [5] of [14]

Phosphoric Acid Plant No. 2

### III. EMISSIONS UNIT INFORMATION

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

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

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

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

**EMISSIONS UNIT INFORMATION**

Section [5] of [14]  
Phosphoric Acid Plant No. 2

**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:  
**Phosphoric Acid Plant No. 2**

3. Emissions Unit Identification Number: **013**

4. Emissions Unit Status Code: <b>A</b>	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: <b>28</b>	8. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
--	--------------------------------	--------------------------	--	--

9. Package Unit:  
Manufacturer: \_\_\_\_\_ Model Number: \_\_\_\_\_

10. Generator Nameplate Rating: \_\_\_\_\_ MW

11. Emissions Unit Comment: **A potential exists for fugitive emissions of F to occur from this EU. It is our understanding, based on past FDEP interpretations and permitting history, that these emissions are not regulated under federal/state/local emission standards. Consists of a reactor, two filters, digester system, and filtrate tanks.**

**EMISSIONS UNIT INFORMATION**

Section [5] of [14]

Phosphoric Acid Plant No. 2

**Emissions Unit Control Equipment**

1. Control Equipment/Method(s) Description:  
**Poly-Con Wet Scrubber**

2. Control Device or Method Code(s): **013**



**EMISSIONS UNIT INFORMATION**

Section [5] of [14]  
 Phosphoric Acid Plant No. 2

**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: <b>Phosphoric Acid Plant No. 2</b>		2. Emission Point Type Code: <b>1</b>	
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: <b>V</b>	6. Stack Height: <b>110 feet</b>	7. Exit Diameter: <b>3.0 feet</b>	
8. Exit Temperature: <b>114°F</b>	9. Actual Volumetric Flow Rate: <b>21,300 acfm</b>	10. Water Vapor: <b>%</b>	
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: <b>Exit temperature and flow rate updated from recent stack test data.</b>			

**EMISSIONS UNIT INFORMATION**

Section [5] of [14]  
 Phosphoric Acid Plant No. 2

**D. SEGMENT (PROCESS/FUEL) INFORMATION**

**Segment Description and Rate:** Segment 1 of 1

1. Segment Description (Process/Fuel Type): <b>Phosphoric Acid; Wet Process; Reactor</b>		
2. Source Classification Code (SCC): <b>3-01-016-01</b>		3. SCC Units: <b>Tons Phosphate Rock</b>
4. Maximum Hourly Rate: <b>178</b>	5. Maximum Annual Rate: <b>1,559,280</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: <b>Rates are based on an assumed phosphate rock P<sub>2</sub>O<sub>5</sub> content of 30.9% and the maximum process rate of 55 TPH P<sub>2</sub>O<sub>5</sub> for the PAP No. 2.</b>		

**Segment Description and Rate:** Segment \_\_\_\_ of \_\_\_\_

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



**EMISSIONS UNIT INFORMATION**

**POLLUTANT DETAIL INFORMATION**

Section [5] of [14]  
Phosphoric Acid Plant No. 2

Page [1] of [1]  
Fluorides - Total

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

**(Optional for unregulated emissions units.)**

**Potential/Estimated Fugitive Emissions**

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

1. Pollutant Emitted: <b>FL</b>	2. Total Percent Efficiency of Control:
3. Potential Emissions: <b>1.0 lb/hour                      4.38 tons/year</b>	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: <b>0.02 lb/ton P<sub>2</sub>O<sub>5</sub></b>  Reference: <b>Permit No. 1050053-012-AV</b>	7. Emissions Method Code: <b>3</b>
8. Calculation of Emissions: <b>Hourly: 55 ton/hr P<sub>2</sub>O<sub>5</sub> x 0.02 lb/ton P<sub>2</sub>O<sub>5</sub> = 1 lb/hr</b>  <b>Annual: 1 lb/hr x 8,760 hr/yr ÷ 2000 lb/ton = 4.38 TPY</b>	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	



**EMISSIONS UNIT INFORMATION**

Section [5] of [14]  
Phosphoric Acid Plant No. 2

**POLLUTANT DETAIL INFORMATION**

Page [1] of [1]  
Fluorides - Total

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

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

**Allowable Emissions** Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>0.02 lb/ton P<sub>2</sub>O<sub>5</sub></b>	4. Equivalent Allowable Emissions: <b>1.0 lb/hour                      4.38 tons/year</b>
5. Method of Compliance: <b>Stack testing using EPA Methods 13A or 13B.</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Maximum emissions are limited to the lesser of 1.0 lb/hr or 0.02 lb/ton P<sub>2</sub>O<sub>5</sub> input. Based on Permit No. 1050053-012-AV.</b>	

**Allowable Emissions** Allowable Emissions \_\_\_\_ of \_\_\_\_

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

**Allowable Emissions** Allowable Emissions \_\_\_\_ of \_\_\_\_

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

**EMISSIONS UNIT INFORMATION**

Section [5] of [14]  
Phosphoric Acid Plant No. 2

**G. VISIBLE EMISSIONS INFORMATION**

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

**Visible Emissions Limitation:** Visible Emissions Limitation \_\_\_\_\_ 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:	

**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 [5] of [14]  
Phosphoric Acid Plant No. 2

**H. CONTINUOUS MONITOR INFORMATION**

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

**Continuous Monitoring System:** Continuous Monitor 1 of 4

1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: <b>Moore</b> Model Number: <b>341DDASAABNNN13</b> Serial Number: <b>00017972</b>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Water flow of PAP No. 2 Poly Con Spray Scrubber. Based on MACT (40 CFR 63, Subpart AA) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**Continuous Monitoring System:** Continuous Monitor 2 of 4

1. Parameter Code: <b>Fan Amperage</b>	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: <b>PAP No. 2 Poly Con Scrubber fan. Based on MACT (40 CFR 63, Subpart AA) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**EMISSIONS UNIT INFORMATION**

Section [5] of [14]  
 Phosphoric Acid Plant No. 2

**H. CONTINUOUS MONITOR INFORMATION**

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

**Continuous Monitoring System:** Continuous Monitor 3 of 4

1. Parameter Code: <b>FLOW</b>	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: <b>Mass flow of phosphorous-bearing feed material to process. Based on 40 CFR 63.625(a).</b>	

**Continuous Monitoring System:** Continuous Monitor 4 of 4

1. Parameter Code: <b>PRS</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: <b>Foxboro</b> Model Number: <b>IDP10-T22B21F-M2L1</b> Serial Number: <b>01500840</b>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Pressure drop across the PAP No. 2 Poly Con Spray Scrubber. Based on MACT (40 CFR 63, Subpart AA) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

# EMISSIONS UNIT INFORMATION

Section [5] of [14]  
Phosphoric Acid Plant No. 2

## 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: <b>GB-EU5-11</b> <input type="checkbox"/> Previously Submitted, Date _____
2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____
3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <b>GB-EU5-13</b> <input type="checkbox"/> Previously Submitted, Date _____
4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: <b>08/21/2003</b> Test Date(s)/Pollutant(s) Tested: <b>F</b> <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input 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: _____ <input checked="" type="checkbox"/> Not Applicable

**EMISSIONS UNIT INFORMATION**

**Section [5] of [14]  
Phosphoric Acid Plant No. 2**

**Additional Requirements for Air Construction Permit Applications**

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.) <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: <b>GB-EU5-IV1</b> <input type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input checked="" type="checkbox"/> Attached, Document ID: <b>GB-EU5-IV2</b> <input 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
5. Acid Rain Part Application. <input type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input type="checkbox"/> Copy Attached, Document ID: _____ <input type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable

**EMISSIONS UNIT INFORMATION**

Section [5] of [14]

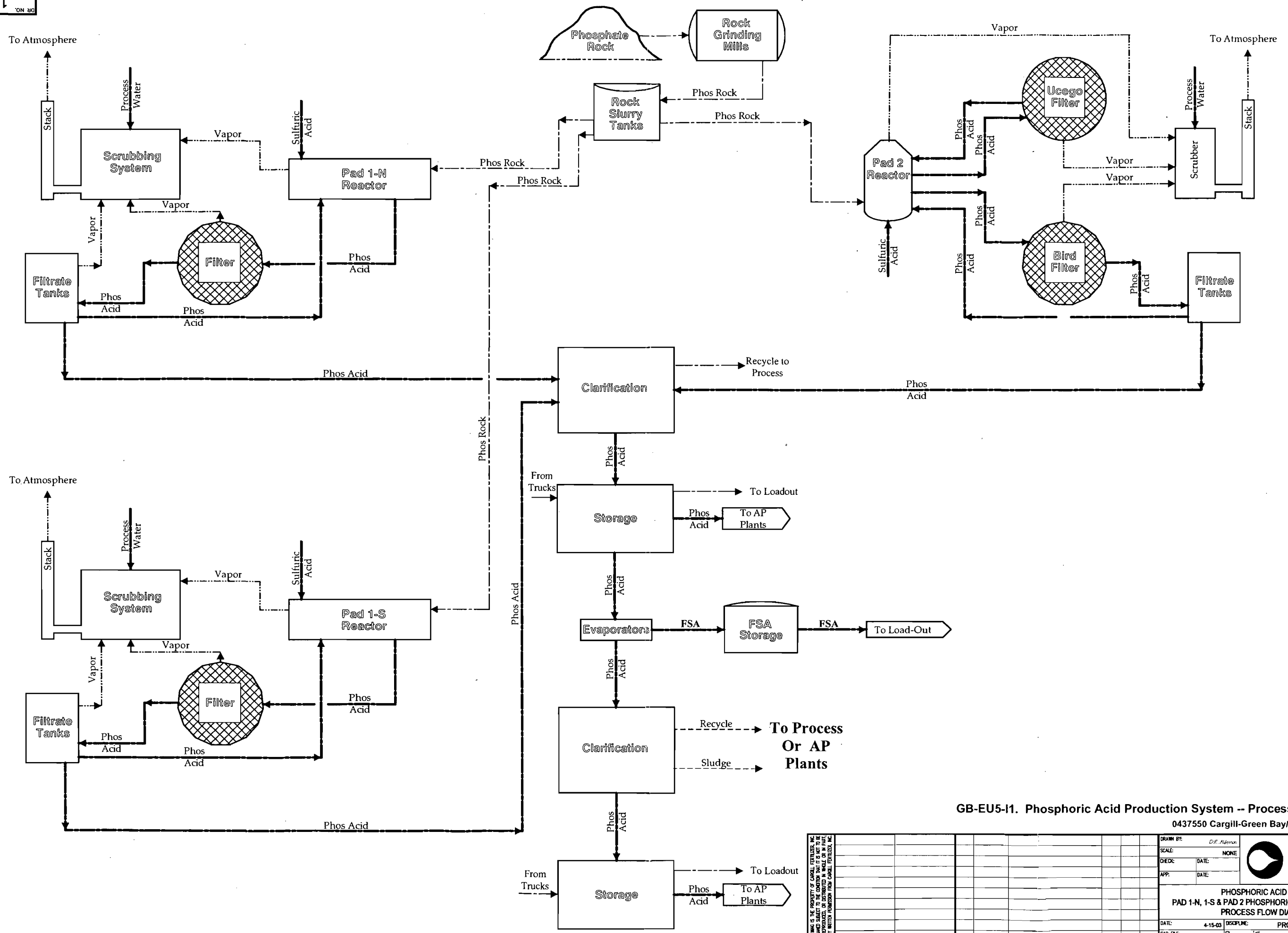
Phosphoric Acid Plant No. 2

**Additional Requirements Comment**

[Empty comment box]

**ATTACHMENT GB-EU5-I1**  
**PROCESS FLOW DIAGRAM**





GB-EU5-I1. Phosphoric Acid Production System -- Process Flow Diagram

0437550 Cargill-Green Bay/4/4/GB-EU5-I1.dwg

DRAWN BY: <i>D.R. Alderman</i>		SCALE: NONE		<p><b>CARGILL FERTILIZER, Inc.</b> Green Bay Facility 4500 CR 640 West Dunbar, FL 32807 Telephone (813) 823-1141</p>		
CHECK: DATE:		APP: DATE:				
<p>PHOSPHORIC ACID PLANT PAD 1-N, 1-S &amp; PAD 2 PHOSPHORIC ACID PRODUCTION PROCESS FLOW DIAGRAM</p>				<p>DATE: 4-15-03 DISCIPLINE: PROCESS PROJECT:</p>		
CAD FILE:		BY: nav		<p>15 15-SK-001</p>		
PLOT SCALE: 1:1		APP:				
REFERENCE DRAWINGS	NO.	DATE	REVISION	BY	CK	APP
		4-23-03	Stock Vapor (Colder)	nav		

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**ATTACHMENT GB-EU5-13**

**DETAILED DESCRIPTION OF CONTROL EQUIPMENT**

Attachment GB-EU5-13. Control Equipment Parameters and F Removal Efficiency Derivation for the Phosphoric Acid Plant No. 2 Poly-Con Wet Scrubber at Cargill Green Bay

Manufacturer and Model No.	Poly-Con C-10189 Phosphoric Acid Wet Scrubber		
Outlet Gas Temperature	115	°F	
Outlet Gas Flow Rate	24,300	acfm	
Pressure Drop Across Device - Minimum	12	inches of H <sub>2</sub> O	
Water flow rate - minimum	110	gpm	
Water flow rate - maximum	210	gpm	
Fan amperage - minimum	40	amps	
Fan amperage - maximum	77	amps	
Maximum Permitted Production Rate <sup>a</sup>	55.0	TPH P <sub>2</sub> O <sub>5</sub>	
	Loading		Control
	Inlet	Permitted <sup>a</sup>	Efficiency <sup>c</sup>
	(lb/hr)	(lb/hr)	(%)
Fluoride <sup>b</sup>	220.0	1.00	99.5

<sup>a</sup>Values obtained from Permit No. 1050053-012-AV.

<sup>b</sup>Inlet data calculated from AP-42 Table 8.5.2-1 using efficiency factor in footnote c.

<sup>c</sup>Control efficiency for entire emission unit.

**ATTACHMENT GB-EU5-IV1**

**IDENTIFICATION OF APPLICABLE REQUIREMENTS**

**ATTACHMENT GB-EU5-IV1  
IDENTIFICATION OF APPLICABLE REQUIREMENTS  
PHOSPHORIC ACID PLANT NO. 2**

List of Applicable Regulations

<b>40 CFR 63, Subpart A—General NESHAPs Requirements</b>
<b>40 CFR 63.600(a) NESHAPs for Phosphoric Acid Manufacturing</b>
<b>40 CFR 63.600(b)(1) NESHAPs for Phosphoric Acid Manufacturing</b>
<b>40 CFR 63.600(c) NESHAPs for Phosphoric Acid Manufacturing</b>
<b>40 CFR 63.600(e) NESHAPs for Phosphoric Acid Manufacturing</b>
<b>40 CFR 63.602(a) Standards for existing sources</b>
<b>40 CFR 63.604 Operating Requirements</b>
<b>40 CFR 63.605(a)(1) Monitoring Requirements</b>
<b>40 CFR 63.605(b)(1) Monitoring Requirements</b>
<b>40 CFR 63.605(c) Monitoring Requirements</b>
<b>40 CFR 63.605(d) Monitoring Requirements</b>
<b>40 CFR 63.606(a)(1) Performance tests and compliance provisions</b>
<b>40 CFR 63.606(b) Performance tests and compliance provisions</b>
<b>40 CFR 63.606(c) Performance tests and compliance provisions</b>
<b>40 CFR 63.607(a) Notification, recordkeeping, and reporting</b>
<b>40 CFR 63.607(b) Notification, recordkeeping, and reporting</b>
<b>40 CFR 63.607(c) Notification, recordkeeping, and reporting</b>
<b>40 CFR 63.608 Applicability of general provisions</b>
<b>40 CFR 63.609(a) Compliance dates</b>
<b>40 CFR 63.610 Exemption from NSPS</b>
<b>62-212.400(7)(b) PSD-Operation Permits</b>
<b>62-296.403 Phosphate Processing</b>
<b>62-297.310 General Compliance Test Requirements</b>
<b>62-297.401 Compliance Test Methods</b>

**ATTACHMENT GB-EU5-IV2**  
**COMPLIANCE ASSURANCE MONITORING**

**ATTACHMENT GB-EU5-IV2**  
**COMPLIANCE ASSURANCE MONITORING**  
**PHOSPHORIC ACID PLANT NO. 2**

CAM does not apply for F since the Phosphoric Acid Plant (PAP) No. 2 is subject to 40 CFR 63, Subpart AA. Cargill received approval for an alternative MACT monitoring plan (File No. 03-C-AP) for the sources subject to 40 CFR 63, Subparts AA and BB, on January 22, 2004. Therefore, since F is the only pollutant for which an emission limit exists for the PAP No. 2, CAM does not apply for the PAP No. 2.

Refer to Attachment A for the CAM applicability analysis.

## EMISSIONS UNIT INFORMATION

Section [6] of [14]  
Phosphoric Acid Plant No. 1—North Train

### III. EMISSIONS UNIT INFORMATION

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

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

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

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



**EMISSIONS UNIT INFORMATION**  
**Section [6] of [14]**  
**Phosphoric Acid Plant No. 1—North Train**

**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:  
**Phosphoric Acid Plant No. 1 – North Train**

3. Emissions Unit Identification Number: **016**

4. Emissions Unit Status Code: <b>A</b>	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: <b>28</b>	8. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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9. Package Unit:  
 Manufacturer: \_\_\_\_\_ Model Number: \_\_\_\_\_

10. Generator Nameplate Rating: \_\_\_\_\_ MW

11. Emissions Unit Comment: **A potential exists for fugitive emissions of F to occur from this EU. It is our understanding, based on past FDEP interpretations and permitting history, that these emissions are not regulated under federal/state/local emission standards. Consists of a reactor, a filter, digester system, and filtrate tanks.**

**EMISSIONS UNIT INFORMATION**

**Section [6] of [14]  
Phosphoric Acid Plant No. 1—North Train**

**Emissions Unit Control Equipment**

1. Control Equipment/Method(s) Description:  
**Two-stage Arco Cyclonic Jet Scrubber**

2. Control Device or Method Code(s): **013**



**EMISSIONS UNIT INFORMATION**

Section [6] of [14]  
 Phosphoric Acid Plant No. 1—North Train

**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: <b>Phosphoric Acid Plant No. 1 – North</b>		2. Emission Point Type Code: <b>1</b>	
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: <b>V</b>	6. Stack Height: <b>100.5 feet</b>	7. Exit Diameter: <b>3.5 feet</b>	
8. Exit Temperature: <b>110°F</b>	9. Actual Volumetric Flow Rate: <b>26,400 acfm</b>	10. Water Vapor: <b>%</b>	
11. Maximum Dry Standard Flow Rate: <b>dscfm</b>		12. Nonstack Emission Point Height: <b>0 feet</b>	
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: <b>Exit temperature and flow rate updated from recent stack test data.</b>			

**EMISSIONS UNIT INFORMATION**

Section [6] of [14]  
 Phosphoric Acid Plant No. 1—North Train

**D. SEGMENT (PROCESS/FUEL) INFORMATION**

**Segment Description and Rate:** Segment 1 of 1

1. Segment Description (Process/Fuel Type): <b>Phosphoric Acid; Wet Process; Reactor</b>		
2. Source Classification Code (SCC): <b>3-01-016-01</b>		3. SCC Units: <b>Tons Phosphate Rock</b>
4. Maximum Hourly Rate: <b>89</b>	5. Maximum Annual Rate: <b>779,640</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: <b>Rates are based on an assumed phosphate rock P<sub>2</sub>O<sub>5</sub> content of 30.9% and the maximum process rate of 27.5 TPH P<sub>2</sub>O<sub>5</sub>.</b>		

**Segment Description and Rate:** Segment \_\_\_\_ of \_\_\_\_

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



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

(Optional for unregulated emissions units.)

**Potential/Estimated Fugitive Emissions**

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

1. Pollutant Emitted: <b>FL</b>	2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>0.55 lb/hour                      2.41 tons/year</b>		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: <b>0.02 lb/ton P<sub>2</sub>O<sub>5</sub></b>  Reference: <b>Permit No. 1050053-012-AV</b>		7. Emissions Method Code: <b>0</b>
8. Calculation of Emissions:  <b>Hourly: 0.02 lb/ton P<sub>2</sub>O<sub>5</sub> x 27.5 TPH P<sub>2</sub>O<sub>5</sub> = 0.55 lb/hr</b>  <b>Annual: 0.55 lb/hr x 8,760 hr/yr ÷ 2,000 lb/ton = 2.41 TPY</b>		
9. Pollutant Potential/Estimated Fugitive Emissions Comment:		

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

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

**Allowable Emissions** Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>0.55 lb/hr</b>	4. Equivalent Allowable Emissions: <b>0.55 lb/hour                      2.41 tons/year</b>
5. Method of Compliance: <b>Stack testing of each scrubber using EPA Methods 13A or 13B.</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Based on Permit No. 1050053-012-AV and 40 CFR 63.602(a)(1).</b>	

**Allowable Emissions** Allowable Emissions \_\_\_\_ of \_\_\_\_

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

**Allowable Emissions** Allowable Emissions \_\_\_\_ of \_\_\_\_

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





**EMISSIONS UNIT INFORMATION**  
 Section [6] of [14]  
 Phosphoric Acid Plant No. 1—North Train

**H. CONTINUOUS MONITOR INFORMATION**

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

**Continuous Monitoring System:** Continuous Monitor 1 of 5

1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: <span style="float: right;">Serial Number:</span>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Water flow. PAP No. 1 – North Train. Arco Cyclonic Jet Scrubber – First Stage. Based on MACT (40 CFR 63, Subpart AA) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**Continuous Monitoring System:** Continuous Monitor 2 of 5

1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: <span style="float: right;">Serial Number:</span>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Water flow. PAP No. 1 – North Train. Arco Cyclonic Jet Scrubber – Second Stage. Based on MACT (40 CFR 63, Subpart AA) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**EMISSIONS UNIT INFORMATION**  
 Section [6] of [14]  
 Phosphoric Acid Plant No. 1—North Train

**H. CONTINUOUS MONITOR INFORMATION**

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

**Continuous Monitoring System:** Continuous Monitor 3 of 5

1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: <b>Foxboro</b> Model Number: <b>2804-SABA-TPA (2000 Series)</b> Serial Number: <b>99251736</b>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Mass flow of phosphorous-bearing feed material to process. Based on 40 CFR 63.625(a).</b>	

**Continuous Monitoring System:** Continuous Monitor 4 of 5

1. Parameter Code: <b>PRS</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: <b>Invensys</b> Model Number: <b>IDP10-T22B21F-M2L1</b> Serial Number: <b>02190663</b>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Pressure drop across Arco Cyclonic Jet Scrubber (First and Second) Stage. Based on MACT (40 CFR 63, Subpart AA) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**EMISSIONS UNIT INFORMATION**  
 Section [6] of [14]  
 Phosphoric Acid Plant No. 1 – North Train

**H. CONTINUOUS MONITOR INFORMATION**

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

**Continuous Monitoring System:** Continuous Monitor 5 of 5

1. Parameter Code: Fan Amperage	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: Fan Amperage of Arco Cyclonic Jet Scrubber fan (First and Second Stage). Based on MACT (40 CFR 63, Subpart AA) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.	

**Continuous Monitoring System:** Continuous Monitor \_\_\_\_ of \_\_\_\_

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

**EMISSIONS UNIT INFORMATION**

Section [6] of [14]  
Phosphoric Acid Plant No. 1—North Train

**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: <b>GB-EU5-I1</b> <input type="checkbox"/> Previously Submitted, Date _____
2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____
3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <b>GB-EU6-I3</b> <input type="checkbox"/> Previously Submitted, Date _____
4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: <b>09/12/2003</b> Test Date(s)/Pollutant(s) Tested: <b>F</b> <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input 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: _____ <input type="checkbox"/> Not Applicable

**EMISSIONS UNIT INFORMATION**

Section [6] of [14]  
Phosphoric Acid Plant No. 1—North Train

**Additional Requirements for Air Construction Permit Applications**

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.) <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: <b>GB-EU6-IV1</b> <input type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input checked="" type="checkbox"/> Attached, Document ID: <b>GB-EU6-IV2</b> <input 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
5. Acid Rain Part Application <input type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input type="checkbox"/> Copy Attached, Document ID: _____ <input type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable

**EMISSIONS UNIT INFORMATION**

**Section [6] of [14]**

**Phosphoric Acid Plant No. 1—North Train**

**Additional Requirements Comment**

[Empty rectangular box for additional requirements comment]

**ATTACHMENT GB-EU6-I3**

**DETAILED DESCRIPTION OF CONTROL EQUIPMENT**



Attachment GB-EU6-13(a). Control Equipment Parameters and F Removal Efficiency Derivation for the Phosphoric Acid Plant No. 1--North Cyclonic Jet (First Stage) Scrubber at Cargill Green Bay

Manufacturer and Model No.	ARCO WM-200RH Phosphoric Acid Cyclonic-Jet Scrubber		
Outlet Gas Temperature	110	°F	
Outlet Gas Flow Rate	29,100	acfm	
Pressure Drop Across Device - Minimum	10	inches of H <sub>2</sub> O	
Water flow rate - minimum	212	gpm	
Water flow rate - maximum	494	gpm	
Fan amperage - minimum	53	amps	
Fan amperage - maximum	97	amps	
Maximum Permitted Production Rate <sup>a</sup>	27.5	TPH P <sub>2</sub> O <sub>5</sub>	
	Loading		Control
	Inlet	Permitted <sup>a</sup>	Efficiency <sup>c</sup>
	(lb/hr)	(lb/hr)	(%)
Fluoride <sup>b</sup>	110.0	0.55	99.5

<sup>a</sup>Values obtained from Permit No. 1050053-012-AV.

<sup>b</sup>Inlet data calculated from AP-42 Table 8.5.2-1 using efficiency factor in footnote c.

<sup>c</sup>Control efficiency for entire emission unit.

Attachment GB-EU6-13(b). Control Equipment Parameters and F Removal Efficiency Derivation for the Phosphoric Acid Plant No. 1--North Cyclonic Jet (Second Stage) Scrubber at Cargill Green Bay

Manufacturer and Model No.	ARCO WM-200LH Phosphoric Acid Cyclonic-Jet Scrubber		
Outlet Gas Temperature	110	°F	
Outlet Gas Flow Rate	29,100	acfm	
Pressure Drop Across Device - Minimum	10	inches of H <sub>2</sub> O	
Water flow rate - minimum	212	gpm	
Water flow rate - maximum	494	gpm	
Fan amperage - minimum	53	amps	
Fan amperage - maximum	97	amps	
Maximum Permitted Production Rate <sup>a</sup>	27.5	TPH P <sub>2</sub> O <sub>5</sub>	
	Loading		Control
	Inlet	Permitted <sup>a</sup>	Efficiency <sup>c</sup>
	(lb/hr)	(lb/hr)	(%)
Fluoride <sup>b</sup>	110.0	0.55	99.5

<sup>a</sup>Values obtained from Permit No. 1050053-012-AV.

<sup>b</sup>Inlet data calculated from AP-42 Table 8.5.2-1 using efficiency factor in footnote c.

<sup>c</sup>Control efficiency for entire emission unit.

**ATTACHMENT GB-EU6-IV1**

**IDENTIFICATION OF APPLICABLE REQUIREMENTS**

**ATTACHMENT GB-EU6-IV1  
IDENTIFICATION OF APPLICABLE REQUIREMENTS  
PHOSPHORIC ACID PLANT NO. 1—NORTH TRAIN**

List of Applicable Regulations

<b>40 CFR 63, Subpart A—General NESHAPs Requirements</b>
<b>40 CFR 63.600(a) NESHAPs for Phosphoric Acid Manufacturing</b>
<b>40 CFR 63.600(b)(1) NESHAPs for Phosphoric Acid Manufacturing</b>
<b>40 CFR 63.600(c) NESHAPs for Phosphoric Acid Manufacturing</b>
<b>40 CFR 63.600(e) NESHAPs for Phosphoric Acid Manufacturing</b>
<b>40 CFR 63.602(a) Standards for existing sources</b>
<b>40 CFR 63.604 Operating Requirements</b>
<b>40 CFR 63.605(a)(1) Monitoring Requirements</b>
<b>40 CFR 63.605(b)(1) Monitoring Requirements</b>
<b>40 CFR 63.605(c) Monitoring Requirements</b>
<b>40 CFR 63.605(d) Monitoring Requirements</b>
<b>40 CFR 63.606(a)(1) Performance tests and compliance provisions</b>
<b>40 CFR 63.606(b) Performance tests and compliance provisions</b>
<b>40 CFR 63.606(c) Performance tests and compliance provisions</b>
<b>40 CFR 63.607(a) Notification, recordkeeping, and reporting</b>
<b>40 CFR 63.607(b) Notification, recordkeeping, and reporting</b>
<b>40 CFR 63.607(c) Notification, recordkeeping, and reporting</b>
<b>40 CFR 63.608 Applicability of general provisions</b>
<b>40 CFR 63.609(a) Compliance dates</b>
<b>40 CFR 63.610 Exemption from NSPS</b>
<b>62-212.400(7)(b) PSD-Operation Permits</b>
<b>62-296.403 Phosphate Processing</b>
<b>62-297.310 General Compliance Test Requirements</b>
<b>62-297.401 Compliance Test Methods</b>

**ATTACHMENT GB-EU6-IV2**  
**COMPLIANCE ASSURANCE MONITORING**

**ATTACHMENT GB-EU6-IV2**  
**COMPLIANCE ASSURANCE MONITORING**  
**PHOSPHORIC ACID PLANT NO. 1—NORTH TRAIN**

CAM does not apply for F since the Phosphoric Acid Plant (PAP) No. 1—North Train is subject to 40 CFR 63, Subpart AA. Cargill received approval for an alternative MACT monitoring plan (File No. 03-C-AP) for the sources subject to 40 CFR 63, Subparts AA and BB, on January 22, 2004. Therefore, since F is the only pollutant for which an emission limit exists for the PAP No. 1—North Train, CAM does not apply for the PAP No. 1—North Train.

Refer to Attachment A for the CAM applicability analysis.

## EMISSIONS UNIT INFORMATION

Section [7] of [14]  
Phosphoric Acid Plant No. 1—South Train

### III. EMISSIONS UNIT INFORMATION

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

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

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

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

**EMISSIONS UNIT INFORMATION**

Section [7] of [14]  
 Phosphoric Acid Plant No. 1— South Train

**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:  
**Phosphoric Acid Plant No. 1 – South Train**

3. Emissions Unit Identification Number: **017**

4. Emissions Unit Status Code: <b>A</b>	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: <b>28</b>	8. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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9. Package Unit:  
 Manufacturer: \_\_\_\_\_ Model Number: \_\_\_\_\_

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment: **A potential exists for fugitive emissions of F to occur from this EU. It is our understanding, based on past FDEP interpretations and permitting history, that these emissions are not regulated under federal/state/local emission standards. Consists of a reactor, a filter, digester system, and filtrate tanks.**



**EMISSIONS UNIT INFORMATION**  
**Section [7] of [14]**  
**Phosphoric Acid Plant No. 1—South Train**

**Emissions Unit Control Equipment**

1. Control Equipment/Method(s) Description:  
**Two-stage Arco Cyclonic Jet Scrubber**

2. Control Device or Method Code(s): **013**



**EMISSIONS UNIT INFORMATION**

Section [7] of [14]  
 Phosphoric Acid Plant No. 1— South Train

**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: <b>Phosphoric Acid Plant No. 1 – South</b>		2. Emission Point Type Code: <b>1</b>	
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: <b>V</b>	6. Stack Height: <b>100.5 feet</b>	7. Exit Diameter: <b>3.5 feet</b>	
8. Exit Temperature: <b>108°F</b>	9. Actual Volumetric Flow Rate: <b>21,200 acfm</b>	10. Water Vapor: <b>%</b>	
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: <b>Exit temperature and flow rate updated from recent stack test data.</b>			

**EMISSIONS UNIT INFORMATION**

Section [7] of [14]  
 Phosphoric Acid Plant No. 1— South Train

**D. SEGMENT (PROCESS/FUEL) INFORMATION**

**Segment Description and Rate:** Segment 1 of 1

1. Segment Description (Process/Fuel Type): <b>Phosphoric Acid; Wet Process; Reactor</b>		
2. Source Classification Code (SCC): <b>3-01-016-01</b>		3. SCC Units: <b>Tons Phosphate Rock</b>
4. Maximum Hourly Rate: <b>146</b>	5. Maximum Annual Rate: <b>1,278,960</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: <b>Rates are based on an assumed phosphate rock P<sub>2</sub>O<sub>5</sub> content of 30.9% and the maximum process rate of 45.03 TPH P<sub>2</sub>O<sub>5</sub>.</b>		

**Segment Description and Rate:** Segment \_\_\_\_ of \_\_\_\_

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



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

**(Optional for unregulated emissions units.)**

**Potential/Estimated Fugitive Emissions**

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

1. Pollutant Emitted: <b>FL</b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>0.83 lb/hour                      3.64 tons/year</b>		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: <b>0.83 lb/hr</b>  Reference: <b>Permit No. 1050053-012-AV</b>		7. Emissions Method Code: <b>0</b>	
8. Calculation of Emissions: <b>0.83 lb/hr x 8,760 hr/yr ÷ 2,000 lb/ton = 3.64 TPY</b>			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

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

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

**Allowable Emissions** Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>0.83 lb/hr</b>	4. Equivalent Allowable Emissions: <b>0.83 lb/hour                      3.64 tons/year</b>
5. Method of Compliance: <b>Stack testing using EPA Methods 13A or 13B.</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Based on Permit No. 1050053-012-AV.</b>	

**Allowable Emissions** Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: <b>RULE</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>0.02 lb/ton P<sub>2</sub>O<sub>5</sub> input</b>	4. Equivalent Allowable Emissions: <b>0.83 lb/hour                      3.64 tons/year</b>
5. Method of Compliance: <b>Stack testing using EPA Methods 13A or 13B.</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Based on 40 CFR 63.602(a)(1). More stringent of 0.02 lb/ton P<sub>2</sub>O<sub>5</sub> or 0.83 lb/hr.</b>	

**Allowable Emissions** Allowable Emissions \_\_\_\_ of \_\_\_\_

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





**EMISSIONS UNIT INFORMATION**  
 Section [7] of [14]  
 Phosphoric Acid Plant No. 1— South Train

**H. CONTINUOUS MONITOR INFORMATION**

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

**Continuous Monitoring System:** Continuous Monitor 1 of 5

1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: <span style="float: right;">Serial Number:</span>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Water flow. PAP No. 1 – South Train. Arco Cyclonic Jet Scrubber – First Stage. Based on MACT (40 CFR 63, Subpart AA) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**Continuous Monitoring System:** Continuous Monitor 2 of 5

1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: <span style="float: right;">Serial Number:</span>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Water flow. PAP No. 1 – South Train. Arco Cyclonic Jet Scrubber – Second Stage. Based on MACT (40 CFR 63, Subpart AA) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	



**EMISSIONS UNIT INFORMATION**  
 Section [7] of [14]  
 Phosphoric Acid Plant No. 1— South Train

**H. CONTINUOUS MONITOR INFORMATION**

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

**Continuous Monitoring System:** Continuous Monitor 5 of 5

1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: <span style="float: right;">Serial Number:</span>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Mass flow of phosphorous-bearing feed material to process. Based on 40 CFR 63.625(a).</b>	

**Continuous Monitoring System:** Continuous Monitor \_\_\_ of \_\_\_

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

**EMISSIONS UNIT INFORMATION**

Section [7] of [14]  
Phosphoric Acid Plant No. 1— South Train

**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: <b>GB-EU5-I1</b> <input type="checkbox"/> Previously Submitted, Date _____
2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____
3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <b>GB-EU7-I3</b> <input type="checkbox"/> Previously Submitted, Date _____
4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: <b>09/12/2003</b> Test Date(s)/Pollutant(s) Tested: <b>F</b> <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input 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: _____ <input checked="" type="checkbox"/> Not Applicable

**EMISSIONS UNIT INFORMATION**

Section [7] of [14]  
Phosphoric Acid Plant No. 1— South Train

**Additional Requirements for Air Construction Permit Applications**

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.) <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: <b>GB-EU7-IV1</b> <input type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input checked="" type="checkbox"/> Attached, Document ID: <b>GB-EU7-IV2</b> <input 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
5. Acid Rain Part Application <input type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input type="checkbox"/> Copy Attached, Document ID: _____ <input type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable

**EMISSIONS UNIT INFORMATION**

Section [ 7 ] of [14]  
Phosphoric Acid Plant No. 1— South Train

**Additional Requirements Comment**

**ATTACHMENT GB-EU7-I3**

**DETAILED DESCRIPTION OF CONTROL EQUIPMENT**

Attachment GB-EU7-13(a). Control Equipment Parameters and F Removal Efficiency Derivation for the Phosphoric Acid Plant No. 1-- South Cyclonic Jet (First Stage) Scrubber at Cargill Green Bay

Manufacturer and Model No.	ARCO WM-200RH Phosphoric Acid Cyclonic-Jet Scrubber		
Outlet Gas Temperature	110	°F	
Outlet Gas Flow Rate	29,100	acfm	
Pressure Drop Across Device - Minimum	9	inches of H <sub>2</sub> O	
Water flow rate - minimum	149	gpm	
Water flow rate - maximum	448	gpm	
Fan amperage - minimum	67	amps	
Fan amperage - maximum	149	amps	
Maximum Permitted Production Rate <sup>a</sup>	45.03	TPH P <sub>2</sub> O <sub>5</sub>	
	Loading		Control
	Inlet	Permitted <sup>a</sup>	Efficiency <sup>c</sup>
	(lb/hr)	(lb/hr)	(%)
Fluoride <sup>b</sup>	180.1	0.83	99.5

<sup>a</sup>Values obtained from Permit No. 1050053-012-AV.

<sup>b</sup>Inlet data calculated from AP-42 Table 8.5.2-1 using efficiency factor in footnote c.

<sup>c</sup>Control efficiency for entire emission unit.



Attachment GB-EU7-13(b). Control Equipment Parameters and F Removal Efficiency Derivation for the Phosphoric Acid Plant No. 1-- South Cyclonic Jet (Second Stage) Scrubber at Cargill Green Bay

Manufacturer and Model No.	ARCO WM-200LH Phosphoric Acid Cyclonic-Jet Scrubber		
Outlet Gas Temperature	110	°F	
Outlet Gas Flow Rate	29,100	acfm	
Pressure Drop Across Device - Minimum	9	inches of H <sub>2</sub> O	
Water flow rate - minimum	149	gpm	
Water flow rate - maximum	448	gpm	
Fan amperage - minimum	67	amps	
Fan amperage - maximum	149	amps	
Maximum Permitted Production Rate <sup>a</sup>	45.03	TPH P <sub>2</sub> O <sub>5</sub>	
	Loading		Control
	Inlet	Permitted <sup>a</sup>	Efficiency <sup>c</sup>
	(lb/hr)	(lb/hr)	(%)
Fluoride <sup>b</sup>	180.1	0.83	99.5

<sup>a</sup>Values obtained from Permit No. 1050053-012-AV.

<sup>b</sup>Inlet data calculated from AP-42 Table 8.5.2-1 using efficiency factor in footnote c.

<sup>c</sup>Control efficiency for entire emission unit.

**ATTACHMENT GB-EU7-IV1**

**IDENTIFICATION OF APPLICABLE REQUIREMENTS**

**ATTACHMENT GB-EU7-IV1**  
**IDENTIFICATION OF APPLICABLE REQUIREMENTS**  
**PHOSPHORIC ACID PLANT NO. 1—SOUTH TRAIN**

List of Applicable Regulations

<b>40 CFR 63, Subpart A—General NESHAPs Requirements</b>
<b>40 CFR 63.600(a) NESHAPs for Phosphoric Acid Manufacturing</b>
<b>40 CFR 63.600(b)(1) NESHAPs for Phosphoric Acid Manufacturing</b>
<b>40 CFR 63.600(c) NESHAPs for Phosphoric Acid Manufacturing</b>
<b>40 CFR 63.600(e) NESHAPs for Phosphoric Acid Manufacturing</b>
<b>40 CFR 63.602(a) Standards for existing sources</b>
<b>40 CFR 63.604 Operating Requirements</b>
<b>40 CFR 63.605(a)(1) Monitoring Requirements</b>
<b>40 CFR 63.605(b)(1) Monitoring Requirements</b>
<b>40 CFR 63.605(c) Monitoring Requirements</b>
<b>40 CFR 63.605(d) Monitoring Requirements</b>
<b>40 CFR 63.606(a)(1) Performance tests and compliance provisions</b>
<b>40 CFR 63.606(b) Performance tests and compliance provisions</b>
<b>40 CFR 63.606(c) Performance tests and compliance provisions</b>
<b>40 CFR 63.607(a) Notification, recordkeeping, and reporting</b>
<b>40 CFR 63.607(b) Notification, recordkeeping, and reporting</b>
<b>40 CFR 63.607(c) Notification, recordkeeping, and reporting</b>
<b>40 CFR 63.608 Applicability of general provisions</b>
<b>40 CFR 63.609(a) Compliance dates</b>
<b>40 CFR 63.610 Exemption from NSPS</b>
<b>62-212.400(7)(b) PSD-Operation Permits</b>
<b>62-296.403 Phosphate Processing</b>
<b>62-297.310 General Compliance Test Requirements</b>
<b>62-297.401 Compliance Test Methods</b>

**ATTACHMENT GB-EU7-IV2**  
**COMPLIANCE ASSURANCE MONITORING**

**ATTACHMENT GB-EU7-IV2**  
**COMPLIANCE ASSURANCE MONITORING**  
**PHOSPHORIC ACID PLANT NO. 1—SOUTH TRAIN**

CAM does not apply for F since the Phosphoric Acid Plant (PAP) No. 1—South Train is subject to 40 CFR 63, Subpart AA. Cargill received approval for an alternative MACT monitoring plan (File No. 03-C-AP) for the sources subject to 40 CFR 63, Subparts AA and BB, on January 22, 2004. Therefore, since F is the only pollutant for which an emission limit exists for the PAP No. 1—South Train, CAM does not apply for the PAP No. 1—South Train.

Refer to Attachment A for the CAM applicability analysis.

## EMISSIONS UNIT INFORMATION

Section [8] of [14]  
Phosphoric Acid Handling Tanks

### III. EMISSIONS UNIT INFORMATION

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

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

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

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

**EMISSIONS UNIT INFORMATION**

Section [8] of [14]  
Phosphoric Acid Handling Tanks

**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 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 checked="" 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: <b>Phosphoric Acid Tanks</b>				
3. Emissions Unit Identification Number: <b>014, 015</b>				
4. Emissions Unit Status Code: <b>A</b>	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: <b>28</b>	8. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
9. Package Unit: Manufacturer: _____ Model Number: _____				
10. Generator Nameplate Rating: _____ MW				
11. Emissions Unit Comment: <b>Consists of two phosphoric acid storage tanks, a clarification tank, and an aging tank.</b>				

**EMISSIONS UNIT INFORMATION**

Section [8] of [14]

Phosphoric Acid Handling Tanks

**Emissions Unit Control Equipment**

1. Control Equipment/Method(s) Description:  
**Two D.R. Technology Wet Scrubbers**

2. Control Device or Method Code(s): **013**



**EMISSIONS UNIT INFORMATION**

Section [8] of [14]  
Phosphoric Acid Handling Tanks

**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:		
3. Maximum Heat Input Rate:	million Btu/hr	
4. Maximum Incineration Rate:	pounds/hr tons/day	
5. Requested Maximum Operating Schedule:	24 hours/day 52 weeks/year	7 days/week 8,760 hours/year
6. Operating Capacity/Schedule Comment:	The four phosphoric acid handling tanks have a maximum storage capacity of 3,532 tons of P <sub>2</sub> O <sub>5</sub> as phosphoric acid.	

**EMISSIONS UNIT INFORMATION**

Section [8] of [14]  
 Phosphoric Acid Handling Tanks

**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: <b>Phos. Acid Tank Vents</b>		2. Emission Point Type Code: <b>3</b>	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: <b>2 Phosphoric Acid Handling Tanks – Scrubber R-R</b> <b>2 Phosphoric Acid Handling Tanks – Scrubber N-N</b>			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: <b>V</b>	6. Stack Height: <b>59.3 feet</b>	7. Exit Diameter: <b>0.8 feet</b>	
8. Exit Temperature: <b>94°F</b>	9. Actual Volumetric Flow Rate: <b>113 acfm</b>	10. Water Vapor: <b>%</b>	
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: <b>Stack parameters represent the vent parameters for the scrubber R-R controlling the Phosphoric Acid Handling Tanks. All other parameters are included in Attachment GB-EU8-C15.</b>			

**EMISSIONS UNIT INFORMATION**

Section [8] of [14]  
 Phosphoric Acid Handling Tanks

**D. SEGMENT (PROCESS/FUEL) INFORMATION**

**Segment Description and Rate:** Segment 1 of 2

1. Segment Description (Process/Fuel Type): <b>Storage and Transport; Inorganic Chemical Storage; All Storage Types; Working Loss.</b>		
2. Source Classification Code (SCC): <b>A252-09-950-00</b>		3. SCC Units: <b>1,000 Gallons Throughput</b>
4. Maximum Hourly Rate: <b>18.2</b>	5. Maximum Annual Rate: <b>159,432</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: <b>Phosphoric acid throughput from Phosphoric Acid Plant.</b>		

**Segment Description and Rate:** Segment 2 of 2

1. Segment Description (Process/Fuel Type): <b>Storage and Transport; Inorganic Chemical Storage; All Storage Types; Breathing Loss.</b>		
2. Source Classification Code (SCC): <b>A252-00-000-00</b>		3. SCC Units: <b>1,000 Gallon Years Storage Capacity</b>
4. Maximum Hourly Rate:	5. Maximum Annual Rate: <b>504.6</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: <b>Maximum annual rate represents the storage capacity of all 4 tanks combined. Converted from 3,532 tons to gallons using a density of 14 lb/gal.</b>		



**EMISSIONS UNIT INFORMATION**

**POLLUTANT DETAIL INFORMATION**

Section [8] of [14]  
Phosphoric Acid Handling Tanks

Page [1] of [1]  
Fluorides - Total

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

**(Optional for unregulated emissions units.)**

**Potential/Estimated Fugitive Emissions**

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

1. Pollutant Emitted: <b>FL</b>	2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>0.04 lb/hour                      0.18 tons/year</b>		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: <b>0.04 lb/hr</b>  Reference: <b>Permit No. 1050053-012-AV</b>		7. Emissions Method Code: <b>0</b>
8. Calculation of Emissions: <b>0.04 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 0.18 TPY</b>		
9. Pollutant Potential/Estimated Fugitive Emissions Comment: <b>The fluoride emissions represent the total from all four tanks.</b>		

**EMISSIONS UNIT INFORMATION**

**POLLUTANT DETAIL INFORMATION**

Section [8] of [14]  
Phosphoric Acid Handling Tanks

Page [1] of [1]  
Fluorides - Total

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

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

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>0.04 lb/hr</b>	4. Equivalent Allowable Emissions: <b>0.04 lb/hour      0.18 tons/year</b>
5. Method of Compliance: <b>Compliance test using EPA Method 13A or 13B once every five years.</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Based on Permit No. 1050053-012-AV. Represents all four tanks combined.</b>	

Allowable Emissions Allowable Emissions \_\_\_\_ of \_\_\_\_

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

Allowable Emissions Allowable Emissions \_\_\_\_ of \_\_\_\_

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



**EMISSIONS UNIT INFORMATION**

Section [8] of [14]  
Phosphoric Acid Handling Tanks

**H. CONTINUOUS MONITOR INFORMATION**

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

**Continuous Monitoring System:** Continuous Monitor \_\_\_\_ of \_\_\_\_

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

**Continuous Monitoring System:** Continuous Monitor \_\_\_\_ of \_\_\_\_

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



**EMISSIONS UNIT INFORMATION**

Section [8] of [14]  
Phosphoric Acid Handling Tanks

**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>GB-EU5-I1</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 checked="" type="checkbox"/> Attached, Document ID: <u>GB-EU8-I3</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 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 checked="" type="checkbox"/> To be Submitted, Date (if known): <u>Prior to Permit Expiration</u> Test Date(s)/Pollutant(s) Tested: <u>E</u> <input 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: _____ <input checked="" type="checkbox"/> Not Applicable

**EMISSIONS UNIT INFORMATION**

Section [8] of [14]  
Phosphoric Acid Handling Tanks

**Additional Requirements for Air Construction Permit Applications**

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

**Additional Requirements for Title V Air Operation Permit Applications**

1. Identification of Applicable Requirements <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input checked="" type="checkbox"/> Attached, Document ID: <b>GB-EU8-IV2</b> <input 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
5. Acid Rain Part Application <input type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input type="checkbox"/> Copy Attached, Document ID: _____ <input type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable

**EMISSIONS UNIT INFORMATION**

Section [8] of [14]

Phosphoric Acid Handling Tanks

**Additional Requirements Comment**

--

**ATTACHMENT GB-EU8-C15**

**STACK PARAMETERS**

Attachment GB-EU8-C15. Summary of Vent Parameters for the Phosphoric Acid Handling Tanks, Cargill Green Bay

Source	EU ID	Stack/Vent Release Height (ft)	Stack/Vent Diameter (ft)	Actual Exhaust Flow Rate (acfm)	Exhaust Gas Exit Temperature (°F)
Phosphoric Acid Tanks (2, R-R)	014	59.3	0.8	113	94
Phosphoric Acid Tanks (2, N-N)	015	62.8	1.3	109	91

**ATTACHMENT GB-EU8-I3**

**DETAILED DESCRIPTION OF CONTROL EQUIPMENT**

Attachment GB-EU8-13(a). Control Equipment Parameters and F Removal Efficiency Derivation for the Phosphoric Acid Handling Tanks DR Technology Scrubber R-R at Cargill Green Bay

Manufacturer and Model No.	D.R. Technology Phosphoric Acid Handling Wet Scrubber		
Outlet Gas Temperature			95 °F
Outlet Gas Flow Rate			113 acfm
Pressure Drop Across Device - Minimum			0.25 inches of H <sub>2</sub> O
Water Flow Rate - Minimum			10 gpm
	Loading		Control Efficiency <sup>c</sup>
	Inlet (lb/hr)	Permitted <sup>a</sup> (lb/hr)	(%)
Fluoride <sup>b</sup>	1.0	0.10	90.0

<sup>a</sup>Values obtained from Permit No. 1050053-012-AV.

<sup>b</sup>Inlet data calculated from AP-42 Table 8.5.2-1 using efficiency factor in footnote c.

<sup>c</sup>Control efficiency for entire emission unit.

Attachment GB-EU8-I3(b). Control Equipment Parameters and F Removal Efficiency Derivation for the Phosphoric Acid Handling Tanks DR Technology Scrubber N-N at Cargill Green Bay

Manufacturer and Model No.	D.R. Technology Phosphoric Acid Blend Tanks Wet Scrubber		
Outlet Gas Temperature	95	°F	
Outlet Gas Flow Rate	109	acfm	
Pressure Drop Across Device - Minimum	0.25	inches of H <sub>2</sub> O	
Water Flow Rate - Minimum	10	gpm	
	Loading		Control
	Inlet	Permitted <sup>a</sup>	Efficiency <sup>c</sup>
	(lb/hr)	(lb/hr)	(%)
Fluoride <sup>b</sup>	1.7	0.10	94.0

<sup>a</sup>Values obtained from Permit No. 1050053-012-AV.

<sup>b</sup>Inlet data calculated from AP-42 Table 8.5.2-1 using efficiency factor in footnote c.

<sup>c</sup>Control efficiency for entire emission unit.



**ATTACHMENT GB-EU8-IV2**  
**COMPLIANCE ASSURANCE MONITORING**

**ATTACHMENT GB-EU8-IV2**  
**COMPLIANCE ASSURANCE MONITORING**  
**PHOSPHORIC ACID HANDLING TANKS**

Cargill Green Bay operates four phosphoric acid handling tanks (EU 014 and 015). Fluoride (F) emissions are controlled by two D.R. Technology wet scrubbers. The tanks have uncontrolled F emissions less than the major source threshold. Therefore, a CAM plan is not required for these sources. Refer to Attachment A for emission calculations.

## EMISSIONS UNIT INFORMATION

Section [9] of [14]  
MAP/DAP Storage and Shipping

### III. EMISSIONS UNIT INFORMATION

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

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

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

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

**EMISSIONS UNIT INFORMATION**

Section [9] of [14]  
MAP/DAP Storage and Shipping

**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:  
**MAP/DAP Storage and Shipping Building**

3. Emissions Unit Identification Number: **020**

4. Emissions Unit Status Code: <b>A</b>	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: <b>28</b>	8. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
--	--------------------------------	--------------------------	--	--

9. Package Unit:  
Manufacturer: \_\_\_\_\_ Model Number: \_\_\_\_\_

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:

**EMISSIONS UNIT INFORMATION**

Section [9] of [14]

MAP/DAP Storage and Shipping

**Emissions Unit Control Equipment**

1. Control Equipment/Method(s) Description:  
**ARCO Wet Cyclonic Scrubber**

2. Control Device or Method Code(s): **013**



**EMISSIONS UNIT INFORMATION**

Section [9] of [14]

MAP/DAP Storage and Shipping

**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: <b>Storage and Shipping</b>		2. Emission Point Type Code: <b>1</b>			
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: <b>V</b>		6. Stack Height: <b>131.5 feet</b>		7. Exit Diameter: <b>8.0 feet</b>	
8. Exit Temperature: <b>92°F</b>		9. Actual Volumetric Flow Rate: <b>137,100 acfm</b>		10. Water Vapor: <b>%</b>	
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 [9] of [14]  
 MAP/DAP Storage and Shipping

**D. SEGMENT (PROCESS/FUEL) INFORMATION**

**Segment Description and Rate:** Segment 1 of 1

1. Segment Description (Process/Fuel Type): <b>Mineral Products; Bulk Materials Loading Operation; Fertilizer; MAP/DAP</b>		
2. Source Classification Code (SCC): <b>3-05-105-97</b>		3. SCC Units: <b>Tons Processed</b>
4. Maximum Hourly Rate: <b>385</b>	5. Maximum Annual Rate: <b>3,372,600</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: <b>Maximum annual rate is based on 8,760 hr/yr operation. Hourly and annual rates represent the maximum process rate of 180 TPH P<sub>2</sub>O<sub>5</sub> or 385 TPH (30-day rolling average) of fertilizer.</b>		

**Segment Description and Rate:** Segment \_\_\_\_ of \_\_\_\_

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





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

(Optional for unregulated emissions units.)

**Potential/Estimated Fugitive Emissions**

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

1. Pollutant Emitted: <b>PM</b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>4.1 lb/hour</b> <b>18 tons/year</b>		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: <b>4.1 lb/hr</b>  Reference: <b>Permit No. 1050053-012-AV</b>		7. Emissions Method Code: <b>3</b>	
8. Calculation of Emissions: <b>4.1 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 18 TPY</b>			
9. Pollutant Potential/Estimated Fugitive Emissions Comment: <b>Potential emissions represent the total from the scrubber stack for both the storage and shipping buildings.</b>			

**EMISSIONS UNIT INFORMATION**

Section [9] of [14]  
 MAP/DAP Storage and Shipping

**POLLUTANT DETAIL INFORMATION**

Page [1] of [1]  
 Particulate Matter - Total

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

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

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>4.1 lb/hr</b>	4. Equivalent Allowable Emissions: <b>4.1 lb/hour                      18 tons/year</b>
5. Method of Compliance: <b>Semiannual compliance test using EPA Method 5.</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Based on Permit No. 1050053-012-AV. Represents total emissions from the scrubber stack for both the storage and shipping buildings.</b>	

Allowable Emissions Allowable Emissions \_\_\_\_ of \_\_\_\_

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

Allowable Emissions Allowable Emissions \_\_\_\_ of \_\_\_\_

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

**EMISSIONS UNIT INFORMATION**

Section [9] of [14]  
MAP/DAP Storage and Shipping

**G. VISIBLE EMISSIONS INFORMATION**

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

**Visible Emissions Limitation:** Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: <b>VE20</b>	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: <b>20 %</b> Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: <b>DEP Method 9</b>	
5. Visible Emissions Comment: <b>Rule 62-296.320(4)(b), F.A.C., and Permit No. 1050053-012-AV.</b>	

**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 [9] of [14]

MAP/DAP Storage and Shipping

**H. CONTINUOUS MONITOR INFORMATION**

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

**Continuous Monitoring System:** Continuous Monitor \_\_\_\_\_ of \_\_\_\_\_

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

**Continuous Monitoring System:** Continuous Monitor \_\_\_\_\_ of \_\_\_\_\_

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

**EMISSIONS UNIT INFORMATION**

Section [9] of [14]  
MAP/DAP Storage and Shipping

**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: <b>GB-EU9-I1</b> <input type="checkbox"/> Previously Submitted, Date _____
2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____
3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <b>GB-EU9-I3</b> <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 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 checked="" type="checkbox"/> To be Submitted, Date (if known): <b>July 2004</b> Test Date(s)/Pollutant(s) Tested: <b>PM, VE</b> <input 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: _____ <input checked="" type="checkbox"/> Not Applicable

**EMISSIONS UNIT INFORMATION**

Section [9] of [14]  
MAP/DAP Storage and Shipping

**Additional Requirements for Air Construction Permit Applications**

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.) <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: <b>GB-EU9-IV1</b> <input type="checkbox"/> Not Applicable
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
5. Acid Rain Part Application <input type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input type="checkbox"/> Copy Attached, Document ID: _____ <input type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable

**EMISSIONS UNIT INFORMATION**

Section [9] of [14]

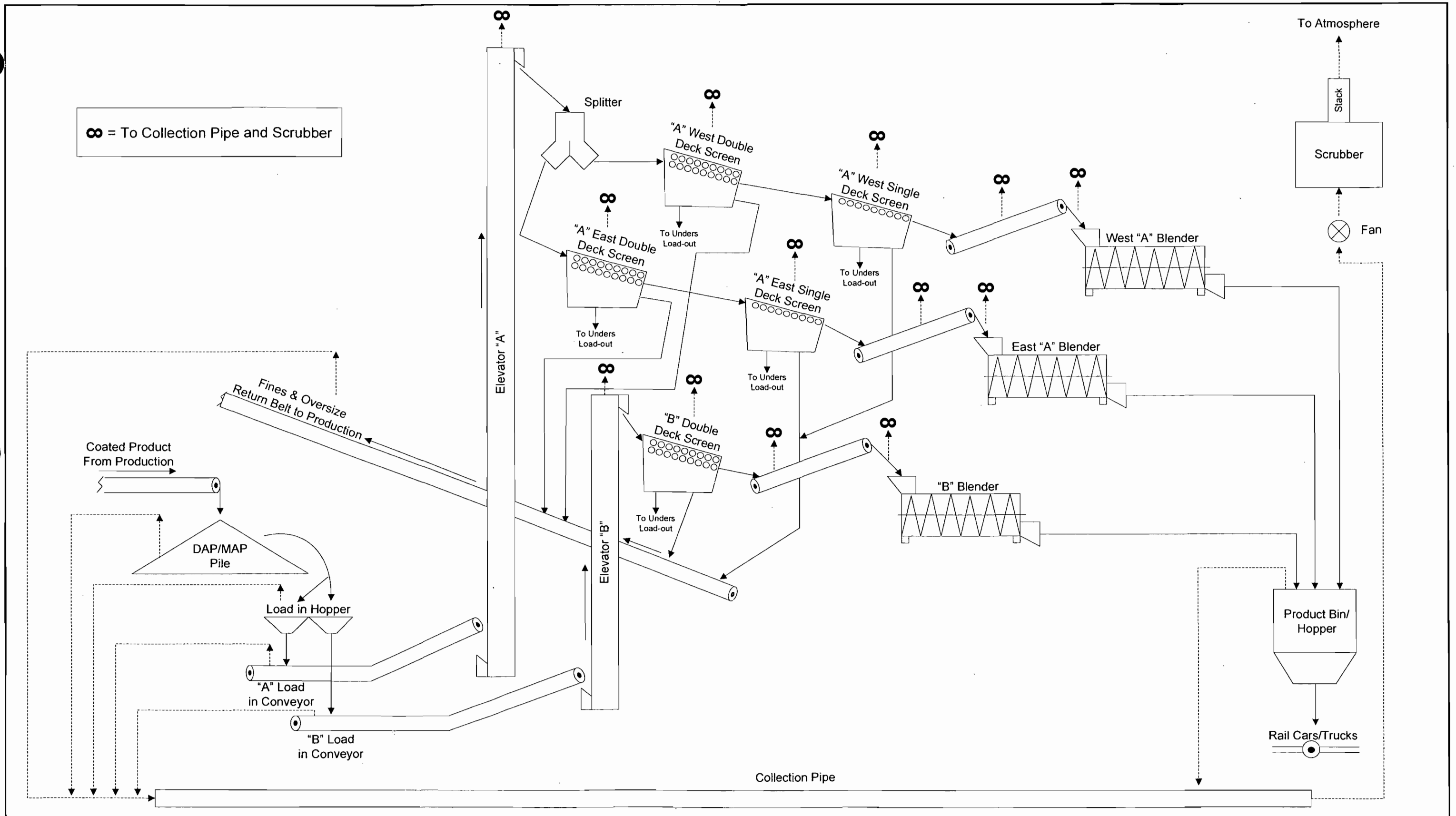
MAP/DAP Storage and Shipping

**Additional Requirements Comment**

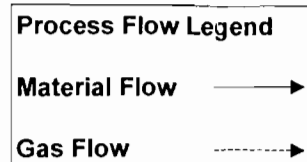
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**ATTACHMENT GB-EU9-I1**  
**PROCESS FLOW DIAGRAM**



Attachment GB-EU9-I1  
 MAP/DAP Storage and Shipping Building  
 Cargill Green Bay



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 Date: 06/17/04



**ATTACHMENT GB-EU9-13**

**DETAILED DESCRIPTION OF CONTROL EQUIPMENT**

Attachment GB-EU9-I3. Control Equipment Parameters and PM and F Removal Efficiency Derivation for  
MAP/DAP Storage and Shipping ARCO Scrubber at Cargill Green Bay

Manufacturer and Model No.	ARCO 8929 Storage and Shipping Cyclonic Wet Scrubber		
Outlet Gas Temperature			90 °F
Outlet Gas Flow Rate			63,000 acfm
Pressure Drop Across Device - Minimum			4 inches of H <sub>2</sub> O
Gas-to-Liquid Ratio			80 ACF/gal
Maximum Permitted Throughput Rate <sup>a</sup>			98.0 TPH P <sub>2</sub> O <sub>5</sub>
	Loading		Control
	Inlet	Permitted <sup>a</sup>	Efficiency <sup>c</sup>
	(lb/hr)	(lb/hr)	(%)
Particulate Matter <sup>b</sup>	588.0	4.1	99.3

<sup>a</sup>Values obtained from Permit No. 1050053-012-AV.

<sup>b</sup>Inlet data calculated from AP-42 Table 8.5.2-1 using efficiency factor in footnote c.

<sup>c</sup>Control efficiency for entire emission unit.

**ATTACHMENT GB-EU9-IV1**  
**IDENTIFICATION OF APPLICABLE REQUIREMENTS**

**ATTACHMENT GB-EU9-IV1**  
**LIST OF APPLICABLE REQUIREMENTS**  
**MAP/DAP STORAGE AND SHIPPING BUILDING**

40 CFR 60, Appendix A—Compliance Test Methods

62-296.320(2), F.A.C.—General Pollutant Emission Limiting Standards (Objectionable Odors)

62-296.320(4), F.A.C.—General Particulate Emission Limiting Standards

62-297.310(2), F.A.C.—General Compliance Test Requirements-Operating Rate During Test

62-297.310(4), F.A.C.—General Compliance Test Requirements-Applicable Test Procedures

62-297.310(7), F.A.C.—General Compliance Test Requirements-Frequency of Compliance Tests

## EMISSIONS UNIT INFORMATION

Section [10] of [14]  
North AP 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 Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

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

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

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

**EMISSIONS UNIT INFORMATION**

Section [10] of [14]  
North AP 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:  
**North AP Plant (Ammoniated Phosphates Fertilizers Manufacturing)**

3. Emissions Unit Identification Number: **029**

4. Emissions Unit Status Code: <b>A</b>	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: <b>28</b>	8. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
--	--------------------------------	--------------------------	--	--

9. Package Unit:  
Manufacturer: \_\_\_\_\_ Model Number: \_\_\_\_\_

10. Generator Nameplate Rating: \_\_\_\_\_ MW

11. Emissions Unit Comment:



**EMISSIONS UNIT INFORMATION**

Section [10] of [14]

North AP Plant

**Emissions Unit Control Equipment**

1. Control Equipment/Method(s) Description:  
053 Three Venturi/Cyclonic Scrubbers  
123 Two Co-current Cyclonic Spray Scrubbers  
038 Ammonia Vaporizer  
118 Cross-flow Scrubber

2. Control Device or Method Code(s): 053, 123, 038, 118



**EMISSIONS UNIT INFORMATION**

Section [10] of [14]  
 North AP 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: <b>North Dry Products</b>		2. Emission Point Type Code: <b>3</b>	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: <b>Main Stack</b> <b>R/G Stack</b>			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: <b>V</b>	6. Stack Height: <b>128 feet</b>	7. Exit Diameter: <b>8.0 feet</b>	
8. Exit Temperature: <b>113°F</b>	9. Actual Volumetric Flow Rate: <b>153,000 acfm</b>	10. Water Vapor: <b>%</b>	
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: <b>Stack/vent information represents the main stack while operating in DAP mode. Refer to Attachment GB-EU10-C15 for a summary of stack/vent information for the North AP Plant.</b>			

**EMISSIONS UNIT INFORMATION**

Section [10] of [14]  
 North AP Plant

**D. SEGMENT (PROCESS/FUEL) INFORMATION**

**Segment Description and Rate: Segment 1 of 3**

1. Segment Description (Process/Fuel Type): <b>Chemical Manufacturing; Ammonium Phosphates; Ammoniator/Granulator</b>		
2. Source Classification Code (SCC): <b>3-01-030-02</b>		3. SCC Units: <b>Tons P<sub>2</sub>O<sub>5</sub> Produced</b>
4. Maximum Hourly Rate: <b>106.1</b>	5. Maximum Annual Rate: <b>929,436</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: <b>Maximum hourly rate is based on operation in MAP mode. The maximum hourly and annual rates during DAP mode are 70.4 TPH P<sub>2</sub>O<sub>5</sub> and 616,704 TPY P<sub>2</sub>O<sub>5</sub>.</b>		

**Segment Description and Rate: Segment 2 of 3**

1. Segment Description (Process/Fuel Type): <b>In-Process Fuel Use; Distillate Oil; Phosphate Fertilizer Dryer</b>		
2. Source Classification Code (SCC): <b>3-90-005-99</b>		3. SCC Units: <b>1,000 Gallons Burned</b>
4. Maximum Hourly Rate: <b>0.37</b>	5. Maximum Annual Rate: <b>3,100</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: <b>0.05</b>	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>135</b>
10. Segment Comment: <b>Maximum hourly rate is based on heat input rate of 50 MMBtu/hr.</b>		

**EMISSIONS UNIT INFORMATION**

Section [10] of [14]

North AP Plant

**D. SEGMENT (PROCESS/FUEL) INFORMATION**

**Segment Description and Rate:** Segment 3 of 3

1. Segment Description (Process/Fuel Type): <b>In-Process Fuel Use; Natural Gas; Phosphate Fertilizer Dryer</b>		
2. Source Classification Code (SCC): <b>3-90-006-99</b>		3. SCC Units: <b>Million Cubic Feet Burned</b>
4. Maximum Hourly Rate: <b>0.05</b>	5. Maximum Annual Rate: <b>438</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>1,000</b>
10. Segment Comment: <b>Maximum hourly rate is based on heat input rate of 50.0 MMBtu/hr.</b>		

**Segment Description and Rate:** Segment \_\_\_ of \_\_\_

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



**EMISSIONS UNIT INFORMATION**

Section [10] of [14]  
 North AP Plant

**POLLUTANT DETAIL INFORMATION**

Page [1] of [3]  
 Particulate Matter - Total

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

**(Optional for unregulated emissions units.)**

**Potential/Estimated Fugitive Emissions**

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

1. Pollutant Emitted: <b>PM</b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>31.8 lb/hour                      139.3 tons/year</b>		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: <b>31.8 lb/hr</b>  Reference: <b>Permit No. 1050053-012-AV</b>		7. Emissions Method Code: <b>3</b>	
8. Calculation of Emissions: <b>31.8 lb/hr x 8,760 hr/yr ÷ 2,000 lb/ton = 139.3 TPY</b>			
9. Pollutant Potential/Estimated Fugitive Emissions Comment: <b>Represents total PM emissions from both stacks combined. Potential emissions above are for MAP mode. Potential emissions for DAP mode are 21.1 lb/hr and 92.5 TPY.</b>			

**EMISSIONS UNIT INFORMATION**

Section [10] of [14]  
North AP Plant

**POLLUTANT DETAIL INFORMATION**

Page [1] of [3]  
Particulate Matter - Total

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

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

**Allowable Emissions** Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>31.8 lb/hr</b>	4. Equivalent Allowable Emissions: <b>31.8 lb/hour                      139.3 tons/year</b>
5. Method of Compliance: <b>Annual stack emission test using EPA Method 5.</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Based on Permit No. 1050053-012-AV and operation in MAP mode.</b>	

**Allowable Emissions** Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>21.1 lb/hr</b>	4. Equivalent Allowable Emissions: <b>21.1 lb/hour                      92.5 tons/year</b>
5. Method of Compliance: <b>Annual stack emission test using EPA Method 5.</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Based on Permit No. 1050053-012-AV and operation in DAP mode.</b>	

**Allowable Emissions** Allowable Emissions \_\_\_\_ of \_\_\_\_

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



**EMISSIONS UNIT INFORMATION**

Section [10] of [14]  
 North AP Plant

**POLLUTANT DETAIL INFORMATION**

Page [2] of [3]  
 Fluorides - Total

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

(Optional for unregulated emissions units.)

**Potential/Estimated Fugitive Emissions**

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

1. Pollutant Emitted: <b>FL</b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>6.4 lb/hour                      27.9 tons/year</b>		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: <b>0.06 lb/ton P<sub>2</sub>O<sub>5</sub></b>  Reference: <b>Permit No. 1050053-012-AV</b>		7. Emissions Method Code: <b>0</b>	
8. Calculation of Emissions: Hourly: <b>0.06 lb/ton P<sub>2</sub>O<sub>5</sub> x 106.1 TPH P<sub>2</sub>O<sub>5</sub> = 6.37 lb/hr</b>  Annual: <b>6.37 lb/hr x 8,760 hr/yr ÷ 2,000 lb/ton = 27.9 TPY</b>			
9. Pollutant Potential/Estimated Fugitive Emissions Comment: <b>Represents total FL emissions from both stacks combined. Potential emissions above are for operation in MAP mode. Potential emissions for DAP mode are 0.0417 lb/ton P<sub>2</sub>O<sub>5</sub>, 2.9 lb/hr, and 12.7 TPY.</b>			

**EMISSIONS UNIT INFORMATION**

**POLLUTANT DETAIL INFORMATION**

Section [10] of [14]  
North AP Plant

Page [2] of [3]  
Fluorides - Total

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

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

**Allowable Emissions** Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>0.06 lb/ton P<sub>2</sub>O<sub>5</sub></b>	4. Equivalent Allowable Emissions: <b>6.4 lb/hour                      27.9 tons/year</b>
5. Method of Compliance: <b>Annual stack emissions test using EPA Method 13A or 13B.</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Based on Permit No. 1050053-012-AV and operation in MAP mode.</b>	

**Allowable Emissions** Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>0.0417 lb/ton P<sub>2</sub>O<sub>5</sub></b>	4. Equivalent Allowable Emissions: <b>2.9 lb/hour                      12.7 tons/year</b>
5. Method of Compliance: <b>Annual stack emissions test using EPA Method 13A or 13B.</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Based on Permit No. 1050053-012-AV and operation in DAP mode.</b>	

**Allowable Emissions** Allowable Emissions      of     

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

**EMISSIONS UNIT INFORMATION**

Section [10] of [14]  
North AP Plant

**POLLUTANT DETAIL INFORMATION**

Page [3] of [3]  
Sulfur Dioxide

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

(Optional for unregulated emissions units.)

**Potential/Estimated Fugitive Emissions**

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

1. Pollutant Emitted: <b>SO<sub>2</sub></b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>2.63 lb/hour                      11.01 tons/year</b>		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year			
6. Emission Factor: <b>142 S lb/Mgal</b>  Reference: <b>Permit No. 1050053-012-AV</b>		7. Emissions Method Code: <b>0</b>	
8. Calculation of Emissions: <b>Refer to Attachment GB-EU10-F8.</b>			
9. Pollutant Potential/Estimated Fugitive Emissions Comment: <b>S = 0.05%.</b>			

**EMISSIONS UNIT INFORMATION**

Section [10] of [14]  
North AP Plant

**POLLUTANT DETAIL INFORMATION**

Page [3] of [3]  
Sulfur Dioxide

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

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

**Allowable Emissions** Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>0.05% Sulfur</b>	4. Equivalent Allowable Emissions: <b>2.63 lb/hour                      11.01 tons/year</b>
5. Method of Compliance: <b>Fuel oil analysis and usage.</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Based on heat input rate of 50 MMBtu/hr.</b>	

**Allowable Emissions** Allowable Emissions \_\_\_\_ of \_\_\_\_

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

**Allowable Emissions** Allowable Emissions \_\_\_\_ of \_\_\_\_

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

**EMISSIONS UNIT INFORMATION**

Section [10] of [14]  
North AP Plant

**G. VISIBLE EMISSIONS INFORMATION**

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

**Visible Emissions Limitation:** Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: <b>VE20</b>	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: <b>20 %</b> Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: <b>Annual VE test using DEP Method 9.</b>	
5. Visible Emissions Comment: <b>Permit No. 1050053-012-AV.</b>	

**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 [10] of [14]  
North AP Plant

**H. CONTINUOUS MONITOR INFORMATION**

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

**Continuous Monitoring System:** Continuous Monitor 1 of 18

1. Parameter Code: <b>PRS</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: <b>Barton</b> Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Pressure drop across R/G Primary (High Mole) Venturi/Cyclonic Scrubber. Based on MACT (40 CFR 63, Subpart BB) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**Continuous Monitoring System:** Continuous Monitor 2 of 18

1. Parameter Code: <b>PRS</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: <b>Barton</b> Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Pressure drop across R/G Secondary (Low Mole) Venturi/Cyclonic Scrubber. Based on MACT (40 CFR 63, Subpart BB) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**EMISSIONS UNIT INFORMATION**

Section [10] of [14]  
 North AP Plant

**H. CONTINUOUS MONITOR INFORMATION**

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

**Continuous Monitoring System:** Continuous Monitor 3 of 18

1. Parameter Code: <b>PRS</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: <b>Siemens</b> Model Number: _____ Serial Number: _____	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Pressure drop across Cooler Venturi/Cyclonic Scrubber. Based on MACT (40 CFR 63, Subpart BB) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**Continuous Monitoring System:** Continuous Monitor 4 of 18

1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
7. Monitor Information... Manufacturer: <b>Brooks Mag</b> Model Number: <b>3585C 284DL</b> Serial Number: <b>9203 29704-1</b>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Scrubbing media flow (recovery solution) of R/G Primary and Secondary (High Mole and Low Mole) Venturi/Cyclonic Scrubbers. Based on MACT (40 CFR 63, Subpart BB) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**EMISSIONS UNIT INFORMATION**

Section [10] of [14]

North AP Plant

**H. CONTINUOUS MONITOR INFORMATION**

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

**Continuous Monitoring System:** Continuous Monitor 5 of 18

1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: <b>Rosemount</b> Model Number: <b>8712-DR12N0B6M4</b> Serial Number: <b>0860164080</b>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Liquid flow rate of ammonia vaporizer (R/G Tailgas Scrubber). Based on MACT (40 CFR 63, Subpart BB) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**Continuous Monitoring System:** Continuous Monitor 6 of 18

1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: <b>Rosemount</b> Model Number: <b>8711TPA060R10880113142</b> Serial Number: <b>0024460</b>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Scrubbing media (recovery solution) flow of Dryer Scrubber. Based on MACT (40 CFR 63, Subpart BB) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	



**EMISSIONS UNIT INFORMATION**

Section [10] of [14]  
North AP Plant

**H. CONTINUOUS MONITOR INFORMATION**

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

**Continuous Monitoring System:** Continuous Monitor 7 of 18

1. Parameter Code: <b>Fan Amperage</b>	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: <b>Dryer Scrubber Fan. Based on MACT (40 CFR 63, Subpart BB) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**Continuous Monitoring System:** Continuous Monitor 8 of 18

1. Parameter Code: <b>PRS</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: <b>Foxboro</b> Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Pressure drop across Dryer Venturi/Cyclonic Scrubber. Based on MACT (40 CFR 63, Subpart BB) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**EMISSIONS UNIT INFORMATION**

Section [10] of [14]  
North AP Plant

**H. CONTINUOUS MONITOR INFORMATION**

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

**Continuous Monitoring System:** Continuous Monitor 9 of 18

1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other	
4. Monitor Information... Manufacturer: <b>Brooks Instruments</b> Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Scrubbing media flow (recovery solution) of Screens and Mills Venturi/Cyclonic Scrubber. Based on MACT (40 CFR 63, Subpart BB) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**Continuous Monitoring System:** Continuous Monitor 10 of 18

1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other	
4. Monitor Information... Manufacturer: <b>Brooks Instruments</b> Model Number: <b>MAG 3580 Series</b> Serial Number: <b>9603-21799-2-2</b>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Scrubbing media (recovery solution) flow of Cooler Venturi/Cyclonic Scrubber. Based on MACT (40 CFR 63, Subpart BB) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**EMISSIONS UNIT INFORMATION**

Section [10] of [14]

North AP Plant

**H. CONTINUOUS MONITOR INFORMATION**

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

**Continuous Monitoring System:** Continuous Monitor 11 of 18

1. Parameter Code: Fan Amperage	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: <b>Screens and Mills Scrubber Fan. Based on MACT (40 CFR 63, Subpart BB) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**Continuous Monitoring System:** Continuous Monitor 12 of 18

1. Parameter Code: PRS	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: <b>Foxboro</b> Model Number: <b>IDP10-T25A21F-M2L1B1V</b> Serial Number: <b>03310021</b>	
5. Installation Date:	6. Performance Specification Test Date:
8. Continuous Monitor Comment: <b>Pressure drop across Screens and Mills Venturi/Cyclonic Scrubber. Based on MACT (40 CFR 63, Subpart BB) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**EMISSIONS UNIT INFORMATION**

Section [10] of [14]  
 North AP Plant

**H. CONTINUOUS MONITOR INFORMATION**

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

**Continuous Monitoring System:** Continuous Monitor 13 of 18

1. Parameter Code: <b>FLOW</b>	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: <b>Mass flow of phosphorous-bearing feed material to process. Based on 40 CFR 63, Subpart BB.</b>	

**Continuous Monitoring System:** Continuous Monitor 14 of 18

1. Parameter Code: <b>PRS</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: <b>Foxboro</b> Model Number: <b>1DP10-T26A21F-M2L1B1V</b> Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Pressure drop across RG tailgas (ammonia vaporizer) scrubber. . Based on MACT (40 CFR 63, Subpart BB) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**EMISSIONS UNIT INFORMATION**

Section [10] of [14]  
 North AP Plant

**H. CONTINUOUS MONITOR INFORMATION**

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

**Continuous Monitoring System:** Continuous Monitor 15 of 18

1. Parameter Code: <b>Fan Amperage</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: <span style="float: right;">Serial Number:</span>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>R/G Tailgas (ammonia vaporizer) Scrubber Fan. Based on MACT (40 CFR 63, Subpart BB) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**Continuous Monitoring System:** Continuous Monitor 16 of 18

1. Parameter Code: <b>Fan Amperage</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: <span style="float: right;">Serial Number:</span>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Cooler Venturi/Cyclonic Scrubber Fan. Based on MACT (40 CFR 63, Subpart BB) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**EMISSIONS UNIT INFORMATION**

Section [10] of [14]

North AP Plant

**H. CONTINUOUS MONITOR INFORMATION**

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

**Continuous Monitoring System:** Continuous Monitor 17 of 18

1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: <b>Rosemount</b> Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Scrubbing media flow of Cross-flow Scrubber. Based on MACT (40 CFR 63, Subpart BB) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**Continuous Monitoring System:** Continuous Monitor 18 of 18

1. Parameter Code: <b>PRS</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: <b>Foxboro</b> Model Number: <b>IDP10-T22B21F-M2RIV</b> Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Pressure Drop across Cross-flow Scrubber. Based on MACT (40 CFR 63, Subpart BB) monitoring plan (24-hour average) and Administrative Order No. 03-C-AP.</b>	

**EMISSIONS UNIT INFORMATION**

Section [10] of [14]  
North AP 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: <b>GB-EU10-I1</b> <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 checked="" type="checkbox"/> Attached, Document ID: <b>GB-EU10-I2</b> <input type="checkbox"/> Previously Submitted, Date _____
3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <b>GB-EU10-I3</b> <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 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 checked="" type="checkbox"/> Previously Submitted, Date: <b>10/21/2003</b> Test Date(s)/Pollutant(s) Tested: <b>PM, F, VE</b> <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input 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 type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

## EMISSIONS UNIT INFORMATION

Section [10] of [14]

North AP Plant

### Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.) <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: <b>GB-EU10-IV1</b> <input type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input checked="" type="checkbox"/> Attached, Document ID: <b>GB-EU10-IV2</b> <input type="checkbox"/> Not Applicable
3. Alternative Methods of Operation <input checked="" type="checkbox"/> Attached, Document ID: <b>GB-EU10-IV3</b> <input type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
5. Acid Rain Part Application <input type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input type="checkbox"/> Copy Attached, Document ID: _____ <input type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable



**EMISSIONS UNIT INFORMATION**

Section [10] of [14]  
North AP Plant

**Additional Requirements Comment**

[Empty comment box]

**ATTACHMENT GB-EU10-C15**

**STACK PARAMETERS**

Attachment GB-EU10-C15. Summary of Stack Parameters for the North AP Plant, Cargill Green Bay

Source	EU ID	Stack/Vent Release Height (ft)	Stack/Vent Diameter (ft)	Actual Exhaust Flow Rate (acfm)	Exhaust Gas Exit Temperature (°F)
North MAP/DAP Plant-Main Stack	029	128.0	7.5	237,800	103
North MAP/DAP Plant-RG Stack	029	116.5	5.5	89,800	198

**ATTACHMENT GB-EU10-F8**  
**CALCULATION OF EMISSIONS**

Attachment GB-EU10-F8. Maximum Emission Rates Due to Fuel Combustion for the Dryer at the North AP Plant, Cargill Green Bay

Parameter	Units	No. 2 Fuel Oil	Natural Gas
<b>Operating Data</b>			
Annual Operating Hours	hr/yr	8,760	8,760
Maximum Heat Input Rate	10 <sup>6</sup> Btu/hr	50	50
Hourly Fuel Oil Usage <sup>a</sup>	10 <sup>3</sup> gal/hr	0.370	N/A
Annual Fuel Oil Usage	10 <sup>3</sup> gal/yr	3,100	N/A
Maximum Sulfur Content	Weight %	0.05	N/A
Hourly Natural Gas Usage <sup>b</sup>	10 <sup>6</sup> scf/hr	N/A	0.050
Annual Natural Gas Usage	10 <sup>6</sup> scf/yr	N/A	438
Hourly LPG Usage	10 <sup>3</sup> gal/hr	N/A	N/A
Annual LPG Usage	10 <sup>3</sup> gal/yr	N/A	N/A

Pollutant	AP-42 Emissions Factor <sup>c</sup>	No. 2 Fuel Oil		Natural gas		Maximum Emission Rate	
		Hourly Emission Rate (lb/hr)	Annual Emission Rate (TPY)	Hourly Emission Rate (lb/hr)	Annual Emission Rate (TPY)	Hourly Emission Rate (lb/hr)	Annual Emission Rate (TPY)
		<b>Sulfur Dioxide</b>					
Fuel oil	142 *(S) lb/10 <sup>3</sup> gal <sup>d</sup>	2.630	11.005	--	--	--	--
Natural gas	0.6 lb/10 <sup>6</sup> ft <sup>3</sup>	--	--	0.030	0.131	--	--
Worse-Case Combination of Fuels		--	--	--	--	2.63	11.01

Footnotes:

<sup>a</sup> Based on the heat content of fuel oil of 135,000 Btu/gallon.

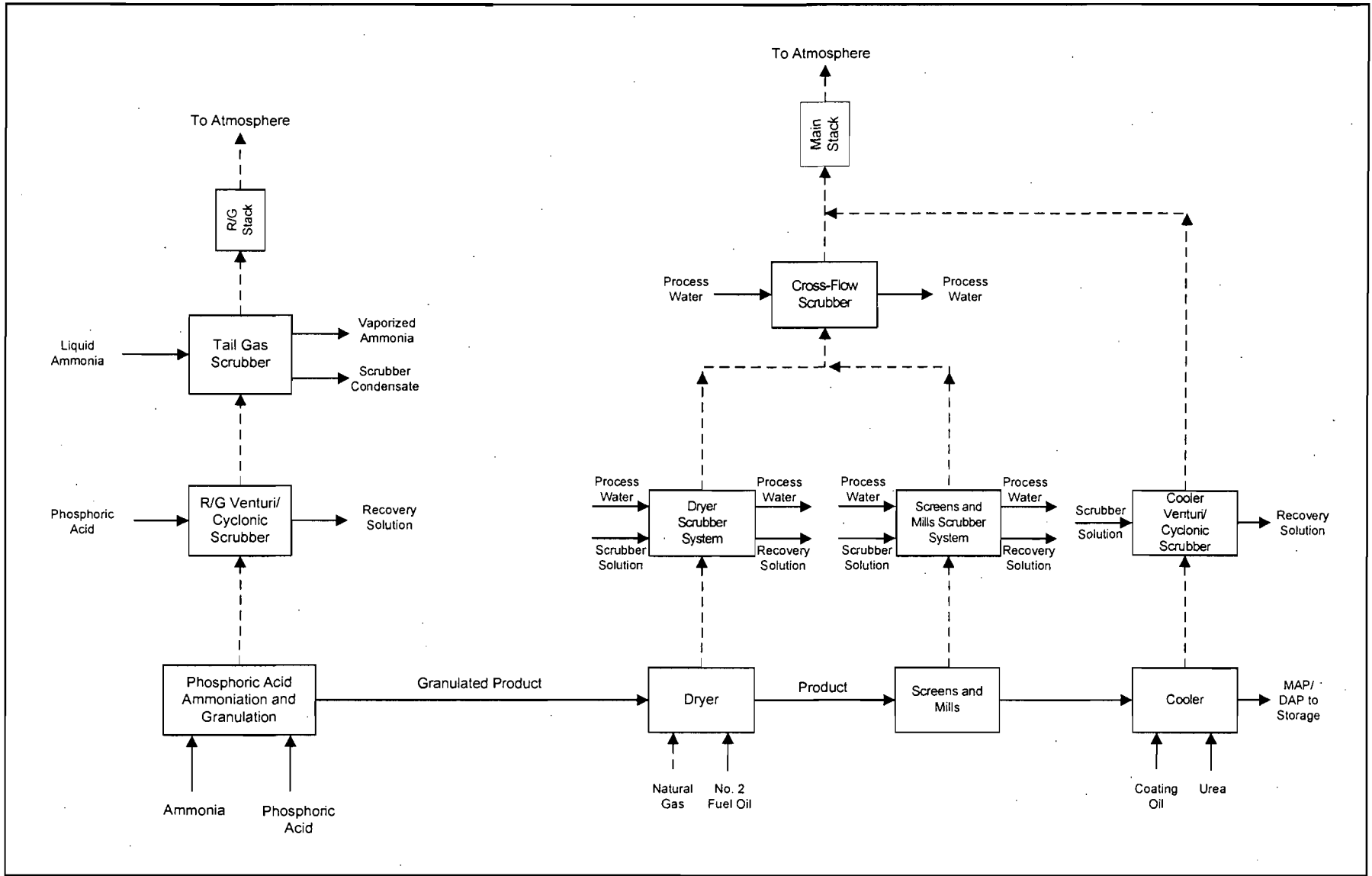
<sup>b</sup> Based on the heat content of natural gas of 1,000 Btu/scf.

<sup>c</sup> Emission factors for fuel oil are based on AP-42, Section 1.3, September 1998. Emission factors for natural gas are based on AP-42, Section 1.4, July 1998.

<sup>d</sup> S denotes the weight-percent of Sulfur in fuel oil; Maximum sulfur content = 0.05%.

**ATTACHMENT GB-EU10-I1**

**PROCESS FLOW DIAGRAM**



Attachment GB-EU10-11  
 Current North MAP/DAP Plant  
 Process Flow Diagram  
 Cargill Fertilizer, Inc. - Green Bay Facility

**Process Flow Legend**  
 Material Flow ———→  
 Gas Flow - - - - -→

Filename: 04375504\4.4\GB-EU10-11.vsd  
 Date: 06/15/04



**ATTACHMENT GB-EU10-I2**

**FUEL ANALYSIS OR SPECIFICATION**



**ATTACHMENT GB-EU10-I2**  
**NORTH AP PLANT FUEL ANALYSIS**

Fuel	Density	Moisture (%)	Weight % Sulfur	Weight % Nitrogen	Weight % Ash	Heat Capacity
Natural Gas	0.048 lb/scf	<0.01	<0.001	0.62	--	1,000 Btu/scf
No. 2 Fuel Oil	6.83 lb/gal	<0.01	0.05	0.006	<0.01	135,000 Btu/gal

**ATTACHMENT GB-EU10-13**

**DETAILED DESCRIPTION OF CONTROL EQUIPMENT**

Attachment GB-EU10-13 (a). Control Equipment Parameters and PM and F Removal Efficiency Derivation for  
North AP Plant RG Primary Venturi/Cyclonic Scrubber at Cargill Green Bay

Manufacturer and Model No.	Tampa Tank RG Primary Venturi/Cyclonic Scrubber		
Outlet Gas Temperature	187	°F	
Outlet Gas Flow Rate	59,400	acfm	
Pressure Drop Across Device - Minimum	2	inches of H <sub>2</sub> O	
Recovery Solution Flow - Minimum	522	gpm	
Recovery Solution Flow - Maximum	1,144	gpm	
Maximum Permitted Production Rate <sup>a</sup>	70.4	tons DAP per hour	
Maximum Permitted Production Rate <sup>a</sup>	106.1	tons MAP per hour	
<u>DAP MODE</u>			
	<u>Loading</u>		<u>Control</u>
	<u>Inlet</u>	<u>Permitted<sup>a</sup></u>	<u>Efficiency<sup>c</sup></u>
	(lb/hr)	(lb/hr)	(%)
Particulate Matter <sup>b</sup>	422.4	31.8	92.5
Fluoride <sup>b</sup>	281.6	6.40	97.7
<u>MAP MODE</u>			
	<u>Loading</u>		<u>Control</u>
	<u>Inlet</u>	<u>Permitted<sup>a</sup></u>	<u>Efficiency<sup>c</sup></u>
	(lb/hr)	(lb/hr)	(%)
Particulate Matter <sup>b</sup>	636.6	31.8	95.0
Fluoride <sup>b</sup>	424.4	6.40	98.5

<sup>a</sup>Values obtained from Permit No. 1050053-012-AV.

<sup>b</sup>Inlet data calculated from AP-42 Table 8.5.2-1 using efficiency factor in footnote c.

<sup>c</sup>Control efficiency for entire emission unit.

Attachment GB-EU10-13 (b). Control Equipment Parameters and PM and F Removal Efficiency Derivation for North AP Plant Dryer Venturi Scrubber at Cargill Green Bay

Manufacturer and Model No.	Airetron Dryer Venturi Scrubber		
Outlet Gas Temperature	138	°F	
Outlet Gas Flow Rate	45,600	acfm	
Pressure Drop Across Device - Minimum	14	inches of H <sub>2</sub> O	
Recovery solution flow rate - minimum	168	gpm	
Recovery solution flow rate - maximum	473	gpm	
Fan amperage - minimum	22	amps	
Fan amperage - maximum	40	amps	
Maximum Permitted Production Rate <sup>a</sup>	70.4	tons DAP per hour	
Maximum Permitted Production Rate <sup>a</sup>	106.1	tons MAP per hour	
<u>DAP MODE</u>	<u>Loading</u>		<u>Control</u>
	<u>Inlet</u>	<u>Permitted<sup>a</sup></u>	<u>Efficiency<sup>c</sup></u>
	(lb/hr)	(lb/hr)	(%)
Particulate Matter <sup>b</sup>	422.4	31.8	92.5
Fluoride <sup>b</sup>	281.6	6.40	97.7
<u>MAP MODE</u>	<u>Loading</u>		<u>Control</u>
	<u>Inlet</u>	<u>Permitted<sup>a</sup></u>	<u>Efficiency<sup>c</sup></u>
	(lb/hr)	(lb/hr)	(%)
Particulate Matter <sup>b</sup>	636.6	31.8	95.0
Fluoride <sup>b</sup>	424.4	6.40	98.5

<sup>a</sup>Values obtained from Permit No. 1050053-012-AV.

<sup>b</sup>Inlet data calculated from AP-42 Table 8.5.2-1 using efficiency factor in footnote c.

<sup>c</sup>Control efficiency for entire emission unit.

Attachment GB-EU10-13 (c). Control Equipment Parameters and PM and F Removal Efficiency Derivation for  
North AP Plant Screens & Mills Venturi Scrubber at Cargill Green Bay

Manufacturer and Model No.	Airetron Screens & Mills Venturi Scrubber		
Outlet Gas Temperature	103	°F	
Outlet Gas Flow Rate	34,700	acfm	
Pressure Drop Across Device - Minimum	2	inches of H <sub>2</sub> O	
Pressure Drop Across Device - Maximum	7	inches of H <sub>2</sub> O	
Recovery Solution Flow Rate - Minimum	186	gpm	
Recovery Solution Flow Rate - Maximum	725	gpm	
Maximum Permitted Production Rate <sup>a</sup>	70.4	tons DAP per hour	
Maximum Permitted Production Rate <sup>a</sup>	106.1	tons MAP per hour	
<u>DAP MODE</u>			
	<u>Loading</u>		<u>Control</u>
	<u>Inlet</u>	<u>Permitted<sup>a</sup></u>	<u>Efficiency<sup>c</sup></u>
	(lb/hr)	(lb/hr)	(%)
Particulate Matter <sup>b</sup>	422.4	31.8	92.5
Fluoride <sup>b</sup>	281.6	6.40	97.7
<u>MAP MODE</u>			
	<u>Loading</u>		<u>Control</u>
	<u>Inlet</u>	<u>Permitted<sup>a</sup></u>	<u>Efficiency<sup>c</sup></u>
	(lb/hr)	(lb/hr)	(%)
Particulate Matter <sup>b</sup>	636.6	31.8	95.0
Fluoride <sup>b</sup>	424.4	6.40	98.5

<sup>a</sup>Values obtained from Permit No. 1050053-012-AV.

<sup>b</sup>Inlet data calculated from AP-42 Table 8.5.2-1 using efficiency factor in footnote c.

<sup>c</sup>Control efficiency for entire emission unit.

Attachment GB-EU10-13 (d). Control Equipment Parameters and PM and F Removal Efficiency Derivation for North AP Plant RG Secondary Scrubber at Cargill Green Bay

Manufacturer and Model No.	Tampa Tank RG Secondary Venturi/Cyclonic Scrubber		
Outlet Gas Temperature	188	°F	
Outlet Gas Flow Rate	59,400	acfm	
Pressure Drop Across Device - Minimum	7	inches of H <sub>2</sub> O	
Recovery solution flow rate - minimum	182	gpm	
Recovery solution flow rate - maximum	778	gpm	
Maximum Permitted Production Rate <sup>a</sup>	70.4	tons DAP per hour	
Maximum Permitted Production Rate <sup>a</sup>	106.1	tons MAP per hour	
<u>DAP MODE</u>			
	Loading		Control
	Inlet	Permitted <sup>a</sup>	Efficiency <sup>c</sup>
	(lb/hr)	(lb/hr)	(%)
Particulate Matter <sup>b</sup>	422.4	31.8	92.5
Fluoride <sup>b</sup>	281.6	6.40	97.7
<u>MAP MODE</u>			
	Loading		Control
	Inlet	Permitted <sup>a</sup>	Efficiency <sup>c</sup>
	(lb/hr)	(lb/hr)	(%)
Particulate Matter <sup>b</sup>	636.6	31.8	95.0
Fluoride <sup>b</sup>	424.4	6.40	98.5

<sup>a</sup>Values obtained from Permit No. 1050053-012-AV.

<sup>b</sup>Inlet data calculated from AP-42 Table 8.5.2-1 using efficiency factor in footnote c.

<sup>c</sup>Control efficiency for entire emission unit.

Attachment GB-EU10-13 (e). Control Equipment Parameters and PM and F Removal Efficiency Derivation for  
North AP Plant Dryer, Screens & Mills, and Cooler Tailgas Cross-Flow Scrubber at Cargill Green Bay

Manufacturer and Model No.	FarmLand Industries Dryer, Screens & Mills, Cooler Tailgas Cross-Flow Scrubber		
Outlet Gas Temperature	119	°F	
Outlet Gas Flow Rate	73,200	acfm	
Pressure Drop Across Device - Minimum	1	inches of H <sub>2</sub> O	
Pressure Drop Across Device - Maximum	6	inches of H <sub>2</sub> O	
Scrubbing Media Flow Rate - Minimum	658	gpm	
Scrubbing Media Flow Rate - Maximum	1,416	gpm	
Maximum Permitted Production Rate <sup>a</sup>	70.4	tons DAP per hour	
Maximum Permitted Production Rate <sup>a</sup>	106.1	tons MAP per hour	
<b>DAP MODE</b>			
	Loading		Control Efficiency <sup>c</sup>
	Inlet (lb/hr)	Permitted <sup>a</sup> (lb/hr)	(%)
Particulate Matter <sup>b</sup>	422.4	31.8	92.5
Fluoride <sup>b</sup>	281.6	6.40	97.7
<b>MAP MODE</b>			
	Loading		Control Efficiency <sup>c</sup>
	Inlet (lb/hr)	Permitted <sup>a</sup> (lb/hr)	(%)
Particulate Matter <sup>b</sup>	636.6	31.8	95.0
Fluoride <sup>b</sup>	424.4	6.40	98.5

<sup>a</sup>Values obtained from Permit No. 1050053-012-AV.

<sup>b</sup>Inlet data calculated from AP-42 Table 8.5.2-1 using efficiency factor in footnote c.

<sup>c</sup>Control efficiency for entire emission unit.

Attachment GB-EU10-13 (f). Control Equipment Parameters and PM and F Removal Efficiency Derivation for North AP Plant Dryer, RG Ammonia Vaporizer at Cargill Green Bay

Manufacturer and Model No.	Doyle and Roth Man. Co. RG Ammonia Vaporizer		
Outlet Gas Temperature	174	°F	
Outlet Gas Flow Rate	52,900	acfm	
Pressure Drop Across Device - Minimum	5	inches of H <sub>2</sub> O	
Scrubbing liquid flow rate - minimum	184	gpm	
Scrubbing liquid flow rate - maximum	634	gpm	
Fan amperage - minimum	24	amps	
Fan amperage - maximum	41	amps	
Maximum Permitted Production Rate <sup>a</sup>	70.4	tons DAP per hour	
Maximum Permitted Production Rate <sup>a</sup>	106.1	tons MAP per hour	
<b><u>DAP MODE</u></b>			
	<u>Loading</u>		Control
	Inlet	Permitted <sup>a</sup>	Efficiency <sup>c</sup>
	(lb/hr)	(lb/hr)	(%)
Particulate Matter <sup>b</sup>	422.4	31.8	92.5
Fluoride <sup>b</sup>	281.6	6.40	97.7
<b><u>MAP MODE</u></b>			
	<u>Loading</u>		Control
	Inlet	Permitted <sup>a</sup>	Efficiency <sup>c</sup>
	(lb/hr)	(lb/hr)	(%)
Particulate Matter <sup>b</sup>	636.6	31.8	95.0
Fluoride <sup>b</sup>	424.4	6.40	98.5

<sup>a</sup>Values obtained from Permit No. 1050053-012-AV.

<sup>b</sup>Inlet data calculated from AP-42 Table 8.5.2-1 using efficiency factor in footnote c.

<sup>c</sup>Control efficiency for entire emission unit.



**ATTACHMENT GB-EU10-IV1**

**IDENTIFICATION OF APPLICABLE REQUIREMENTS**

**ATTACHMENT GB-EU10-IV1  
IDENTIFICATION OF APPLICABLE REQUIREMENTS  
NORTH AP FERTILIZER PLANT**

List of Applicable Regulations

40 CFR 63, Subpart A—NESHAPs General Requirements
40 CFR 63.620(a) NESHAPs for Phosphate Fertilizer Plants
40 CFR 63.620(b)(1) NESHAPs for Phosphate Fertilizer Plants
40 CFR 63.620(e) NESHAPs for Phosphate Fertilizer Plants
40 CFR 63.622(a) Standards for existing DAP/MAP Plants
40 CFR 63.624 Wet Scrubber operating requirements
40 CFR 63.625(a) Monitoring requirements
40 CFR 63.625(b) Monitoring requirements
40 CFR 63.625(c) Monitoring requirements
40 CFR 63.625(f) Monitoring requirements
40 CFR 63.626(a)(1) Performance tests and compliance
40 CFR 63.626(b) Performance tests and compliance
40 CFR 63.626(c) Performance tests and compliance
40 CFR 63.627(a) Notification, recordkeeping, and reporting
40 CFR 63.627(b) Notification, recordkeeping, and reporting
40 CFR 63.627(c) Notification, recordkeeping, and reporting
40 CFR 63.628 Applicability of general provisions
40 CFR 63.630(a) Compliance dates
40 CFR 63.631 Exemption from NSPS
62-212.400(7)(b) PSD
62-296.320(b) General VE Standard
62-296.403 Phosphate processing
62-297.310 Compliance Testing
62-297.401 Compliance Test Methods

**ATTACHMENT GB-EU10-IV2**  
**COMPLIANCE ASSURANCE MONITORING**

**ATTACHMENT GB-EU10-IV2**  
**COMPLIANCE ASSURANCE MONITORING**  
**NORTH AP FERTILIZER PLANT**

The North AP Fertilizer Plant utilizes three venturi/cyclonic acid and two spray cyclonic scrubbers to reduce particulate matter (PM) emissions and two secondary tailgas scrubbers to control fluoride (F) emissions. The acid scrubbers are used to recover ammonia and product (PM), therefore these scrubbers are considered to be inherent process equipment. As such, CAM does not apply for the three venturi acid scrubbers at the North AP Fertilizer Plant. And since the two secondary tailgas scrubbers are used to control F emissions and not PM emissions, CAM does not apply for PM for the North AP Fertilizer Plant.

CAM does not apply for F since the North AP Fertilizer Plant is subject to 40 CFR 63, Subpart BB. Cargill received approval for an alternative MACT monitoring plan (File No. 03-C-AP) for the sources subject to 40 CFR 63, Subparts AA and BB, on January 22, 2004.

Refer to Attachment A for the CAM applicability analysis.

**ATTACHMENT GB-EU10-IV3**

**ALTERNATIVE METHODS OF OPERATION**

**ATTACHMENT GB-EU10-IV3****ALTERNATIVE METHODS OF OPERATION**

The North MAP/DAP Fertilizer Plant can produce monoammonium phosphates (MAP) and diammonium phosphates (DAP) fertilizer. The North AP Fertilizer Plant dryer is permitted to burn natural gas or No. 2 fuel oil at a maximum heat input rate of 50.0 MMBtu/hr.

## EMISSIONS UNIT INFORMATION

Section [11] of [14]  
Molten Sulfur Handling

### III. EMISSIONS UNIT INFORMATION

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

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

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

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

**EMISSIONS UNIT INFORMATION**

Section [11] of [14]  
 Molten Sulfur Handling

**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:  
**Molten Sulfur Storage/Handling: Tanks and Pits**

3. Emissions Unit Identification Number: **See Comment**

4. Emissions Unit Status Code: <b>A</b>	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: <b>28</b>	8. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
--	--------------------------------	--------------------------	--	--

9. Package Unit:  
 Manufacturer: \_\_\_\_\_ Model Number: \_\_\_\_\_

10. Generator Nameplate Rating: \_\_\_\_\_ MW

11. Emissions Unit Comment:  
**030 = Tank No. 1; 031 = Tank No. 2; 032 = Tank No. 3; 033 = Truck Pit; 034 = Truck and Backup Railcar Pit; 035 = Pit No. 5; 036 = Pit Nos. 3 and 4; 039 = Tank No. 4; 041=Pit No. 6.**



**EMISSIONS UNIT INFORMATION**

Section [11] of [14]

Molten Sulfur Handling

**Emissions Unit Control Equipment**

1. Control Equipment/Method(s) Description:

2. Control Device or Method Code(s):



**EMISSIONS UNIT INFORMATION**

Section [11] of [14]

Molten Sulfur Handling

**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: <b>Sulfur Storage Tanks, Sulfur Unloading Pits, Sulfur Tanks, Sulfur Pits</b>		2. Emission Point Type Code: <b>3</b>	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: <b>See Section A.11. for list of sources.</b>			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: <b>V</b>	6. Stack Height: <b>11 feet</b>	7. Exit Diameter: <b>0.8 feet</b>	
8. Exit Temperature: <b>68°F</b>	9. Actual Volumetric Flow Rate: <b>16,000 acfm</b>	10. Water Vapor: <b>%</b>	
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: <b>Parameters presented above are for the molten sulfur railcar pit.</b>			

**EMISSIONS UNIT INFORMATION**

Section [11] of [14]  
Molten Sulfur Handling

**D. SEGMENT (PROCESS/FUEL) INFORMATION**

**Segment Description and Rate:** Segment 1 of 1

1. Segment Description (Process/Fuel Type): <b>Industrial Processes; Mineral Products; Bulk Materials Unloading Operation; Sulfur</b>		
2. Source Classification Code (SCC): <b>3-051-04-08</b>		3. SCC Units: <b>Tons Processed</b>
4. Maximum Hourly Rate:	5. Maximum Annual Rate: <b>924,000</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

**Segment Description and Rate:** Segment \_\_\_\_ of \_\_\_\_

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



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

(Optional for unregulated emissions units.)

**Potential/Estimated Fugitive Emissions**

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

1. Pollutant Emitted:		2. Total Percent Efficiency of Control:	
3. Potential Emissions: lb/hour		tons/year	4. Synthetically Limited? <input type="checkbox"/> Yes <input type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: Reference:		7. Emissions Method Code:	
8. Calculation of Emissions:			
9. Pollutant Potential/Estimated Fugitive Emissions Comment:			

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

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

Allowable Emissions Allowable Emissions \_\_\_\_ of \_\_\_\_

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

Allowable Emissions Allowable Emissions \_\_\_\_ of \_\_\_\_

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

Allowable Emissions Allowable Emissions \_\_\_\_ of \_\_\_\_

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

**EMISSIONS UNIT INFORMATION**

Section [11] of [14]

Molten Sulfur Handling

**G. VISIBLE EMISSIONS INFORMATION**

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

**Visible Emissions Limitation:** Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: <b>VE20</b>	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: <b>20 %</b> Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: <b>Visible emissions test using DEP Method 9 once every 5 years.</b>	
9. Visible Emissions Comment: <b>Applies to any system vent or opening. Rule 62-296.411(1)(g), F.A.C.; and Permit No. 1050053-012-AV.</b>	

**Visible Emissions Limitation:** Visible Emissions Limitation \_\_\_ of \_\_\_

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input checked="" 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 [11] of [14]  
Molten Sulfur Handling

**H. CONTINUOUS MONITOR INFORMATION**

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

**Continuous Monitoring System:** Continuous Monitor \_\_\_\_ of \_\_\_\_

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

**Continuous Monitoring System:** Continuous Monitor \_\_\_\_ of \_\_\_\_

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

**EMISSIONS UNIT INFORMATION**

Section [11] of [14]

Molten Sulfur Handling

**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: <b>GB-EU11-11</b> <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 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 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 checked="" type="checkbox"/> To be Submitted, Date (if known): <b>July 2004</b> Test Date(s)/Pollutant(s) Tested: <b>VE</b> <input 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: _____ <input checked="" type="checkbox"/> Not Applicable

**EMISSIONS UNIT INFORMATION**

Section [11] of [17]

Molten Sulfur Handling

**Additional Requirements for Air Construction Permit Applications**

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.) <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: <b>GB-EU11-IV1</b> <input type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input checked="" type="checkbox"/> Attached, Document ID: <b>GB-EU11-IV2</b> <input 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
5. Acid Rain Part Application <input type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input type="checkbox"/> Copy Attached, Document ID: _____ <input type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable

**EMISSIONS UNIT INFORMATION**

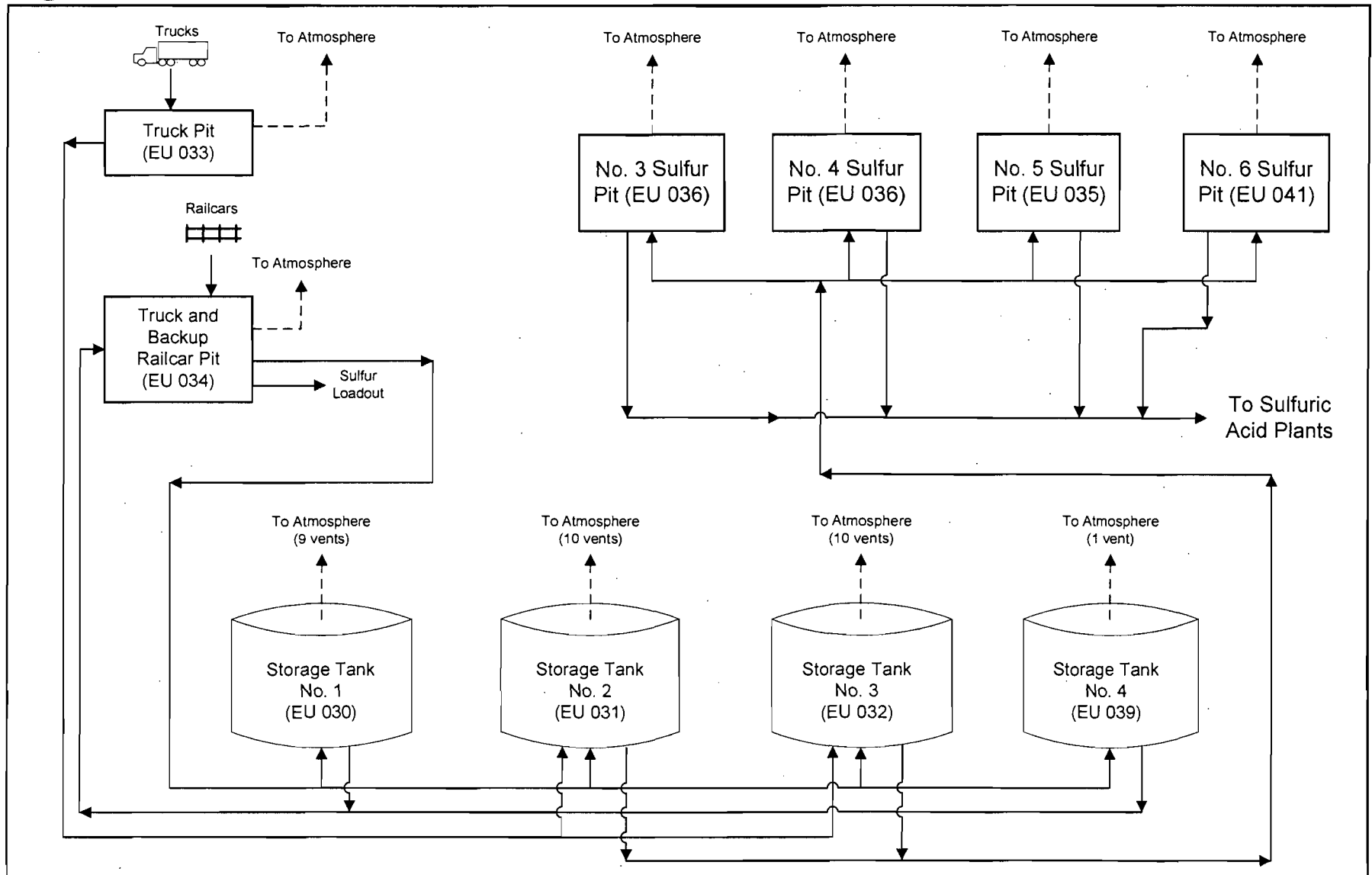
Section [11] of [17]

Molten Sulfur Handling

**Additional Requirements Comment**

[Empty rectangular box for additional requirements comment]

**ATTACHMENT GB-EU11-11**  
**PROCESS FLOW DIAGRAM**



Attachment GB-EU11-11  
 Process Flow Diagram - Molten Sulfur Handling  
 Cargill - Green Bay

Source: Golder, 2004

**Process Flow Legend**

Sulfur Flow   
 Air Flow

Filename: 04375504\4.4\GB-EU11-11.vsd

Date: 07/01/04



**ATTACHMENT GB-EU11-IV1**

**IDENTIFICATION OF APPLICABLE REQUIREMENTS**

**ATTACHMENT GB-EU11-IV1**  
**LIST OF APPLICABLE REQUIREMENTS**  
**MOLTEN SULFUR HANDLING**

40 CFR 60, Appendix A—Compliance Test Methods

62-296.320, F.A.C.—General Pollutant Emission Limiting Standards

62-296.411(1), F.A.C.—Molten Sulfur Storage and Handling Facilities

62-297.310, F.A.C.—General Compliance Test Requirements

62-297.401, F.A.C.—Compliance Test Methods



**ATTACHMENT GB-EU11-IV2**  
**COMPLIANCE ASSURANCE MONITORING**

**ATTACHMENT GB-EU11-IV2**  
**COMPLIANCE ASSURANCE MONITORING PLAN**  
**MOLTEN SULFUR HANDLING SYSTEM**

The Molten Sulfur Handling System (EU 030 through 036, 039, and 041) consists of four storage tanks and five storage pits. These sources do not use "control devices" as defined in 40 CFR Part 64 and do not have any emission limits, therefore CAM plans are not required for these sources.

## EMISSIONS UNIT INFORMATION

Section [12] of [14]  
Phosphoric Acid Blend Tanks

### III. EMISSIONS UNIT INFORMATION

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

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

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

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

# EMISSIONS UNIT INFORMATION

Section [12] of [14]  
Phosphoric Acid Blend Tanks

## 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:  
**Phosphoric Acid Blend Tanks**

3. Emissions Unit Identification Number:

4. Emissions Unit Status Code: <b>A</b>	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: <b>28</b>	8. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
--	--------------------------------	--------------------------	--	--

9. Package Unit:

Manufacturer:

Model Number:

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:

**Consists of four (4) tanks, each holding 634,000 gallons.**

**EMISSIONS UNIT INFORMATION**

Section [12] of [14]

Phosphoric Acid Blend Tanks

**Emissions Unit Control Equipment**

1. Control Equipment/Method(s) Description:  
**DR Technology Packed-Bed Scrubber**

2. Control Device or Method Code(s): **117**



**EMISSIONS UNIT INFORMATION**

Section [12] of [14]

Phosphoric Acid Blend Tanks

**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: <b>Blend Acid Tank Scrubber</b>		2. Emission Point Type Code: <b>2</b>			
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: <b>4 Phosphoric Acid Blend Tanks</b>					
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:					
5. Discharge Type Code: <b>F</b>		6. Stack Height: <b>22.5 feet</b>		7. Exit Diameter: <b>0.5 feet</b>	
8. Exit Temperature: <b>77°F</b>		9. Actual Volumetric Flow Rate: <b>94 acfm</b>		10. Water Vapor: <b>%</b>	
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 [12] of [14]

Phosphoric Acid Blend Tanks

**D. SEGMENT (PROCESS/FUEL) INFORMATION****Segment Description and Rate:** Segment 1 of 2

1. Segment Description (Process/Fuel Type): <b>Storage and Transport; Inorganic Chemical Storage; All Storage Types; Working Loss</b>		
2. Source Classification Code (SCC): <b>A252-09-950-00</b>		3. SCC Units: <b>Thousand Gallons Throughput</b>
4. Maximum Hourly Rate: <b>12.2</b>	5. Maximum Annual Rate: <b>106,893</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: <b>Maximum rates represent the material receiving rate of 2,050 TPD 54% P<sub>2</sub>O<sub>5</sub> for all four tanks. Converted to gallons using a density of 14 lb/gal.</b>		

**Segment Description and Rate:** Segment 2 of 2

1. Segment Description (Process/Fuel Type): <b>Storage and Transport; Inorganic Chemical Storage; All Storage Types; Breathing Loss</b>		
2. Source Classification Code (SCC): <b>A252-00-000-00</b>		3. SCC Units: <b>Thousand Gallon Years Storage Capacity</b>
4. Maximum Hourly Rate:	5. Maximum Annual Rate: <b>2,536</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: <b>Maximum annual rate represents the storage capacity of all 4 tanks combined.</b>		





**EMISSIONS UNIT INFORMATION**

Section [12] of [14]  
Phosphoric Acid Blend Tanks

**POLLUTANT DETAIL INFORMATION**

Page [1] of [1]  
Fluorides - Total

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

**(Optional for unregulated emissions units.)**

**Potential/Estimated Fugitive Emissions**

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

1. Pollutant Emitted: <b>FL</b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>0.10 lb/hour                      0.44 tons/year</b>		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: <b>0.10 lb/hr</b>  Reference: <b>Permit No. 1050053-012-AV</b>		7. Emissions Method Code: <b>3</b>	
8. Calculation of Emissions: <b>0.1 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 0.44 TPY</b>			
9. Pollutant Potential/Estimated Fugitive Emissions Comment: <b>Represents the emissions from all four tanks combined.</b>			

**EMISSIONS UNIT INFORMATION**

Section [12] of [14]  
Phosphoric Acid Blend Tanks

**POLLUTANT DETAIL INFORMATION**

Page [1] of [1]  
Fluorides - Total

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

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

**Allowable Emissions** Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>0.10 lb/hr</b>	4. Equivalent Allowable Emissions: <b>0.10 lb/hour      0.44 tons/year</b>
5. Method of Compliance: <b>Compliance testing using EPA Method 13A or 13B once every 5 years.</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Based on Permit No. 1050053-012-AV. Represents all four tanks combined.</b>	

**Allowable Emissions** Allowable Emissions \_\_\_\_ of \_\_\_\_

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

**Allowable Emissions** Allowable Emissions \_\_\_\_ of \_\_\_\_

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



**EMISSIONS UNIT INFORMATION**

Section [12] of [14]  
Phosphoric Acid Blend Tanks

**H. CONTINUOUS MONITOR INFORMATION**

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

**Continuous Monitoring System:** Continuous Monitor \_\_\_\_ of \_\_\_\_

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

**Continuous Monitoring System:** Continuous Monitor \_\_\_\_ of \_\_\_\_

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

**EMISSIONS UNIT INFORMATION**

Section [12] of [14]

Phosphoric Acid Blend Tanks

**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: <b>GB-EU5-11</b> <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 checked="" type="checkbox"/> Previously Submitted, Date _____
3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <b>GB-EU12-13</b> <input type="checkbox"/> Previously Submitted, Date _____
4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> To be Submitted, Date (if known): <b>Prior to Permit Renewal</b> Test Date(s)/Pollutant(s) Tested: <b>F</b> <input 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: _____ <input checked="" type="checkbox"/> Not Applicable

**EMISSIONS UNIT INFORMATION**

Section [12] of [14]  
Phosphoric Acid Blend Tanks

**Additional Requirements for Air Construction Permit Applications**

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

**Additional Requirements for Title V Air Operation Permit Applications**

1. Identification of Applicable Requirements <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input checked="" type="checkbox"/> Attached, Document ID: <b>GB-EU12-IV2</b> <input 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
5. Acid Rain Part Application <input type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input type="checkbox"/> Copy Attached, Document ID: _____ <input type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable

**EMISSIONS UNIT INFORMATION**

Section [12] of [14]

Phosphoric Acid Blend Tanks

**Additional Requirements Comment**

[Empty rectangular box for Additional Requirements Comment]



**ATTACHMENT GB-EU12-I3**

**DETAILED DESCRIPTION OF CONTROL EQUIPMENT**

Attachment GB-EU12-13. Control Equipment Parameters and F Removal Efficiency Derivation for the Phosphoric Acid Blend Tanks DR Technology Scrubber at Cargill Green Bay

Manufacturer and Model No.	D.R. Technology Phosphoric Acid Blend Tanks Packed-Bed Scrubber		
Outlet Gas Temperature			95 °F
Outlet Gas Flow Rate			94 acfm
Pressure Drop Across Device - Minimum			3 inches of H <sub>2</sub> O
Liquid Flow Rate - Minimum			10 gpm
	Loading		Control
	Inlet (lb/hr)	Permitted <sup>a</sup> (lb/hr)	Efficiency <sup>c</sup> (%)
Fluoride <sup>b</sup>	1.0	0.10	90.0

<sup>a</sup>Values obtained from Permit No. 1050053-012-AV.

<sup>b</sup>Inlet data calculated from AP-42 Table 8.5.2-1 using efficiency factor in footnote c.

<sup>c</sup>Control efficiency for entire emission unit.

**ATTACHMENT GB-EU12-IV2**  
**COMPLIANCE ASSURANCE MONITORING**

**ATTACHMENT GB-EU12-IV2**  
**COMPLIANCE ASSURANCE MONITORING**  
**PHOSPHORIC ACID BLEND TANKS**

Cargill Green Bay operates four phosphoric acid blend tanks (EU 037). Fluoride (F) emissions are controlled by a D.R. Technology wet scrubber. The tanks have uncontrolled F emissions less than the major source threshold. Therefore, a CAM plan is not required for these sources. Refer to Attachment A for emission calculations.

## EMISSIONS UNIT INFORMATION

Section [13] of [14]  
Phosphogypsum Stack

### III. EMISSIONS UNIT INFORMATION

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

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

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

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

**EMISSIONS UNIT INFORMATION**

Section [13] of [14]  
Phosphogypsum Stack

**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:  
**Phosphogypsum Stack**

3. Emissions Unit Identification Number: **040**

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

5. Commence Construction Date:

6. Initial Startup Date:

7. Emissions Unit Major Group SIC Code:  
**28**

8. Acid Rain Unit?  
 Yes  
 No

9. Package Unit:  
Manufacturer:

Model Number:

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment: **This emission unit is an inactive phosphogypsum stack regulated under 40 CFR 61, Subpart R.**

**EMISSIONS UNIT INFORMATION**

Section [13] of [14]

Phosphogypsum Stack

**Emissions Unit Control Equipment**

1. Control Equipment/Method(s) Description:

2. Control Device or Method Code(s):





**EMISSIONS UNIT INFORMATION**

Section [13] of [14]  
 Phosphogypsum Stack

**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: <b>Inactive Gypsum Stack</b>		2. Emission Point Type Code: <b>4</b>	
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: <b>F</b>	6. Stack Height: feet	7. Exit Diameter: feet	
8. Exit Temperature: <b>77°F</b>	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: <b>0</b> 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 [13] of [14]

Phosphogypsum Stack

**D. SEGMENT (PROCESS/FUEL) INFORMATION**

**Segment Description and Rate:** Segment 1 of 1

1. Segment Description (Process/Fuel Type): <b>Phosphoric Acid; Wet Process; Other not classified.</b>		
2. Source Classification Code (SCC): <b>3-01-010-99</b>		3. SCC Units: <b>Tons Processed</b>
4. Maximum Hourly Rate: <b>0</b>	5. Maximum Annual Rate: <b>0</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: <b>Phosphogypsum stack is now inactive.</b>		

**Segment Description and Rate:** Segment \_\_\_\_ of \_\_\_\_

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





**EMISSIONS UNIT INFORMATION**

**POLLUTANT DETAIL INFORMATION**

Section [13] of [14]  
Phosphogypsum Stack

Page [1] of [1]  
Radionuclides

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

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

**Allowable Emissions** Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>RULE</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>20 pCi/m<sup>2</sup>-s</b>	4. Equivalent Allowable Emissions: lb/hour                      tons/year
5. Method of Compliance: <b>One-time test using EPA Method 115.</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>40 CFR 61.202</b>	

**Allowable Emissions** Allowable Emissions \_\_\_\_ of \_\_\_\_

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

**Allowable Emissions** Allowable Emissions \_\_\_\_ of \_\_\_\_

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



**EMISSIONS UNIT INFORMATION**

Section [13] of [14]  
Phosphogypsum Stack

**H. CONTINUOUS MONITOR INFORMATION**

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

**Continuous Monitoring System:** Continuous Monitor \_\_\_\_ of \_\_\_\_

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

**Continuous Monitoring System:** Continuous Monitor \_\_\_\_ of \_\_\_\_

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

**EMISSIONS UNIT INFORMATION**

Section [13] of [14]

Phosphogypsum Stack

**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 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 type="checkbox"/> Previously Submitted, Date _____
4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: <b>Radon 222</b> <input 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: _____ <input checked="" type="checkbox"/> Not Applicable



**EMISSIONS UNIT INFORMATION**

Section [13] of [14]  
Phosphogypsum Stack

**Additional Requirements for Air Construction Permit Applications**

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.) <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: <b>GB-EU13-IV1</b> <input type="checkbox"/> Not Applicable
2. Compliance Assurance Monitoring <input checked="" type="checkbox"/> Attached, Document ID: <b>GB-EU13-IV2</b> <input 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
5. Acid Rain Part Application <input type="checkbox"/> Certificate of Representation (EPA Form No. 7610-1) <input type="checkbox"/> Copy Attached, Document ID: _____ <input type="checkbox"/> Acid Rain Part (Form No. 62-210.900(1)(a)) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input type="checkbox"/> Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable

**EMISSIONS UNIT INFORMATION**  
Section [13] of [14]  
Phosphogypsum Stack

**Additional Requirements Comment**

**ATTACHMENT GB-EU13-IV1**  
**IDENTIFICATION OF APPLICABLE REQUIREMENTS**

**ATTACHMENT GB-EU13-IV1**  
**IDENTIFICATION OF APPLICABLE REQUIREMENTS**  
**PHOSPHOGYPSUM STACK**

40 CFR 61.200, Subpart R—Radon Emissions from Phosphogypsum Stacks

40 CFR 61.202, Subpart R—Standard for Radon-222

40 CFR 61.203, Subpart R—Radon Monitoring and Compliance Procedures

40 CFR 61.209, Subpart R—Required Records

40 CFR 61.209(a), Subpart R—Required Records

40 CFR 61.209(d), Subpart R—Required Records

40 CFR 61.210, Subpart R—Exemption

**ATTACHMENT GB-EU13-IV2**  
**COMPLIANCE ASSURANCE MONITORING**

**ATTACHMENT GB-EU13-IV2  
COMPLIANCE ASSURANCE MONITORING  
PHOSPHOGYPSUM STACK**

The Phosphogypsum Stack does not use a "control device" as defined in 40 CFR Part 64 and does not have federally enforceable emission limits, thus a CAM plan is not required for this source.

## EMISSIONS UNIT INFORMATION

Section [14] of [14]  
Facility-wide Unregulated Emissions

### III. EMISSIONS UNIT INFORMATION

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

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

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

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

**EMISSIONS UNIT INFORMATION**

Section [14] of [14]  
Facility-wide Unregulated Emissions

**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:  
**Facility-wide Unregulated Emissions**

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

4. Emissions Unit Status Code: <b>A</b>	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: <b>28</b>	8. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
--	--------------------------------	--------------------------	--	--

9. Package Unit:  
Manufacturer: \_\_\_\_\_ Model Number: \_\_\_\_\_

10. Generator Nameplate Rating: \_\_\_\_\_ MW

11. Emissions Unit Comment: **Refer to Attachment GB-EU14-A11 for a complete list of unregulated sources.**



**EMISSIONS UNIT INFORMATION**

Section [14] of [14]

Facility-wide Unregulated Emissions

**Emissions Unit Control Equipment**

1. Control Equipment/Method(s) Description:

2. Control Device or Method Code(s):



**EMISSIONS UNIT INFORMATION**Section [14] of [14]  
Facility-wide Unregulated Emissions**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:		2. Emission Point Type Code:			
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:		6. Stack Height: feet		7. Exit Diameter: feet	
8. Exit Temperature: °F		9. Actual Volumetric Flow Rate: acfm		10. Water Vapor: %	
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 [14] of [14]  
 Facility-wide Unregulated Emissions

**D. SEGMENT (PROCESS/FUEL) INFORMATION**

**Segment Description and Rate:** Segment 1 of 1

1. Segment Description (Process/Fuel Type): <b>Mineral Products; Phosphate Rock; Transfer Storage</b>		
2. Source Classification Code (SCC): <b>3-05-019-03</b>	3. SCC Units: <b>Tons Phosphate Rock</b>	
4. Maximum Hourly Rate: <b>607.8</b>	5. Maximum Annual Rate: <b>4,046,489</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: <b>Segment information for wet phosphate rock handling system. Maximum rates based on hourly P<sub>2</sub>O<sub>5</sub> content of 20% and an annual P<sub>2</sub>O<sub>5</sub> content of 25% and maximum production rate of 121.56 TPH P<sub>2</sub>O<sub>5</sub>.</b>		

**Segment Description and Rate:** Segment \_\_\_\_ of \_\_\_\_

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





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

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

Allowable Emissions Allowable Emissions \_\_\_\_\_ of \_\_\_\_\_

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

Allowable Emissions Allowable Emissions \_\_\_\_\_ of \_\_\_\_\_

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

Allowable Emissions Allowable Emissions \_\_\_\_\_ of \_\_\_\_\_

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

**EMISSIONS UNIT INFORMATION**  
 Section [14] of [14]  
 Facility-wide Unregulated Emissions

**G. VISIBLE EMISSIONS INFORMATION**

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

**Visible Emissions Limitation:** Visible Emissions Limitation \_\_\_\_ 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:	

**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 [14] of [14]  
Facility-wide Unregulated Emissions**H. CONTINUOUS MONITOR INFORMATION****Complete if this emissions unit is or would be subject to continuous monitoring.****Continuous Monitoring System:** Continuous Monitor \_\_\_\_ of \_\_\_\_

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

**Continuous Monitoring System:** Continuous Monitor \_\_\_\_ of \_\_\_\_

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

**EMISSIONS UNIT INFORMATION**

Section [14] of [14]  
Facility-wide Unregulated Emissions

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

**EMISSIONS UNIT INFORMATION**

Section [14] of [14]  
Facility-wide Unregulated Emissions

**Additional Requirements for Air Construction Permit Applications**

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

**Additional Requirements for Title V Air Operation Permit Applications**

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

**EMISSIONS UNIT INFORMATION**

Section [14] of [14]  
Facility-wide Unregulated Emissions

**Additional Requirements Comment**

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**ATTACHMENT GB-EU14-A11**  
**UNREGULATED SOURCE LIST**

**ATTACHMENT GB-EU14-A11**  
**UNREGULATED SOURCE LIST**  
**CARGILL GREEN BAY**

Fertilizer Plants

Coating oil tanks  
Raw material and product storage bins and storage buildings  
Cage mills, lump breakers, fines bins  
MAP/DAP rail/truck loading system  
Material conveyors and elevators  
Ammonia chillers and vaporizers  
Product recovery units (cyclones systems)  
Fines bins  
Screens (non-evacuated portion)  
Hot well tanks  
Recycle acid tanks (for scrubbers)  
Nitric acid tank  
Storage tanks and storage areas  
Conveyors, surge bins, screens, chutes, and hoppers

Phosphoric Acid Plant

Flash coolers, vacuum pumps, seal pumps and seal tanks  
Nos. 1 North, South, Bird, and Ucego Filters (4) – unevacuated area  
Pumps  
Flash coolers  
Fluosilic Tank and rail and truck loading  
Truck and railcar loading/unloading  
Clarifier and clarifier feed tank (3)  
Aging, filtrate, raw material, and product storage tanks  
Hotwells  
Filtrate tanks  
Tank wet scrubbers

Molten Sulfur Handling

Molten sulfur spills  
Sulfur melter at railcar unloading  
Molten sulfur storage tank fires  
Truck/Rail loading/unloading

Sulfuric Acid Plants

Water reuse tanks, water storage tanks, condensate tanks  
Economizers  
Sulfuric acid storage tanks (4)  
Sulfuric acid truck and rail loading/unloading  
Cooling towers  
Sulfuric acid pump tanks  
Turbine oil tank  
Storage Tanks  
Heat Exchangers

Ammonia Handling

Bullets  
Pipeline  
Pop-off valves  
Truck unloading  
Ammonia venting system  
Ammonia truck unloading

Facility-Wide

Fuel tanks and dispensers  
Compressors, generators, pumps  
Active phosphogypsum stack and cooling ponds  
Inactive phosphogypsum stack and cooling ponds  
Wastewater collection system and septic drainfield  
Laboratory, lime hopper, refrigerators  
Neutralization system and lime slaker  
Pressure/steam relief valves  
Wet rock railcar/truck unloading pit, conveyor belts  
Wet rock pile, rock hoppers  
Wet rock grinding ball mills (3)  
Wet rock storage bins  
Wet rock slurry tanks  
Wet Rock Storage Pile and Handling  
Pumps  
Drinking water treatment plants  
Laboratory equipment and vents  
Turbo-generator  
Gasoline and diesel tanks  
Water evaporation sprays  
Locomotives  
Solvent cleaners  
Sand blasters, welding equipment  
Raw material and product storage tanks  
Sand blast media silo  
Salt tanks—pneumatically loaded  
Flocculent and defoamer tanks  
Railcar wash station  
Minor fugitive leaks from process equipment

**ATTACHMENT A**

**CAM APPLICABILITY DETERMINATION  
AND EMISSION CALCULATIONS**



Table A-1. CAM Applicability Determination for Cargill Green Bay

Emission Source	Title V EU ID	Control Equipment	Pollutants with Permitted Emission Limits	Uncontrolled Emission Rates (TPY) <sup>a</sup>					CAM Plan Required? (Yes/No)	Comments
				SO <sub>2</sub>	SAM	NO <sub>x</sub>	PM/PM <sub>10</sub>	F		
Sulfuric Acid Plant No. 4	004	--	SO <sub>2</sub> , SAM	--	--	--	--	--	No	No control equipment.
Sulfuric Acid Plant No. 5	005	--	SO <sub>2</sub> , SAM	--	--	--	--	--	No	No control equipment.
Sulfuric Acid Plant No. 6	038	--	SO <sub>2</sub> , SAM, NO <sub>x</sub>	--	--	--	--	--	No	No control equipment.
South AP Fertilizer Plant	007	Scrubbers	PM, F	--	--	--	--	--	No	PM control equipment inherent process equipment, therefore CAM does not apply for PM. MACT applies for F, therefore CAM does not apply.
Phosphoric Acid Plant No. 2	013	Scrubber	F	--	--	--	--	--	No	MACT applies for F, therefore CAM does not apply.
Phosphoric Acid Plant No. 1--North Train	016	Scrubbers	F	--	--	--	--	--	No	MACT applies for F, therefore CAM does not apply.
Phosphoric Acid Plant No. 1--South Train	017	Scrubbers	F	--	--	--	--	--	No	MACT applies for F, therefore CAM does not apply.
4 Phosphoric Acid Tanks Handling Tanks	014, 015	Scrubbers	F	--	--	--	--	0.010	No	Uncontrolled F emissions < 100 TPY, therefore CAM does not apply.
MAP/DAP Storage and Shipping Buildings	020	Scrubber	PM, F	--	--	--	816	21	Yes	Uncontrolled PM emissions > 100 TPY, therefore CAM applies. Uncontrolled F emissions < 100 TPY, therefore CAM does not apply.
North AP Fertilizer Plant	029	Scrubbers	PM, F, SO <sub>2</sub>	--	--	--	--	--	Yes	PM control equipment is inherent process equipment, therefore, CAM does not apply for PM. MACT applies for F, therefore CAM does not apply. No control device for SO <sub>2</sub> .
Molten Sulfur Storage and Handling System	030 - 036, 039	--	--	--	--	--	--	--	No	No control equipment or emission limits, therefore CAM does not apply.
4 Phosphoric Acid Blend Tanks	037	Scrubber	F	--	--	--	--	0.0066	No	Uncontrolled F emissions < 100 TPY, therefore CAM does not apply.
Phosphogypsum Stack	040	--	--	--	--	--	--	--	No	No control equipment or emission limits, therefore CAM does not apply.

<sup>a</sup> Refer to Tables A- 2 and A-3 for calculations.

Note: The major source thresholds for all pollutants shown is 100 TPY.

Table A-2. Summary of Uncontrolled PM Emission Calculations for Sources Potentially Applicable to the CAM Plan Requirements,  
Cargill Fertilizer, Inc., Green Bay

Emission Source	Title V EU ID	Production/ Process Rate	Uncontrolled F Emissions		
			Emission Factor	Ref.	Emission Rate (TPY)
MAP/DAP Storage and Shipping Buildings	020	180 TPH P <sub>2</sub> O <sub>5</sub>	1.04 lb/ton P <sub>2</sub> O <sub>5</sub>	(1)	816.15

(1) Emission factor based on AP-42 Table 8.5.3-1 (7/93), for controlled emissions from the production of ammonium phosphates, product sizing and material transfer. Uncontrolled emissions calculated by using the controlled emission factor of 0.06 lb/ton of product, and assuming an 87.4% control efficiency (AP-42 page 8.5.3-4) for the scrubber. Emission factor converted from lb/ton of product to lb/ton P<sub>2</sub>O<sub>5</sub> using a P<sub>2</sub>O<sub>5</sub> content of 46%.

Table A-3. Summary of Uncontrolled F Emission Calculations for Sources Potentially Applicable to the CAM Plan Requirements, Cargill Fertilizer, Inc., Green Bay

Emission Source	Title V EU ID	Production/ Process Rate	Uncontrolled F Emissions		
			Emission Factor	Ref.	Emission Rate (TPY)
4 Phosphoric Acid Tanks Handling Tanks	014, 015	128 TPH P <sub>2</sub> O <sub>5</sub> <sup>a</sup>	1.76E-05 lb/ton P <sub>2</sub> O <sub>5</sub>	(1)	0.0099
MAP/DAP Storage and Shipping Buildings	020	180 TPH P <sub>2</sub> O <sub>5</sub>	2.72E-02 lb/ton P <sub>2</sub> O <sub>5</sub>	(4)	21.42
4 Phosphoric Acid Blend Tanks	037	85 TPH 54% P <sub>2</sub> O <sub>5</sub>	1.76E-05 lb/ton P <sub>2</sub> O <sub>5</sub>	(1)	0.0066

<sup>a</sup> Throughput rate based on the combined total production rate of the Phosphoric Acid Plants Nos. 1 (North and South Trains) and 2.  
References:

- (1) Based on F emissions from 3/31/98 stack test (0.000032 lb/ton) and assuming a 97% control efficiency for the scrubber.
- (2) Emission factor based on AP-42 Table 8.5.3-1 (7/93), for controlled emissions from the production of ammonium phosphates, product sizing and material transfer. Uncontrolled emissions calculated by using the controlled emission factor of 0.002 lb/ton of product, and assuming an 84% control efficiency (AP-42 page 8.5.3-4) for the scrubber. Emission factor converted from lb/ton of product to lb/ton P<sub>2</sub>O<sub>5</sub> using a P<sub>2</sub>O<sub>5</sub> content of 46%.