Golder Associates Inc.

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

RECEIVED

AUG 05 2004

BUREAU OF AIR REGULATION

August 4, 2004

0337593

Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Attention: Cindy L. Phillips, P.E., Bureau of Air Regulation

RE: TITLE V PERMIT RENEWAL DEP FILE NO. 0570008-045-AV
CARGILL FERTILIZER, INC.—RIVERVIEW FACILITY

Dear Ms. Phillips:

Cargill Fertilizer, Inc. (Cargill) is in receipt of the Department's letter dated April 29, 2004, requesting additional information to continue processing the Title V renewal application for Cargill's Riverview facility.

COMPLIANCE ASSURANCE MONITORING (CAM) INFORMATION

MAP Plant (EU 022, 023, & 024)
CAM is applicable for PM. The information presented in Attachment CR-EU6-IV2a is not clear enough to determine whether compliance with the emission limits will be assured. The numbers in Table D-1 also do not appear to be substantiated by the information contained in Attachment CR-EU6-IV2a. Although an alternative monitoring plan has been approved for these emissions units pursuant to the applicable MACT, that was for monitoring compliance with the fluoride emissions. A clear demonstration needs to be made that compliance with the PM emission limits can be assured through the use of the chosen indicator ranges. Please provide a concise table of data that correlates the chosen indicator ranges to the stack test results. When resubmitting the tables, do not included any extraneous information related to fluoride. Specific indicator ranges must be specified in the monitoring approach table for each emissions unit's control device. Please create unique monitoring approach tables for each emissions unit specifying the indicator ranges. When resubmitting, please include an electronic copy of the CAM plan in Word format. The averaging period will be changed from daily to a 3-hour period to match the requirements of the compliance test method. CAM does not apply for F due to MACT.

Response: The Chemco primary scrubber (i.e., controlling PM emissions) at the MAP Plant utilizes phosphoric acid as the scrubbing liquid. Since this acid scrubber is used to recover ammonia and product (PM), this scrubber would be considered inherent process equipment. As such, CAM does not apply for the Chemco scrubber at the MAP Plant And since the Arco tailgas scrubber is used to control F emissions and not PM emissions, CAM does not apply for PM for the MAP Plant. Therefore, a CAM plan is not required for the MAP Plant.

If you have any questions regarding this information, please contact me at (352) 336-5600 or Dean Ahrens, Cargill Fertilizer, at (813) 671-6369.

Sincerely,

GOLDER ASSOCIATES INC.

Scott McCann, P.E.
PE Seal # 54172
Associate Engineer

<FWB>

Enclosures

cc: D. Ahrens, Cargill
F. Bergen, Golder
A. Harmon, HCEPC

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Phillips, Cindy

From: Dennis, Ron [DennisR@epchc.org]

Sent: Wednesday, August 25, 2004 4:22 PM

To: Phillips, Cindy

Cc: Harman, Alice

Subject: Cargill Fertilizer, Inc. Title V Permit Renewal (0570008-045-AV) Response to Department's Letter of April 29, 2004

Cindy,

We have reviewed the Cargill Fertilizer, Inc. Title V Permit Renewal (0570008-045-AV) Response to the Department's Letter of April 29, 2004, which we received on August 9, 2004, and have the following comment on it:

> We strongly disagree with Cargill that CAM does not apply for PM at the MAP Plant. We believe that both the Chemco and Arco scrubbers are necessary to control PM emissions so that the PM standard of 0.30 pounds per ton of product can be met. Without these controls, how can Cargill meet this standard?

Ron Dennis
Professional Engineer,I
Hillsborough County EPC
Air Management Division

Mosaic Fertilizer, LLC
8813 U.S. Highway 41, South
Riverview, FL 33569
www.mosaicco.com

Tel 813-677-9111
Fax 813-671-6149

CERTIFIED MAIL: 7003 1010 0004 8607 6964

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DEC 10 2004
BUREAU OF AIR REGULATION

December 6, 2004

Ms. Cindy L. Phillips, P.E.
Bureau of Air Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Ms. Phillips:

Re: Title V Permit Renewal DEP File No. 0570008-45-AV
Riverview Chemical Complex

In response to your letter dated September 3, 2004 regarding the above referenced permit renewal, the following are responses to applicable questions.

1. Is the primary purpose of the acid scrubber other than to control PM emissions relative to the applicable emissions limit (e.g. product recovery, worker safety? Please explain. (Note: is the primary purpose of the Chemco primary acid scrubber to recover ammonia?)

RESPONSE:
Yes, The primary purpose of the acid scrubber other than to control PM emissions relative to the applicable emissions limit is product/raw material recovery. The system is designed to recover ammonia and granular mono-ammonium phosphate (product) from the reactor evacuation stream.

2. Would the acid scrubber be installed if there was no PM emission limit in place for the MAP plant? Please explain.

RESPONSE:
Yes, The system is designed to recover costly raw materials (i.e. ammonia) as well as product.

3. Is the efficiency at which the acid scrubber is designed and operated, for purposes other than compliance with the PM emission limit, more than sufficient to assure compliance with the PM emission limit (e.g. significant margin of compliance)? Please explain.

RESPONSE:
Yes, the efficiency at which the acid scrubber is designed and operated is approximately 90-95%, which is more than adequate to comply with the applicable PM emission limit.

If you require further information, please contact me at (813) 671-6369

Sincerely,

David B. Jellerson
Environmental Manager

cc: Jellerson
File P-05-01

Department of
Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Colleen M. Castille
Secretary

September 3, 2004

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. David B. Jellerson, Environmental Manger
Cargill Fertilizer, Inc.
8813 U.S. Highway 41 South
Riverview, FL 33569

Re: Title V Permit Renewal DEP File No. 0570008-045-AV
Riverview Chemical Complex

Dear Mr. Jellerson:

On August 5, 2004 the Department received additional information from Scott McCann, of Golder Associates, for the processing of the application for the renewal of the Title V Permit for the Cargill Fertilizer, Inc., Riverview Chemical Complex. This application is still incomplete. The following additional information is needed in order to process the application:

COMPLIANCE ASSURANCE MONITORING (CAM) INFORMATION

MAP Plant (EU 022, 023 & 024)

The following questions need to be answered in order to make a determination that the MAP plants' Chemco primary acid scrubber is inherent to the operation, as stated in your response, rather than being strictly a control device.

1. Is the primary purpose of the acid scrubber other than to control PM emissions relative to the applicable emissions limit (e.g., product recovery, worker safety)? Please explain.

2. Would the acid scrubber be installed if there was no PM emissions limit in place for the MAP plants? Please explain.

3. Is the efficiency at which the acid scrubber is designed and operated, for purposes other than compliance with the PM emissions limit, more than sufficient to assure compliance with the PM emissions limit (e.g., a significant margin of compliance)? Please explain.

If the answer to all three questions is "yes," then the acid scrubber qualifies as inherent process equipment for CAM purposes (and is, therefore, exempt from the CAM requirements for that particular pollutant.)

If the answer to any question is "no", please provide a CAM Plan for PM for the MAP plants' acid scrubber, or justification as to why a CAMP Plan is not needed.

Please certify your response to these questions by signing as a Responsible Official. Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to any Department requests for additional information of an engineering nature. Permit applicants are advised that Rule 62-4.055(1), F.A.C. requires applicants to respond to requests for information within 90 days.

If you have any questions concerning the processing of your application, please contact me at Cindy.Phillips@dep.state.fl.us or 850/921-9534.

Sincerely,

Cindy L. Phillips, P.E.
Bureau of Air Regulation

cc: Jason Waters, DEP-SWD
Alice Harman, EPCHC
Scott A. McCann, P.E., Golder Associates Inc.
Jonathan Holtom, DEP-BAR

Department of
Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Colleen M. Castille
Secretary

April 29, 2004

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. E. O. Morris, Vice President
Cargill Fertilizer, Inc.
8813 U.S. Highway 41 South
Riverview, FL 33569

Re: Title V Permit Renewal DEP File No. 0570008-045-AV
Tampa Plant

Dear Mr. Morris:

On March 30, 2004 the Department received your additional information for the processing of the application for the renewal of the Title V Permit for the Cargill Fertilizer, Inc. Tampa Plant. This application is still incomplete. The following additional information is needed in order to process the application:

COMPLIANCE ASSURANCE MONITORING (CAM) INFORMATION

MAP Plant (EU 022, 023 & 024)

CAM is applicable for PM. The information presented in Attachment CR-EU6-IV2a is not clear enough to determine whether compliance with the emissions limits will be assured. The numbers in Table D-1 also do not appear to be substantiated by the information contained in Attachment CR-EU6-IV2a. Although an alternative monitoring plan has been approved for these emissions units pursuant to the applicable MACT, that was for monitoring compliance with the fluoride emissions. A clear demonstration needs to be made that compliance with the PM emission limits can be assured through the use of the chosen indicator ranges. Please provide a concise table of data that correlates the chosen indicator ranges to the stack test results. When resubmitting the tables, do not include any extraneous information related to fluoride. Specific indicator ranges must be specified in the monitoring approach table for each emissions unit's control device. Please create unique monitoring approach tables for each emissions unit specifying the indicator ranges. When resubmitting, please include an electronic copy of the CAM plan in Word format. The averaging period will be changed from daily to a 3-hour period to match the requirements of the compliance test method. CAM does not apply for F due to MACT.

Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. Permit applicants are advised that Rule 62-4.055(1), F.A.C. requires applicants to respond to requests for information within 90 days.

If you have any specific questions regarding this request for additional CAM information, please contact Mr. Jonathan Holtom at Jonathan.Holtom@dep.state.fl.us or 850-921-9531. If you have any questions concerning the processing of your application, please contact me at Cindy.Phillips@dep.state.fl.us or 850/921-9534.

Sincerely,

Cindy L. Phillips, P.E.
Bureau of Air Regulation

cc: Jerry Kissel, DEP-SWD
Jerry Campbell, EPCHC
Scott A. McCann, P.E., Golder Associates Inc.
Jonathan Holtom, DEP-BAR

Golder Associates Inc.

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

March 29, 2004

0337593

RECEIVED
MAR 30 2004
BUREAU OF AIR REGULATION

Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Attention: Cindy L. Phillips, P.E., Bureau of Air Regulation

RE: TITLE V PERMIT RENEWAL DEP FILE NO. 0570008-045-AV
CARGILL FERTILIZER, INC.—RIVERVIEW FACILITY

Dear Ms. Phillips:

Cargill Fertilizer, Inc. (Cargill) is in receipt of the Department's letter dated December 22, 2003, requesting additional information to continue processing the Title V renewal application for Cargill's Riverview facility. The comments are addressed below in the order they appear in the letter.

A. GENERAL APPLICATION INFORMATION

1. Facility Regulatory Classifications.
   a. Please explain why the box for item no. 3 "Title V Source" was not checked.

   Response: This box was erroneously left blank. The corrected application page is included in Attachment A.

   b. Please provide reasonable assurance that this facility is not a Major Source of Hazardous Air Pollutants (HAPs).

   Response: Cargill has previously submitted to the Department a demonstration that emissions are below the major source threshold; however, Cargill has reached an alternative monitoring plan agreement with the Department will accept the permit requiring compliance hydrogen fluoride (HF) MACT regulations. Refer to Attachment A for the revised application page.

2. Scope of Application. Please explain why emission unit 041, Sodium Silicofluoride/Sodium Fluoride Dryer; emission unit 054, Sodium Silicofluoride/Sodium Fluoride Plant Handling; and emission unit 103, AFI Plant #2; were omitted from the application.

   Response: The Sodium Silicofluoride/Sodium Fluoride Dryer; emission unit 054, Sodium Silicofluoride/Sodium Fluoride Plant Handling have been permanently shut down.

   The Animal Feed Ingredient (AFI) Plant No. 2 is currently under construction. As such, it has not been incorporated into the Title V permit yet. Once construction is complete on the AFI Plant No. 2, Cargill will submit an application to incorporate this plant into the Title V permit.

3. List of Pollutants Emitted by Facility. Please explain why the Pollutant Classification for Hydrogen Fluoride (H107) was listed as "A" for "Major Pollutant" but the box for Facility Regulatory Classification no. 6, "Major Source of Hazardous Air Pollutants (HAPs) was not checked.

   Response: Refer to comment 1.b. above.

4. Facility Plot Plan. Please provide a facility plot plan with the emission points identified.

   Response: A facility plot plan with the emission points was included as Attachment CF-FI-C1 in the Title V renewal application.

5. Attachment CR-FI-CV1, List of Proposed Insignificant Activities. Please provide an edited list that has eliminated activities or emission units that are not actually found at the Tampa Plant, such as blacksmith forges.

   Response: An edited list is included in Attachment A.

6. Fuel Analyses. There are attachments for emissions units throughout the application that are titled "Fuel Analysis." For each of these fuels, please provide a copy of an actual recent lab analysis report that states the results as well as when the fuel was sampled and analyzed, and by whom. If a vendor's contract specification is being relied upon for a fuel analysis, please submit a copy of the vendor's contract specification.

   Response: Refer to Attachment B for the fuel analysis reports. A recent laboratory report for No. 2 fuel oil, including when the fuel was analyzed and by whom, is included in Attachment B. Since natural gas is monitored regularly by the vendor and not analyzed by a laboratory, a gas chromatograph has been included.

7. Dust Suppression by Chemical Stabilizers. Please submit the Material Safety Data Sheets for any dust suppressants used at the facility.

   Response: Refer to Attachment C for the material safety data sheets (MSDSs) for four (4) types of dust suppression oil that are used at the Riverview facility.

8. Nos. 3 and 4 MAP Plant and South Cooler, Section 6, page 14, Emissions Unit Description and Status. Please verify that the correct box has been checked. It seems that it would be more appropriate to check the second box (...a group of process or production units and activities which has at least one definable emission point...).

   Response: The revised application page is included in Attachment A.

9. Molten Sulfur Handling, Section 11, page 14, No. 11—Emissions Unit Comment.
   a. Our database currently has emissions units 064, Tank 2, and 065, Tank 3, listed as "inactive." Tanks 1, 2, & 3 combined into one emissions unit 063. Do you have a preference as to how these emissions units are grouped? If so, why?

   Response: Emissions Unit Nos. 063, 064, and 065 were originally designated for Tanks 1, 2, and 3. Cargill does not have a preference on the emission unit designations for these sources.

However, when Cargill received approval for the addition of a single scrubber controlling all three tanks, the Emission Unit No. 063 was assigned to represent this emission point for Tanks 1, 2, and 3.

b. Also, our database currently has emissions unit 069, Ship Unloading Dock, listed as "inactive". Is this now an active emissions unit? If so, when was it reactivated?

Response: Emission Unit No. 069, Ship Unloading Dock, is an inactive emission unit number. However, the ship unloading dock is currently operating. Emission unit No. 069 was deleted in Permit No. 0570008-030-AC, issued March 30, 2001, since there are no emissions from the ship itself during the transferring of molten sulfur to 1 of 3 molten sulfur storage tanks. The ship's molten sulfur storage system is a closed system. The revised application pages, reflecting the deletion of Emission Unit No. 069, are included in Attachment A.

10. (Inactive) Phosphogypsum Stack, Section 16, page 14. When did this phosphogypsum stack become inactive? Please submit a copy of the EPA Method 115 test report.

Response: The inactive phosphogypsum stack became inactive in 1989. A copy of the EPA Method 115 test report (Radon Flux Report) is included in Attachment B.

11. Our database currently has an active phosphogypsum stack listed as emission unit 104. It appears that there is now an inactive phosphogypsum stack and an active phosphogypsum stack at the facility. Is this the case? If so, there should be separate emission unit numbers assigned to the two phosphogypsum stacks since 40 CFR 61 Subpart R also regulates active phosphogypsum stacks (and therefore can not be included in the "unregulated" list.) Is there some distinction that can be used to tell the difference between the two stacks, such as "east" and "west", or do you prefer to just have them labeled as "active" and "inactive" in the permit?

Response: There are both an active (EU 104) and inactive (no EU ID number) phosphogypsum stacks at the Cargill Riverview facility. The separate stacks should be labeled as active or inactive.

12. Attachment CR-EU17-A11. Summary of Unregulated Emission Sources.
    a. Please describe the coating drums in more detail.

Response: The coating drums contain coating oil that is used for dust suppression.

b. For the listed emission sources where it is actually only the fugitive emissions component that is unregulated, please revise the list to indicate that these are fugitive emissions only.

Response: The revised Attachment CR-EU17-A11, Summary of Unregulated Emission Sources, is included in Attachment A. The designation "fugitive only" has been added to those sources whose fugitive emissions only are unregulated.

An ammonia flare has been added to the list of unregulated emission sources. The ammonia flare is being added as a safety measure to the No. 6 Granulation Plant to control ammonia emissions from the safety relief valves.

c. What pollutants are being scrubbed from the clarifier and clarifier feed tank?

Response: HF is being scrubbed from the clarifier and clarifier feed tank.

d. Are any chromium-based water treatment chemicals used in the cooling towers?

Response: No, there are no chromium-based water treatment chemicals used in the cooling towers.

e. What are the Molten sulfur storage tank fires?

Response: Fires occasionally occur in the storage tanks.

f. Are the Animal Feed Plant acid heaters heated by fuel combustion? If so, what type?

Response: Yes, there is a burner at the AFI Plant that burns natural gas.

g. Please explain "Oil fires".

Response: Oil is used (fired) to heat the catalyst up for cold startup at the Sulfuric Acid Plants. The description of this source has been changed to "oil fired catalyst" on Attachment CR-EU17-A11, Summary of Unregulated Emission Sources, Cargill Fertilizer Riverview Plant, for clarification.

C. COMPLIANCE ASSURANCE MONITORING (CAM) INFORMATION

1. GTSP/DAP Manufacturing Plant (EU007)
   a. CAM is applicable for PM and fluoride. The choice of scrubber pressure drop and liquid flow rate through the scrubbers are acceptable indicators to monitor. However, indicator ranges must be clearly stated in the monitoring approach table. The selection of the indicator ranges must also be clearly justified and demonstrate that operation at those levels is protective of the allowable emissions limitations. Please provide a table of test data that correlates the pressure differentials and flow rates to the tested PM and fluoride emission levels. From the data, provide a justification of your choices and clearly indicated a maximum and minimum pressure drop and water flow rate for each of the scrubbers that will assure compliance with the emission limits with a margin of safety that allows for corrective action to be taken before a permit limit is exceeded. The application can not be deemed complete until these numbers are provided and justified.

Response: The GTSP/DAP Manufacturing Plant is currently under construction (Permit No. 0570008-044-AC). Upon startup of the modified GTSP/DAP Plant (will be renamed the No. 6 Granulation Plant), Cargill will perform compliance testing to establish CAM indicator ranges. Since the control equipment is being modified as part of this construction project, establishment of indicator ranges based on historical test data would not be representative. Cargill will submit a revised CAM plan for PM for the No. 6 Granulation Plant after initial compliance testing.

CAM does not apply for F since the No. 6 Granulation Plant is subject to 40 CFR 63, Subpart BB. Cargill received approval for an alternative monitoring plan (File No. 03-C-AP) for the sources subject to 40 CFR 63, Subparts AA and BB, on January 6, 2004.

b. The averaging period should be changed from daily to a 3-hour period to match the requirements of the compliance test method.

Response: The 24-hour averaging period is consistent with the approved alternative maximum achievable control technology (MACT) monitoring plan. Since the 24-hour average was approved in the MACT monitoring plan for F emissions control, Cargill feels that a 24-hour averaging period should be sufficient for PM emissions control in the CAM plan.

2. MAP Plant (EUs 022, 023, and 024). CAM is applicable for PM. The choice of scrubber pressure drop and liquid flow rate through the scrubbers are acceptable indicators to monitor. However, indicator ranges must be clearly stated in the monitoring approach table. The selection of the indicator ranges must also be clearly justified and demonstrate that operation at those levels is protective of the allowable emissions limitations. Please provide a table of test data that correlates the pressure differentials and flow rates to the tested PM and fluoride emission levels. From the data, provide a justification of your choices and clearly indicated a maximum and minimum pressure drop and water flow rate for each of the scrubbers that will assure compliance with the emission limits with a margin of safety that allows for corrective action to be taken before a permit limit is exceeded. The application can not be deemed complete until these numbers are provided and justified.

Response: The revised CAM plan for PM for the MAP Plant is included in Attachment D. However, CAM does not apply for F since the MAP Plant is subject to 40 CFR 63, Subpart BB. Cargill received approval for an alternative monitoring plan (File No. 03-C-AP) for the sources subject to 40 CFR 63, Subparts AA and BB, on January 6, 2004. Minimum pressure drops, minimum and maximum water flow rates, and fan amperage (for cyclonic and South Cooler venturi scrubbers only) have been proposed for each scrubber at the MAP Plant. These indicators were approved in the Department's order for an alternative monitoring plan (File No. 03-C-AP) for HF emissions control. Therefore, Cargill is requesting the same indicators and indicator ranges for PM emissions control.

a. The averaging period should be changed from daily to a 3-hour period to match the requirements of the compliance test method.

Response: The 24-hour averaging period is consistent with the approved alternative MACT monitoring plan. Since the 24-hour average was approved in the MACT monitoring plan for F emissions control, Cargill feels that a 24-hour averaging period should be sufficient for PM emissions control in the CAM plan.

3. Raymond Mills 5, 7, and 9 (EUs 100, 106, and 101). CAM is applicable for PM. The choice of VE may be an acceptable indicator to monitor if the chosen indicator range can be justified with test data. The submitted CAM plan states that the VE limit of 5%, while the initial Title V permit sets the limit at 10%. Has there been a permit revision to this limit since the initial Title V permit was issued?

If the VE limit is 5%, the indicator range will need to set at a level less than 5% in order to avoid violations of the permit limit. Please provide a table of test data that correlates the VE readings to the tested PM emission levels. From this data, provide a justification of your choice and clearly indicate a maximum VE reading that will assure compliance with the emission limits with a

margin of safety that allows for corrective action to be taken before a permit limit is exceeded. The application can not be deemed complete until these numbers are provided and justified.

Response: Cargill will no longer manufacture GTSP. As such, the Raymond Mills 5, 7, and 9 have been shut down. Please remove these sources from the Title V permit.

4. No. 5 DAP Plant (EU055)
   a. CAM is applicable for PM and fluoride. The choice of scrubber pressure drop and liquid flow rate through the scrubbers are acceptable indicators to monitor. However, indicator ranges must be clearly stated in the monitoring approach table. The selection of the indicator ranges must also be clearly justified and demonstrate that operation at those levels is protective of the allowable emissions limitations. Please provide a table of test data that correlates the pressure differentials and flow rates to the tested PM and fluoride emission levels. From the data, provide a justification of your choices and clearly indicated a maximum and minimum pressure drop and water flow rate for each of the scrubbers that will assure compliance with the emission limits with a margin of safety that allows for corrective action to be taken before a permit limit is exceeded. The application can not be deemed complete until these numbers are provided and justified.

Response: CAM does not apply for F since the No. 5 DAP Plant is subject to 40 CFR 63, Subpart BB. Cargill received approval for an alternative monitoring plan (File No. 03-C-AP) for the sources subject to 40 CFR 63, Subparts AA and BB on January 6, 2004. The three (3) venturi scrubbers at the No. 5 DAP Plant utilize phosphoric acid as the scrubbing liquid. Since these acid scrubbers are used to recover ammonia and product (PM), these scrubbers would be considered inherent process equipment. As such, CAM does not apply for the three venturi acid scrubbers at the No. 5 DAP Plant. And since the tailgas scrubbers are used to control F emissions and not PM emissions, CAM does not apply for PM for the No. 5 DAP Plant. Therefore, a CAM plan is not required for the No. 5 DAP Plant.

   b. The averaging period should be changed from daily to a 3-hour period to match the requirements of the compliance test method.

Response: CAM does not apply to the No. 5 DAP Plant. Refer to comment 4.a. above.

5. Phosphoric Acid Plant (EU073). CAM is applicable for fluoride. The choice of scrubber pressure drop and liquid flow rate through the scrubbers are acceptable indicators to monitor. However, indicator ranges must be clearly stated in the monitoring approach table. The selection of the indicator ranges must also be clearly justified and demonstrate that operation at those levels is protective of the allowable emissions limitations. Please provide a table of test data that correlates the pressure differentials and flow rates to the tested fluoride emission levels. From the data, provide a justification of your choices and clearly indicated a maximum and minimum pressure drop and water flow rate for each of the scrubbers that will assure compliance with the emission limits with a margin of safety that allows for corrective action to be taken before a permit limit is exceeded. The application can not be deemed complete until these numbers are provided and justified.

Response: CAM does not apply for F, since the Phosphoric Acid Plant is subject to 40 CFR 63, Subpart AA. Cargill received approval for an alternative monitoring plan (File No. 03-C-AP) for the sources subject to 40 CFR 63, Subparts AA and BB on January 6, 2004.

Comments 6 through 14. Comments noted.

If you have any questions regarding this information, please contact me at (352) 336-5600 or Dean Ahrens, Cargill, at (813) 671-6369.

Sincerely,

GOLDER ASSOCIATES INC.

Scott McCann, P.E.
PE Seal #54172

FWB/nav

Attachments

cc: D. Ahrens, Cargill, w/Attachments
A. Harmon, HCEPC, w/Attachments
F. Bergen, Golder, w/Attachments

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ATTACHMENT A

REVISED APPLICATION PAGES
AND ATTACHMENTS

BEST AVAILABLE COPY

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:
   Mr. David B. Jellerson, Environmental Manager

2. Application Responsible Official Qualification (Check one or more of the following options, as applicable):
   - ☒ For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C.
   - ☐ For a partnership or sole proprietorship, a general partner or the proprietor, respectively.
   - ☐ For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.
   - ☐ The designated representative at an Acid Rain source.

3. Application Responsible Official Mailing Address...
   Organization/Firm: Cargill Fertilizer, Inc.
   Street Address: 8813 U.S. Highway 41 South
   City: Riverview State: FL Zip Code: 33569

4. Application Responsible Official Telephone Numbers...
   Telephone: (813) 671- 6297 ext. Fax: (813) 671- 6149

5. Application Responsible Official Email Address: David_B_Jellerson@cargill.com

6. Application Responsible Official Certification:
   I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in ~~compliance~~ plan(s) submitted with this application.

David B. Jellerson — Signature

3-29-04 — Date

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: **Scott A. McCann**
   Registration Number: **54172**
2. Professional Engineer Mailing Address...
   Organization/Firm: **Golder Associates Inc.****
   Street Address: **6241 NW 23rd Street, Suite 500**
   City: **Gainesville** State: **FL** Zip Code: **32653-1500**
3. Professional Engineer Telephone Numbers...
   Telephone: **(352) 336- 5600** ext. Fax: **(352) 336- 6603**
4. Professional Engineer Email Address: **smccann@golder.com**
5. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

(3) If the purpose of this application is to obtain a Title V air operation permit (check here ☒, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.

(4) If the purpose of this application is to obtain an air construction permit (check here ☐, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here ☐, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here ☐, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Signature 3/29/04 Date

(seal)

* Attach any exception to certification statement.

** Board of Professional Engineers Certificate of Authorization #00001670

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone **17** East (km) **362.9** North (km) **3,082.5**		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) **27/51/28** Longitude (DD/MM/SS) **82/23/15**	
3. Governmental Facility Code: **0**	4. Facility Status Code: **A**	5. Facility Major Group SIC Code: **28**	6. Facility SIC(s): **2874**
7. Facility Comment :			

Facility Contact

1. Facility Contact Name: **Dean Ahrens, Environmental Superintendent**
2. Facility Contact Mailing Address... Organization/Firm: **Cargill Fertilizer, Inc.** Street Address: **8813 U.S. Highway 41 South** City: **Riverview** State: **FL** Zip Code: **33569**
3. Facility Contact Telephone Numbers: Telephone: **(813) 671-6369** ext. Fax: **(813) 671-6149**
4. Facility Contact Email Address: **Dean_Ahrens@cargill.com**

Facility Primary Responsible Official

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

1. Facility Primary Responsible Official Name: **Mr. E.O. Morris, Vice President**
2. Facility Primary Responsible Official Mailing Address... Organization/Firm: **Cargill Fertilizer, Inc.** Street Address: **8813 U.S. Highway 41 South** City: **Riverview** State: **FL** Zip Code: **33569**
3. Facility Primary Responsible Official Telephone Numbers... Telephone: **(813) 671-6158** ext. Fax: **(813) 671-6149**
4. Facility Primary Responsible Official Email Address: **Ozzie_Morris@cargill.com**

FACILITY INFORMATION

Facility Regulatory Classifications

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

1. ☐ Small Business Stationary Source	☐ Unknown
2. ☐ Synthetic Non-Title V Source	
3. ☒ Title V Source	
4. ☒ Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5. ☐ Synthetic Minor Source of Air Pollutants, Other than HAPs	
6. ☒ Major Source of Hazardous Air Pollutants (HAPs)	
7. ☐ Synthetic Minor Source of HAPs	
8. ☒ One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9. ☐ One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10. ☒ One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11. ☐ Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	
12. Facility Regulatory Classifications Comment: **See attached Title V Core List.**	

ATTACHMENT A

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 pro-ducts, 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.[1]

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[2].

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.[3]

Air compressors and pneumatically operated equipment, including hand tools.

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[1] 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.

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

[3] 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.

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.[4]

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.~~

~~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_2 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.~~

[4] 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.

~~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 demineralizes.

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.~~

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:
Nos. 3 and 4 MAP Plant and South Cooler

3. Emissions Unit Identification Number: **022, 023, 024**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A			**28**	☐ Yes ☒ No

9. Package Unit:
Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:

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: Ship Unloading, Tanks, Pits, and Truck Loading Station

3. Emissions Unit Identification Number: **See Comment**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A			**28**	☐ Yes ☒ No

9. Package Unit:
Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:
063 = Tank 1; 064 = Tank 2; 065 = Tank 3; 066 = Pit 7; 067 = Pit 8; 068 = Pit 9; 074 = Truck Loading Station.

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: **Pit 7, 8, 9, Molten Sulfur Tanks**	2. Emission Point Type Code: **3**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: **063 = Tank 1; 064 = Tank 2; 065 = Tank 3; 066 = Pit 7; 067 = Pit 8; 068 = Pit 9; 074 = Truck Loading Station.**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **24** feet	7. Exit Diameter: **1.7** feet
8. Exit Temperature: **240**°F	9. Actual Volumetric Flow Rate: **620** acfm	10. Water Vapor: **2**%
11. Maximum Dry Standard Flow Rate: **459** 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: **Parameters presented above are the same for all three tanks during tank loading and unloading operations.**		

Attachment CR-EU17-A11. Summary of Unregulated Emission Sources, Cargill Fertilizer Riverview Plant

Emission Source	Process Area
Coating drums	Fertilizer Plants
Raw material and product storage tanks, bins, and storage buildings (fugitive only)	Fertilizer Plants
Grinding mills (fugitive only), chain mills, cage mills, lump breakers	Fertilizer Plants
Cooling tower, slurry pumps, scrubber water sumps	Fertilizer Plants
DAP rail loading system, truck unloading	Fertilizer Plants
Material conveyors, elevators, and screens (fugitive only)	Fertilizer Plants
Ammonia chillers and vaporizers	Fertilizer Plants
Product Recovery Units	Fertilizer Plants
Ammonia flare	Fertilizer Plants
Chutes, conveyor, and hopper (fugitive only)	GTSP Truck Loading System
Storage bin	GTSP Ground Rock Handling
Coating oil tank - 17,233 gallons (installed 1986)*	GTSP Plant
Choke feeder, covered conveyors, screening tower (fugitive only)	Material Handling System
Rock and feed hoppers, conveyors (fugitive only)	Phosphate Rock Grinding/Drying
Railcar/truck unloading and unloading pit (fugitive only)	Phosphate Rock Grinding/Drying
Wet rock hoppers and grinding mills	Phosphoric Acid Plants
Flash cooler hotwells	Phosphoric Acid Plants
Flash coolers, vacuum pumps, seal pumps and seal tanks	Phosphoric Acid Plants
Nos. 1, 2 and 3 Filters - unevacuated area (fugitive only)	Phosphoric Acid Plants
Centrifuges, pumps	Phosphoric Acid Plants
East, north, and south coolers	Phosphoric Acid Plants
Truck loading/unloading	Phosphoric Acid Plants
Clarifier and clarifier feed tank and associated wet scrubbers	Phosphoric Acid Plants
Aging, filtrate, raw material, and product storage tanks	Phosphoric Acid Plants
Aux. power diesel generator with tank	Phosphoric Acid Plants
Raw material and product storage tanks, bins, and buildings	SSF/SF Manufacturing Plant
Belt filter, classifier, settler, sumps, vacuum pump	SSF/SF Manufacturing Plant
Fluoride Reactors, mixers	SSF/SF Manufacturing Plant
Elevator, screw conveyors, railcar unloading	SSF/SF Manufacturing Plant
Dock unloading/truck unloading (fugitive only)	Molten Sulfur Handling
Molten sulfur storage tank fires	Molten Sulfur Handling
Molten Sulfur Tank #2 - 3,104,714 gallons (installed 1990)*	Molten Sulfur Handling
Water reuse tanks, water storage tanks, condensate tanks	Sulfuric Acid Plants
Economizers	Sulfuric Acid Plants
Sulfuric acid storage tanks	Sulfuric Acid Plants
Sulfuric acid truck loading/unloading	Sulfuric Acid Plants
Cooling towers	Sulfuric Acid Plants
Acid heaters and dilution tank	Animal Feed Plant
High speed mixer	Animal Feed Plant
Diatomaceous earth weigh bin and feed splitters	Animal Feed Plant
Limestone metering feeder and screen feed splitter	Animal Feed Plant
Weigh bin slide gate and weighing belt	Animal Feed Plant
Conveyors	Animal Feed Plant
Bullets, pipeline, pop off valves, truck unloading	Ammonia Handling

Attachment CR-EU17-A11. Summary of Unregulated Emission Sources, Cargill Fertilizer Riverview Plant

Emission Source	Process Area
Fuel tanks and dispensors	Facilitywide
Compressors, generators (6MW, 35MW)	Facilitywide
Active phosphogypsum stack and cooling ponds	Facilitywide
Wastewater treatment plant and collection system	Facilitywide
Laboratory, lime hopper, refrigerators	Facilitywide
Pressure/steam relief valves	Facilitywide
Railcar/truck unloading, conveyor belts (fugitive only)	Facilitywide
Wet rock pile, rock hoppers, rock grinding mills (fugitive only)	Facilitywide
Safety kleen solvent cleaners	Facilitywide
Sand blasters, welding equipment, supersucker	Facilitywide
Raw material and product storage tanks	Facilitywide
Minor fugitive leaks from process equipment	Facilitywide
Diesel pump at active phosphogypsum stack	Facilitywide
Diesel pump at NPDES Outfall 005	Facilitywide
Locomotive engines	Facilitywide
Asbestos, waste and hazarduos wste removal	Facilitywide
Refrigeration equipment <50 lbs charge	Facilitywide
Oil-fired catalyst	Facilitywide

* Tanks subject to 40 CFR 60, Subpart Kb, NSPS for VOC Storage Tanks.

ATTACHMENT B

FUEL ANALYSIS REPORTS AND
METHOD 115 TEST RESULTS
(RADON FLUX REPORT)

Citgo Petroleum Corporation
P.O. Box 1562
4401 Cities Service Highway
Lake Charles, Louisiana 70602

LABORATORY REPORT OF SHIPMENTS
HIGH SULFUR NO. 2 FUEL OIL

Title	: CITGO NO.2 FUEL OIL		Assay Date	: 3/14/2004	
Tank Number	: 27		Barrels	:	
Lab I.D.	: 04-03-098		At Degrees F	:	
Shipped Via	:		Sales Order Number	:	
Shipped To	:		Certificate Number	: 553925-9683	
Date	:		Cycle Number	:	

Product Property	Reported As	ASTM Method	Value	ASTM D-86	Degrees F
API Gravity	API	D-287	31.7	IBP	375.9
Ash Content	Weight %	D-482	< 0.01	10 %	458.5
Carbon Residue, 10% Bottoms	Weight %	D-524	0.01	20 %	486.5
Cetane Index		D-976	44.1	30%	502.5
Cetane Index		D-4737	43.6	40 %	516.6
Color (ASTM)		D-1500	N.R.	50 %	531.0
Dye Visible			YES	60 %	545.4
Cloud Point	Degrees F	D-2500	11	70 %	561.4
Cu Strip Corrosion, 3 hrs @ 122 F		D-130	1	80 %	580.4
Flash Point (PM)	Degrees F	D-93	173	90 %	606.7
Haze Rating @ 70 Degrees F		Colonial	1	95 %	632.1
Odor			GOOD	EP	646.8
Pour Point	Degrees F	D-97	-5	Recovery %	96.8
Red Dye Content	lbs/1000		4.50	Residue %	1.0
Thermal Stab, 90 Min. 150 C	Cpad	Dupont	1		
Sulfur, Total	Weight %	D-2622	0.3597		
Viscosity, @ 100 F (38 C)	CST	D-445	3.2		
@ 100 F (38 C)	SUS	D-88	36.7		
Water & Sediment (BS&W)	Volume %	D-1796	0.0		

A) Inhibitor Addition lbs/1000 bbl

Type: _____

B) Dye Added: 11.5 Lbs/1000 Barrels

Source ID: P.W.

Analysis Checked and Approved By

Don Broussard

Title S/E Date 3/15/04

Inspector: Refinery Laboratory

Florida Gas Transmission-8031 Mar 24 2004 1:31 PM

Date	BTU	CO2	N2	Grav	Methan	Ethane	Propan	Ibutan	Nbutan	Ipenta	Npenta	C6	C7
H2	Helium	Oxygen											
03/24/2004	1039	0.888	0.477	0.590	94.846	3.007	0.482	0.101	0.095	0.033	0.022		
0.049	0.000	0.000	0.000	0.000									
03/23/2004	1042	0.883	0.496	0.592	94.525	3.240	0.532	0.107	0.107	0.034	0.024		
0.052	0.000	0.000	0.000	0.000									
03/22/2004	1042	0.899	0.479	0.592	94.614	3.139	0.535	0.112	0.111	0.035	0.024		
0.052	0.000	0.000	0.000	0.000									
03/21/2004	1048	0.888	0.466	0.596	94.284	3.196	0.697	0.157	0.154	0.050	0.034		
0.074	0.000	0.000	0.000	0.000									
03/20/2004	1049	0.920	0.467	0.597	94.160	3.231	0.729	0.170	0.160	0.054	0.035		
0.074	0.000	0.000	0.000	0.000									
03/19/2004	1050	0.910	0.460	0.597	94.121	3.270	0.739	0.174	0.164	0.054	0.034		
0.075	0.000	0.000	0.000	0.000									
03/18/2004	1050	0.943	0.473	0.598	94.017	3.334	0.746	0.178	0.159	0.051	0.031		
0.068	0.000	0.000	0.000	0.000									
03/17/2004	1044	0.911	0.505	0.594	94.349	3.283	0.595	0.127	0.119	0.036	0.024		
0.050	0.000	0.000	0.000	0.000									
03/16/2004	1040	0.901	0.517	0.591	94.615	3.152	0.515	0.103	0.100	0.031	0.021		
0.045	0.000	0.000	0.000	0.000									
03/15/2004	1040	0.890	0.500	0.591	94.657	3.148	0.506	0.103	0.099	0.031	0.021		
0.045	0.000	0.000	0.000	0.000									
03/14/2004	1040	0.902	0.458	0.590	94.886	2.921	0.505	0.112	0.106	0.035	0.023		
0.053	0.000	0.000	0.000	0.000									
03/13/2004	1040	0.891	0.425	0.590	95.015	2.816	0.507	0.117	0.112	0.037	0.024		
0.055	0.000	0.000	0.000	0.000									
03/12/2004	1038	0.863	0.419	0.588	95.253	2.672	0.472	0.107	0.104	0.034	0.024		
0.053	0.000	0.000	0.000	0.000									
03/11/2004	1039	0.837	0.482	0.589	94.998	2.876	0.488	0.106	0.106	0.034	0.023		
0.050	0.000	0.000	0.000	0.000									
03/10/2004	1039	0.838	0.460	0.589	95.097	2.789	0.490	0.108	0.108	0.034	0.024		
0.052	0.000	0.000	0.000	0.000									
03/09/2004	1038	0.855	0.484	0.589	95.096	2.752	0.492	0.107	0.105	0.033	0.023		
0.052	0.000	0.000	0.000	0.000									
03/08/2004	1040	0.865	0.466	0.590	95.011	2.803	0.514	0.109	0.113	0.037	0.026		
0.057	0.000	0.000	0.000	0.000									
03/07/2004	1041	0.871	0.478	0.591	94.826	2.903	0.552	0.122	0.123	0.040	0.028		
0.059	0.000	0.000	0.000	0.000									
03/06/2004	1040	0.827	0.498	0.590	94.957	2.883	0.505	0.110	0.110	0.035	0.024		
0.050	0.000	0.000	0.000	0.000									
03/05/2004	1040	0.817	0.552	0.591	94.761	3.029	0.509	0.110	0.111	0.035	0.024		
0.052	0.000	0.000	0.000	0.000									
03/04/2004	1039	0.836	0.498	0.590	95.062	2.748	0.500	0.113	0.116	0.039	0.028		

0.060	0.000	0.000	0.000	0.000								
03/03/2004		1038	0.892	0.499	0.590	95.064	2.725	0.478	0.111	0.107	0.039	0.026
0.060	0.000	0.000	0.000	0.000								
03/02/2004		1038	0.897	0.510	0.590	95.032	2.731	0.482	0.111	0.110	0.040	0.027
0.062	0.000	0.000	0.000	0.000								
03/01/2004		1037	0.908	0.488	0.589	95.109	2.676	0.476	0.109	0.107	0.039	0.027
0.060	0.000	0.000	0.000	0.000								
02/29/2004		1036	0.923	0.495	0.589	95.153	2.638	0.458	0.105	0.105	0.038	0.026
0.059	0.000	0.000	0.000	0.000								
02/28/2004		1036	0.940	0.471	0.589	95.199	2.591	0.461	0.109	0.105	0.038	0.025
0.060	0.000	0.000	0.000	0.000								
02/27/2004		1036	0.892	0.434	0.588	95.415	2.467	0.456	0.107	0.104	0.038	0.026
0.061	0.000	0.000	0.000	0.000								
02/26/2004		1037	0.872	0.505	0.589	95.156	2.643	0.480	0.111	0.109	0.039	0.026
0.059	0.000	0.000	0.000	0.000								
02/25/2004		1041	0.882	0.573	0.592	94.701	2.921	0.545	0.122	0.125	0.042	0.029
0.060	0.000	0.000	0.000	0.000								
02/24/2004		1039	0.889	0.521	0.591	94.900	2.806	0.520	0.120	0.117	0.040	0.027
0.060	0.000	0.000	0.000	0.000								
02/23/2004		1037	0.887	0.455	0.589	95.253	2.592	0.473	0.110	0.105	0.038	0.025
0.062	0.000	0.000	0.000	0.000								
02/22/2004		1039	0.880	0.504	0.590	95.005	2.772	0.488	0.111	0.111	0.039	0.027
0.063	0.000	0.000	0.000	0.000								
02/21/2004		1037	0.884	0.455	0.588	95.253	2.611	0.462	0.104	0.104	0.038	0.026
0.061	0.000	0.000	0.000	0.000								
02/20/2004		1036	0.890	0.455	0.588	95.326	2.549	0.447	0.106	0.101	0.038	0.025
0.062	0.000	0.000	0.000	0.000								
02/19/2004		1036	0.914	0.455	0.588	95.285	2.583	0.441	0.103	0.099	0.037	0.025
0.058	0.000	0.000	0.000	0.000								
02/18/2004		1037	0.892	0.469	0.589	95.188	2.642	0.475	0.106	0.107	0.037	0.026
0.057	0.000	0.000	0.000	0.000								
02/17/2004		1043	0.863	0.529	0.592	94.757	2.781	0.654	0.135	0.147	0.043	0.030
0.061	0.000	0.000	0.000	0.000								
02/16/2004		1045	0.880	0.522	0.594	94.625	2.792	0.739	0.147	0.156	0.045	0.031
0.062	0.000	0.000	0.000	0.000								
02/15/2004		1040	0.907	0.484	0.591	94.974	2.660	0.594	0.123	0.129	0.041	0.029
0.059	0.000	0.000	0.000	0.000								
02/14/2004		1040	0.913	0.480	0.591	95.029	2.612	0.574	0.126	0.132	0.042	0.029
0.063	0.000	0.000	0.000	0.000								
02/12/2004		1037	0.906	0.385	0.588	95.425	2.422	0.508	0.116	0.111	0.039	0.026
0.061	0.000	0.000	0.000	0.000								
02/11/2004		1036	0.899	0.438	0.588	95.373	2.463	0.487	0.107	0.109	0.038	0.027
0.060	0.000	0.000	0.000	0.000								
02/10/2004		1036	0.903	0.396	0.587	95.532	2.373	0.463	0.101	0.105	0.038	0.027
0.061	0.000	0.000	0.000	0.000								
02/09/2004		1036	0.872	0.393	0.587	95.562	2.391	0.456	0.100	0.104	0.036	0.026
0.060	0.000	0.000	0.000	0.000								
02/08/2004		1040	0.908	0.460	0.591	95.077	2.615	0.545	0.122	0.129	0.044	0.032

0.068	0.000	0.000	0.000	0.000								
02/07/2004		1039	0.924	0.469	0.591	94.909	2.809	0.544	0.112	0.114	0.037	0.026
0.055	0.000	0.000	0.000	0.000								
02/06/2004		1038	0.890	0.458	0.589	95.214	2.579	0.509	0.111	0.116	0.038	0.027
0.058	0.000	0.000	0.000	0.000								
02/05/2004		1037	0.939	0.449	0.589	95.262	2.505	0.494	0.111	0.112	0.039	0.027
0.062	0.000	0.000	0.000	0.000								
02/04/2004		1037	0.968	0.489	0.590	95.126	2.574	0.493	0.108	0.109	0.040	0.028
0.064	0.000	0.000	0.000	0.000								
02/03/2004		1038	0.925	0.507	0.590	94.986	2.708	0.535	0.101	0.106	0.040	0.030
0.063	0.000	0.000	0.000	0.000								
02/02/2004		1038	0.944	0.505	0.590	95.038	2.654	0.501	0.109	0.115	0.041	0.029
0.064	0.000	0.000	0.000	0.000								
02/01/2004		1036	0.929	0.443	0.588	95.326	2.516	0.456	0.100	0.104	0.038	0.027
0.060	0.000	0.000	0.000	0.000								
01/31/2004		1035	0.914	0.408	0.587	95.503	2.410	0.436	0.101	0.101	0.039	0.027
0.061	0.000	0.000	0.000	0.000								
01/30/2004		1037	0.927	0.439	0.589	95.285	2.536	0.472	0.106	0.104	0.040	0.028
0.062	0.000	0.000	0.000	0.000								
01/29/2004		1037	0.903	0.444	0.589	95.265	2.571	0.466	0.109	0.105	0.040	0.028
0.068	0.000	0.000	0.000	0.000								
01/28/2004		1044	1.024	0.491	0.595	94.368	3.099	0.579	0.138	0.145	0.046	0.030
0.080	0.000	0.000	0.000	0.000								
01/27/2004		1039	0.912	0.524	0.591	94.902	2.793	0.503	0.114	0.112	0.042	0.030
0.068	0.000	0.000	0.000	0.000								
01/26/2004		1037	0.952	0.474	0.590	95.100	2.647	0.472	0.109	0.107	0.042	0.029
0.069	0.000	0.000	0.000	0.000								
01/25/2004		1037	0.914	0.461	0.589	95.230	2.563	0.474	0.109	0.109	0.043	0.029
0.068	0.000	0.000	0.000	0.000								
01/24/2004		1036	0.925	0.411	0.588	95.425	2.430	0.461	0.110	0.105	0.041	0.027
0.065	0.000	0.000	0.000	0.000								
01/23/2004		1038	0.919	0.451	0.590	95.174	2.603	0.485	0.114	0.112	0.043	0.030
0.069	0.000	0.000	0.000	0.000								
01/22/2004		1039	0.900	0.490	0.590	95.063	2.680	0.497	0.117	0.113	0.043	0.029
0.069	0.000	0.000	0.000	0.000								
01/21/2004		1038	0.892	0.505	0.590	95.080	2.660	0.502	0.119	0.114	0.041	0.027
0.060	0.000	0.000	0.000	0.000								
01/20/2004		1037	0.861	0.496	0.588	95.257	2.588	0.469	0.111	0.102	0.037	0.024
0.055	0.000	0.000	0.000	0.000								
01/19/2004		1037	0.829	0.506	0.588	95.255	2.596	0.478	0.112	0.103	0.038	0.024
0.058	0.000	0.000	0.000	0.000								
01/18/2004		1039	0.830	0.509	0.589	95.079	2.723	0.503	0.112	0.109	0.041	0.028
0.066	0.000	0.000	0.000	0.000								
01/17/2004		1038	0.808	0.487	0.588	95.256	2.622	0.480	0.106	0.105	0.040	0.028
0.069	0.000	0.000	0.000	0.000								
01/16/2004		1038	0.807	0.474	0.588	95.322	2.555	0.481	0.110	0.110	0.042	0.029
0.070	0.000	0.000	0.000	0.000								
01/15/2004		1038	0.855	0.497	0.589	95.170	2.624	0.491	0.115	0.111	0.041	0.028

0.068	0.000	0.000	0.000	0.000								
01/14/2004		1039	0.870	0.494	0.590	95.056	2.704	0.507	0.117	0.111	0.042	0.029
0.069	0.000	0.000	0.000	0.000								
01/13/2004		1038	0.876	0.461	0.589	95.244	2.567	0.492	0.112	0.106	0.042	0.029
0.071	0.000	0.000	0.000	0.000								
01/12/2004		1036	0.883	0.462	0.588	95.425	2.412	0.476	0.108	0.102	0.040	0.027
0.065	0.000	0.000	0.000	0.000								
01/11/2004		1038	0.913	0.474	0.590	95.144	2.595	0.515	0.116	0.112	0.041	0.027
0.062	0.000	0.000	0.000	0.000								
01/10/2004		1038	0.956	0.451	0.590	95.125	2.576	0.515	0.120	0.114	0.043	0.029
0.071	0.000	0.000	0.000	0.000								
01/09/2004		1040	0.935	0.483	0.591	94.918	2.731	0.546	0.123	0.118	0.044	0.030
0.072	0.000	0.000	0.000	0.000								
01/08/2004		1041	0.917	0.478	0.592	94.842	2.817	0.564	0.127	0.117	0.042	0.028
0.068	0.000	0.000	0.000	0.000								
01/07/2004		1049	0.829	0.708	0.598	93.775	3.536	0.687	0.153	0.162	0.049	0.037
0.065	0.000	0.000	0.000	0.000								
01/06/2004		1054	0.811	0.801	0.602	93.140	3.944	0.793	0.170	0.188	0.052	0.039
0.063	0.000	0.000	0.000	0.000								
01/05/2004		1040	0.856	0.418	0.589	95.210	2.598	0.549	0.123	0.116	0.041	0.027
0.062	0.000	0.000	0.000	0.000								
01/04/2004		1045	0.812	0.538	0.593	94.568	2.989	0.659	0.143	0.150	0.046	0.033
0.063	0.000	0.000	0.000	0.000								
01/03/2004		1051	0.847	0.669	0.599	93.524	3.760	0.732	0.159	0.160	0.049	0.034
0.065	0.000	0.000	0.000	0.000								
01/02/2004		1045	0.896	0.418	0.594	94.663	2.912	0.671	0.149	0.143	0.048	0.032
0.068	0.000	0.000	0.000	0.000								
01/01/2004		1045	0.898	0.354	0.592	94.913	2.734	0.664	0.150	0.141	0.047	0.031
0.068	0.000	0.000	0.000	0.000								
12/31/2003		1045	0.919	0.353	0.593	94.862	2.755	0.671	0.153	0.142	0.048	0.031
0.067	0.000	0.000	0.000	0.000								
12/30/2003		1052	0.881	0.578	0.600	93.719	3.483	0.823	0.177	0.181	0.054	0.038
0.065	0.000	0.000	0.000	0.000								
12/29/2003		1053	0.895	0.645	0.601	93.453	3.682	0.818	0.172	0.182	0.053	0.038
0.061	0.000	0.000	0.000	0.000								
12/28/2003		1047	0.926	0.432	0.595	94.445	3.032	0.712	0.155	0.153	0.049	0.032
0.063	0.000	0.000	0.000	0.000								
12/27/2003		1057	0.909	0.679	0.604	93.013	3.908	0.910	0.200	0.203	0.060	0.041
0.076	0.000	0.000	0.000	0.000								
12/26/2003		1053	0.911	0.549	0.600	93.700	3.466	0.841	0.183	0.179	0.056	0.037
0.077	0.000	0.000	0.000	0.000								
12/25/2003		1047	0.904	0.430	0.595	94.487	2.986	0.730	0.160	0.152	0.051	0.032
0.068	0.000	0.000	0.000	0.000								
12/24/2003		1049	0.931	0.451	0.597	94.244	3.142	0.752	0.170	0.155	0.052	0.032
0.070	0.000	0.000	0.000	0.000								

RADON FLUX REPORT

CARGILL FERTILIZER, INC.

RIVERVIEW PHOSPHOGYPSUM STACK

8813 HWY 41 SOUTH

RIVERVIEW, FL 33569

Prepared by:

PEMBROKE LABORATORY, INC.

528 GOOCH RD.

FT. MEADE, FL 33841

June 28, 1991

Statement of Responsibility

J. R. Hammond

Company Officer Vice Pres & Treas.

I certify under penalty of law that I have personally examined and am familiar with information submitted herein and based upon my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

TABLE OF CONTENTS

INTRODUCTION

Pembroke Laboratory, Inc. (PLI) was commissioned by Cargill Fertilizer, Inc. to perform a radon flux measurement survey on a phosphogypsum stack in Riverview, Florida. This project was to begin on June 3, 1991. The EPA was notified prior to the thirtieth days before commencement of sampling.

Sampling was completed on June 21, 1991. The sampling thus covered 19 days, during which 250 sites were sampled. This satisfied the required number of samples mandated by 40 CFR, subpart R, 1989. One hundred sites were sampled on the top, one hundred on the sides, and fifty on the hard-packed roads. There were no beaches associated with this stack. Sample sites were evenly spaced within their respective areas to achieve flux measurements which are as representative of the entire stack as possible (see appendix B for the sampling grid map). The canisters used were made according to the specifications given in EPA's publication,"Radon Flux Measurements on Gardinier and Royster Phosphogypsum Piles near Tampa and Mulberry, Florida". (1) The sampling and analytical methods employed were taken from the same report.

Several data are involved in the calculation and reporting of the individual measurements. These are: Canister number, sample location (site number), date and time deployed, retrieved, and counted, and meteorological conditions observed. The total flux measurement for the stack is derived from the individual measurements and the area of the top, sides, and roads of the stack, as specified in the Federal Register cited above.

Mr. Hank Mathot is the chief executive officer for Cargill Fertilizer, Inc., and is responsible for the operation of the facility. This report was prepared by Mr. Gene Whitney at Pembroke Laboratory, Inc., located in Ft. Meade, Florida.

STACK INFORMATION

Cargill's phosphogypsum stack is located between Hillsborough Bay and Highway 41 north of the mouth of the Alafia River. It is currently inactive, and has been capped with an impermeable barrier of 40 mil High Density Polyethylene liner and 18 inches of soil on the top and with soil on the sides. Drains have been provided to prevent standing water except during periods of heaviest rain. Vegetation is established over the entire stack, excluding most road surfaces, and is luxuriant over much of the sides, ranging to five feet or more of grass atop a two-foot thick thatch of dead grass and humus. Bird and mammal populations are well established.

The stack covers approximately 15 hectares (370 acres) and is approximately 67 meters (220 feet) in height. (a)

This stack is located in an industrial port area of Hillsborough Bay with no significant population center within two miles. It is presumed that no urban development will occur in this area within twenty years.

One other stack exists at the facility and is currently active. This field has been active only since January, 1990. It is permitted to cover 326 acres, and is currently limited to a height of 100 feet. The current height is approximately 17 feet above sea level.

(a) Risk Assessments, Environmental Impact Statement, NESHAPS for Radionuclides, Background Information Document - Volume 2; Sept. 89, U.S.EPA, Office of Radiation Programs, Washington, D.C.

TOTAL RESULTS

The total radon flux from the Cargill phosphogypsum stack is 3.346 picoCuries per meter per second. This flux was derived by multiplying the mean of measurements from each zone (top, sides, roads) by the respective area of the zone (giving a total flux in pCi/sec), summing the results of these three zones, and dividing the total pCi/sec for the entire stack by the area of the entire stack. These data appear below:

Zone	Average Flux pCi/M^2/sec	Area M^2	Total Flux pCi/sec
Top	0.277	445154	123420
Sides	4.787	971246	4649343
Roads	2.890	72843	210527
		------	-------
	TOTAL	1489243	4983290
OVERALL AVERAGE FLUX		3.346 pCi/M^2/sec	

Following the method specifications, every tenth sample was analyzed in duplicate for precision determination. The relative standard deviation (%RSD) was calculated for each duplicate, and is given in the data summary. The average %RSD was 3.22%. The standards used to calibrate the gamma spectrosopy system used in the analysis are NBS radioactivity standard solutions of radium 226 and cesium 137/barium 137m.

Data given here and in the individual reports may reflect more accuracy than is warranted. This is due to the computer program associated with the analytical equipment, which is designed to render results from very low level samples as well as samples in a "normal " range, such as these. The individual sample reports should be consulted for detection limits and probable counting error, which differ from sample to sample.

CALCULATIONS

The calculations used to determine the individual flux measurements is as follows: (1)

$$J = \frac{C\,L^{2}}{K\,A\,E\,(1 - e^{-L\,t1})\,(e^{-L\,(t2 - t1)} - e^{-L\,(t3 - t1)})}$$

where J = radon flux in pCi/M^2/sec
C = net counts (after background subtraction) betweeen 272 and 722 kev (three radon daughters contribute to counts)
L = radon decay constant, 2.Ø97 E-Ø6/sec.
A = area of collector, M^2
E = efficiency of detector, cnts/disintegration
K = conversion from disintegrations/sec to pico Curies, Ø.Ø37 d/s/pCi
t1= exposure time, sec.
t2= time from start of collection to start of counting, sec.
t3= time from start of collection to end of counting, sec.

(1) Radon Flux Measurements on Gardinier and Royster Phosphogypsum Piles Near Tampa and Mulberry, Florida; Pacific Northwest Laboratory, Richland, Washington

ANALYTICAL METHODS

Sampling and analysis was conducted in accordance with 40 CFR 61, Appendix B, method 115. The method used to measure radon flux involves adsorption onto activated charcoal of the radon contained in soil gasses emitted from the surface being tested. 180.0 grams of charcoal is contained in an even layer in a Large Area Activated Charcoal Canister (LAACC), consisting of a 10" PVC pipe cap (I.D. ~11 inches) which has a small vent hole on top and porous spacers and support inside to maintain the layer of charcoal. The canister is placed on the surface of the stack, sealed, if necessary, by adding adjacent soil around the perimeter of the LAACC, and allowed to collect radon from soil gasses passing through it for approximately 24 hours. The charcoal is then transferred to a 16 oz. plastic cup, sealed, and returned to the laboratory for analysis.

The radon present in the sample is determined by gamma spectroscopy, utilizing the formula given above. The gamma activity in the specified energy region is determined at least daily on an equal amount of unexposed charcoal and on a standard consisting of the same type of charcoal to which has been added a known amount of National Bureau of Standards Ra-226 solution.

This method assumes 100% efficiency in radon adsorption by the charcoal and constant radon flux over the exposure period.

SUMMARY

The total average radon flux from this stack, 3.346 picoCuries per square meter, is greatly below the EPA maximum allowance of 20 picoCuries per square meter per second. The addition of a plastic liner and soil over the entire top of the stack has had a major impact on the radon flux. The addition of soil, stabilized by vegetation, on the sides reduces the flux in that area to much lower levels than would otherwise be expected. The roadways are of minimal area, and are mostly hard-packed, a factor which, in itself, prevents much soil gas flow.

The stack and its covering are well maintained, and the establishment of vegetation cover is actively encouraged by the Cargill staff. These policies will ensure that the radon emanation from this stack will have a minimal impact on the surrounding area.

APPENDIX A

METEOROLOGICAL OBSERVATIONS

Date	
6/03	Clear and windy, 30% rain probability
6/04	30% rain probability
6/05	70% rain probability
6/06	60% rain probability
6/07	Clear and windy, 30% rain probability
6/08	Clear and windy
6/10	Clear
6/11	Clear
6/12	Clear
6/13	Clear
6/17	Scattered showers, 30% rain probability
6/18	Scattered showers, 30% rain probability
6/19	50% rain probability. Heavy rain last night
6/20	Clear, 30% rain forecast

APPENDIX B

Cargill Radon Flux Project Summary 27-Jun-91

	Avg Flux pCi/M^2/s	Area M^2	Total Flux
TOPS	0.277	445154	123420 pCi/sec
SIDE	4.787	971246	4649343 pCi/sec
ROAD	2.890	72843	210527 pCi/sec
Total area		1489243	

Overall avg flux: 3.346 pCi/sq.meter/sec.

Note: Flux measurements are given to the nearest 0.001 unit for statistical use. See individual sample reports for detection limits and probable counting error.

	Date (June 91)					Avg RSD:	3.22%
RF#	Set	Ret.	Site #	Zone	Flux	Duplicates	%RSD
1322	20	21	1	top	0.037		
1323	3	4	2	top	0.344		
1324	3	4	3	top	0.278		
1325	3	4	4	top	0.175		
1326	3	4	5	top	0.316		
1327	3	4	6	top	0.140		
1328	3	4	7	top	0.269		
1329	3	4	8	top	0.484		
1330	3	4	9	top	0.272		
1331	3	4	10	top	0.239	0.247	3.29%
1332	20	21	11	top	0.043		
1333	3	4	12	top	0.322		
1334	3	4	13	top	0.438		
1335	3	4	14	top	0.381		
1336	3	4	15	top	0.256		
1337	3	4	16	top	0.270		
1338	3	4	17	top	0.209		
1339	3	4	18	top	0.413		
1340	3	4	19	top	0.034		
1341	3	4	20	top	0.096	0.088	8.70%
1342	20	21	21	top	0.024		
1343	4	5	22	top	0.247		
1344	4	5	23	top	0.196		
1345	4	5	24	top	0.013		
1346	4	5	25	top	0.226		
1347	4	5	26	top	0.266		
1348	4	5	27	top	0.360		
1349	4	5	28	top	0.274		
1350	4	5	29	top	0.582		
1351	4	5	30	top	0.224	0.210	6.45%
1352	20	21	31	top	0.035		
1353	4	5	32	top	0.184		
1354	4	5	33	top	0.106		
1355	4	5	34	top	0.154		

1356	4	5	35 top	0.223		
1357	4	5	36 top	0.162		
1358	4	5	37 top	0.237		
1359	4	5	38 top	0.110		
1360	4	5	39 top	0.331		
1361	4	5	40 top	0.155	0.155	0.00%
1362	5	6	41 top	0.207		
1363	5	6	42 top	0.629		
1364	5	6	43 top	0.193		
1365	5	6	44 top	0.343		
1366	5	6	45 top	0.444		
1367	5	6	46 top	0.223		
1368	5	6	47 top	0.376		
1369	5	6	48 top	0.146		
1370	5	6	49 top	0.153		
1371	5	6	50 top	0.337	0.338	0.30%
1372	5	6	51 top	0.358		
1373	5	6	52 top	0.323		
1374	5	6	53 top	0.288		
1375	5	6	54 top	0.247		
1376	5	6	55 top	0.224		
1377	5	6	56 top	0.291		
1378	5	6	57 top	0.369		
1379	5	6	58 top	0.265		
1380	5	6	59 top	0.355		
1381	5	6	60 top	0.210	0.212	0.95%
1382	6	7	61 top	0.198		
1383	6	7	62 top	1.466		
1384	6	7	63 top	0.092		
1385	6	7	64 top	0.458		
1386	6	7	65 top	0.296		
1387	6	7	66 top	0.272		
1388	6	7	67 top	0.272		
1389	6	7	68 top	0.223		
1390	6	7	69 top	1.075		
1391	6	7	70 top	0.295	0.277	6.29%
1392	6	7	71 top	0.321		
1393	6	7	72 top	0.109		
1394	6	7	73 top	0.234		
1395	6	7	74 top	0.144		
1396	6	7	75 top	0.682		
1397	6	7	76 top	0.324		
1398	6	7	77 top	0.372		
1399	6	7	78 top	0.589		
1400	6	7	79 top	0.350		
1401	6	7	80 top	0.433	0.455	4.95%
1402	7	8	81 top	0.285		
1403	7	8	82 top	0.257		
1404	7	8	83 top	0.096		
1405	7	8	84 top	0.108		
1406	7	8	85 top	0.081		
1407	7	8	86 top	0.079		
1408	7	8	87 top	0.216		

1409	7	8	88	top	0.245		
1410	7	8	89	top	0.062		
1411	7	8	90	top	0.211	0.199	5.85%
1412	7	8	91	top	0.046		
1413	7	8	92	top	0.078		
1414	7	8	93	top	0.165		
1415	7	8	94	top	0.197		
1416	7	8	95	top	0.264		
1417	7	8	96	top	0.098		
1418	7	8	97	top	0.063		
1419	7	8	98	top	0.166		
1420	7	8	99	top	0.461		
1421	7	8	100	top	1.236	1.229	0.57%
1422	10	11	101	side	5.215		
1423	10	11	102	side	4.224		
1424	10	11	103	side	0.839		
1425	10	11	104	side	4.299		
1426	10	11	105	side	1.463		
1427	10	11	106	side	10.630		
1428	10	11	107	side	3.725		
1429	10	11	108	side	0.862		
1430	10	11	109	side	4.403		
1431	10	11	110	side	3.592	3.546	1.29%
1432	10	11	111	side	7.559		
1433	10	11	112	side	1.118		
1434	10	11	113	side	4.770		
1435	10	11	114	side	1.806		
1436	10	11	115	side	3.160		
1437	10	11	116	side	5.610		
1438	10	11	117	side	2.553		
1439	10	11	118	side	1.719		
1440	10	11	119	side	0.217		
1441	10	11	120	side	0.114	0.118	3.45%
1442	11	12	121	side	2.068		
1443	11	12	122	side	0.546		
1444	11	12	123	side	1.000		
1445	11	12	124	side	3.080		
1446	11	12	125	side	11.222		
1447	11	12	126	side	6.211		
1448	11	12	127	side	12.995		
1449	11	12	128	side	10.344		
1450	11	12	129	side	11.158		
1451	11	12	130	side	11.811	11.882	0.60%
1452	11	12	131	side	4.065		
1453	11	12	132	side	4.299		
1454	11	12	133	side	3.059		
1455	11	12	134	side	3.131		
1456	11	12	135	side	1.521		
1457	11	12	136	side	6.196		
1458	11	12	137	side	1.194		
1459	11	12	138	side	2.718		
1460	11	12	139	side	11.855		
1461	11	12	140	side	2.548	2.494	2.14%

1462	12	13	141 side	10.246		
1463	12	13	142 side	11.517		
1464	12	13	143 side	15.794		
1465	12	13	144 side	8.552		
1466	12	13	145 side	6.886		
1467	12	13	146 side	0.200		
1468	12	13	147 side	8.644		
1469	12	13	148 side	7.917		
1470	12	13	149 side	12.113		
1471	12	13	150 side	18.245	17.930	1.74%
1472	12	13	151 side	8.505		
1473	12	13	152 side	3.718		
1474	12	13	153 side	3.021		
1475	12	13	154 side	8.070		
1476	12	13	155 side	6.899		
1477	12	13	156 side	7.291		
1478	12	13	157 side	3.038		
1479	12	13	158 side	5.959		
1480	12	13	159 side	9.983		
1481	12	13	160 side	7.731	7.537	2.54%
1482	13	14	161 side	0.105		
1483	13	14	162 side	0.500		
1484	13	14	163 side	0.388		
1485	13	14	164 side	2.221		
1486	13	14	165 side	3.390		
1487	13	14	166 side	0.440		
1488	13	14	167 side	0.923		
1489	13	14	168 side	2.189		
1490	13	14	169 side	1.339		
1491	13	14	170 side	0.661	0.641	3.07%
1492	13	14	171 side	1.032		
1493	13	14	172 side	1.311		
1494	13	14	173 side	1.198		
1495	13	14	174 side	0.503		
1496	13	14	175 side	0.658		
1497	13	14	176 side	0.726		
1498	13	14	177 side	0.737		
1499	13	14	178 side	0.246		
1500	13	14	179 side	0.849		
1501	13	14	180 side	0.735	0.758	3.08%
1502	17	18	181 side	5.526		
1503	17	18	182 side	1.812		
1504	17	18	183 side	5.929		
1505	17	18	184 side	10.038		
1506	17	18	185 side	5.706		
1507	17	18	186 side	1.839		
1508	17	18	187 side	4.652		
1509	17	18	188 side	4.520		
1510	17	18	189 side	1.938		
1511	17	18	190 side	1.813	1.838	1.37%
1512	17	18	191 side	2.380		
1513	17	18	192 side	3.785		
1514	17	18	193 side	8.012		

1515	17	18	194 side	6.187		
1516	17	18	195 side	15.326		
1517	17	18	196 side	5.295		
1518	17	18	197 side	7.878		
1519	17	18	198 side	5.468		
1520	17	18	199 side	3.200		
1521	17	18	200 side	14.016	13.888	0.92%
1522	18	19	201 road	5.496		
1523	18	19	202 road	16.629		
1524	18	19	203 road	0.284		
1525	18	19	204 road	1.429		
1526	18	19	205 road	4.989		
1527	18	19	206 road	0.479		
1528	18	19	207 road	6.793		
1529	18	19	208 road	3.210		
1530	18	19	209 road	1.084		
1531	18	19	210 road	2.126	2.126	0.00%
1532	18	19	211 road	0.374		
1533	18	19	212 road	4.154		
1534	18	19	213 road	1.394		
1535	18	19	214 road	1.879		
1536	18	19	215 road	1.663		
1537	18	19	216 road	0.074		
1538	18	19	217 road	3.228		
1539	18	19	218 road	3.183		
1540	18	19	219 road	10.801		
1541	18	19	220 road	1.358	1.331	2.01%
1542	19	20	221 road	3.835		
1543	19	20	222 road	3.205		
1544	19	20	223 road	3.531		
1545	19	20	224 road	1.926		
1546	19	20	225 road	0.459		
1547	19	20	226 road	0.646		
1548	19	20	227 road	5.819		
1549	19	20	228 road	12.417		
1550	19	20	229 road	4.146		
1551	19	20	230 road	0.616	0.617	0.16%
1552	19	20	231 road	4.109		
1553	19	20	232 road	3.211		
1554	19	20	233 road	5.449		
1555	19	20	234 road	4.609		
1556	19	20	235 road	9.372		
1557	19	20	236 road	1.266		
1558	19	20	237 road	1.227		
1559	19	20	238 road	0.716		
1560	19	20	239 road	4.018		
1561	19	20	240 road	0.732	0.740	1.09%
1562	20	21	241 road	0.039		
1563	20	21	242 road	0.102		
1564	20	21	243 road	0.017		
1565	20	21	244 road	0.041		
1566	20	21	245 road	0.422		
1567	20	21	246 road	0.033		

1568	20	21	247	road	1.132		
1569	20	21	248	road	0.536		
1570	20	21	249	road	0.226		
1571	20	21	250	road	0.023	0.028	19.61%

Field notes

Site #	52	Ant hill found under canister
	152	Ant hill found under canister
	163	Ant hill found under canister
	177	Ant hill found under canister
	193	No grass
	199	No grass

ATTACHMENT C

DUST SUPPRESSION MSDS

MATERIAL SAFETY DATA SHEET

Manufacturer

ARR-MAZ PRODUCTS, INC.
621 Snively Avenue
Winter Haven, Fl 33880

Emergency Phone Number

813-293-7884

PRODUCT INFORMATION

Trade Name:	Dustrol 3079
Chemical Family:	Hydrocarbon
Composition:	Complex mixture of hydrocarbons with a carbon number predominantly over C-20.
HMIS RATING:	Health Hazard 1 Slight Flammability Hazard 1 Slight Reactivity Hazard 0 Minimal
D.O.T. Shipping Classification:	Not Regulated

PHYSICAL DATA

Boiling Point (°F):	> 300°F
Solubility in Water:	Negligible
Vapor Pressure (mmHg at 25°C):	< 1
Vapor Density (Air = 1):	> 10
Appearance:	Brown Liquid
Odor:	Typical petroleum hydrocarbon
Specific Gravity (at 180°F):	.96 ∓ .01

FIRE EXPLOSION

Flash Point (PM Closed Cup °F): > 300°F

Extinguishing Media: Agents approved for Class B fires (CO_2, foam, steam, halogenated agents, dry chemical, etc.) or water fog.

Special Fire Fighting Procedures: Self contained breathing apparatus and protective clothing should be worn in fighting fires involving chemicals. Water spray may be used to cool exposed containers.

HEALTH HAZARD INFORMATION

EYE

Effect: Some irritation may be expected.

First Aid: Immediately flush with plenty of water for at least 15 minutes. Contact a physician.

Protection: Wear safety glasses and/or goggles.

SKIN

Effect: Can cause skin irritation on prolonged or repeated contact.

First Aid: Wash exposed area thoroughly with soap and water.

Protection: Exercise normal safety practices. Remove contaminated clothing immediately, wash before reuse.

INHALATION

Effect: None expected under normal conditions of use.

First Aid: None expected.

Protection: None required under normal conditions of use.

INGESTION

Effect: Expected to be relatively nontoxic.

First Aid: If irritation of the digestive tract develops and persists seek medical attention.

REACTIVITY DATA

Stability: Stable

Hazardous Polymerization: Will NOT occur.

Incompatibilities: Do not expose to the action of strong oxidizers of organic material.

Hazardous Decomposition Products: Thermal decomposition or burning may produce major amounts of oxides of carbon as well as unidentified organic compounds.

----------SPILL, LEAK, AND DISPOSAL PROCEDURES----------

Spills and Leaks: Treat as an oil spill. Contain spill and remove by mechanical means. Use absorbent material or pads on remaining material or on small spills. Report spill as required to appropriate authorities. U.S. Coast Guard regulations require immediate reporting of spills the could reach any waterway including Intermittent Dry Creeks. Report spill to Coast Guard (800) 424-8802. In case of accident or road spill notify Chemtrec, (800) 424-9300.

Waste Disposal: Dispose of waste at an appropriate waste disposal facility in accordance with current applicable laws and regulations, and product characteristics at time of Disposal. No RCRA waste number assigned.

CERCLA RQ: NONE

SPECIAL PROTECTION INFORMATION

Respiratory Protection: No respiratory protection is normally required. However, a respirator should be used in areas where vapor concentrations are excessive due to high temperatures or where misting occurs.

Protective Gloves: Use solvent resistant gloves.

Eye Protection: Use safety glasses and/or goggles.

Other Protective Equipment: Eye wash and safety shower should be easily accessible.

STORAGE AND SPECIAL PRECAUTIONS

Storage Precautions: Material is stable on storing. Do not store near open flame or sources of extreme heat.

Other Precautions: Wash contaminated clothes before wearing. do not wear contaminated shoes or boots.

DISCLAIMER OF EXPRESSED OR IMPLIED WARRANTS

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MATERIAL SAFETY DATA SHEET

Manufacturer

ArrMaz Custom Chemicals, Inc

621 Snively Avenue
Winter Haven, Fl 33880

Emergency Phone Number
863-293-7884

PRODUCT INFORMATION

Trade Name:	DF-458-20 AF	
Chemical Family:	Anionic Surfactant Fatty acid and fatty acid derivatives.	
HMIS RATING:	Health Hazard	1 Slight
	Flammability Hazard	1 Slight
	Reactivity Hazard	0 Minimal
D.O.T. Shipping Classification:	Not Regulated	

PHYSICAL DATA

Boiling Point (°F):	> 200°F
Solubility in Water:	Partial Dispersible
Vapor Pressure (mmHg at 25°C):	ND
Vapor Density (Air = 1):	ND
Appearance:	Dark brown liquid
Odor:	Organic odor
Specific Gravity (at 77°F):	0.95 to 0.98

FIRE EXPLOSION

Flash Point (PM Closed Cup °F):	> 300°F
Extinguishing Media:	Water fog, foam, CO2, dry chemical, halogenated agents.

Special Fire Fighting Procedures: Self contained breathing apparatus should be worn when fighting any chemical fire. Water spray may cause frothing if applied to burning material. Water spray may be used to cool exposed containers or to flush material away from flames.

HEALTH HAZARD INFORMATION

EYE

Effect: Contact with material may irritate eyes.

First Aid: In case of contact flush eyes with water for 15 minutes. Get medical attention if symptoms are severe or persistent.

Protection: Safety glasses and/or goggles.

SKIN

Effect: Prolonged or repeated contact may cause skin irritation.

First Aid: Wash with soap and water.

Protection: Rubber gloves and clean body covering clothing. Wash clothing before reuse and do not wear contaminated boots or shoes.

INHALATION

Effect: None expected under normal conditions. Sufficient concentrations of fumes or mist may irritate mucous membranes and lungs.

First Aid: Move to fresh air. If necessary, aid in breathing and get immediate medical attention.

Protection: None required for normal conditions. Use an organic vapor/mist respirator in instances of heavy mist or vapors.

INGESTION

Effect: If swallowed material may irritate mouth and gastrointestinal tract. Toxicity has not been determined.

REACTIVITY DATA

Stability: Stable

Hazardous Polymerization: Will NOT occur.

Incompatibilities:	Avoid contact will oxidizers of organic material.
Hazardous Decomposition Products:	Major amounts of oxides of carbon, as well as other unidentified organic compounds.

SPILL, LEAK, AND DISPOSAL PROCEDURES

Spills and Leaks:	Contain spill and remove by mechanical means. Use absorbent material or pads on remaining material or on small spills. Advise authorities if material has entered or may enter waterways or sewer drains.
Waste Disposal:	Dispose of according to local, state, and federal regulations.

SPECIAL PROTECTION INFORMATION

Respiratory Protection:	No respiratory protection is normally required. Use a NIOSH/MSHA approved organic vapor/mist respirator in instances of heavy mist or vapors.
Protective Gloves:	Use rubber or other chemical resistant gloves.
Eye Protection:	Use safety glasses and/or goggles.
Other Protective Equipment:	Safety shower, eye bath, and as needed to prevent skin contact.

STORAGE AND SPECIAL PRECAUTIONS

Storage Precautions:	Material is stable on storing. Overheating may produce smoke or fumes. Do not store near open flame or sources of extreme heat.
Other Precautions:	Wash contaminated clothing before wearing. Do not wear contaminated shoes or boots.

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MATERIAL SAFETY DATA SHEET

Manufacturer

ArrMaz Custom Chemicals, Inc

621 Snively Avenue
Winter Haven, Fl 33880

Emergency Phone Number
863-293-7884

PRODUCT INFORMATION

Trade Name:	Dustrol 3670	
Chemical Family:	Hydrocarbon	
Composition:	Complex mixture of hydrocarbons with a carbon number predominantly over C-20.	
HMIS RATING:	Health Hazard	1 Slight
	Flammability Hazard	1 Slight
	Reactivity Hazard	0 Minimal
D.O.T. Shipping Classification:	Not Regulated	

PHYSICAL DATA

Boiling Point (⌢F):	> 400⌢F
Solubility in Water:	Negligible
Vapor Pressure (mmHg at 25°⌢C):	< 1
Vapor Density (Air = 1):	> 10
Appearance:	Brown liquid
Odor:	Typical petroleum hydrocarbon
Specific Gravity (at 140⌢F):	0.95 ⟨ 0.01

FIRE EXPLOSION

Flash Point (PM Closed Cup ⌢F):	> 300⌢F
Extinguishing Media:	Agents approved for Class B fires (CO2, foam, steam, halogenated agents, dry chemical, etc.) or water fog.
Special Fire Fighting Procedures:	Self contained breathing apparatus and protective clothing should be worn in fighting fires involving chemicals. Water spray may be used to cool exposed containers.

HEALTH HAZARD INFORMATION

EYE

Effect: No significant irritation expected.

First Aid: Flush eyes with water for at least 15 minutes. Contact a physician.

Protection: Wear safety glasses or goggles.

SKIN

Effect: Can cause skin irritation on prolonged or repeated contact.

First Aid: Wash exposed area thoroughly with soap and water.

Protection: Exercise good hygiene and normal safety practices. Remove contaminated shoes or clothing immediately, wash before reuse.

INHALATION

Effect: None expected under normal conditions of use.

First Aid: None expected. Remove victim from area and seek medical attention if needed.

Protection: None required under normal conditions of use. Use a respirator in areas where misting occurs or vapor concentrations are excessive.

INGESTION

Effect: Expected to be relatively nontoxic.

First Aid: If irritation of the digestive tract develops and persists, seek medical attention.

REACTIVITY DATA

Stability: Stable

Hazardous Polymerization: Will NOT occur.

Incompatibilities: Do not expose to the action of strong oxidizers of organic material.

Hazardous Decomposition Products: Thermal decomposition or burning may produce major amounts of oxides of carbon as well as unidentified organic compounds.

SPILL, LEAK, AND DISPOSAL PROCEDURES

Spills and Leaks: Treat as an oil spill. Contain spill and remove by mechanical means. Use absorbent material or pads on remaining material or on small spills. Report spill as required to appropriate authorities. U.S. Coast Guard regulations require immediate reporting of spills that could reach any waterway including intermittent dry creeks. Report spill to Coast Guard (800) 424-8802. In case of accident or road spill notify Chemtrec, (800) 424-9300.

Waste Disposal: Dispose of waste at an appropriate waste disposal facility in accordance with current applicable laws and regulations, and product characteristics at time of Disposal. No RCRA waste number assigned.

CERCLA RQ: NONE

SPECIAL PROTECTION INFORMATION

Respiratory Protection: No respiratory protection is normally required. However, NIOSH/MSHA approved respirator for dust, mist and fumes should be used in areas where misting occurs or vapor concentrations are excessive. May contain trace levels of hydrogen sulfide. Concentrations are expected to be less than 1.0 ppm.

	OSHA PEL (8 hr TWA)	ACGIH TLV (8 hr TWA)
Mineral Oil Mist	5 mg/m^3	5 mg/m^3; 10 mg/m^3 STEL
Hydrogen Sulfide	20 ppm, ceiling	10 ppm; 15 ppm STEL

Protective Gloves: Use solvent resistant gloves.

Eye Protection: Use safety glasses or goggles.

Other Protective Equipment: Eye wash and safety shower should be easily accessible.

STORAGE AND SPECIAL PRECAUTIONS

Storage Precautions: Material is stable on storing. Do not store near open flame or sources of extreme heat.

Other Precautions: Wash contaminated clothes before wearing. Do not wear contaminated shoes or boots. Hydrogen sulfide may be emitted from heated DUSTROL and may accumulate in the vapor spaces of storage tanks, transportation vessels and other confined spaces. Prolonged breathing (greater than 1 hour) of hydrogen sulfide concentrations around 50 ppm can produce eye and respiratory tract irritation and at high concentrations (300 ppm) it is considered immediately dangerous to life and health. Since the sense of smell becomes rapidly insensitive to hydrogen sulfide, odor can not be relied upon as an indicator of concentration. Check the hydrogen sulfide concentration before entering any confined space used for DUSTROL storage or transportation.

TOXICOLOGICAL INFORMATION

Specific toxicity tests have not been conducted on this product. Evaluations are based on information from similar products, information from ingredient suppliers, technical literature and professional experience. This material is expected to be relatively non-toxic to animals, plants or fish.

Th International Agency for Research on Cancer (IARC) has found evidence for the carcinogenicity of *certain* mineral oils. However, the petroleum hydrocarbons in this formulation DO NOT carry this warning.

Some polycyclic aromatic hydrocarbons (PAH) have been shown to cause cancer and high levels of these compounds in certain mineral oils are most closely associated with their carcinogenic risk. This formulation may contain trace or detectable levels of PAH. However, the PAH levels in this formulation are below the concentrations established by CFR 1910.1200 for labeling as a carcinogen.

Based on the above information, this DUSTROL formulation is considered to be non-carcinogenic.

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MATERIAL SAFETY DATA SHEET

Manufacturer

ArrMaz Custom Chemicals, Inc

621 Snively Avenue
Winter Haven, Fl 33880

Emergency Phone Number
863-293-7884

PRODUCT INFORMATION

Trade Name:	Dustrol 3015W [Patent Pending]	
Chemical Family:	Hydrocarbon	
Composition:	Complex mixture of hydrocarbons with a carbon number predominantly over C-20.	
HMIS RATING:	Health Hazard	1 Slight
	Flammability Hazard	1 Slight
	Reactivity Hazard	0 Minimal
D.O.T. Shipping Classification:	Not Regulated	

PHYSICAL DATA

Boiling Point (°F):	> 400
Solubility in Water:	Negligible
Vapor Pressure (mmHG @ 25°C):	< 1
Vapor Density (Air = 1):	> 10
Appearance:	Brown liquid
Odor:	Typical petroleum hydrocarbon
Specific Gravity (@ 140°F):	0.95 ± 0.01

FIRE EXPLOSION

Flash Point (PM Closed Cup °F):	> 300
Extinguishing Media:	Agents approved for Class B fires (CO2, foam, steam, halogenated agents, dry chemical, etc.) or water fog.

Special Fire Fighting Procedures: Self contained breathing apparatus and protective clothing should be worn in fighting fires involving chemicals. Water spray may be used to cool exposed containers.

HEALTH HAZARD INFORMATION

EYE

Effect: No significant irritation expected.

First Aid: Flush eyes with water for at least 15 minutes. Contact a physician.

Protection: Wear safety glasses or goggles.

SKIN

Effect: Can cause skin irritation on prolonged or repeated contact.

First Aid: Wash exposed area thoroughly with soap and water.

Protection: Exercise good hygiene and normal safety practices. Remove contaminated shoes or clothing immediately, wash before reuse.

INHALATION

Effect: None expected under normal conditions of use.

First Aid: None expected. Remove victim from area and seek medical attention if needed.

Protection: None required under normal conditions of use. Use a respirator in areas where misting occurs or vapor concentrations are excessive.

INGESTION

Effect: Expected to be relatively nontoxic.

First Aid: If irritation of the digestive tract develops and persists, seek medical attention.

REACTIVITY DATA

Stability: Stable

Hazardous Polymerization: Will NOT occur.

Incompatibilities: Do not expose to the action of strong oxidizers of organic material.

Hazardous Decomposition Products: Thermal decomposition or burning may produce major amounts of oxides of carbon as well as unidentified organic compounds.

SPILL, LEAK, AND DISPOSAL PROCEDURES

Spills and Leaks: Treat as an oil spill. Contain spill and remove by mechanical means. Use absorbent material or pads on remaining material or on small spills. Report spill as required to appropriate authorities. U.S. Coast Guard regulations require immediate reporting of spills that could reach any waterway including intermittent dry creeks. Report spill to Coast Guard (800) 424-8802. In case of accident or road spill notify Chemtrec, (800) 424-9300.

Waste Disposal: Dispose of waste at an appropriate waste disposal facility in accordance with current applicable laws and regulations, and product characteristics at time of Disposal. No RCRA waste number assigned.

CERCLA RQ: NONE

SPECIAL PROTECTION INFORMATION

Respiratory Protection: No respiratory protection is normally required. However, NIOSH/MSHA approved respirator for dust, mist and fumes should be used in areas where misting occurs or vapor concentrations are excessive. May contain trace levels of hydrogen sulfide. Concentrations are expected to be less than 1.0 ppm.

	OSHA PEL (8 hr TWA)	ACGIH TLV (8 hr TWA)
Mineral Oil Mist	5 mg/m^3	5 mg/m^3; 10 mg/m^3 STEL
Hydrogen Sulfide	20 ppm, ceiling	10 ppm; 15 ppm STEL

Protective Gloves: Use solvent resistant gloves.

Eye Protection: Use safety glasses or goggles.

Other Protective Equipment: Eye wash and safety shower should be easily accessible.

STORAGE AND SPECIAL PRECAUTIONS

Storage Precautions: Material is stable on storing. Do not store near open flame or sources of extreme heat.

Other Precautions: Wash contaminated clothes before wearing. Do not wear contaminated shoes or boots. Hydrogen sulfide may be emitted from heated DUSTROL and may accumulate in the vapor spaces of storage tanks, transportation vessels and other confined spaces. Prolonged breathing (greater than 1 hour) of hydrogen sulfide concentrations around 50 ppm can produce eye and respiratory tract irritation and at high concentrations (300 ppm) it is considered immediately dangerous to life and health. Since the sense of smell becomes rapidly insensitive to hydrogen sulfide, odor can not be relied upon as an indicator of concentration. Check the hydrogen sulfide concentration before entering any confined space used for DUSTROL storage or transportation.

TOXICOLOGICAL INFORMATION

Specific toxicity tests have not been conducted on this product. Evaluations are based on information from similar products, information from ingredient suppliers, technical literature and professional experience. This material is expected to be relatively non-toxic to animals, plants or fish.

Th International Agency for Research on Cancer (IARC) has found evidence for the carcinogenicity of *certain* mineral oils. However, the petroleum hydrocarbons in this formulation DO NOT carry this warning.

Some polycyclic aromatic hydrocarbons (PAH) have been shown to cause cancer and high levels of these compounds in certain mineral oils are most closely associated with their carcinogenic risk. This formulation may contain trace or detectable levels of PAH. However, the PAH levels in this formulation are below the concentrations established by CFR 1910.1200 for labeling as a carcinogen.

Based on the above information, this DUSTROL formulation is considered to be non-carcinogenic.

DISCLAIMER OF EXPRESSED OR IMPLIED WARRANTS

This material safety data sheet and the information it contains is offered to you in good faith as accurate. We have reviewed any information contained in this data sheet which we received from sources outside our company. We believe that information to be correct but can not guarantee its accuracy or completeness. Health and safety precautions in this data sheet may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. No statement made in this data sheet shall be construed as a permission or recommendation for the use of any product in a manner that might infringe existing patents. No warranty is made, either expressed or implied.

Note: Patent pending formulation.

ATTACHMENT D

REVISED CAM PLANS

ATTACHMENT CR-EU6-IV2
COMPLIANCE ASSURANCE MONITORING PLAN:
PM EMISSIONS FROM MAP PLANT

I. Background

A. Emissions Unit

Description:	No. 3 MAP Plant, No. 4 MAP Plant, South Cooler
EU ID:	022, 023, 024
Facility:	Cargill Fertilizer, Inc. Riverview, FL

B. Applicable Regulation, Emission Limits, and Monitoring Requirements

Regulations:	Permit No. 0570008-014-AV
Emissions Limits:	
Particulate Matter:	0.30 lb/ton product, 10.0 lb/hr, and 42.50 TPY for the Nos. 3 and 4 MAP Plants combined; 0.04 gr/dscf (cyclone/venturi scrubber), 0.30 lb/ton product, 12.0 lb/hr, and 51.00 TPY from the South Cooler [Rules 62-296.403(2), 62-296.705(2)(a), F.A.C.; Permit No. AC29-261247]
Fluorides:	2.0 lb/hr and 8.5 TPY from the Nos. 3 and 4 MAP Plants combined; 1.0 lb/hr and 4.25 TPY from the South Cooler [Rules 62-296.403(2), 62-296.705(2)(a), F.A.C.; Permit No. AC29-261247]
Monitoring Requirements:	Currently required to monitor scrubber liquid flow, gas pressure drop across the ARCO & Chemco scrubber system combined, gas pressure drop across the Cooler scrubber system, and mole ratio parameters for the Chemco scrubbers.

C. Control Technology

PM and F emissions generated from the granulating, screening, and milling operations are controlled by 2 cyclonic spray scrubbers. The emissions generated from the cooling operation are controlled by a wet venturi scrubber.

II. Monitoring Approach

		Indicator No. 1	Indicator No. 2	Indicator No. 3
I.	Indicator	Pressure drop across each scrubber.	Scrubber liquid flow rate to each scrubber.	Fan amperage to each scrubber.
	A. Measurement Approach	Each pressure drop is monitored with a differential pressure transmitter.	Each liquid flow rate is measured using a magnetic flow transmitter.	Each fan amperage is measured using an ammeter.
II.	Indicator Range	An excursion is defined as operation at a daily average pressure drop below the minimum pressure drops in Table D-1. Excursions trigger an inspection, corrective action, and a reporting requirement.	An excursion is defined as operation at a daily average liquid flow outside of the ranges in Table D-1. Excursions trigger an inspection, corrective action, and a reporting requirement.	An excursion is defined as operation at a daily average fan amperage outside of the ranges in Table D-1. Excursions trigger an inspection, corrective action, and a reporting requirement.
III.	Performance Criteria			
	A. Data Representativeness	The minimum accuracy of the device is ±5%.	The minimum accuracy of the device is ±5%.	The minimum accuracy of the device is ±5%.
	B. Verification of Operation Status	NA	NA	NA
	C. QA/QC Practices and Citeria	Each differential pressure transmitter is calibrated at least annually.	Each magnetic flow transmitter is calibrated at least annually.	Each ammeter is calibrated at least annually.
	D. Monitoring Frequency	Each pressure drop is monitored continuously.	Each liquid flow rate is monitored continuously.	Each fan amperage is monitored continuously.
	E. Data Collection Procedures	Scrubber pressure drop is recorded every 15-minutes. Daily averages are computed.	Scrubber liquid flow rate is recorded every 15-minutes. Daily averages are computed.	Fan amperage is recorded every 15-minutes. Daily averages are computed.
	F. Averaging Period	Daily average based on 15-minute readings.	Daily average based on 15-minute readings.	Daily average based on 15-minute readings.

III. Justification

A. Background

Cargill operates a MAP Plant (Nos. 3 and 4 MAP Plants and South Cooler). The MAP Plant has federally enforceable limits for PM and F. The MAP Plant uses control devices to meet these emissions limits and has uncontrolled PM emissions greater than the major source threshold. Therefore, a CAM plan is required for this source for PM. However, since uncontrolled F emissions are less than the major source threshold, a CAM plan is not required for this source for F. Refer to Attachment A for emission calculations.

B. Rationale for Selection of Performance Indicators

The performance indicators selected are liquid flow rate and total gas pressure drop. To achieve the required emission reduction, a minimum liquid flow rate must be supplied to remove the given amount of PM in the gas stream. The liquid-to-gas (L/G) ratio is a key operating parameter of the scrubber. If the L/G ratio decreases below the minimum, PM removal will not occur. The minimum liquid flow rate required to maintain the proper L/G ratio at the maximum gas flow and PM loading through the scrubber are determined during compliance testing. Maintaining this minimum liquid flow, even during periods of reduced gas flow, will ensure the required L/G ratio is achieved at all times.

Pressure drop was selected as a performance indicator because it indicates the level of impaction energy in the throat of the venturi scrubber. The energy in the throat indicates PM removal efficiency. If pressure drop is too low, proper PM removal will not occur.

Fan amps provide a good indication of proper operation and maintenance of the pollution control equipment. Fan amps provide an accurate indication of air movement through the evacuation system and can be a reliable indicator of system upsets. Air flow outside normal ranges could indicate short-circuiting of air through the scrubbers, excess tramp air being drawn into the system, scrubber fouling, or inadequate evacuation of process equipment.

C. Rationale for Selection of Indicator Ranges

The indicator ranges for pressure drop, liquid flow rate, and fan amperage for each scrubber are based on historical compliance testing. A summary of compliance testing performed on the GTSP/DAP Manufacturing Plant that was used to determine the proposed indicator ranges is included as

Attachment CR-EU6-IV2a. An excursion is defined as operation of a daily average pressure drop, liquid flow rate, and fan amperage outside of the indicator ranges. When an excursion occurs, corrective action will be initiated, beginning with an evaluation of the occurrence to determine the action required to correct the situation. All excursions will be documented and reported.

Attachment CR-EU6-IV2a. Historical Compliance Test Results for the MAP Plant, Cargill Riverview

Date	Run No.	Start Time	End Time	Production Rate, TPH (as P2O5)	#3 MAP Chemco Scrubber ΔP, in H2O	#3 MAP Arco Scrubber ΔP, in H2O	#3 MAP Scrubber System ΔP, in H2O	#4 MAP Chemco Scrubber ΔP, in H2O	#4 MAP Arco Scrubber ΔP, in H2O	#4 MAP Scrubber System ΔP, in H2O	Cooler Scrubber ΔP, in H2O
06/06/02	1	8:38	9:40	31.0	19.40	9.90	29.30	11.20	14.10	25.30	19.50
	2	10:41	11:44	31.0	19.50	5.60	25.10	11.30	14.10	25.40	19.30
	3	12:16	13:18	31.0	19.50	9.90	29.40	11.20	14.00	25.20	19.30
05/10/01	1	8:15	9:17	32.8	15.40	16.90	32.30	14.80	16.90	31.70	14.50
	2	9:27	11:02	32.8	14.80	29.00	43.80	14.90	16.80	31.70	14.50
	3	11:18	12:19	32.8	14.30	18.00	32.30	14.80	16.80	31.60	14.40
12/21/00	1	8:48	9:18								
	2	9:57	10:27								
	3	11:05	11:35								
05/18/00	1	8:51	9:55	31.3	19.00	14.00	33.00	10.00	17.00	27.00	13.00
	2	10:22	11:52	33.4	19.50	14.10	33.60	9.70	16.00	25.70	13.00
	3	12:21	13:22	33.4	19.00	14.20	33.20	10.80	16.70	27.50	13.00
04/20/99	1	7:43	8:54	66.8			35.00			35.00	12.00
	2	9:05	10:10	66.8			36.00			35.00	12.00
	3	10:31	11:33	66.8			35.00			35.00	12.00
07/30/98	1	7:49	8:51	69.0			31.00			41.00	12.00
	2	8:56	9:59	69.0			32.00			44.00	12.00
	3	10:01	11:04	69.0			30.00			42.00	11.00
07/31/97	1	9:36	10:39	35.6	22.00	11.00	33.00	6.00	15.00	21.00	17.00
	2	10:52	11:55	35.6	21.00	12.00	33.00	6.00	15.00	21.00	16.00
	3	12:10	13:12	35.6	21.00	12.00	33.00	5.00	15.00	20.00	13.00

Attachment CR-EU6-IV2a. Historical Compliance Test Results for the MAP Plant, Cargill Riverview

Date	Run No.	#3 MAP Chemco Scrubber Recycle Flow, gpm	#3 MAP Chemco Scrubber Make-Up Flow, gpm	#3 MAP Arco Scrubber Recycle Flow, gpm	#3 MAP Arco Scrubber Make-Up Flow, gpm	#4 MAP Chemco Scrubber Recycle Flow, gpm	#4 MAP Chemco Scrubber Make-Up Flow, gpm	#4 MAP Arco Scrubber Recycle Flow, gpm	#4 MAP Arco Scrubber Make-Up Flow, gpm	Cooler Scrubber Flow, gpm	Dry Standard Stack Gas Flow Rate, dscfm
06/06/02	1	1049.8	11.8	242.5	63.7	1394.2	11.7	249.7	50.3	970.9	94,635
	2	1049.5	12.0	242.1	63.7	1417.5	13.0	250.1	48.7	969.7	95,669
	3	1050.7	12.0	242.2	63.7	1422.8	13.0	250.2	51.2	969.9	99,363
05/10/01	1	1080.6	10.0	283.6	39.0	1035.8	13.3	252.2	34.4	882.5	107,245
	2	1035.5	12.1	283.8	45.8	1046.9	12.6	251.7	37.6	879.9	104,822
	3	1070.6	12.0	283.5	40.1	1049.3	12.5	252.0	35.7	879.8	106,262
12/21/00	1										115,293
	2										113,112
	3										112,489
05/18/00	1	1080.0	22.0	319.0	31.0	1224.0	22.0	242.0	31.0	811.0	97,440
	2	1083.0	22.0	319.0	32.0	1212.0	22.0	242.0	31.0	807.0	97,677
	3	1083.0	22.0	319.0	31.0	1217.0	22.0	242.0	31.0	805.0	99,455
04/20/99	1										115,925
	2										114,475
	3										109,837
07/30/98	1	1187.0	30.0	305.0	42.0	1191.0	14.0	263.0	22.0	745.0	104,082
	2	1186.0	32.0	305.0	25.0	1192.0	14.0	262.0	23.0	756.0	106,062
	3	1181.0	32.0	305.0	30.0	1193.0	13.0	262.0	20.0	726.0	106,357
07/31/97	1	1276.0	12.0	298.0	26.0	1063.0	8.0	302.0	21.0	752.0	108,490
	2	1280.0	11.0	300.0	27.0	1062.0	7.5	302.0	25.0	737.0	103,057
	3	1291.0	11.0	302.0	26.0	1086.0	7.5	302.0	22.0	752.0	99,376

PM 3+4 Combined 10 lb/hr 42.5 TPY
cooler 12 lb/hr

Attachment CR-EU6-IV2a. Historical Compliance Test Results for the MAP Plant, Cargill Riverview

Date	Run No.	#3 MAP Scrubber Fan, Amps	#4 MAP Scrubber Fan, Amps	Cooler Scrubber Fan, Amps	Fluoride Emissions, lb/hr	Particulate Emissions, lb/hr	Ammonia Emissions, lb/hr	MACT Allowable Fluorides Limit, lb/ton P2O5	Actual Fluorides Emissions, lb/ton P2O5	Actual Particulate Emissions, lb/ton P2O5
06/06/02	1	61.7	75.8	90.3	0.550	3.400	64.690		0.0177	0.1097
	2	61.8	76.0	90.7	0.680	4.000	214.500		0.0219	0.1290
	3	61.6	76.0	90.6	0.460	3.700	209.000		0.0148	0.1194
05/10/01	1	66.9	79.6	86.8	0.286	5.168	161.254		0.0087	0.1575
	2	67.6	81.3	85.1	0.814	2.978	238.773		0.0248	0.0908
	3	67.4	81.3	85.4	0.411	2.995	35.358		0.0125	0.0913
12/21/00	1						18.970			
	2						36.350			
	3						99.330			
05/18/00	1	61.0	77.0	82.0	0.720	2.200	2.910		0.0230	0.0703
	2	60.0	76.0	82.0	0.770	2.900	6.050		0.0231	0.0868
	3	60.0	77.0	82.0	0.730	1.000	14.450		0.0219	0.0299
04/20/99	1	79.0	71.0	85.0	0.698	1.918	5.329		0.0104	0.0287
	2	79.0	71.0	85.0	0.458	1.153	5.764		0.0069	0.0173
	3	79.0	71.0	85.0	0.272	2.004	5.928		0.0041	0.0300
07/30/98	1	66.0	73.0	83.0	0.237	2.578	21.297		0.0034	0.0374
	2	66.0	73.0	82.0	0.175	1.992	17.633		0.0025	0.0289
	3	66.0	72.0	83.0	0.201	1.903	17.678		0.0029	0.0276
07/31/97	1	73.0	70.0	71.0	0.268	0.940	31.610		0.0075	0.0264
	2	73.0	70.0	71.0	0.149	1.143	23.998		0.0042	0.0321
	3	73.0	70.0	67.0	0.124	1.546	20.322		0.0035	0.0434

Attachment CR-EU6-IV2a. Historical Compliance Test Results for the MAP Plant, Cargill Riverview

Date	Run No.	Chemco Scrubbers ΔP, in H2O	Arco Scrubbers ΔP, in H2O	Scrubber System ΔP, in H2O	Cooler Venturi ΔP, in H2O	System ΔP, in H2O	System Fan, Amps	Chemco Scrubbers Flow gpm	Arco Scrubbers Flow gpm	Cooler Venturi Flow gpm	System Flow gpm
06/06/02	1	30.6	24.00	54.60	19.50	74.10	227.8	2444.0	492.2	970.9	3907.1
	2	30.8	19.70	50.50	19.30	69.80	228.5	2467.0	492.2	969.7	3928.9
	3	30.7	23.90	54.60	19.30	73.90	228.2	2473.5	492.4	969.9	3935.8
05/10/01	1	30.2	33.80	64.00	14.50	78.50	233.3	2116.4	535.8	882.5	3534.7
	2	29.7	45.80	75.50	14.50	90.00	234.0	2082.4	535.5	879.9	3497.8
	3	29.1	34.80	63.90	14.40	78.30	234.1	2119.9	535.5	879.8	3535.2
12/21/00	1										
	2										
	3										
05/18/00	1	29.0	31.00	60.00	13.00	73.00	220.0	2304.0	561.0	811.0	3676.0
	2	29.2	30.10	59.30	13.00	72.30	218.0	2295.0	561.0	807.0	3663.0
	3	29.8	30.90	60.70	13.00	73.70	219.0	2300.0	561.0	805.0	3666.0
04/20/99	1			70.00	12.00	82.00	235.0				
	2			71.00	12.00	83.00	235.0				
	3			70.00	12.00	82.00	235.0				
07/30/98	1			72.00	12.00	84.00	222.0	2378.0	568.0	745.0	3691.0
	2			76.00	12.00	88.00	221.0	2378.0	567.0	756.0	3701.0
	3			72.00	11.00	83.00	221.0	2374.0	567.0	726.0	3667.0
07/31/97	1	28.0	26.00	54.00	17.00	71.00	214.0	2339.0	600.0	752.0	3691.0
	2	27.0	27.00	54.00	16.00	70.00	214.0	2342.0	602.0	737.0	3681.0
	3	26.0	27.00	53.00	13.00	66.00	210.0	2377.0	604.0	752.0	3733.0

Table D-1. Summary of Proposed Indicator Ranges, Cargill Riverview

Emission Unit/Scrubber	Pressure Drop (inches H_2O)	Liquid Flow Rate (gpm)		Fan Amperage (amps)	
	Minimum	Minimum	Maximum	Minimum	Maximum
MAP Plant					
No. 3 Chemco Scrubber	12	840	1,539	N/A	N/A
No. 3 Arco Scrubber	7	194	383	49	74
No. 4 Chemco Scrubber	5	835	1,694	N/A	N/A
No. 4 Arco Scrubber	11	194	362	61	91
Cooler Venturi Scrubber	9	594	1,164	N/A	N/A
System (No. 3, No. 4, and Cooler)	--	--	--	170	282

Notes:
gpm = gallons per minute
All indicator ranges are based on plus or minus 20% during compliance test.

Subsection D. This section addresses the following emissions units.

E.U. ID No.	Brief Description
-022	No. 3 MAP Plant
-023	No. 4 MAP Plant
-024	South Cooler

The two (2) ammonium phosphate granulators and one (1) associated ammonium phosphate cooler are designated as MAP Plants No. 3 and 4 and the South Cooler, respectively. Each MAP Plant is capable of producing a maximum of 34.5 tons per hour of monoammonium phosphate. The operation of the MAP plant(s) includes granulation, screening and recycling. Screened exiting material from MAP Plants No. 3 and 4 is cooled in the South Cooler and transported by a conveyor system to storage.

Particulate matter and fluoride emissions generated from the granulating, screening and milling operations are controlled by two (2) cyclonic spray scrubbers. Design air flow of each scrubber is 35,000 ACFM. The emissions generated from the cooling operation are controlled by a wet venturi scrubber with a design air flow of 56,000 ACFM. The pollutants are discharged from MAP Plants No. 3 and 4 and the South Cooler through a common stack.

{Permitting notes: These emissions units are regulated under NESHAP – 40 CFR 63, Subpart A – General Provisions; 40 CFR 63, Subpart BB – National Emission Standards for Hazardous Air Pollutants From Phosphate Fertilizers Production Plants, Rule 62-296.700, F.A.C., RACT Particulate Matter; Rule 62-296.320, F.A.C., General Pollutant Emission Limiting Standards and Rule 62-296.403, F.A.C., Phosphate Processing. Dust suppression is currently used for reduction of particulate emissions at these emission units. The dust suppressant is used only for improvements in product quality and/or when requested by customers.}

The following conditions apply to the emissions units listed above:

Essential Potential to Emit (PTE) Parameters

D.1. Capacity.

a. The production rate for the MAP Plants No. 3 and 4 combined shall not exceed 69.0 tons per hour (daily average basis).
b. The process/production rate through the South Cooler shall not exceed 69.0 tons per hour (daily average basis).
c. The natural gas usage shall not exceed 2,440 cubic feet per hour for each MAP Plant (monthly average basis).
d. The P_2O_5 input rate for MAP Plants No. 3 and 4 combined shall not exceed 35.88 tons per hour (daily average basis).

[Rule 62-4.160(2), F.A.C. and Rule 62-210.200, F.A.C., Definitions - (PTE), Air Construction Permit AC29-261247]
{Permitting Note: See Conditions D.16 and D.17 regarding the NESHAP requirements for monitoring and recordkeeping of the equivalent P_2O_5 feed rate.}

D.2. Hours of Operations. The hours of operation for these emission units shall not exceed 8,500 hours per year.
[Rule 62-210.200, F.A.C., Definitions - (PTE), Air Construction Permit AC29-261247]

D.3. Fuels. The MAP Plant Nos. 3 and 4 dryers shall be fired by natural gas only.
[Air Construction Permit AC29-261247]

Emission Limitations and Standards

D.4. The permittee shall not exceed the following emission rates:

Emission Unit	Particulate Matter*				Fluorides		
	Grains/DSCF	Pounds per Ton of Product**	Pounds per Hour	Tons per Year	Pounds per Ton of equiv. P_2O_5 Feed	Pounds per hour	Tons per Year
MAP Plants No. 3 and 4 combined	-	0.30	10.0	42.50	0.06	2.0	8.50
South Cooler	0.04***	0.30	12.0	51.00	0.06	1.0	4.25

{Permitting Note: The fluoride emission limit in Condition D.4. of 0.06 lb/ton equivalent P_2O_5 feed per 40 CFR 63.622(a) will go into effect on and after the date the initial performance (compliance) test is completed, which must be no later than

the 40 CFR 63, Subpart BB compliance date, June 10, 2002. The permittee shall comply with the applicable requirements of the NESHAP, 40 CFR 63, Subpart A and BB, see NESHAP Conditions in this subsection as well as NESHAP Common Conditions in Subsection Q.}

*Particulate matter includes PM^{10}
**Note that lbs./hr. limits are less than the product of lbs./ton times tons/hr. per permittee's request.
***The maximum particulate matter emission concentration from the dry cyclone/venturi scrubber.
[Rules 62-296.403(2), 62-296.705(2)(a), F.A.C., Air Construction Permit AC29-261247, 40 CFR 63.622(a)]

D.5. Visible emissions from these emission units shall not exceed 20% opacity.
[Rule 62-296.705(2)(a), F.A.C.]

Test Methods and Procedures

D.6. The permittee shall test the emissions from MAP Plants No. 3 and 4 and the South Cooler for the following pollutants annually, within the period beginning 30 days prior to the last annual test date and ending 30 days after such date:

a. fluorides (F)**
b. particulate matter
c. visible emissions
d. ammonia

***For fluorides only*, starting no later than the compliance date of 40 CFR 63, Subpart BB, June 10, 2002, the permittee shall test annually to demonstrate compliance with the applicable emission standards in Condition D.4.
[Rules 62-297.310(7)(a)4, F.A.C., and Air Construction Permit AC29-261247, 40 CFR 63.626(a)(1) and 63.630(a)]
{Permitting Note: The dates of the last compliance tests are listed below.}

	Test Due Date		
Pollutant	**No. 3 MAP Plant**	**No. 4 MAP Plant**	**South Cooler**
Fluoride	July 14	July 14	July 14
Particulates	July 14	July 14	July 14
Opacity	July 14	July 14	July 14
Ammonia	July 14	July 14	-

D.7. Compliance with the emission limitations of Conditions D.4 and D.5 shall be determined using EPA Methods 1, 2, 4, 5, 9 and 13A or 13B contained in 40 CFR 60, Appendix A, and adopted by reference in Chapter 62-297, F.A.C., while MAP Plants No. 3 and 4 and the South Cooler are operating. *For fluorides only*, starting no later than the compliance date of 40 CFR 63, Subpart BB, June 10, 2002, the permittee shall conduct the performance (compliance) test according to the procedures in 40 CFR 63, Subpart A and BB. The scrubber liquid flow rate, gas pressure drop and mole ratio as specified in

Condition D.8 and D.9 shall be included in the test report. Ammonia emissions shall be determined using a variation of the EPA draft Method, using large impingers, the last impinger dry and a probe with an external design similar to that used in EPA Method 16 or any other test method agreed to by the Department. The actual production rate shall be specified in each test report. Failure to include the actual production rate in the report may invalidate the test.

The total allowable emissions from the common stack serving MAP Plants No. 3 and 4 and the South Cooler shall be the sum of the allowable emissions for each of the sources in operation during the compliance tests.
[40 CFR 63.626(b) and 63.630(a), Air Construction Permit AC29-261247]

Monitoring of Operations

D.8. Condition D.8 is superceded by the applicable monitoring, reporting, recordkeeping, and excess emissions reporting requirements of 40 CFR 63, Subpart BB (See NESHAP Conditions D.13 through D.21) and 40 CFR 63, Subpart A (See Subsection Q. NESHAP Common Conditions) on or after the date that the initial performance (compliance) test is completed, but no later than the compliance date of 40 CFR 63, Subpart BB, June 10, 2002. Control-equipment operation parameters are shown on Table 2-1, which may be revised upon request form the permittee and written approval form the Department, in accordance with procedures described by NESHAP Condition D.19.

In order to provide reasonable assurance that the pollution control equipment is operating properly, the permittee shall comply with the minimum pressure drops and water flow rates specified in the attached table of control device parameters for the MAP Plant:
[Rule 62-213.440(1), F.A.C.]

Pollution Control Equipment	Parameter	Minimum Limitation	Units	Averaging Time
#3 MAP Arco Scrubber	Flow (recirculation)	230	GPM	24 hr
	Flow (make-up)	20	GPM	24 hr
#4 MAP Arco Scrubber	Flow (recirculation)	230	GPM	24 hr
	Flow (make-up)	20	GPM	24 hr
South Cooler Scrubber	Flow (recirculation)	630	GPM	24 hr
	Flow (make-up)	90	GPM	24 hr
	Pressure Drop	10	"H_2O	24 hr
#3 MAP Arco & Chemco Combined	Pressure Drop	18	"H_2O	24 hr
#4 MAP Arco & Chemco Combined	Pressure Drop	18	"H_2O	24 hr
#3 MAP Chemco	Flow	960	GPM	24 hr
#4 MAP Chemco	Flow	960	GPM	24 hr

D.9. The mole ratio parameters for the CHEMCO scrubbers associated with these plants shall not exceed 1.60 (1.10 x 1.45).
[Air Construction permit AC29-261247, 62-4.070(3), F.A.C.]

Recordkeeping and Reporting Requirements

D.10. In order to comply with Conditions D.1, D.2, D.8, and D.9, the permittee shall maintain daily records showing production unit(s) No. 3 and 4 operating time, MAP production rate(s), phosphoric acid (P_2O_5) consumption, natural gas usage for No. 3 and No. 4 MAP Plant, scrubber liquid flow(s), gas pressure drop across the ARCO & Chemco scrubber system combined for production unit(s) No. 3 and 4, gas pressure drop across the Cooler scrubber system, and mole ratio parameters for the Chemco scrubbers. The permittee shall record the scrubber operating parameters at least once per eight hour shift that the unit(s) operates.
[Rule 62-4.070(4), F.A.C., Air Construction Permit AC29-261247]
{Permitting Note: See the applicable monitoring, reporting, recordkeeping, and excess emissions reporting requirements of 40 CFR 63, Subpart BB (See NESHAP Conditions D.13 through D.21) and 40 CFR 63, Subpart A (See Subsection Q. NESHAP Common Conditions) on or after the date that the initial performance (compliance) test is completed, but no later than the compliance date of 40 CFR 63, Subpart BB, June 10, 2002.}

Operation and Maintenance Plan

D.11. The following Operation and Maintenance (O & M) Plan for Particulate Matter Control submitted by the applicant pursuant to Rule 62-296.700(6), F.A.C., shall be followed:

Control Equipment Data

Arco Scrubber (MAP Plants No. 3 & 4)

Manufacturer:	Automotive Rubber Company
Model Name/Number:	WM-350-L
Type:	Cyclonic Spray Scrubber (two)
Design Liquid Gas Ratio:	167 ACF/gallon
Efficiency Rating: (at design capacity)	95%
Pressure Drop:	3 to 17 " w.g.
Scrubbing Liquor Composition:	Pondwater
Operating Parameters:	find in permit

Chemco Scrubber (MAP Plants No. 3 & 4)

Manufacturer:	Chemical Company
Model Name/Number:	Unknown
Type:	Venturi (two)
Design Gas Flow Rate:	35,000 ACFM
Design Liquid to Gas Ratio:	50 ACF/gallon

Efficiency Rating: (at design capacity)	95%
Design Pressure Drop:	6 to 26 " w.g.
Scrubbing Liquor Composition:	Phosphoric Acid
Operating Parameters:	find in permit

D.R. Technology Scrubber (South Cooler)

Manufacturer:	D.R. Technology
Model Name/Number:	N/A
Type:	Wetted wall venturi with cyclonic mist eliminator
Design Liquid to Gas Ratio:	50 ACF/gal
Design Gas Flow Rate:	56,000 ACFM
Efficiency Rate: (at design capacity)	98%
Design Pressure Drop:	9 to 25" w.g.
Scrubbing Liquor Composition:	Pondwater
Operating Parameters:	find in permit

Process Data

Production Rate:	69 TPH MAP combined
Raw Material Input:	35.9 TPH P_2O_5 combined
	5.1 TPH NH_3 combined
Fuel Usage:	4.88 MMBtu/hr combined

Inspection and Maintenance Schedule

Scrubber operating parameters recorded as specified in permit conditions. The of the evacuation system, scrubber pumps and piping, fans, and scrubbers shall be assessed every six months.

Recordkeeping Schedule

Records of inspections, maintenance, and performance parameter data shall be retained and be made available to the Department and the Environmental Protection Commission of Hillsborough County for inspection upon request (Rule 62-296.700(e), F.A.C.).
[Air Construction permit AC29-261247]

D.12. Not Federally Enforceable. The permittee shall comply with all "abnormal events" requirements associated with these sources on a consistent basis and all abnormal events shall be reported to the Air Management Division of the Environmental Protection Commission of Hillsborough County within thirty (30) minutes of each event. "Abnormal events" would be defined as any of the following:

1. Operation of the sources without liquid on the tailgas scrubbers for fifteen (15) minutes or more:

2. Operation of the sources for fifteen (15) minutes or more when the pH of the primary scrubber liquor is seven (7) or greater when the scrubbing medium is pond water or, when a nitrogen/phosphorous mole ratio greater than 1.6 when the scrubbing medium is phosphoric acid:
3. Any pipeline or vessel leak associated with the sources which results in release of uncontrolled ammonia emissions to the outside air in quantities in excess of the SARA Section 304 (Community Right-to-Know Reportable Quantity).
4. Ammonia emissions in excess of 200.0 pounds/hour during annual testing (ref. Specific Conditions 6 & 7). The thirty minute notification requirement above is not applicable to this item but the test report shall address actions taken to mitigate this situation.

[Air Construction Permit AC29-261247]

NESHAP Conditions

D.13. The permittee shall achieve compliance with the requirements of 40 CFR 63, Subpart BB no later than June 10, 2002.
[40 CFR 63.630(a)]

D.14. This emissions unit is subject to specific requirements in the 40 CFR 63, Subpart A – General Provisions, which are located in Subsection Q. NESHAP Common Conditions.
[40 CFR 63, Appendix A of Subpart BB]

D.15. On or after the date on which the initial performance (compliance) test is completed, the permittee must maintain three-hour averages of the pressure drop across each scrubber and of the flow rate of the scrubbing liquid to each scrubber within the allowable ranges established pursuant the requirements of 40 CFR 63.625(f)(1) or 63.625(f)(2), as indicated in Condition D.19.
[40 CFR 63.624]

D.16. The permittee shall install, calibrate, maintain, and operate a monitoring system which can be used to determine and permanently record the mass flow of phosphorus-bearing feed material to the process. The monitoring system shall have an accuracy of $\pm$ 5 % over its operating range.
[40 CFR 63.625(a)]

D.17. The permittee shall maintain a daily record of equivalent P_2O_5 feed by first determining the total mass rate of phosphorus bearing feed using a monitoring system for measuring mass flowrate which meets the requirements of 40 CFR 63.625(b) and then by proceeding according to 40 CFR 63.626(c)(3).
[40 CFR 63.625(b)]

D.18. The permittee shall install, calibrate, maintain, and operate the following monitoring systems:

A. Pressure Drop. A monitoring system which continuously measures and permanently records the pressure drop across each scrubber in the process scrubbing system in 15-minute block averages. The monitoring system shall be certified by the manufacturer to have an accuracy of ± 5% over its operating range.

B. Scrubbing Liquid Flow Rate. A monitoring system which continuously measures and permanently records the flow rate of the scrubbing liquid to each scrubber in the process scrubbing system in 15-minute block averages. The monitoring system shall be certified by the manufacturer to have an accuracy of ±5 % over its operating range.

[40 CFR 63.625(c)]

D.19. Following the date on which the performance (compliance) test is completed per 40 CFR 62.626, the permittee must establish allowable ranges for operating parameters using the methodology of either of the following:

A. The allowable range for the daily averages of the pressure drop across each scrubber and the flow rate of the scrubbing liquid to each scrubber in the process scrubbing system is ±20% of the baseline average value determined per 40 CFR 62.626(c)(4). The baseline average values used for compliance shall be the arithmetic averages of the three runs during the most recent performance (compliance) test. The permittee must notify the Department of the baseline average value and each time that the baseline value is changed as a result of the most recent performance test.

Or

B. The permittee can establish the allowable ranges of baseline average values based upon baseline average values recorded during previous performance test or by using the results of a performance test conducted specifically to determine the baseline average values. The permittee shall certify that the control devices and processes have not been modified prior to testing upon which the data used to establish the allowable ranges were obtained. The arithmetic averages of the three runs during the performance test shall be used as the baseline average for the average pressure drop and the average scrubber liquid flow rate. The permittee shall establish and notify the Department for approval, allowable ranges of baseline average values for the pressure drop across and the flow rate of the scrubbing liquid to each scrubber in the process scrubbing system for the purpose of compliance with 40 CFR 63, Subpart BB. Until changes to allowable ranges of the baseline average values are approved by the Department, the allowable ranges shall be based upon the range of baseline average values proposed for approval. The new baseline average value for either of the above shall be effective on the date following the performance test.

[40 CFR 63.625(f); 40 CFR 63.626(c)(4)]

D.20. The permittee shall determine compliance with the total fluorides standard as required in 40 CFR 63.626(c), based on the equivalent P_2O_5 computed as indicated in 40 CFR 63.626(c)(3).
[40 CFR 63.626(c)]

D.21. The permittee must comply with the notification requirements in 40 CFR 63.9 and the reporting and recordkeeping requirements in 40 CFR 63.10. The reporting requirements in 40 CFR 63.10 includes the initial and annual performance test reports, excess emissions reports, and the summary report.
[40 CFR 63.627]

December 22, 2003

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. E. O. Morris, Vice President
Cargill Fertilizer, Inc.
8813 U.S. Highway 41 South
Riverview, FL 33569

Re: Title V Permit Renewal DEP File No. 0570008-045-AV
Tampa Plant

Dear Mr. Morris:

On October 28, 2003 the Department received your application for the renewal of the Title V Permit for the Cargill Fertilizer, Inc. Tampa Plant. This application is incomplete. The following information is needed in order to process the application:

1. Facility Regulatory Classifications.

a. Please explain why the box for item no. 3 "Title V Source" was not checked.

b. Please provide reasonable assurance that this facility is not a Major Source of Hazardous Air Pollutants (HAPs).

2. Scope of Application. Please explain why emission unit 041, Sodium Silicofluoride/Sodium Fluoride Dryer; emission unit 054, Sodium Silicofluoride/Sodium Fluoride Plant Handling; and emission unit 103, AFI Plant #2; were omitted from the application.

3. List of Pollutants Emitted by Facility. Please explain why the Pollutant Classification for Hydrogen Fluoride (H107) was listed as "A" for "Major pollutant" but the box for Facility Regulatory Classification no. 6, "Major Source of Hazardous Air Pollutants (HAPs) was not checked.

4. Facility Plot Plan. Please provide a facility plot plan with the emission points identified.

5. Attachment CR-FI-CV1, List of Proposed Insignificant Activities. Please provide an edited list that has eliminated activities or emission units that are not actually found at the Tampa Plant, such as Blacksmith forges.

6. Fuel Analyses. There are attachments for emissions units throughout the application that are titled "Fuel Analysis." For each of these fuels, please provide a copy of an actual recent lab analysis report that states the results as well as when the fuel was sampled and analyzed, and by whom. If a vendor's contract specification is being relied upon for a fuel analysis, please submit a copy of the vendor's contract specification.

7. Dust Suppression by Chemical Stabilizers. Please submit the Material Safety Data Sheets for any dust suppressants used at the facility.

8. Nos. 3 and 4 MAP Plant and South Cooler, Section 6, page 14, Emissions Unit Description and Status. Please verify that the correct box has been checked. It seems that it would be more appropriate to check the second box (..a group of process or production units and activities which has at least one definable emission point...).

9. Molten Sulfur Handling, Section 11, page 14, No. 11-Emissions Unit Comment.
a. Our database currently has emissions units 064, Tank 2, and 065, Tank 3, listed as "inactive." Tanks 1, 2, & 3 combined into one emissions unit 063. Do you have a strong preference as to how these emissions units are grouped? If so, why?
b. Also, our database currently has emissions unit 069, Ship Unloading Dock, listed as "inactive". Is this now an active emissions unit? If so, when was it reactivated?

10. (Inactive) Phosphogypsum stack, Section 16, page14. When did this phosphogypsum stack become inactive? Please submit a copy of the EPA Method 115 test report.

11. Our database currently has an active phosphogypsum stack listed as emission unit 104. It appears that there is now an inactive phosphogypsum stack and an active phosphogypsum stack at the facility. Is this the case? If so, there should be separate emission unit numbers assigned to the two phosphogypsum stacks since 40 CFR 61 Subpart R also regulates active phosphogypsum stacks. Is there some distinction that can be used to tell the difference between the two stacks, such as "east" and "west", or do you prefer to just have them labeled as "active" and "inactive" in the permit?

12. CAM???

13. EPCHC??

Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. Permit applicants are advised that Rule 62-4.055(1), F.A.C. requires applicants to respond to requests for information within 90 days.

If you have any questions regarding this request for additional information, please contact me at Cindy.Phillips@dep.state.fl.us or 850/921-9534.

Sincerely,

Cindy L. Phillips, P.E.
Bureau of Air Regulation

cc: Jerry Kissel, DEP-SWD
Jerry Campbell, EPCHC
Scott A. McCann, P.E., Golder Associates Inc.

ATTACHMENT CR-EU1-IV2

COMPLIANCE ASSURANCE MONITORING PLAN

SULFURIC ACID PLANT NO. 7 -004

The Sulfuric Acid Plant No. 7 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.

It should be noted that EPA performed a series of stack tests to develop 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 SAM emission limit. Since there was no SAM emission limit for these facilities to meet, it is reasonable to assume the mist eliminators were there for other reasons, including acid recovery and corrosion control.

The permitted SAM emission rate is 0.15 lb/ton of sulfuric acid produced. At the permitted production rate of 3,200 TPD of acid, the permitted SAM emission rate is 480 lb/day. EPA's published emission factor for uncontrolled SAM from sulfuric acid plants is 0.35 lb/ton of sulfuric acid produced. Using this emission factor, uncontrolled SAM emissions are calculated to be 1,120 lb/day. The difference between the controlled and uncontrolled emission rate, 640 lb/day, is an indication of the amount of sulfuric acid recovered using the mist eliminators. Sulfuric acid is valued at approximately $30 per ton. This equals approximately $3,500 per year on direct product savings.

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 is well worth the capital and operating expenses of the mist eliminators.

Based on the information presented above, Cargill believes the mist eliminators should be considered inherent process equipment, and therefore, not subject to CAM requirements.

agreed J.H 12/22/03
N/A CAM

ATTACHMENT CR-EU2-IV2

COMPLIANCE ASSURANCE MONITORING PLAN

SULFURIC ACID PLANT NO. 8 605

The Sulfuric Acid Plant No. 8 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.

It should be noted that EPA performed a series of stack tests to develop 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 SAM emission limit. Since there was no SAM emission limit for these facilities to meet, it is reasonable to assume the mist eliminators were there for other reasons, including acid recovery and corrosion control.

The permitted SAM emission rate is 0.15 lb/ton of sulfuric acid produced. At the permitted production rate of 2,700 TPD of acid, the permitted SAM emission rate is 405 lb/day. EPA's published emission factor for uncontrolled SAM from sulfuric acid plants is 0.35 lb/ton of sulfuric acid produced. Using this emission factor, uncontrolled SAM emissions are calculated to be 945 lb/day. The difference between the controlled and uncontrolled emission rate, 540 lb/day, is an indication of the amount of sulfuric acid recovered using the mist eliminators. Sulfuric acid is valued at approximately $30 per ton. This equals approximately $3,000 per year on direct product savings.

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 is well worth the capital and operating expenses of the mist eliminators.

Based on the information presented above, Cargill believes the mist eliminators should be considered inherent process equipment, and therefore, not subject to CAM requirements.

agreed JH 12/22/03

ATTACHMENT CR-EU3-IV2

COMPLIANCE ASSURANCE MONITORING PLAN

SULFURIC ACID PLANT NO. 9 006

The Sulfuric Acid Plant No. 9 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.

It should be noted that EPA performed a series of stack tests to develop 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 SAM emission limit. Since there was no SAM emission limit for these facilities to meet, it is reasonable to assume the mist eliminators were there for other reasons, including acid recovery and corrosion control.

The permitted SAM emission rate is 0.15 lb/ton of sulfuric acid produced. At the permitted production rate of 3,400 TPD of acid, the permitted SAM emission rate is 510 lb/day. EPA's published emission factor for uncontrolled SAM from sulfuric acid plants is 0.35 lb/ton of sulfuric acid produced. Using this emission factor, uncontrolled SAM emissions are calculated to be 1,190 lb/day. The difference between the controlled and uncontrolled emission rate, 680 lb/day, is an indication of the amount of sulfuric acid recovered using the mist eliminators. Sulfuric acid is valued at approximately $30 per ton. This equals approximately $3,700 per year on direct product savings.

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 is well worth the capital and operating expenses of the mist eliminators.

Based on the information presented above, Cargill believes the mist eliminators should be considered inherent process equipment, and therefore, not subject to CAM requirements.

agreed D.H. 12/22/03

ATTACHMENT CR-EU4-IV2

COMPLIANCE ASSURANCE MONITORING PLAN:

007

PM AND F EMISSIONS FROM GTSP/DAP MANUFACTURING PLANT

I. Background

A. Emissions Unit

Description:	GTSP/DAP Manufacturing Plant
EU ID:	007
Facility:	Cargill Fertilizer, Inc. Riverview, FL

B. Applicable Regulation, Emission Limits, and Monitoring Requirements

Regulations:	Permit No. 0570008-014-AV
Emissions Limits:	
Particulate Matter:	0.235 lb/ton product, 21.6 lb/hr, and 94.6 TPY for GTSP production; 0.30 lb/ton product, 15.6 lb/hr, and 68.3 TPY for DAP production [Rules 62-296.700(4)(b) and 62-296.705(2)(a), F.A.C., and Permit No. AC29-263835]
Fluorides:	3.45 lb/hr and 15.1 TPY for GTSP production; 0.06 lb/ton P_2O_5, 1.44 lb/hr and 6.3 TPY for DAP production [AC29-227826, Rule 62-296.403(2), F.A.C., and 10/09/85 fluoride allocation, 62-204.800, F.A.C.; 40 CFR 60.222(a)]
Monitoring Requirements:	Currently required to monitor mass-flow of phosphorous bearing feed material to the process, and scrubber liquid flow and pressure drop across each scrubber.

C. Control Technology

Emissions generated from the reactors, granulator, cooler and miscellaneous points are controlled by the RGCV venturi scrubber and followed by the RGCV tower tailgas scrubber. Emissions from the dryer are controlled by the Dryer venturi scrubber followed by another dryer tower tailgas scrubber.

II. Monitoring Approach

		Indicator No. 1	Indicator No. 2
I.	Indicator	Pressure drop across each scrubber.	Scrubber liquid flow rate to each scrubber.
	A. Measurement Approach	Each pressure drop is monitored with a differential pressure transmitter.	Each liquid flow rate is measured using a magnetic flow transmitter.
II.	Indicator Range	An excursion is defined as operation at a daily average pressure drop below the baseline average value experienced during the performance test. Excursions trigger an inspection, corrective action, and a reporting requirement.	An excursion is defined as operation at a daily average liquid flow outside of the baseline average range experienced during the performance test. Excursions trigger an inspection, corrective action, and a reporting requirement.
III.	Performance Criteria		
	A. Data Representativeness	The minimum accuracy of the device is ±5%.	The minimum accuracy of the device is ±5%.
	B. Verification of Operation Status	NA	NA
	C. QA/QC Practices and Citeria	Each differential pressure transmitter is calibrated at least annually.	Each magnetic flow transmitter is calibrated at least annually.
	D. Monitoring Frequency	Each pressure drop is monitored continuously.	Each liquid flow rate is monitored continuously.
	E. Data Collection Procedures	Scrubber pressure drop is recorded every 15-minutes. Daily averages are computed.	Scrubber liquid flow rate is recorded every 15-minutes. Daily averages are computed.
	F. Averaging Period	Daily average based on 15-minute readings.	Daily average based on 15-minute readings.

2 3 hr

2 3-hr averag. ? – what does test method Req. ?

must Specify # Based on past Tests

III. Justification

A. Background

Cargill operates a GTSP/DAP Manufacturing Plant. The GTSP/DAP Manufacturing Plant has federally enforceable emissions limits for PM and F. The GTSP/DAP Plant uses control devices to meet these emissions limits and has uncontrolled PM and F emissions greater than the major source threshold. Therefore, CAM plans are required for this source for PM and F. Refer to Attachment A for emission calculations.

CAM for PM & F

B. Rationale for Selection of Performance Indicators

The performance indicators selected are total gas pressure drop and scrubber liquid flow rate. To achieve the required emission reduction, a minimum liquid flow rate must be supplied to remove the given amount of pollutant in the gas stream. The liquid-to-gas (L/G) ratio is a key operating parameter of the scrubber. If the L/G ratio decreases below the minimum, pollutant removal will not occur. The minimum liquid flow rate required to maintain the proper L/G ratio at the maximum gas flow and pollutant loading through the scrubber are determined during compliance testing. Maintaining this minimum liquid flow, even during periods of reduced gas flow, will ensure the required L/G ratio is achieved at all times.

Need #'s Now

Pressure drop was selected as a performance indicator because it indicates the level of impaction energy in the throat of the venturi scrubber. The energy in the throat indicates PM and F removal efficiency. If pressure drop is too low, proper PM and F removal will not occur.

C. Rationale for Selection of Indicator Ranges

The indicator ranges for pressure drop and liquid flow rate for each scrubber will be determined during compliance testing. Cargill will perform the necessary baseline emissions testing to establish the minimum and maximum liquid flow rate and the minimum pressure drop limits. An excursion is defined as operation of a daily average pressure drop or liquid flow rate outside of the indicator range (determined during compliance testing). When an excursion occurs, corrective action will be initiated, beginning with an evaluation of the occurrence to determine the action required to correct the situation. All excursions will be documented and reported.

do Testing NOW &/or look at old tests. Appl. will remain incomplete until valid indicators are Justified

ATTACHMENT CR-EU5-IV2
COMPLIANCE ASSURANCE MONITORING PLAN:
PM EMISSIONS FROM GTSP GROUND ROCK HANDLING

008

The GTSP Ground Rock Handling system uses a bag collector to recover ground phosphate rock. The ground phosphate rock is transferred to the storage bin. The storage bin then feeds the ground phosphate rock to the GTSP plant. The primary purpose of the bag collector is to capture phosphate rock. It is standard practice to operate a rock handling system with a bag collector. The baghouse would still be used if no air pollution control regulations existed. Therefore, the GTSP Ground Rock Handling does not use "control devices" as defined in 40 CFR Part 64, thus a CAM plan is not required for this source for PM.

agreed.
JH. 12/22/03

ATTACHMENT CR-EU6-IV2
COMPLIANCE ASSURANCE MONITORING PLAN:
PM EMISSIONS FROM MAP PLANT

I. Background

A. Emissions Unit

-022 -023 -024

Description:	No. 3 MAP Plant, No. 4 MAP Plant, South Cooler
EU ID:	022, 023, 024
Facility:	Cargill Fertilizer, Inc. Riverview, FL

B. Applicable Regulation, Emission Limits, and Monitoring Requirements

Regulations:	Permit No. 0570008-014-AV
Emissions Limits:	
Particulate Matter:	0.30 lb/ton product, 10.0 lb/hr, and 42.50 TPY for the Nos. 3 and 4 MAP Plants combined; 0.04 gr/dscf (cyclone/venturi scrubber), 0.30 lb/ton product, 12.0 lb/hr, and 51.00 TPY from the South Cooler [Rules 62-296.403(2), 62-296.705(2)(a), F.A.C.; Permit No. AC29-261247]
Fluorides:	2.0 lb/hr and 8.5 TPY from the Nos. 3 and 4 MAP Plants combined; 1.0 lb/hr and 4.25 TPY from the South Cooler [Rules 62-296.403(2), 62-296.705(2)(a), F.A.C.; Permit No. AC29-261247]
Monitoring Requirements:	Currently required to monitor scrubber liquid flow, gas pressure drop across the ARCO & Chemco scrubber system combined, gas pressure drop across the Cooler scrubber system, and mole ratio parameters for the Chemco scrubbers.

C. Control Technology

PM and F emissions generated from the granulating, screening, and milling operations are controlled by 2 cyclonic spray scrubbers. The emissions generated from the cooling operation are controlled by a wet venturi scrubber.

II. Monitoring Approach

		Indicator No. 1	Indicator No. 2
I.	Indicator	Pressure drop across each scrubber.	Scrubber liquid flow rate to each scrubber.
	A. Measurement Approach	Each pressure drop is monitored with a differential pressure transmitter.	Each liquid flow rate is measured using a magnetic flow transmitter.
II.	Indicator Range	An excursion is defined as operation at a daily average pressure drop below the baseline average value experienced during the performance test. Excursions trigger an inspection, corrective action, and a reporting requirement. Need tests Now.	An excursion is defined as operation at a daily average liquid flow outside of the baseline average range experienced during the performance test. Excursions trigger an inspection, corrective action, and a reporting requirement.
III.	Performance Criteria		
	A. Data Representativeness	The minimum accuracy of the device is ±5%.	The minimum accuracy of the device is ±5%.
	B. Verification of Operation Status	NA	NA
	C. QA/QC Practices and Citeria	Each differential pressure transmitter is calibrated at least annually.	Each magnetic flow transmitter is calibrated at least annually.
	D. Monitoring Frequency	Each pressure drop is monitored continuously.	Each liquid flow rate is monitored continuously.
	E. Data Collection Procedures	Scrubber pressure drop is recorded every 15-minutes. Daily averages are computed.	Scrubber liquid flow is recorded every 15-minutes. Daily averages are computed.
	F. Averaging Period	Daily average based on 15-minute readings.	Daily average based on 15-minute readings.

what do Tests Req. for average?

3hr avg

III. Justification

A. Background

Cargill operates a MAP Plant (Nos. 3 and 4 MAP Plants and South Cooler). The MAP Plant has federally enforceable limits for PM and F. The MAP Plant uses control devices to meet these emissions limits and has uncontrolled PM emissions greater than the major source threshold. Therefore, a CAM plan is required for this source for PM. However, since uncontrolled F emissions are less than the major source threshold, a CAM plan is not required for this source for F. Refer to Attachment A for emission calculations.

CAM for PM

B. Rationale for Selection of Performance Indicators

The performance indicators selected are liquid flow rate and total gas pressure drop. To achieve the required emission reduction, a minimum liquid flow rate must be supplied to remove the given amount of PM in the gas stream. The liquid-to-gas (L/G) ratio is a key operating parameter of the scrubber. If the L/G ratio decreases below the minimum, PM removal will not occur. The minimum liquid flow rate required to maintain the proper L/G ratio at the maximum gas flow and PM loading through the scrubber are determined during compliance testing. Maintaining this minimum liquid flow, even during periods of reduced gas flow, will ensure the required L/G ratio is achieved at all times.

Pressure drop was selected as a performance indicator because it indicates the level of impaction energy in the throat of the venturi scrubber. The energy in the throat indicates PM removal efficiency. If pressure drop is too low, proper PM removal will not occur.

C. Rationale for Selection of Indicator Ranges

The indicator ranges for pressure drop and liquid flow rate for each scrubber will be determined during compliance testing. Cargill will perform the necessary baseline emissions testing to establish the minimum and maximum liquid flow rate and the minimum pressure drop limits. An excursion is defined as operation of a daily average pressure drop and liquid flow rate outside of the indicator range (determined during compliance testing). When an excursion occurs, corrective action will be initiated, beginning with an evaluation of the occurrence to determine the action required to correct the situation. All excursions will be documented and reported.

Do Now!

039

ATTACHMENT CR-EU7a-IV2
COMPLIANCE ASSURANCE MONITORING PLAN:
PM EMISSIONS FROM PHOSPHATE ROCK RAILCAR/TRUCK UNLOADING SYSTEM AND GROUND ROCK HANDLING/STORAGE SYSTEM

The Phosphate Rock Railcar/Truck Unloading System and the Ground Rock Handling system use a bag collector to recover ground phosphate rock. Wet or dry unground phosphate rock may be unloaded by truck or railcar, then transferred to the mills by an elevator. Ground rock captured in cyclones at the rock mills is discharged into the ground rock surge bin and then transferred to a silo. From the silo it is pneumatically conveyed to the GTSP plant. The primary purpose of the bag collector is to capture phosphate rock. It is standard practice to operate a rock handling system with a bag collector. The baghouse would still be used if no air pollution control regulations existed. Therefore, the Phosphate Rock Railcar/Truck Unloading System and the Ground Rock Handling system does not use "control devices" as defined in 40 CFR Part 64, thus a CAM plan is not required for this source for PM.

agreed J.H 12/22/03

ATTACHMENT CR-EU7b-IV2
COMPLIANCE ASSURANCE MONITORING PLAN:
PM EMISSIONS FROM RAYMOND MILLS NOS. 5, 7, AND 9

I. Background

A. Emissions Unit

Description:	Raymond Mill Nos. 5, 7, and 9
EU ID:	100, 106, 101
Facility:	Cargill Fertilizer, Inc. Riverview, FL

B. Applicable Regulation, Emission Limits, and Monitoring Requirements

Regulations:	Permit No. 0570008-014-AV; Permit No. 0570008-024-AC/PSD-FL-247
Emissions Limits:	
Opacity:	5% [Permit No. 0570008-024-AC; Rule 62-212.400, F.A.C.]
Particulate Matter:	1.56 lb/hr and 6.83 TPY from each mill [Rule 62-212.400, F.A.C.]
Monitoring Requirements:	Currently required to monitor the mass flow of phosphate rock to the process and the opacity from each baghouse unless a broken bag detector is used.

C. Control Technology

Excess air from each mill system is vented to a baghouse.

II. Monitoring Approach

		Indicator No. 1
I.	Indicator	Visible emissions.
	Measurement Approach	Visible emissions from the baghouse exhaust using a continuous opacity monitoring system (COMS).
II.	Indicator Range	An excursion is defined as a daily opacity reading greater than 5%. Excursions trigger an inspection, corrective action, and a recordkeeping and reporting requirement.
III.	Performance Criteria	
	A. Data Representativeness	The COMS is installed at a representative location in the baghouse exhaust.
	B. Verification of Operation Status	NA
	C. QA/QC Practices and Criteria	The COMS is automatically calibrated every 24 hours. Calibration information is recorded through a data acquisition system (DAS). A neutral density filter test is performed quarterly as well as preventative maintenance items as prescribed by the manufacturer.
	D. Monitoring Frequency	Opacity is measured continuously.
	E. Data Collection Procedures	VE readings are recorded once per day through the DAS.
	F. Averaging Period	None.

Recorded excursion = Permit violation thx 3% for corrective action

III. Monitoring Approach

A. Background

Cargill operates the Nos. 5, 7, and 9 Raymond Mills. The Nos. 5, 7, and 9 Raymond Mills have federally enforceable emissions limits for PM and use control devices to comply with these emissions limits. Since uncontrolled PM emissions are greater than the major source threshold, CAM plans are required for these sources for PM. Please refer to Attachment A for emission calculations.

CAM for PM

B. Rationale for Selection of Performance Indicators

Visible emissions are selected as the performance indicator because it is indicative of good operation and maintenance of the baghouse. When the baghouse is operating properly, there will not be any visible emissions from the exhaust. Any increase in the visible emissions indicate reduced efficiency of the baghouse.

(=0?)

C. Rationale for Selection of Indicator Ranges

The selected indicator range is a daily opacity reading greater than 5-percent opacity. When an excursion occurs, corrective action will be initiated, beginning with an evaluation of the occurrence to determine the action required to correct the situation. All excursions will be documented and reported. An indicator range of 5-percent visible emissions was selected because an increase in visible emissions is indicative of an increase of particulate emissions.

Compare VE to PM tests.

ATTACHMENT CR-EU8-IV2
COMPLIANCE ASSURANCE MONITORING PLAN
AUXILIARY BOILER

043

The Auxiliary Boiler does not use a "control device" as defined in 40 CFR Part 64, thus a CAM plan is not required for this source.

ok

ATTACHMENT CR-EU9-IV2
COMPLIANCE ASSURANCE MONITORING PLAN
MATERIAL HANDLING SYSTEM

The Material Handling System (EU 051, 052, 053, 058, 059, 060, and 061) has uncontrolled PM emissions less than the major source threshold. Therefore, CAM plans are not required for these sources. Please refer to Attachment A for emission calculations.

ok? check att. A.

ATTACHMENT CR-EU10-IV2
COMPLIANCE ASSURANCE MONITORING PLAN:
PM AND F EMISSIONS FROM NO. 5 DAP PLANT

055

I. Background

A. Emissions Unit

Description:	No. 5 DAP Plant
EU ID:	055
Facility:	Cargill Fertilizer, Inc. Riverview, FL

B. Applicable Regulation, Emission Limits, and Monitoring Requirements

Regulations:	Permit No. 0570008-014-AV
Emissions Limits:	
Particulate Matter:	12.8 lb/hr and 56.0 TPY [Permit AC29-238303]
Fluorides:	3.3 lb/hr and 14.5 TPY [Permit AC29-238303]
Sulfur Dioxide:	12.7 lb/hr and 2.6 TPY [Permit AC29-238303]
Monitoring Requirements:	Currently required to monitor mass-flow of phosphorous bearing feed material to the process and scrubber liquid flow and pressure drop across each scrubber.

C. Control Technology

Emissions from the process are controlled by three venturi scrubbers in parallel, then two up-flow packed body scrubbers exhausting into a common stack.

II. Monitoring Approach

	Indicator No. 1	Indicator No. 2
I. Indicator	Pressure drop across each scrubber.	Scrubber liquid flow rate to each scrubber.
A. Measurement Approach	Each pressure drop is monitored with a differential pressure transmitter.	Each liquid flow rate is measured using a magnetic flow transmitter.
II. Indicator Range	An excursion is defined as operation at a daily average pressure drop below the baseline average value experienced during the performance test. Excursions trigger an inspection, corrective action, and a reporting requirement.	An excursion is defined as operation at a daily average liquid flow outside of the baseline average range experienced during the performance test. Excursions trigger an inspection, corrective action, and a reporting requirement.
III. Performance Criteria		
A. Data Representativeness	The minimum accuracy of the device is ±5%.	The minimum accuracy of the device is ±5%.
B. Verification of Operation Status	NA	NA
C. QA/QC Practices and Citeria	Each differential pressure transmitter is calibrated at least annually.	Each magnetic flow transmitter is calibrated at least annually.
D. Monitoring Frequency	Each pressure drop is monitored continuously.	Each liquid flow rate is monitored continuously.
E. Data Collection Procedures	Scrubber pressure drop is recorded every 15-minutes. Daily averages are computed.	Scrubber liquid flow rate is recorded every 15-minutes. Daily averages are computed.
F. Averaging Period	Daily average based on 15-minute readings.	Daily average based on 15-minute readings.

Provide test data and Choose Range Now.

III. Justification

Cargill operates a No. 5 DAP Plant. The No. 5 DAP Plant has federally enforceable emissions limits for PM, F, and SO_2 and uses control devices to comply with these emissions limits. Uncontrolled PM and F emissions are greater than the major source threshold, thus CAM plans are required for this source for PM and F. However, uncontrolled SO_2 emissions are less than the major source threshold, thus a CAM plan is not required for this source for SO_2. Refer to Attachment A for emission calculations.

CAM for PM + F

B. Rationale for Selection of Performance Indicators

The performance indicators selected are liquid flow rate and total gas pressure drop. To achieve the required emission reduction, a minimum liquid flow rate must be supplied to remove the given amount of pollutant in the gas stream. The liquid-to-gas (L/G) ratio is a key operating parameter of the scrubber. If the L/G ratio decreases below the minimum, pollutant removal will not occur. The minimum liquid flow rate required to maintain the proper L/G ratio at the maximum gas flow and pollutant loading through the scrubber are determined during compliance testing. Maintaining this minimum liquid flow, even during periods of reduced gas flow, will ensure the required L/G ratio is achieved at all times.

Pressure drop was selected as a performance indicator because it indicates the level of impaction energy in the throat of the venturi scrubber. The energy in the throat is an indication of pollutant removal efficiency. If pressure drop is too low, proper pollutant removal will not occur.

C. Rationale for Selection of Indicator Ranges

The indicator ranges for pressure drop and liquid flow rate for each scrubber will be determined during compliance testing. Cargill will perform the necessary baseline emissions testing to establish the minimum and maximum liquid flow rate and the minimum pressure drop limits. An excursion is defined as operation of a daily average pressure drop and liquid flow rate outside of the indicator range (determined during compliance testing). When an excursion occurs, corrective action will be initiated, beginning with an evaluation of the occurrence to determine the action required to correct the situation. All excursions will be documented and reported.

Need test Data + Chosen indicators

ATTACHMENT CR-EU11-IV2
COMPLIANCE ASSURANCE MONITORING PLAN
MOLTEN SULFUR HANDLING SYSTEM

063 ~~066~~ 074

The Molten Sulfur Handling System (EU 063 through 069 and 074) consists of three storage tanks, three pits, a ship unloading system, and a truck unloading station. The ship unloading system (EU 069) and the pits (EU 066, 067, and 068) do not use "control devices" as defined in 40 CFR Part 64, this a CAM plan is not required for these sources. The tanks (EU 063, 064, and 065) and the truck loading station (EU 074) have uncontrolled PM emissions less than the major source threshold. Therefore, a CAM plan is not required for these sources. Refer to Attachment A for emission calculations.

Ok, but check.

010,011

ATTACHMENT CR-EU12-IV2
COMPLIANCE ASSURANCE MONITORING PLAN
GTSP STORAGE BUILDINGS NOS. 2 AND 4

The GTSP Storage Buildings Nos. 2 and 4 do not use a "control device" as defined in 40 CFR Part 64, thus a CAM plan is not required for these sources.

ok

072

ATTACHMENT CR-EU13-IV2
COMPLIANCE ASSURANCE MONITORING PLAN
GTSP TRUCK LOADING STATION

The GTSP Truck Loading Station has uncontrolled PM emissions less than the major source threshold. Therefore, a CAM plan is not required for this source. Refer to Attachment A for emission calculations.

check

ATTACHMENT CR-EU14-IV2
COMPLIANCE ASSURANCE MONITORING PLAN:
F EMISSIONS FROM PHOSPHORIC ACID PLANT

073

I. Background

A. Emissions Unit

Description:	Phosphoric Acid Production Facility
EU ID:	073
Facility:	Cargill Fertilizer, Inc. Riverview, FL

B. Applicable Regulation, Emission Limits, and Monitoring Requirements

Regulations:	Permit No. 0570008-014-AV
Emissions Limits:	
Fluorides:	0.0135 lb/ton P_2O_5, 2.29 lb/hr, and 10.03 TPY [Permit No. 0570008-004-AC, BACT determination dated August 26, 1996 and 40 CFR 60.202(a)]
Monitoring Requirements:	Currently required to monitor mass-flow of phosphorous bearing feed material to the process pressure drop across each scrubber.

C. Control Technology

Fluoride emissions from the Nos. 3 and 4 reactors, Nos. 1, 2, and 3 filters, Nos. 1, 2, and 3 filtrate tanks, Nos. 1-11 Evaporator FSA Seal Tanks are controlled by three separate scrubbers: the Teller Packed-Bed, the VESCOR, and the VESCOR replica.

II. Monitoring Approach

	Indicator No. 1	Indicator No. 2
I. Indicator	Pressure drop across each scrubber.	Scrubber liquid flow rate to each scrubber.
A. Measurement Approach	Each pressure drop is monitored with a differential pressure transmitter.	Each liquid flow rate is measured using a magnetic flow transmitter.
II. Indicator Range	An excursion is defined as operation at a daily average pressure drop below the baseline average value experienced during the performance test. Excursions trigger an inspection, corrective action, and a reporting requirement.	An excursion is defined as operation at a daily average liquid flow outside of the baseline average range experienced during the performance test. Excursions trigger an inspection, corrective action, and a reporting requirement.
III. Performance Criteria		
A. Data Representativeness	The minimum accuracy of the device is ±5%.	The minimum accuracy of the device is ±5%.
B. Verification of Operation Status	NA	NA
C. QA/QC Practices and Citeria	Each differential pressure transmitter is calibrated at least annually.	Each magnetic flow transmitter is calibrated at least annually.
D. Monitoring Frequency	Each pressure drop is monitored continuously.	Each liquid flow rate is monitored continuously.
E. Data Collection Procedures	Scrubber pressure drop is recorded every 15-minutes. Daily averages are computed.	Scrubber liquid flow rate is recorded every 15-minutes. Daily averages are computed.
F. Averaging Period	Daily average based on 15-minute readings.	Daily average based on 15-minute readings.

III. Justification

A. Background

Cargill operates a Phosphoric Acid Plant. The Phosphoric Acid Plant has a federally enforceable emissions limit for F, uses control devices to comply with this emissions limit, and has uncontrolled F emissions greater than the major source threshold. Therefore, a CAM plan is required for F for this source. Refer to Attachment A for emission calculations.

CAM for F

B. Rationale for Selection of Performance Indicators

The performance indicators selected are liquid flow rate and total gas pressure drop. To achieve the required emission reduction, a minimum liquid flow rate must be supplied to remove the given amount of F in the gas stream. The liquid-to-gas (L/G) ratio is a key operating parameter of the scrubber. If the L/G ratio decreases below the minimum, F removal will not occur. The minimum liquid flow rate required to maintain the proper L/G ratio at the maximum gas flow and F loading through the scrubber are determined during compliance testing. Maintaining this minimum liquid flow, even during periods of reduced gas flow, will ensure the required L/G ratio is achieved at all times.

Pressure drop was selected as a performance indicator because it indicates the level of impaction energy in the throat of the venturi scrubber. The energy in the throat is an indication of F removal efficiency. If pressure drop is too low, proper F removal will not occur.

C. Rationale for Selection of Indicator Ranges

The indicator ranges for pressure drop and liquid flow rate for each scrubber will be determined during compliance testing. Cargill will perform the necessary baseline emissions testing to establish the minimum and maximum liquid flow rate and the minimum pressure drop limits. An excursion is defined as operation of a daily average pressure drop and liquid flow rate outside of the indicator range (determined during compliance testing). When an excursion occurs, corrective action will be initiated, beginning with an evaluation of the occurrence to determine the action required to correct the situation. All excursions will be documented and reported.

Choose Now based on tests

ATTACHMENT CR-EU15-IV2
COMPLIANCE ASSURANCE MONITORING PLAN
AFI PLANT, DE SILO, LIMESTONE SILO, AND AFI PLANT LOADOUT SYSTEM

The AFI Plant No. 1 (EU 078) has uncontrolled PM and F emissions less than the major source threshold. Therefore, a CAM plan is not required for this source. Refer to Attachment A for emission calculations. dh

The AFI Product Loadout System (EU 081) has uncontrolled PM emissions less than the major source threshold. Therefore, a CAM plan is not required for this source. Refer to Attachment A for emission calculations. dh

The DE Silo uses a baghouse to recover diatomaceous earth (DE). The primary purpose of the baghouse is to recover DE. The baghouse would still be used if no air pollution control regulations existed. Therefore, the DE Silo does not use a "control device" as defined in 40 CFR Part 64, thus a CAM plan is not required for this source. agreed. J.H. 12/22/03

The Limestone Silo uses a baghouse to recover limestone. The primary purpose of the baghouse is to recover limestone. The baghouse would still be used if no air pollution control regulations existed. Therefore, the Limestone Silo does not use a "control device" as defined in 40 CFR Part 64, thus a CAM plan is not required for this source. agreed. J.H. 12/22/03

ATTACHMENT CR-EU16-IV2
COMPLIANCE ASSURANCE MONITORING PLAN
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.