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<p>1. Article Addressed to:</p> <p>Ms. Kathy Edgemon Environmental Superintendent Cargill Fertilizer, Inc. 8813 U.S. Highway 41 South Riverview, FL 33569</p>	<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type</p> <p><input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p> <p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>
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Jeb Bush  
Governor

# Department of Environmental Protection

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

David B. Struhs  
Secretary

January 10, 2002

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Ms. Kathy Edgemon  
Environmental Superintendent  
Cargill Fertilizer, Inc.  
8813 U.S. Highway 41 South  
Riverview, Florida 33569

Re: DEP File No. 0570008-039-AC; PSD-FL-315A  
Riverview Plant

Dear Ms. Edgemon:

Enclosed is one copy of the Draft PSD Permit Modification for the Riverview Plant located in Hillsborough County. The Department's Intent to Issue PSD Permit Modification and the "PUBLIC NOTICE OF INTENT TO ISSUE PSD PERMIT MODIFICATION" are also included.

The "PUBLIC NOTICE OF INTENT TO ISSUE PSD PERMIT MODIFICATION" must be published in a newspaper of general circulation in Hillsborough County. Proof of publication, i.e., newspaper affidavit, must be provided to the Department's Bureau of Air Regulation office within seven (7) days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit modification.

Please submit any written comments you wish to have considered concerning the Department's proposed action to A. A. Linero, P.E., Administrator, New Source Review Section at the above letterhead address. If you have any other questions, please call Mr. Syed Arif at 850/921-9528.

Sincerely,

C. H. Fancy, P.E., Chief  
Bureau of Air Regulation

CHF/sa

Enclosures

In the Matter of an  
Application for Permit Modification by:

Ms. Kathy Edgemon  
Environmental Superintendent  
Cargill Fertilizer, Inc.  
8813 U.S. Highway 41 South  
Riverview, Florida 33569

DEP File No. 0570008-039-AC; PSD-FL-315A  
Riverview Plant  
Hillsborough County

### INTENT TO ISSUE PSD PERMIT MODIFICATION

The Department of Environmental Protection (Department) gives notice of its intent to issue a permit modification (copy of DRAFT Permit Modification attached) for the proposed action, as detailed in the application specified above, for the reasons stated below.

The applicant, Cargill Fertilizer, Inc., applied on December 13, 2001 to the Department for a permit modification to allow production of granulated mono-ammonium phosphate in addition to granulated di-ammonium phosphate at the Riverview plant in Hillsborough County.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, and 62-212. The above actions are not exempt from permitting procedures. The Department has determined that a PSD permit modification is required together with an update of the previously issued determination of Best Available Control Technology (BACT).

The Department intends to issue this air construction permit based on the belief that reasonable assurances have been provided to indicate that operation of these emission units will not adversely impact air quality, and the emission units will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C.

Pursuant to Section 403.815, F.S., and Rule 62-110.106(7)(a)1., F.A.C., you (the applicant) are required to publish at your own expense the enclosed Public Notice of Intent to Issue Air Construction Permit. The notice shall be published one time only in the legal advertisement section of a newspaper of general circulation in the area affected. Rule 62-110.106(7)(b), F.A.C., requires that the applicant cause the notice to be published as soon as possible after notification by the Department of its intended action. For the purpose of these rules, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400 (Telephone: 850/488-0114; Fax 850/ 922-6979). You must provide proof of publication within seven days of publication, pursuant to Rule 62-110.106(5), F.A.C. No permitting action for which published notice is required shall be granted until proof of publication of notice is made by furnishing a uniform affidavit in substantially the form prescribed in section 50.051, F.S. to the office of the Department issuing the permit. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rules 62-110.106(9) & (11), F.A.C.

The Department will issue the final permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed permit issuance action for a period of 14 (fourteen) days from the date of publication of Public Notice of Intent to Issue Air Permit. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation is not available in this proceeding.

In addition to the above, a person subject to regulation has a right to apply for a variance from or waiver of the requirements of particular rules, on certain conditions, under Section 120.542 F.S. The relief provided by this state statute applies only to state rules, not statutes, and not to any federal regulatory requirements. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a person may have in relation to the action proposed in this notice of intent.


The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. The petition must specify the following information: (a) The name, address, and telephone number of the petitioner; (b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any; (c) Each rule or portion of a rule from which a variance or waiver is requested; (d) The citation to the statute underlying (implemented by) the rule identified in (c) above; (e) The type of action requested; (f) The specific facts that would justify a variance or waiver for the petitioner; (g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and (h) A statement whether the variance or waiver is

permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in Section 120.542(2) F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.

Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of the EPA and by any person under the Clean Air Act unless and until the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

Executed in Tallahassee, Florida.

  
for C. H. Fancy, P.E., Chief  
Bureau of Air Regulation

**CERTIFICATE OF SERVICE**

The undersigned duly designated deputy agency clerk hereby certifies that this Intent to Issue Air Construction Permit (including the Public Notice of Intent to Issue Air Construction Permit, Technical Evaluation and Preliminary Determination, and the Draft permit) was sent by certified mail (\*) and copies were mailed by U.S. Mail before the close of business on 2/11/02 to the person(s) listed:

Ms. Kathy Edgemon, Cargill Fertilizer, Inc.\*  
Mr. B. Thomas, DEP-SWD  
Mr. G. Worley, EPA  
Mr. J. Bunyak, NPS  
Ms. Alice Harmon, P.E., EPCHC

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Victoria Gibson January 11, 2002  
(Clerk) (Date)

**PUBLIC NOTICE OF INTENT TO ISSUE PSD PERMIT MODIFICATION**

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

DEP File No. 0570008-039-AC; PSD-FL-315A

Riverview Plant  
Cargill Fertilizer, Inc.  
Hillsborough County

The Department of Environmental Protection (Department) gives notice of its intent to issue a PSD permit modification to Cargill Fertilizer, Inc., for the Riverview plant located in Hillsborough County. A construction permit was issued to Cargill in November 2001 for facility expansion. This permit modification re-designates the No. 5 di-ammonium phosphate (DAP) plant to No. 5 Ammoniated Phosphate Plant. This change will allow Cargill to produce mono-ammonium phosphate (MAP) in addition to DAP. The Department is issuing a revised BACT with this modification to include production of MAP at this plant. The applicant's mailing address is: Cargill Fertilizer, Inc., 8813 U.S. Highway 41 South, Riverview, Florida 33569.

The granulated MAP and granulated DAP processes are similar. The Department has determined that the emission limits in the recently issued PSD permit and BACT determination are applicable to both products.

An air quality impact analysis was recently conducted with the original application. The impacts from the MAP process are no greater than the DAP process. Emissions from the facility will not consume PSD increment and will not significantly contribute to or cause a violation of any state or federal ambient air quality standards. The project has an insignificant impact on the Chassahowitzka PSD Class I area.

The Department will issue the Final permit modification with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed permit modification issuance action for a period of 14 (fourteen) days from the date of publication of this Public Notice of Intent to Issue PSD permit modification. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit modification and require, if applicable, another Public Notice.

The Department will issue the permit modification with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3),

**NOTICE TO BE PUBLISHED IN THE NEWSPAPER**

however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Dept. of Environmental Protection Bureau of Air Regulation Suite 4, 111 S. Magnolia Drive Tallahassee, Florida, 32301 Telephone: 850/488-0114 Fax: 850/922-6979	Dept. of Environmental Protection Southwest District 3804 Coconut Palm Drive Tampa, Florida 33619-8218 Telephone: 813/744-6100 Fax: 813/744-6084	Hillsborough County Environmental Protection Commission 1900 Ninth Avenue Tampa, Florida 33605 Telephone: 813/272-5960 Fax: 813/272-5157
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The complete project file includes the application, Draft permit modification, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Administrator, New Source Review Section, at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/488-0114, for additional information.

**NOTICE TO BE PUBLISHED IN THE NEWSPAPER**

**REVISED**  
**BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)**

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**Revised BACT Determination**  
**Riverview No. 5 DAP Plant (EU ID No. 055)**  
**Cargill Fertilizer, Inc.**  
**PSD-FL-315A/ 0570008-039-AC**  
**Riverview, Hillsborough County**

Cargill Fertilizer, Inc. was issued a BACT determination in November 2001, to modify several existing emission units at its phosphate fertilizer manufacturing facility located in Riverview, Florida. The proposed changes included increased molten sulfur through the molten sulfur handling system, additional digestion capacity associated with the Dorcco Reactor at the Phosphoric Acid plant (PAP), modification of the Granular Triple Super Phosphate (GTSP) plant, modification of the Animal Feed Ingredient (AFI) plant, construction of a second AFI granulation train, and modification of the No. 5 Diammonium Phosphate (DAP) plant.

Cargill submitted a request for a minor modification to the original construction permit on December 13, 2001. In order to meet marketing demands, Cargill needs to have greater operational flexibility at its No. 5 DAP Plant. The plant is to be re-designated as the No. 5 Ammoniated Phosphate Plant. This change will allow production of ammoniated phosphate fertilizers, DAP and Mono Ammonium Phosphate (MAP). The only physical modifications required to achieve this goal will be some minor piping changes. The revised BACT will include MAP production for this emission unit. The processes, emissions characteristics, and applicable control methods are similar for granulated MAP and DAP. The Department has determined that the same limits apply for the two granulated products when made at the same plant.

**DATE OF RECEIPT OF COMPLETE MODIFIED BACT APPLICATION:**

December 13, 2001.

**BACT DETERMINATION PROCEDURE:**

In accordance with Chapter 62-212.400, F.A.C., this BACT determination is based on the maximum degree of reduction of each pollutant emitted which the Department of Environmental Protection (Department), on a case by case basis, taking into account energy, environmental and economic impacts, and other costs, determines is achievable through application of production processes and available methods, systems, and techniques. In addition, the regulations state that, in making the BACT determination, the Department shall give consideration to:

- Any Environmental Protection Agency determination of BACT pursuant to Section 169, and any emission limitation contained in 40 CFR Part 60 - Standards of Performance for New Stationary Sources or 40 CFR Part 61 - National Emission Standards for Hazardous Air Pollutants.
- All scientific, engineering, and technical material and other information available to the Department.
- The emission limiting standards or BACT determination of any other state.
- The social and economic impact of the application of such technology.



**REVISED**  
**BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)**

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The EPA currently stresses that BACT should be determined using the "top-down" approach. The first step in this approach is to determine, for the emission unit in question, the most stringent control available for a similar or identical emission unit or emission unit category. If it is shown that this level of control is technically or economically unfeasible for the emission unit in question, then the next most stringent level of control is determined and similarly evaluated. This process continues until the BACT level under consideration cannot be eliminated by any substantial or unique technical, environmental, or economic objections.

The air pollutant emissions from this facility can be grouped into categories based upon the control equipment and techniques that are available to control emissions from these emission units. Using this approach, the emissions can be classified as indicated below:

- **Fluorides** (primarily HF). Controlled generally by scrubbing with pond water.
- **Particulate Matter** (PM, PM<sub>10</sub>). Controlled generally by wet scrubbing or filtration.
- **Combustion Products** (SO<sub>2</sub>, NO<sub>x</sub>). NO<sub>x</sub> controlled generally by good combustion of clean fuels. SO<sub>2</sub> controlled generally by scrubbing when quantities are substantial.
- **Products of Incomplete Combustion** (CO, VOC). Controlled generally by proper combustion.

Grouping the pollutants in this manner facilitates the BACT analysis because it enables the pollutant control equipment and the corresponding energy, economic, and environmental impacts to be examined on a common basis. Although all of the pollutants addressed in the BACT analysis may be subject to a specific emission limiting standard as a result of PSD review, the control of "non-regulated" air pollutants is considered in imposing a more stringent BACT limit on a "regulated" pollutant (i.e., PM, SO<sub>2</sub>, H<sub>2</sub>SO<sub>4</sub>, fluorides, etc.), if a reduction in "non-regulated" air pollutants can be directly attributed to the control device selected as BACT for the abatement of the "regulated" pollutants.

**BACT EMISSION LIMITS PROPOSED BY APPLICANT:**

**No. 5 Ammoniated Phosphate Plant**

<b>POLLUTANT</b>	<b>EMISSION LIMIT</b>	<b>LIMIT BASIS</b>	<b>CONTROL TECHNOLOGY</b>
PM/PM <sub>10</sub>	12.8 lb/hr	0.17 lb/ton P <sub>2</sub> O <sub>5</sub> input	(3) Venturi scrubbers
F	2.9 lb/hr	0.04 lb/ton P <sub>2</sub> O <sub>5</sub> input	(2) Tailgas scrubbers

**BACT ANALYSIS**

The No. 5 Ammoniated Phosphate plant is currently equipped with three venturi scrubbers and two tailgas scrubbers. The three primary venturi scrubbers are of different but similar design, as

**REVISED**  
**BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)**

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are the two tailgas scrubbers. One venturi scrubber controls PM emissions and recovers ammonia from the exhaust gases of the reactor and granulator, the second controls the cooler and equipment vents, and the third venturi scrubber controls PM emissions from the dryer. One tailgas scrubber controls fluoride emissions from the reactor, granulator, and cooler, while the second controls emissions from the dryer. Exhaust gases go to a common stack for the No. 5 Ammoniated Phosphate plant.

Currently, the scrubber systems are achieving lower emission rates for DAP production than required by permit No. 0570008-014-AV. As shown in recent stack tests, emissions from the common stack range from 1.3 to 2.9 lb/hr for PM and 0.47 to 3.02 lb/hr for F for DAP. These are equivalent to 0.018 to 0.042 lb of PM per ton of  $P_2O_5$  input, and 0.008 to 0.042 lb of F per ton  $P_2O_5$  input for DAP.

Cargill's proposed PM/PM<sub>10</sub> emission rate for the No. 5 Ammoniated Phosphate plant of 12.8 lb/hr is equivalent to 0.174 lb/ton  $P_2O_5$  input for either DAP or MAP production. This proposed limit is lower than the previous determinations, based on the actual emissions measured from the No. 5 Ammoniated Phosphate plant. The proposed limit is justified to provide certainty that the emission limit will be achievable on a continuous basis.

Cargill's proposed fluoride emission rate for the No. 5 Ammoniated Phosphate plant is 2.9 lb/hr, equivalent to 0.04 lb/ton  $P_2O_5$  input for either DAP or MAP production. The proposed BACT limit is equal to the most stringent BACT issued to date for a MAP or DAP plant.

The sources of PM and VE, consisting primarily of DAP and MAP dust along with relatively small amounts of ammonium fluoride and other related compounds, are the reactor/granulator, cooler, screens and mills. These emissions are controlled by cyclones, which remove most of the larger particles with the remainder controlled by wet scrubbers. The top-down approach for control of PM/PM<sub>10</sub> and VE identified the following BACT options:

1. High-energy (>30 in. w.c.) venturi scrubber or ionizing wet scrubber.
2. Medium-energy (15-30 in.w.c.) venturi scrubber.

Characteristic of this process is that the first stage of scrubbing (acid scrubber) is primarily for ammonia recovery while the primary function of the second stage scrubber is fluoride removal, leaving PM/PM<sub>10</sub> control with a secondary priority from a design standpoint. Since recovery of ammonia takes place by chemical reaction with the acid scrubbing medium, the required removal can be effected using a medium energy scrubber which also removes up to 85% of the product dust escaping the cyclones. The tail gas scrubber is a low-pressure drop device that removes fluorides by absorption. For these reasons, employment of a high energy, high efficiency device for PM/PM<sub>10</sub> removal has not been a design consideration for these plants.

**REVISED**  
**BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)**

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If maximum PM/PM<sub>10</sub> removal were considered to be a design parameter, the cost effectiveness of adding high energy scrubbing to the existing system (Option 1) would likely be in the range of \$50,000 - \$75,000 per incremental ton of PM/PM<sub>10</sub> removed based on recent analyses for other projects. On a non-incremental basis, however, assuming replacement of the existing acid scrubbers with high energy ones, the cost effectiveness would drop to about \$7,000 to \$9,000 per ton for PM/PM<sub>10</sub> removal in the 98+% efficiency range. Due to the high costs of installing new ducts, pumps, fans, and instrumentation for retrofitting an existing system, and the high-energy costs, Option 1 is not feasible for this project.

Option 2 is the feasible choice, and the BACT requirement will be satisfied by specifying that the maximum emissions from the cyclonic scrubbers be limited to 0.174 lb PM/ton and 0.04 lb F/ton of P<sub>2</sub>O<sub>5</sub> input for either DAP or MAP production. Actual emissions from recent stack tests ranged from 0.018 to 0.042 lb PM/ton and 0.008 to 0.042 lb F/ton of DAP production. Test data indicate that the actual emissions from the cyclonic scrubbers are below the minimum previous BACT determinations of 0.18 lb PM/ton and 0.0417 lb F/ton of P<sub>2</sub>O<sub>5</sub> input of MAP production. Based on the range of previous BACT determinations for PM and F, the proposed limits are lower than the previous determinations for F and PM.

The Department's recent BACT determinations for MAP plants are as follows:

Company Name	Permit Number	Permit Issue Date	F Emission Limit	PM Emission Limit
Cargill Bartow	PSD-FL-255	4-21-99	0.041 lb/ton P <sub>2</sub> O <sub>5</sub>	0.18 lb/ton P <sub>2</sub> O <sub>5</sub>
Farmland Hydro	PSD-FL-246	9-11-98	0.06 lb/ton P <sub>2</sub> O <sub>5</sub>	0.3 lb/ton P <sub>2</sub> O <sub>5</sub>

**BACT DETERMINATION BY THE DEPARTMENT:**

Based on the information provided by the applicant and other information available the Department agrees with the emission limit proposed by the applicant and establishes the following emission limits as BACT for this project:

**No. 5 Ammoniated Phosphate Plant**

POLLUTANT	EMISSION LIMIT	LIMIT BASIS	CONTROL TECHNOLOGY
PM/PM <sub>10</sub>	12.8 lb/hr	0.17 lb/ton P <sub>2</sub> O <sub>5</sub> input	(3) Venturi scrubbers
F	2.9 lb/hr	0.04 lb/ton P <sub>2</sub> O <sub>5</sub> input	(2) Tailgas scrubbers

Visible emissions from the No. 5 Ammoniated Phosphate Plant shall not exceed 10% opacity.

**COMPLIANCE**

Compliance with the emission limits shall be in accordance with the following EPA Reference Methods as contained in 40 CFR 60, Appendix A or as otherwise approved by the Department:

**REVISED**  
**BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)**

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EMISSION UNIT	POLLUTANT	EPA REFERENCE METHOD
No. 5 Ammoniated Phosphate Plant	PM/PM <sub>10</sub>	5
	FL	13A or 13B
	VE	9

**DETAILS OF THE REVISED ANALYSIS MAY BE OBTAINED BY CONTACTING:**

Syed Arif, P.E. II \_\_\_\_\_  
New Source Review Section  
Department of Environmental Protection  
Bureau of Air Regulation  
2600 Blair Stone Road, MS 5505  
Tallahassee, Florida 32399-2400

Recommended By:

Approved By:

\_\_\_\_\_  
C.H. Fancy, P.E., Chief  
Bureau of Air Regulation

\_\_\_\_\_  
Howard L. Rhodes, Director  
Division of Air Resources Management

\_\_\_\_\_  
Date:

\_\_\_\_\_  
Date:

# DRAFT

February xx, 2002

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Ms. Kathy Edgemon  
Environmental Superintendent  
Cargill Fertilizer, Inc.  
8813 U.S. Highway 41 South  
Riverview, Florida 33569

Re: DEP File No. 0570008-039-AC; PSD-FL-315A  
Riverview Plant

Dear Ms. Edgemon:

The Department has reviewed your request of December 7, 2001, to provide greater operational flexibility at your No. 5 Di-ammonium Phosphate (DAP) plant. This request is acceptable to the Department. The plant will be re-designated as No. 5 Ammoniated Phosphate Plant. This change will allow Cargill to produce ammoniated phosphate fertilizers without restrictions to only producing DAP. The Department issued a revised BACT to include production of MAP at this plant.

Based on the above, the Department will modify PSD-FL-315, previously issued on November 21, 2001, as follows:

## **SUBSECTION A. COMMON CONDITIONS**

The Specific Conditions listed in this section apply to the following emission units:

<b>EMISSION UNIT No.</b>	<b>EMISSION UNIT DESCRIPTION</b>
063-068, 074, 107	Molten Sulfur Handling System
005	No. 8 Sulfuric Acid Plant
006	No. 9 Sulfuric Acid Plant
073	Phosphoric Acid Plant
007	EPP Plant
078-081, 103	AFI Plants No. 1 and 2
055	No. 5 <del>DAP</del> Ammoniated Phosphate Plant

# DRAFT

- Unless otherwise indicated, the modification/construction and operation of the molten sulfur handling system, the Nos. 8 and Sulfuric Acid Plants, the Phosphoric Acid Plant, the EPP Plant, the AFI Plant Nos. 1 and 2, and the No. 5 DAP Ammoniated Phosphate Plant shall be in accordance with the capacities and specifications stated in the application. **[Rule 62-210.300, F.A.C.]**

## SUBSECTION G. No. 5 DAP Ammoniated Phosphate Plant

The Specific Conditions listed in this section apply to the following emission units:

EMISSION UNIT No.	EMISSION UNIT DESCRIPTION
055	No. 5 <u>DAP Ammoniated Phosphate Plant</u>

- The process input rate of the No. 5 DAP Ammoniated Phosphate Plant shall not exceed 1,764 tons per day of 100% phosphorus pentoxide ( $P_2O_5$ ). **[Rule 62-210.200, F.A.C.]**
- The No. 5 DAP Ammoniated Phosphate Plant may operate up to 8,760 hours per year. **[Rule 62-210.200, F.A.C.]**
- Emissions from the No. 5 DAP Ammoniated Phosphate Plant shall not exceed the following **[Rule 62-212.400, F.A.C.]**

Pollutant	Maximum Allowable Emissions		
	lb/ton $P_2O_5$	lb/hr	TPY
PM/PM <sub>10</sub>	0.174	12.8	56.1
Fluorides	0.04	2.9	12.9

- Visible emissions from the No. 5 DAP Ammoniated Phosphate Plant shall not exceed 10% opacity. **[Permit No. 0570008-014-AV]**
- The compliance test shall be conducted under each mode of operation, i.e., if the plant produced DAP and MAP, then compliance testing shall be done under both modes of operation. **[Applicant Request]**
- All measurements, records, and other data required to be maintained by this facility shall be retained for at least five (5) years following the date on which such measurements, records, or data are recorded. These data shall be made available to the Department upon request. **[Rule 62-4.070(3), F.A.C.]** The permittee shall install, calibrate, maintain, and operate a monitoring device which can be used to determine the mass flow of phosphorus-bearing feed material to the process. The monitoring device shall have an accuracy of  $\pm 5$  percent over its operating range. The permittee shall maintain a daily record of equivalent  $P_2O_5$  feed

# DRAFT

by first determining the total mass rate in metric tons/hour of phosphorus bearing feed using the flow monitoring device meeting the requirements of 40 CFR 60.223(a) and then by proceeding according to 40 CFR 60.224(b)(3). [Rule 62-296.800, F.A.C.; 40 CFR 60.223(b)]

A copy of this letter shall be filed with the referenced permit and shall become part of the permit. This permit modification is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order (permit modification) has the right to seek judicial review of it under Section 120.68, F.S., by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within thirty days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

\_\_\_\_\_  
Howard L. Rhodes, Director  
Division of Air Resources  
Management

### CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this permit modification was sent by certified mail (\*) and copies were mailed by U.S. Mail before the close of business on \_\_\_\_\_ to the person(s) listed:

Ms. Kathy Edgemon, Cargill Fertilizer, Inc.\*  
Mr. B. Thomas, DEP-SWD  
Mr. G. Worley, EPA  
Mr. J. Bunyak, NPS  
Ms. Alice Harman, P.E., EPCHC

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED,  
on this date, pursuant to §120.52, Florida  
Statutes, with the designated Department Clerk,  
receipt of which is hereby acknowledged.

\_\_\_\_\_  
(Clerk)

\_\_\_\_\_  
(Date)