Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

February 1, 2002

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. David Jellerson
Environmental Manager
Cargill Fertilizer, Incorporated
8813 U.S. Highway 41 South
Riverview, Florida 33569

Re: DRAFT Permit No. 1050046-015-AC (PSD-FL-322)
No. 4 Fertilizer Plant Modification
Bartow Plant

Dear Mr. Jellerson:

Enclosed is one copy of the Draft Air Construction Permit for modification of the Bartow Plant, located at 3200 Highway 60 West, Bartow, Polk County. The Technical Evaluation and Preliminary Determination, Best Available Control Technology, the Department's Intent to Issue Air Construction Permit and the "PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT" are also included.

The "PUBLIC NOTICE" must be published one time only, as soon as possible, in the legal advertisement section of a newspaper of general circulation in the area affected, pursuant to the requirements Chapter 50, Florida Statutes. Proof of publication, i.e., newspaper affidavit, must be provided to the Department's Bureau of Air Regulation office within seven days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit.

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 contact Syed Arif, P.E., at 850/921-9528 or Mr. Linero at 850/921-9523.

Sincerely,

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

CHF/sa

Enclosures

In the Matter of an
Application for Permit by:

Mr. David Jellerson, Environmental Manager
Cargill Fertilizer, Inc.
8813 Highway 41 South
Riverview, Florida 33569

DEP File No. 1050046-015-AC
Draft Permit No. PSD-FL-322
Bartow Plant
Polk County

INTENT TO ISSUE AIR CONSTRUCTION PERMIT

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit (copy of DRAFT Permit attached) for the proposed project, detailed in the application specified above and the attached Technical Evaluation and Preliminary Determination, for the reasons stated below.

The applicant, Cargill Fertilizer, Inc., submitted a complete application on January 15, 2002 to the Department for an air construction permit to improve the energy efficiency of the plant and product quality, as well as provide more product flexibility at its existing No. 4 Diammonium Phosphate Plant located in Bartow. The plant is located at 3200 Highway 60 West, Bartow, Polk 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 review for the Prevention of Significant Deterioration (PSD), a determination of Best Available Control Technology (BACT) and an air construction permit are required for the proposed work.

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 Air Construction Permit in accordance with the conditions of the attached Draft Air Construction permit 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 and requests for a public meeting concerning the proposed permit issuance action for a period of 30 (thirty) days from the date of publication of PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION 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 Draft Air Construction Permit, the permitting authority shall issue a Revised Draft Air Construction 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, Technical Evaluation and Preliminary Determination, Draft BACT Determination, and the DRAFT permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 2/5/02 to the person(s) listed:

David Jellerson, Cargill Fertilizer, Inc.*
Debra Waters, Cargill – Bartow Plant
Gregg Worley, EPA
John Bunyak, NPS
Bill Thomas, DEP-SWD
David Buff, P.E., Golder Associates Inc.

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 (Clerk) February 5, 2002 (Date)

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DEP File No. 1050046-015-AC, PSD-FL-322
Bartow Plant
Cargill Fertilizer, Incorporated.
Polk County

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit to Cargill Fertilizer, Inc., to improve the energy efficiency of the plant and product quality, as well as provide more product flexibility at its existing No. 4 Diammonium Phosphate (DAP) Plant located in Bartow, Florida. A Best Available Control Technology (BACT) determination was required for fluorides (F), particulate matter (PM), particulate matter less than or equal to 10 micrometers (PM_{10}) and nitrogen oxides (NO_x) pursuant to Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD). The applicant's name and address (also facility address) are Cargill Fertilizer, Inc., 3200 Highway 60 West, Bartow, Florida 33830.

The proposed quality improvements will be accomplished by implementing changes to the reactor, granulator, and cooling and screening systems. Specific changes will include installation of a pipe reactor at the granulator inlet, improvements to the dryer capacity, and installation of additional product screening and cooling capacity. Product flexibility enhancements will enable the plant to produce a wider range of ammoniated phosphate-based nutrient products (e.g., diammonium phosphate and monoammonium phosphate).

The proposed modifications to the No. 4 DAP Plant will not result in an increase in the maximum hourly or annual production rates. The modified plant will be renamed the "No. 4 Fertilizer Plant". The Department proposes the continued use of the existing scrubbing system with enhancements to the primary acid scrubbers. BACT limitations for fluorides and particulate matter have been determined to be 0.04 lb/ton P_2O_5 input and 0.15 lb/ton P_2O_5 input respectively for the No. 4 DAP Plant. Good combustion practices and low sulfur content oil (which has a low nitrogen content) constitute BACT for NO_x for this source.

An air quality impact analysis was conducted. Emissions from the facility will not significantly contribute to or cause a violation of any state or federal ambient air quality standards. The project is predicted to have no significant impact in the PSD Class II area in the vicinity of the facility for NO_x. The maximum predicted PM_{10} PSD Class II increments in the vicinity of the project consumed by all sources in the area, including this project, will be as follows:

Averaging Time	Allowable Increment ($\mu g/m^3$)	Increment Consumed ($\mu g/m^3$)	Percent Consumed
PM_{10}			
24-hour	30	26	87
Annual	17	3	18

PSD Class I significant impact levels were not exceeded in the PSD Class I Chassahowitzka National Wilderness Area located 118 km to the northwest, therefore a multi-source Class I PSD increment analysis for PM_{10} and NO_2 were not required. Based on this analysis, the Department has reasonable assurance that the proposed project will not cause or significantly contribute to a violation of any or PSD increment in the Class I area.

The Department will issue the Final Air Construction Permit in accordance with the conditions of the Draft Air Construction Permit unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions. The permitting authority has determined that an Air Construction Permit is required.

The Department will accept written comments and requests for a public meeting concerning the proposed permit issuance action for a period of 30 (thirty) days from the date of publication of "PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION 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

NOTICE TO BE PUBLISHED IN THE NEWSPAPER

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. 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), 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	Polk County Environmental Services Natural Resources & Drainage Division 4177 Ben Durrance Road Bartow, Florida 33830 Telephone: 941/534-7377 Fax: 941/534-7374

The complete project file includes the application, technical evaluations, Draft Permit, 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 Resource 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

TECHNICAL EVALUATION
AND
PRELIMINARY DETERMINATION

CARGILL FERTILIZER, INC.

BARTOW PLANT
Polk County, Florida

No. 4 Fertilizer Plant Modification

DEP File No. 1050046-015-AC
PSD-FL-322

Florida Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation

January 30, 2002

I. APPLICATION INFORMATION:

A. Applicant

Cargill Fertilizer, Inc.

3200 Highway 60 West

Bartow, Florida 33830

Authorized Representative: David Jellerson, Environmental Manager

B. Request

The Department received a complete application on January 15, 2002, to modify its existing No. 4 Diammonium Phosphate (DAP) Plant to improve energy efficiency of the plant and product quality, as well as provide more product flexibility. The proposed quality improvements will be accomplished by implementing changes to the reactor, granulator, and cooling and screening systems. Energy efficiency improvements will be accomplished primarily by the installation of an ammonia vaporizer along with a heat recovery spray chamber downstream of the reactor, granulator, and equipment vents (RGV) acid scrubber. Product flexibility enhancements will enable the plant to produce a wider range of ammoniated phosphate-based nutrient products (e.g., diammonium phosphate and monoammonium phosphate). These changes will be implemented through improved process control systems for the reactor, granulator, and acid scrubbing systems. Enhancements to existing emission control equipment along with new control equipment will accompany these process changes.

C. Facility Location

The applicant's facility is located at 3200 Highway 60 West, Bartow, Polk County, Florida. Latitude and longitude are 27/54/22 and 81/54/59 respectively. UTM coordinates of the site are: Zone 17, 409.8 km E and 3086.7 km N.

Facility Identification Code (SIC): Major Group No. 28, Industry Group No. 2874, 2819.

D. Reviewing and Process Schedule

- Application received August 20, 2001
- Department's letters dated October 12, 2001 and October 19, 2001
- Applicant's submittal received December 17, 2001 and January 15, 2002
- National Park Service's letter dated October 11, 2001
- Technical Evaluation and Preliminary Determination dated January 30, 2002

II. PROJECT DESCRIPTION/EMISSIONS:

A. No. 4 Fertilizer (DAP) Plant

Cargill currently operates a diammonium phosphate fertilizer plant with a maximum permitted DAP production rate of 261 tons per hour (TPH), daily average basis, and 2,170,212 tons per year (TPY). The maximum permitted phosphorous pentoxide (P_2O_5) production rate is 120 TPH of 100-percent P_2O_5, daily average basis. The plant is also limited to a maximum of 8,500 operation hours per year.

The No. 4 DAP Plant currently consists of a reactor, granulator, dryer, screens and mills, coolers, and associated equipment. The applicant is proposing to modify the No. 4 DAP Plant to improve energy efficiency and product quality of the plant and to enable production of a wider range of fertilizer products. The modified plant will be renamed the "No. 4 Fertilizer Plant".

The proposed project will include the following changes and improvements:

1. Improvements to the process control systems for the reactor, granulator, and acid scrubbing systems,
2. Installation of a pipe reactor at the granulator inlet,
3. Improvements to the dryer capacity,
4. Installation of additional product screening capacity and cooling capacity to increase the evacuation air flow,
5. Installation of an ammonia vaporizer along with a heat recovery spray chamber downstream of the RGV acid scrubber to reduce electrical energy consumption, and
6. Improvements to the fluoride and particulate matter emission control systems.
7. Other miscellaneous changes as necessary to meet the stated production and product quality goals.

In order to maintain the SO_2 emissions increase below the PSD significant emission rate of 40 tons per year (TPY), even considering the contemporaneous increases, Cargill is proposing to use fuel oil with a maximum sulfur content of 0.25% in both the Nos. 3 and 4 Fertilizer Plant dryers. Since No. 2 fuel oil is only used as a back-up to natural gas, Cargill is proposing a bubble-limit of 2.2 million gallons per year (MMgal/yr) of fuel oil between both the No. 3 and 4 Fertilizer Plants. While either plant can consume up to 2.2 MMgal/yr of fuel oil alone, the combined maximum fuel oil consumption will not exceed 2.2 MMgal/yr. The SO_2 emissions resulting from burning 2.2 MMgal/yr of 0.25% sulfur fuel oil is less than 40 TPY.

B. Project Emissions

The following table compares the current actual emissions to the applicant's proposed maximum emissions in tons/year:

Source Description	Pollutant Emission Rate (TPY)							
	SO_2	NO_x	CO	PM	PM_{10}	VOC	Fluoride	SAM
Potential Emissions From Modified/New/Affected Sources								
A. Existing No. 4 Fertilizer Shipping Plant	--	--	--	31.60	31.60	--	--	--
B. Modified No. 4 Fertilizer Plant/No. 3 Fertilizer Plant [a]	0.10	16.76	14.28	76.50	76.50	0.94	20.40	0.66
Total Potential Emission Rates	**0.10**	**16.76**	**14.28**	**108.10**	**108.10**	**0.94**	**20.40**	**0.66**
Actual Emissions from Current Operations								
A. No. 4 Fertilizer Shipping Plant	--	--	--	0.53	0.53	--	--	--
B. No. 4 DAP Plant	0.08	12.72	10.69	22.65	22.65	0.70	5.40	0.00
Total Actual Emission Rates	**0.08**	**12.72**	**10.69**	**23.18**	**23.18**	**0.70**	**5.40**	**0.00**
TOTAL CHANGE DUE TO PROPOSED PROJECT	**0.02**	**4.04**	**3.59**	**84.92**	**84.92**	**0.24**	**15.00**	**0.66**
Contemporaneous Emission Changes								
A. No. 3 Fertilizer Plant Expansion (April 1999) [b]	39.16	39.52	20.22	[d]	[d]	1.18	[d]	--
B. Phosphoric Acid Reactor Modification (April 1999) [c]	--	--	--	--	--	--	--	--
C. Phosphoric Acid Plant Filter Replacement (Oct. 2000)	[d]	21.30	1.40	[d]	[d]	0.57	[d]	--
Total Contemporaneous Emission Changes	**39.16**	**60.82**	**21.62**	**0.00**	**0.00**	**1.75**	**0.00**	**0.00**
TOTAL NET CHANGE	**39.18**	**64.86**	**25.21**	**84.92**	**84.92**	**1.99**	**15.00**	**0.66**
PSD SIGNIFICANT EMISSION RATE	40	40	100	15	15	40	3	7
PSD REVIEW TRIGGERED?	No	Yes	No	Yes	Yes	No	Yes	No

[a] SO_2, NO_x, CO, VOC, and SAM emissions reflect the difference between the total combined emissions from the Nos. 3 and 4 Fertilizer plants and emissions from the No. 3 Fertilizer plant that are accounted for under contemporaneous emissions changes.

[b] Emissions based on 0.25% sulfur content fuel oil.

[c] Project was determined to not result in an increase in emissions of any pollutant.

[d] Denotes that PSD review was triggered for this pollutant, therefore any previous contemporaneous increases/decreases are wiped clean.

III. RULE APPLICABILITY:

A. Prevention of Significant Deterioration

The proposed project was reviewed under Rule 62-212.400(5), F.A.C., New Source Review (NSR) for Prevention of Significant Deterioration (PSD), because it will be a modification to a major stationary source resulting in a significant increase in NO_x, PM/PM_{10}, and fluoride emissions. This review consisted of a determination of Best Available Control Technology (BACT) and an analysis of the air quality impact of the increased emissions. The review also includes an analysis of the project's impacts on soils, vegetation and visibility, along with air quality impacts resulting from associated commercial, residential and industrial growth.

The emission units affected by this PSD permit shall comply with all applicable provisions of the Florida Administrative Code and, specifically, the following Chapters and Rules:

Chapter 62-4	Permits
Rule 62-204.220	Ambient Air Quality Protection
Rule 62-204.240	Ambient Air Quality Standards
Rule 62-204.260	Prevention of Significant Deterioration Increments
Rule 62-204.360	Designation of Prevention of Significant Deterioration Areas
Rule 62-204.800	Federal Regulations Adopted By Reference
Rule 62-210.200	Definitions
Rule 62-210.300	Permits Required
Rule 62-210.350	Public Notice and Comments
Rule 62-210.370	Reports
Rule 62-210.550	Stack Height Policy
Rule 62-210.650	Circumvention
Rule 62-210.700	Excess Emissions
Rule 62-210.900	Forms and Instructions
Rule 62-212.300	General Preconstruction Review Requirements
Rule 62-212.400	Prevention of Significant Deterioration
Chapter 62-213	Operation Permits for Major Sources of Air Pollution
Rule 62-296.320	General Pollutant Emission Limiting Standards
Rule 62-297.310	General Test Requirements
Rule 62-297.400	Compliance Test Methods

B. Federal and State Emission Standards

The proposed project is subject to the applicable provisions of Chapter 403, Florida Statutes, Chapters 62-212 and 62-4, Florida Administrative Code (F.A.C.), and 40 CFR 60. The facility is located in an area designated attainment or maintenance for all criteria pollutants in accordance with F.A.C. Rule 62-275.400.

The No. 4 Fertilizer plant is subject to federal NSPS under 40 CFR 60, Subpart V. Subpart V regulates F emissions from DAP plants. The No. 4 Fertilizer plant is also subject to the emission limitations of Rule 62-296.403(1)(f) F.A.C. pertaining to fluoride emissions from phosphate processing plants.

The No. 4 Fertilizer plant is also presumed to be subject to National Emission Standards for Hazardous Air Pollutants from Phosphate Fertilizer Production Plants, 40 CFR 63, Subpart BB. Subpart BB regulates hazardous air pollutant emissions (HAPs), particularly F emissions, from phosphate fertilizers production plants.

IV. AIR QUALITY ANALYSIS:

A. Introduction

According to the application, the proposed project will increase emissions of three pollutants in excess of PSD significant amounts: NO_x, PM/PM_{10}, and fluorides. PM_{10} and NO_x are criteria pollutants and have national and state ambient air quality standards (AAQS) and PSD increments defined for them. Fluoride is not a criteria pollutant and has no AAQS or PSD increments defined for it. Therefore, no AAQS or PSD increment air quality impact analysis was required for fluoride. Instead, the BACT requirement will establish the fluoride emission limits for this project. The PSD regulations require the following air quality analyses for this project:

- Significant impact analysis for PM_{10} and NO_x.
- Analysis of existing air quality for PM_{10} and NO_x.
- PSD increment analysis for PM_{10} and NO_x.
- AAQS analysis for PM_{10} and NO_x.
- Analysis of impacts on soils, vegetation, wildlife, visibility and growth-related air quality impacts for PM_{10}, NO_x, and fluorides.

Based on the required analyses, the Department has reasonable assurance that the proposed project, as described in this report and subject to the conditions of approval proposed herein, will not cause nor significantly contribute to a violation of any AAQS or PSD increment. However, the following EPA-directed stack height language is included: "In approving this permit, the Department has determined that the application complies with the applicable provisions of the stack height regulations as revised by EPA on July 8, 1985 (50 FR 27892). Portions of the regulations have been remanded by a panel of the U.S. Court of Appeals for the D.C. Circuit in NRDC v. Thomas, 838 F. 2d 1224 (D.C. Cir. 1988). Consequently, this permit may be subject to modification if and when EPA revises the regulation in response to the court decision. This may result in revised emission limitations or may affect other actions taken by the source owners or operators." A discussion of the required analyses follows.

B. Analysis of Existing Air Quality and Determination of Background Concentrations

Preconstruction ambient air quality monitoring is required for all pollutants subject to PSD review unless otherwise exempted or satisfied. The monitoring requirement may be satisfied by using existing representative monitoring data, if available. An exemption to the monitoring requirement may be obtained if the maximum air quality impact resulting from the projected emissions increase, as determined by air quality modeling, is less than a pollutant-specific *de minimis* concentration. In addition, if EPA has not established an acceptable monitoring method for the specific pollutant, monitoring may not be required.

If preconstruction ambient monitoring is exempted, determination of background concentrations for PSD significant pollutants with established AAQS may still be necessary for use in any required AAQS analysis. These concentrations may be established from the required preconstruction ambient air quality monitoring analysis or from existing representative monitoring data. These background ambient air quality concentrations are added to pollutant impacts predicted by modeling and represent the air quality impacts of sources not included in the modeling.

The table below shows that predicted PM_{10} and F impacts from the project are predicted to be above the *de minimis* level. Preconstruction ambient air quality monitoring is therefore required for PM_{10} and F. However, since there are existing monitoring data in the vicinity of the plant, the monitoring requirement can be satisfied by using these data. PM_{10} background concentrations of 50 and 23 ug/m^3 for the 24-hour and annual averaging times, respectively, were established from these previously existing air quality data for use in the AAQS analysis required for PM_{10}. No AAQS for fluorides has been promulgated. Therefore, pre-construction monitoring is not required for F. The table shows that predicted NO_2 impacts from the project are predicted to be below the *de minimis* level. Preconstruction ambient air quality monitoring is therefore not required for NO_2.

Maximum Project Air Quality Impacts for Comparison to De Minimis Ambient Levels

Pollutant	Avg. Time	Max Predicted Impact ($\mu g/m^3$)	De Minimis Level ($\mu g/m^3$)	Impact Above De Minimis?
PM_{10}	24-hour	14	10	Yes
NO_2	Annual	0.1	14	No
F	24-hour	1.6	0.25	Yes

C. Models and Meteorological Data Used in the Air Quality Impact Analysis

PSD Class II Area Model

The applicant and the Department used the EPA-approved Industrial Source Complex Short-Term (ISCST3) dispersion model to evaluate the pollutant emissions from the proposed project. The model determines ground-level concentrations of inert gases or small particles emitted into the atmosphere by point, area, and volume sources. The model incorporates elements for plume rise, transport by the mean wind, Gaussian dispersion, and pollutant removal mechanisms such as deposition. The ISCST3 model allows for the separation of sources, building wake downwash, and various other input and output features. A series of specific model features, recommended by the EPA, are referred to as the regulatory options. The applicant used the EPA recommended regulatory options. Direction-specific downwash parameters were used for all sources for which downwash was considered.

Meteorological data used in the ISCST3 model consisted of a consecutive 5-year period of hourly surface weather observations and twice-daily upper air soundings from the National Weather Service (NWS) stations at Tampa International Airport, Florida (surface data) and Ruskin, Florida (upper air data). The 5-year period of meteorological data was from 1991 through 1995. These NWS stations were selected for use in the study because they are the closest primary weather stations to the study area and are most representative of the project site. The surface observations included wind direction, wind speed, temperature, cloud cover, and cloud ceiling.

Since five years of data were used in ISCST3, the highest-second-high (HSH) short-term predicted concentrations were compared with the appropriate AAQS or PSD increments. For the annual averages, the highest predicted yearly average was compared with the standards. For determining the project's significant impact area in the vicinity of the facility and in the PSD Class I area, both the highest short-term predicted concentrations and the highest predicted yearly averages were compared to their respective significant impact levels.

PSD Class I Area Model

Since the Chassahowitzka National Wilderness Area (CNWA) PSD Class I Area is greater than 50 km from the facility, long-range transport modeling was required for the Class I impact assessment. The California Puff (CALPUFF) dispersion model was used to evaluate the potential impact of the proposed pollutant emissions on the PSD Class I increments and on one Air Quality Related Value (AQRV): regional haze. CALPUFF is a non-steady state, Lagrangian, long-range transport model that incorporates Gaussian puff dispersion algorithms. This model determines ground-level concentrations of inert gases or small particles emitted into the atmosphere by point, line, area, and volume sources. The CALPUFF model has the capability to treat time-varying sources. It is

also suitable for modeling domains from tens of meters to hundreds of kilometers, and has mechanisms to handle rough or complex terrain situations. Finally, the CALPUFF model is applicable for inert pollutants as well as pollutants that are subject to linear removal and chemical conversion mechanisms.

The meteorological data used in the CALPUFF model was processed by the California Meteorological (CALMET) model. The CALMET model utilizes data from multiple meteorological stations and produces a three-dimensional modeling grid domain of hourly temperature and wind fields. The wind field is enhanced by the use of terrain data, which is also input into the model. Two-dimensional fields such as mixing heights, dispersion properties, and surface characteristics are produced by the CALMET model as well. For this project, the CALMET model produced a modeling domain extending 280 km in the north-south direction by 350 km in the east-west direction. The modeling domain was produced by using 1990 meteorological data from 3 upper air, 6 surface, and 27 precipitation stations located throughout the state of Florida.

D. Significant Impact Analysis

Initially, the applicant conducts modeling using only the proposed project's emissions changes. If this modeling shows significant impacts, further modeling is required to determine the project's impacts on the AAQS or PSD increments. To determine the PM_{10} and NO_x significant impact areas for the proposed project, concentrations were predicted for 324 program-generated regular polar grid receptors located in a radial grid centered on the Cargill Bartow No. 4 Fertilizer Plant stack. Receptors were located in "rings" with 36 receptors per ring, spaced at 10 degree intervals, and at distances of the 5, 6, 8, 10, 12, 14, 16, 18, and 20 km from the No. 4 Fertilizer Plant stack location. Discrete receptors included 267 receptors that are located on the plant property boundary at 100-meter intervals, plus 140 additional off-property receptors at distances of 1.5, 2.0, 2.5, 3.0, 3.5, and 4.0 km from the No. 4 Fertilizer Plant stack to cover the area between the property boundary and the closest regular receptor grid distance (i.e., 5.0 km). Cargill will ensure that all property boundaries are properly fenced or have other physical barriers (equivalent to a fence), and are properly posted and patrolled.

Thirteen discrete receptors were located in the Chassahowitzka National Wilderness Area (CNWA) which is a PSD Class I area located approximately 118 km to the north-northwest of the project at its closest point.

For each pollutant subject to PSD and also subject to PSD increment and/or AAQS analyses, this modeling compares maximum predicted impacts due to the project with PSD significant impact levels to determine whether significant impacts due to the project are predicted in the vicinity of the facility or in the CNWA. The tables below show the results of this modeling. A significant impact was predicted in the Class II area in the vicinity of the project for PM_{10}. Therefore, further PM_{10} AAQS and PSD increment analyses in the vicinity of the project

were required for this project. Based on the results of the PM_{10} significant impact analysis, a maximum receptor distance of 4.0 km was used for the screening grid for the AAQS and PSD Class II analyses. Since a significant impact was not predicted for NO_2 in the vicinity of the plant, further AAQS or PSD Class II increment analyses are not required. No significant impact was predicted in the CNWA PSD Class I area for PM_{10} or NO_2. Therefore, further PSD Class I increment analyses are not required.

Maximum Project Air Quality Impacts for Comparison to PSD Class II Significant Impact Levels in the Vicinity of the Facility

Pollutant	Averaging Time	Maximum Predicted Impact ($\mu g/m^3$)	Significant Impact Level ($\mu g/m^3$)	Significant Impact
PM_{10}	Annual	0.8	1	No
	24-hour	14	5	Yes
NO_x	Annual	0.1	1	No

Maximum Project Air Quality Impacts in the CNWA for Comparison to PSD Class I Significant Impact Levels

Pollutant	Averaging Time	Maximum Predicted Impact ($\mu g/m^3$)	Significant Impact Level ($\mu g/m^3$)	Significant Impact
PM_{10}	Annual	0.001	0.2	NO
	24-hour	0.02	0.3	NO
NO_x	Annual	0.0001	0.1	NO

E. AAQS Analysis

For pollutants subject to an AAQS review, the total impact on ambient air quality is obtained by adding "background" concentrations to the maximum modeled concentrations for each pollutant and averaging time. The maximum modeled concentrations are based on the maximum allowable emissions from facility sources and all other sources in the vicinity of the facility. The "background" concentrations take into account all sources of a particular pollutant that are not explicitly modeled. The results of the AAQS analysis for PM_{10} are summarized in the table below. As shown in this table, emissions from the proposed project are not expected to cause or contribute to a violation of any AAQS.

Ambient Air Quality Impacts

Pollutant	Averaging Time	Modeled Sources Impact ($\mu g/m^3$)	Background Conc. ($\mu g/m^3$)	Total Impact ($\mu g/m^3$)	Florida AAQS ($\mu g/m^3$)	Total Impact Greater Than AAQS
PM_{10}	Annual	12	23	35	50	No
	24-hour	43	50	93	150	No

F. PSD Class II Analysis

The PSD increment represents the amount that new sources in an area may increase ambient ground level concentrations of a pollutant from a baseline concentration which was established in 1977 for PM_{10} and SO_2 (the baseline year was 1975 for existing major sources of PM_{10} and SO_2), and 1988 for NO_2 (the baseline year was 1988 for existing major sources of NO_2). The emission values that are input into the model for predicting increment consumption are based on maximum potential emissions from increment-consuming facility sources and all other increment-consuming sources in the vicinity of the facility. The maximum predicted PSD Class II area PM_{10} increments consumed by this project and all other increment-consuming sources in the vicinity of the facility are shown below.

PSD Class II Increment Analysis

Pollutant	Averaging Time	Maximum Predicted Impact ($\mu g/m^3$)	Allowable Increment ($\mu g/m^3$)	Impact Greater Than Allowable Increment
PM_{10}	Annual	3	17	No
	24-hour	26	30	No

G. Additional Impact Analysis

Impact Analysis Impacts On Soils, Vegetation, And Wildlife

According to the modeling results, the maximum air quality impacts due to the Cargill Bartow facility emitting at maximum rate are predicted to be below Class II increments and AAQS for PM_{10}. The maximum ground-level concentrations of NO_2 were determined to be below the significant impact levels. The AAQS are designed to protect both the public health and welfare. As such, this project is not expected to have a harmful impact on soils and vegetation in the PSD Class II area. An air quality related values (AQRV) analysis was performed by the applicant for the Class I area. Since the maximum predicted impacts in the Class I area were predicted to be less

than the PSD Class I significant impact levels for PM_{10} and NO_2, no significant impacts on this area are expected due to the proposed project.

Impact On Visibility

A regional haze analysis was used to assess the potential for a significant increase in regional haze in the Class I CNWA due to this source's projected increase in emissions. A regional haze analysis to determine visibility impacts in the Class I area was required by the National Park Service. The results indicate that the impact of this project on visibility in the Class I area is insignificant.

Growth-Related Air Quality Impacts

The proposed modification will not significantly change employment, population, housing or commercial/industrial development in the area to the extent that a significant air quality impact will result.

V. CONCLUSION:

Based on the foregoing technical evaluation of the application and additional information submitted by Cargill Fertilizer, Inc., the Department has made a preliminary determination that the proposed project will comply with all applicable state air pollution regulations provided that the Department's Best Available Control Technology Determination is implemented and certain conditions are met. The General and Specific Conditions are listed in the attached draft conditions of approval.

Permit Engineer: Syed Arif
Meteorologist: Cleve Holladay

PERMITTEE:

Cargill Fertilizer, Inc.
3200 Highway 60 West
Bartow, Florida 33830

File No.	1050046-015-AC
Permit No.	PSD-FL-322
SIC No.	2874, 2819
Project:	No. 4 Fertilizer (DAP) Plant Modification
Expires:	October 1, 2006

Authorized Representative:

David Jellerson
Environmental Manager

PROJECT AND LOCATION:

Permit for modification of the No. 4 Fertilizer (DAP) Plant to improve the energy efficiency of the plant and product quality, as well as provide more product flexibility. The project is located at the Cargill Fertilizer facility, 3200 Highway 60 West, Bartow, Polk County. UTM coordinates are Zone 17; 409.8 km E; 3086.7 km N.

STATEMENT OF BASIS:

This construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and the Florida Administrative Code (F.A.C.) Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297. The above named permittee is authorized to modify the facility in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department of Environmental Protection (Department).

ATTACHED APPENDICES ARE MADE A PART OF THIS PERMIT:

Appendix BD BACT Determination
Appendix GC Construction Permit General Conditions

Howard L. Rhodes, Director
Division of Air Resources
Management

SECTION I – FACILITY INFORMATION

FACILITY DESCRIPTION

Cargill Fertilizer, Inc. operates a phosphate fertilizer manufacturing facility located west of Bartow in Polk County, Florida. The plant consists of molten sulfur and rock handling systems, phosphoric acid, sulfuric acid, and fertilizer plants, and fertilizer shipping plants. The company has applied to modify its existing No. 4 DAP Plant to improve the energy efficiency of the plant and product quality, as well as provide more product flexibility. As a result of these changes, increases in the actual particulate matter (PM), PM with an aerodynamic diameter of 10 microns or less (PM_{10}), sulfur dioxide (SO_2), fluoride (F), nitrogen oxides (NO_x), sulfuric acid mist (SAM), carbon monoxide (CO), and volatile organic compounds (VOC) emissions will occur.

REGULATORY CLASSIFICATION

The Cargill Bartow Plant is classified as a "Major or Title V Source" per Rule 62-210.200, F.A.C., because it has the potential to emit at least 100 tons per year of PM when potential fugitive emissions are included with potential controlled emissions.

Phosphate rock processing plants are listed as a Major Facility Category in Table 62-212.400-1, F.A.C., "Major Facility Categories." Therefore, stack and fugitive emissions of over 100 TPY of a regulated pollutant are sufficient to classify the installation as a "Major Facility" per the definitions in Rule 62-210.200, F.A.C., subject to the Significant Emission Rates given in Table 62-212.400-2, F.A.C. and the requirements of Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD) and Best Available Control Technology (BACT).

PERMIT SCHEDULE:

- 08-20-01: Date of Receipt of Application
- 01-15-02: Application deemed complete
- 01-xx-02: Intent issued
- 02-xx-00: Notice of Intent published in _____

RELEVANT DOCUMENTS:

The documents listed below are specifically related to this permitting action and form the basis of the permit. They are on file with the Department:

- Application received August 20, 2001
- Department's letters dated October 12, 2001 and October 19, 2001
- Applicant's submittal received December 17, 2001 and January 15, 2002
- National Park Service's letter dated October 11, 2001
- Technical Evaluation and Preliminary Determination dated January 30, 2002
- Best Available Control Technology determination (issued concurrently with permit)

1. Regulating Agencies: All documents related to applications for permits to operate, reports, tests, minor modifications and notifications shall be submitted to the Department's Southwest District Office, 3804 Coconut Palm Drive, Tampa, Florida 33619-8218. All applications for permits to construct or modify an emissions unit(s) *subject to the Prevention of Significant Deterioration or Nonattainment (NA) review requirements* should be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection (FDEP), 2600 Blair Stone Road, MS 5505, Tallahassee, Florida 32399-2400 (phone number 850/488-0114).
2. General Conditions: The owner and operator is subject to and shall operate under the attached General Permit Conditions G.1 through G.15 listed in Appendix GC of this permit. General Permit Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]
3. Terminology: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code.
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of the subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of Chapter 403, F.S. and Florida Administrative Code Chapters 62-4, 62-110, 62-204, 62-212, 62-213, 62-296, 62-297 and the Code of Federal Regulations Title 40, Part 60, adopted by reference in the Florida Administrative Code (F.A.C.) regulations. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]
5. Expiration: This air construction permit shall expire on **October 1, 2006** [Rule 62-210.300(1), F.A.C.]. The permittee may, for good cause, request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit. However, the permittee shall promptly notify the Department's Southwest District Office of any delays in completion of the project which would affect the startup day by more than 90 days. [Rule 62-4.090, F.A.C]
6. Application for Title V Permit: An application for a Title V operating permit, pursuant to Chapter 62-213, F.A.C., must be submitted to the Department's Southwest District Office. [Chapter 62-213, F.A.C.]
7. Permit Approval: Approval to construct shall become invalid if construction is not commenced within 18 months after receipt of such approval, or if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified. [40 CFR 52.21(r)(2)].
8. BACT Determination: In conjunction with extension of the 18 month periods to commence or continue construction, or extension of the permit expiration date, the permittee may be required to demonstrate the adequacy of any previous determination of best available control technology for the source. [40 CFR 52.21(j)(4)]
9. Annual Reports: Pursuant to Rule 62-210.370(2), F.A.C., Annual Operation Reports, the permittee is required to submit annual reports on the actual operating rates and emissions from this facility. Annual operating reports using DEP Form 62-210.900(4) shall be sent to the DEP's Southwest District office by March 1st of each year.
10. Stack Testing Facilities: Stack sampling facilities shall be installed in accordance with Rule 62-297.310(6), F.A.C.

11. Quarterly Reports: Quarterly excess emission reports, in accordance with 40 CFR 60.7 (a)(7) (c) (1997 version), shall be submitted to the DEP's Southwest District office.

12. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

DRAFT Permit

SUBSECTION A. COMMON CONDITIONS

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

EMISSION UNIT NO.	EMISSION UNIT DESCRIPTION
021	No. 4 Fertilizer (DAP) Plant
001	No. 3 Fertilizer Plant

1. Unless otherwise indicated, the modification/construction and operation of No. 4 Fertilizer Plant and the No. 3 Fertilizer Plant shall be in accordance with the capacities and specifications stated in the application. **[Rule 62-210.300, F.A.C.]**

2. Before this construction permit expires, and annually, the subject emissions units shall be tested for compliance with the applicable emission limits. For the duration of all tests the emission units shall be operating at permitted capacity. Permitted capacity is defined as 90-100 percent of the maximum operating rate allowed by the permit. If it is impracticable to test at permitted capacity, then the emission unit may be tested at less than permitted capacity (i.e., 90% of the maximum operating rate allowed by the permit); in this case, subsequent emission unit operation is limited to 110 percent of the test load until a new test is conducted. Once the emission unit is so limited, then operation at higher capacities is allowed for no more than 15 consecutive days for the purposes of additional compliance testing to regain the permitted capacity in the permit. **[Rule 62-297.310, F.A.C.]**

3. In order to document continuing compliance with the maximum sulfur content requirement, the permittee shall maintain a record of the sulfur content of the fuel oil received for use in the product dryer. These records may be based on vendor supplied information or analysis of samples taken by the permittee in accordance with Rule 62-297.440, F.A.C. **[Rule 62-4.070(3), F.A.C.]**

4. The Department's Southwest District office shall be notified in writing at least 15 days prior to source testing. Written reports of the test results shall be submitted to that office within 45 days of test completion. **[Rule 62-297.310, F.A.C.]**

5. The compliance test procedures shall be in accordance with EPA Reference Methods 1, 2, 3, 4, 5, 9, and 13A or 13B, as appropriate, as published in 40 CFR 60, Appendix A, or as otherwise specifically authorized by the Department **[Rules 62-204.800 and 62-297.310(7)(c), F.A.C.]**

6. No person shall cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor. **[Rule 62-296.320, F.A.C.]**

7. No person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly. **[Rule 62-210.650, F.A.C.]**

8. The subject emissions units shall be subject to the following:

- Excess emissions resulting from startup, shutdown or malfunction of any source shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. **[Rule 62-210.700, F.A.C.]**

- Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited. **[Rule 62-210.700, F.A.C.]**

- Considering operational variations in types of industrial equipment operations affected by this rule, the Department may adjust maximum and minimum factors to provide reasonable and practical regulatory controls consistent with the public interest. **[Rule 62-210.700, F.A.C.]**

- In case of excess emissions resulting from malfunctions, each source shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. **[Rule 62-210.700, F.A.C.]**

SUBSECTION B. NO. 4 FERTILIZER PLANT

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

EMISSION UNIT NO.	EMISSION UNIT DESCRIPTION
021	No. 4 Fertilizer Plant

1. The maximum production rate for the No. 4 Fertilizer Plant shall not exceed 261 tons of DAP or MAP per hour (daily average basis; 120 TPH @ 100% P_2O_5) and 2,170,212 tons of DAP or MAP per year. **[Rule 62-210.200, F.A.C. and Permit No. 1050046-003-AV]**

2. The maximum heat input rate to the rotary dryer shall not exceed 40 MMBtu/hr (daily average basis). **[Rules 62-4.160(2) and 62-210.200, F.A.C. and Permit No. 1050046-003-AV]**

3. The rotary dryer shall be fired with natural gas only, except that No. 2 fuel oil with a maximum sulfur content of 0.25% by weight is allowed as a back-up fuel. No. 2 fuel oil usage shall not exceed 2.2 million gallons per year in the No. 4 Fertilizer Plant. No. 2 fuel oil usage for the No. 3 and No. 4 Fertilizer Plants combined shall not exceed 2.2 million gallons per year. **[Rule 62-210.200, F.A.C.]**

4. The hours of operation for the No. 4 Fertilizer Plant shall not exceed 8,500 hours in any 12 consecutive month period. **[Rule 62-210.200, F.A.C. and Permit No. 1050046-003-AV]**

5. Emissions from the No. 4 Fertilizer Plant shall not exceed the following **[Rule 62-212.400, F.A.C.]**:

Pollutant	Maximum Allowable Emissions		
	lb/ton P_2O_5 input	lb/hr	TPY
PM	0.15	18.0	76.5
Fluorides	0.04	4.8	20.4

6. Visible emissions from the No. 4 Fertilizer Plant shall not exceed 10% opacity. **[Permit No. 1050046-003-AV]**

7. The compliance test procedures for particulate matter shall be in accordance with EPA Reference Method 5 as published in 40 CFR 60, Appendix A. **[Rule 62-297.410(5), F.A.C.]**

8. The compliance test procedures for fluorides shall be in accordance with EPA Reference Methods 13A or 13B as published in 40 CFR 60, Appendix A. **[Rule 62-297.410(13), F.A.C.]**

9. The compliance test procedures for visible emissions shall be in accordance with EPA Reference Method 9 as published in 40 CFR 60, Appendix A. **[Rule 62-297.410(9), F.A.C.]**

SUBSECTION B. NO. 3 FERTILIZER PLANT

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

EMISSION UNIT NO.	EMISSION UNIT DESCRIPTION
001	No. 3 Fertilizer Plant

1. The rotary dryer shall be fired with natural gas only, except that No. 2 fuel oil with a maximum sulfur content of 0.25% by weight is allowed as a back-up fuel. No. 2 fuel oil usage shall not exceed 2.2 million gallons per year in the No. 3 Fertilizer Plant. No. 2 fuel oil usage for the No. 3 and No. 4 Fertilizer Plants combined shall not exceed 2.2 million gallons per year. **[Rule 62-210.200, F.A.C.]**

APPENDIX BD
BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)

Cargill Fertilizer, Inc.
No. 4 Fertilizer (DAP) Plant Modification
PSD-FL-322/1050046-015-AC
Bartow, Polk County

DRAFT

Cargill Fertilizer, Inc. has applied to modify the No. 4 Fertilizer Plant at its phosphate fertilizer manufacturing facility located west of Bartow in Polk County, Florida. The company has applied to modify its existing No. 4 DAP Plant to improve the energy efficiency of the plant and product quality, as well as provide more product flexibility. As a result of these changes, increases in the actual particulate matter (PM), PM with an aerodynamic diameter of 10 microns or less (PM_{10}), sulfur dioxide (SO_2), fluoride (F), nitrogen oxides (NO_x), sulfuric acid mist (SAM), carbon monoxide (CO), and volatile organic compounds (VOC) emissions will occur.

The increases in emissions of F, NO_X, PM, and PM_{10} will exceed the significant emission rates listed in Table 212.400-2 of Rule 62-212.400, Florida Administrative Code (F.A.C.). The project is therefore subject to Prevention of Significant Deterioration (PSD) review for F, NO_x, PM, and PM_{10} in accordance with 62-212.400, F.A.C. A Best Available Control Technology (BACT) determination is part of the review required by Rules 62-212.400 and 62-296, F.A.C.

DATE OF RECEIPT OF COMPLETE BACT APPLICATION:

The original application received on August 20, 2001 was complete on January 15, 2002.

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.

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_{10}). Controlled generally by wet scrubbing or filtration.
- **Combustion Products** (SO_2, NO_x). NO_X controlled generally by good combustion of clean fuels. SO_2 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_2, H_2SO_4, 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.

In the case of the proposed project at Cargill, annual emissions of F, NO_x, PM, and PM_{10} are above significant emission rates triggering review for these pollutants. Therefore, since the proposed project involves physical modification to the plant the BACT analysis will address emissions of F, NO_x, PM, and PM_{10}.

BACT EMISSION LIMITS PROPOSED BY APPLICANT:

POLLUTANT	EMISSION LIMIT	LIMIT BASIS	CONTROL TECHNOLOGY
PM/PM_{10}	18.0 lb/hr	0.15 lb/ton P_2O_5 input	(2) Venturi scrubbers and (1) Cross-Flow scrubber
F	4.8 lb/hr	0.04 lb/ton P_2O_5 input	(2) Tailgas scrubbers and (1) Pre-scrubber
NO_x	N/A	N/A	Good combustion practices

BACT ANALYSIS

The No. 4 DAP Plant is currently equipped with two venturi scrubbers, a wet cross-flow scrubber, and two tailgas scrubbers. The two primary venturi scrubbers are of similar design, as are the two tailgas scrubbers. One venturi scrubber, the RGV scrubber, controls PM emissions and recovers ammonia from the exhaust gases of the reactor, granulator, and equipment vents. The second controls the dryer. The wet cross-flow scrubber controls PM emissions from the

cooler. One tailgas scrubber controls fluoride emissions from the reactor, granulator, and equipment vents, while the second controls fluoride emissions from the dryer. Exhaust gases exit through a common stack for the No. 4 DAP Plant. Operating parameters for these scrubbers are as follows.

Pollution Control Equipment	Parameter	Minimum Limitations[a]
Cooler Scrubber	Flow	250 gpm
	Pressure Drop	1" H2 O
Dryer Tailgas Scrubber	Flow	1,100 gpm
	Pressure Drop	4" H2 O
RGV Tailgas Scrubber	Flow	1,600 gpm
	Pressure Drop	4" H2O
Dryer Venturi Scrubber	Flow	250 gpm
	Pressure Drop	4" H2O
RGV Venturi Scrubber	Flow	900 gpm
	Pressure Drop	13" H2O

a Based on 3-hour averaging times.

Currently, the scrubber systems are achieving lower emission rates than required by Title V operating Permit No. 1050046-003-AV. Emissions from the common stack range from 1.07 to 9.69 lb/hr for PM and 0.60 to 4.73 lb/hr for F. These are equivalent to 0.01 to 0.099 lb/ton of P_2O_5 input for PM, and 0.006 to 0.050 lb/ton P_2O_5 input for F.

The proposed BACT for PM/PM_{10} for the modified No. 4 Fertilizer Plant is the proposed reconfigured control system consisting of the following:

- A new pre-scrubber for the reactor and granulator which will utilize recirculating phosphoric acid as the scrubbing medium;
- A new RGV venturi scrubber which will utilize recirculating phosphoric acid;
- A new RGV tailgas scrubber using once through pond water;
- An upgraded cooler scrubber; and
- The existing dryer venturi scrubber and dryer tailgas scrubber.

A review of previous BACT determinations for PM emissions from GTSP and ammoniated phosphate plants (MAP and DAP) was conducted. The results of this show that the previous BACT determinations were all based on wet scrubber technology. This demonstrates that the proposed combination of a prescrubber, followed by a venturi scrubber, followed by packed tower tailgas scrubbers, is the best control technology for application on the No. 4 Fertilizer Plant. Previous BACT determinations have resulted in PM emission limits ranging from 0.18 to 0.41 lb of PM per ton of P_2O_5 input. Cargill's proposed PM/PM_{10} emission rate for the No. 4 Fertilizer Plant of 18.0 lb/hr is equivalent to 0.15 lb/ton P_2O_5 input and 0.069 lb/ton of DAP produced. This proposed limit is lower than the previous determinations, based on the actual emissions measured from the common plant stack. The proposed limit is justified to provide certainty that the proposed emission level will be achievable on a continuous basis.

A previous BACT determination for a DAP plant (IMC-Agrico New Wales; PSD-FL-241) addressed alternatives for PM/PM_{10} control. The alternatives addressed consisted of a high-

energy venturi scrubber and an existing medium-energy venturi scrubber. The high costs of adding a high-energy venturi scrubbing system was deemed economically infeasible with incremental cost effectiveness ranging from $50,000 to $75,000 per ton of PM/PM_{10} removed. As a result, the high-energy venturi scrubber option was found to be infeasible, and the existing medium-energy venturi scrubber was selected as BACT.

Cargill is proposing a medium-energy wet scrubber and medium-energy venturi scrubbers in its No. 4 Fertilizer Plant. Similar to the above analysis, replacing the existing scrubbers with higher energy venturi scrubbers would not be cost effective. Therefore, the existing and proposed medium-energy venturi scrubbers represent BACT for the Cargill No. 4 Fertilizer Plant. Cargill is proposing to lower the current allowable of 22.8 lb/hr to 18.0 lb/hr, considering the proposed modifications.

BACT for fluorides for the modified No. 4 Fertilizer Plant is the same reconfigured control system proposed for PM/PM_{10} emissions. A review of previous BACT determinations for F emissions from MAP and DAP plants was conducted. The results show that the previous BACT determinations were all based on wet scrubber technology. This demonstrates that the existing and proposed packed tower tailgas scrubbers are the best control technology for application on the No. 4 Fertilizer Plant. Previous BACT determinations resulted in emission limits ranging from 0.0417 to 0.06 lb/ton P_2O_5 input for F. Cargill's proposed fluoride emission rate for the No. 4 Fertilizer Plant is 4.8 lb/hr, equivalent to 0.04 lb/ton P_2O_5 input. .

A previous BACT determination for a DAP plant (IMC-Agrico New Wales) addressed alternatives for F control. The alternatives included a packed scrubber using either once-through fresh water, neutralized water from a dedicated pond (fresh water makeup), or process cooling pond water. The first option was dismissed due to concern over fresh water usage and plant water balance problems. The second option was dismissed based on economics, with the cost effectiveness estimated at $14,000 per ton of F removed. In Cargill's case, the first two options can be dismissed based on similar considerations. This leaves the third option, using process cooling pond water, as BACT.

The No. 4 Fertilizer Plant is a small source of NO_x due to the fuel combustion in the dryer. Good combustion practices and low sulfur content oil (which has a low nitrogen content) constitute BACT for NO_x for this source.

BACT DETERMINATION BY THE DEPARTMENT:

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

POLLUTANT	EMISSION LIMIT	LIMIT BASIS	CONTROL TECHNOLOGY
PM/PM_{10}	18.0 lb/hr	0.15 lb/ton P_2O_5 input	(2) Venturi scrubbers and (1) Cross-Flow scrubber
F	4.8 lb/hr	0.04 lb/ton P_2O_5 input	(2) Tailgas scrubbers and (1) Pre-scrubber
NOx	N/A	N/A	Good combustion practices

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:

EMISSION UNIT	POLLUTANT	EPA REFERENCE METHOD
No. 4 Fertilizer Plant	PM/PM_{10}	5
	FL	13A or 13B
	VE	9

DETAILS OF THE 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:

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

Date:

Approved By:

Howard L. Rhodes, Director
Division of Air Resources Management

Date:

APPENDIX GC
GENERAL PERMIT CONDITIONS [F.A.C. 62-4.160]

G.1 The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

G.2 This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings or exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

G.3 As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

G.4 This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

G.5 This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

G.6 The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

G.7 The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

(a) Have access to and copy and records that must be kept under the conditions of the permit;
(b) Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
(c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

G.8 If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

(a) A description of and cause of non-compliance; and
(b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

G.9 In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extend it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

G.10 The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

G.11 This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

G.12 This permit or a copy thereof shall be kept at the work site of the permitted activity.

G.13 This permit also constitutes:

(a) Determination of Best Available Control Technology *(X)*
(b) Determination of Prevention of Significant Deterioration *(X)*; and
(c) Compliance with New Source Performance Standards *(X)*.

G.14 The permittee shall comply with the following:

(a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

(b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

(c) Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements;
2. The person responsible for performing the sampling or measurements;
3. The dates analyses were performed;
4. The person responsible for performing the analyses;
5. The analytical techniques or methods used; and
6. The results of such analyses.

G.15 When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

Florida Department of
Environmental Protection

Memorandum

TO: ~~Clair Fancy~~ cay for CHF

THRU: Al Linero cay

FROM: Syed Arif Syed Arif

DATE: February 1, 2002

SUBJECT: Cargill Fertilizer, Incorporated
1050046-015-AC (PSD-FL-322)

Attached is the Public Notice package to improve the energy efficiency of the plant and product quality, as well as provide more product flexibility at its existing No. 4 Diammonium Phosphate (DAP) Plant located in Bartow, Polk County.

The project is subject to Prevention of Significant Deterioration (PSD) review for F, PM/PM_{10} and NO_x in accordance with 62-212.400, F.A.C. A Best Available Control Technology (BACT) determination is part of the review required by Rules 62-212.400 and 62-296, F.A.C.

The proposed quality improvements will be accomplished by implementing changes to the reactor, granulator, and cooling and screening systems. Specific changes will include installation of a pipe reactor at the granulator inlet, improvements to the dryer capacity, and installation of additional product screening and cooling capacity. Product flexibility enhancements will enable the plant to produce a wider range of ammoniated phosphate-based nutrient products (e.g., diammonium phosphate and monoammonium phosphate).

The proposed modifications to the No. 4 DAP Plant will not result in an increase in the maximum hourly or annual production rates. The modified plant will be renamed the "No. 4 Fertilizer Plant". The Department proposes the continued use of the existing scrubbing system with enhancements to the primary acid scrubbers. BACT limitations for fluorides and particulate matter have been determined to be 0.04 lb/ton P_2O_5 input and 0.15 lb/ton P_2O_5 input respectively for the No. 4 DAP Plant. Good combustion practices and low sulfur content oil (which has a low nitrogen content) constitute BACT for NO_x for this source.

February 1 is Day 18 for the project.

I recommend your approval and signature.

AAL/sa

Attachments

CARGILL
FERTILIZER, INC.

P.O. Box 9002 • Bartow, Florida 33831 • Telephone 863-534-9610 • FAX 863-534-9680

February 15, 2002
Certified Mail
7099 3220 0007 3016 7680

RECEIVED
FEB 25 2002
BUREAU OF AIR REGULATION

Al Linero, P.E.
Administrator
New Source Review Section
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Dear Mr. Linero:

RE: CARGILL FERTILIZER – BARTOW FACILITY
#4 FERTILIZER PLANT MODIFICATIONS
DRAFT PERMIT NO 1050046-015-AC (PSD-FL-322)
AFFIDAVIT OF PUBLICATION

Enclosed please find the Affidavit of Publication from the Lakeland Ledger of the Intent to Issue for the above referenced permit.

If you need anything else at this time please call me at (863) 534-9615.

Sincerely,

Debra R. Waters

Debra R. Waters
Environmental Superintendent

xc: File 60-07-07A
cc: S. Arif
C. Holladay
B. Thomas, SWD
B. Worley, EPA
O. Bumgart, NPS

recycled paper

AFFIDAVIT OF PUBLICATION

THE LEDGER

Lakeland, Polk County, Florida

RECEIVED
FEB 25 2002
BUREAU OF AIR REGULATION

Case No .....

STATE OF FLORIDA)
COUNTY OF POLK)

Before the undersigned authority personally appeared Ken Holtzinger, who on oath says that he is the Classified Manager of The Ledger, a daily newspaper published at Lakeland in Polk County, Florida; that the attached copy of advertisement, being a

Notice of Intent

in the matter of DEP File No. 1050046-015-AC

in the

Court, was published in said newspaper in the issues of

2-7; 2002

Affiant further says that said The Ledger is a newspaper published at Lakeland, in said Polk County, Florida, and that the said newspaper has heretofore been continuously published in said Polk County, Florida, daily, and has been entered as second class matter at the post office in Lakeland, in said Polk County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Signed
Ken Holtzinger
Classified Manager
Who is personally known to me.

Sworn to and subscribed before me this 8TH day of FEBRUARY A.D. 2002

Patricia Ann Rouse
Notary Public
PATRICIA ANN ROUSE

PATRICIA ANN ROUSE
MY COMMISSION # CC 976018
EXPIRES October 17, 2004
Bonded Thru Atlantic Bonding Co., Inc.

(Seal)

My Commission Expires

24740360 G331 Cargill Fertilizer

Attach Notice Here

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DEP File No. 1050046-015-AC, PSD-FL-372
Bartow Plant
Cargill Fertilizer, Incorporated
Polk County

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit to Cargill Fertilizer, Inc., to improve the energy efficiency of the plant and product quality as well as provide more product flexibility at its existing No. 4 Diammonium Phosphate (DAP) Plant located in Bartow, Florida. A Best Available Control Technology (BACT) determination was required for fluorides (F), particulate matter (PM), particulate matter less than or equal to 10 micrometers (PM_{10}) and nitrogen oxides (NO_x) pursuant to Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD). The applicant's name and address (also facility address) are Cargill Fertilizer, Inc., 3200 Highway 60 West, Bartow, Florida 33830.

The proposed quality improvements will be accomplished by implementing changes to the reactor, granulator and cooling and screening systems. Specific changes will include installation of a pipe reactor, granulator, and cooling and capacity. Product flexibility enhancements will enable the plant to produce a wider range of ammoniated phosphate-based nutrient products (e.g., diammonium phosphate and monoammonium phosphate).

The proposed modifications to the No. 4 DAP Plant will not result in an increase in the maximum hourly or annual production rates. The modified plant will be renamed the "No. 4 Fertilizer Plant". The Department proposes the continued use of the existing scrubbing system with enhancements to the primary acid scrubbers. BACT limitations for fluorides and particulate matter have been determined to be 0.04 lb/ton P_2O_5 input and 0.15 lb/ton P_2O_5 input respectively for the No. 4 DAP Plant. Good combustion practices and low sulfur content oil (which has a low nitrogen content) constitute BACT for NO_x for the source.

Air quality impact analysis was conducted. Emissions from the facility will not significantly contribute to or impact in the PSD Class II area in the vicinity of the facility for NO_x. The maximum predicted PM_{10} PSD Class II increments in the vicinity of the project consumed by all sources in the area, including this project, will be as follows:

Averaging Time	Allowable Increment (µg/m³)	Increment Consumed	Percent Consumed
PM_{10}			
24 hour	30	26	87
Annual	17	3	18

PSD Class I significant impact levels were not exceeded in the PSD Class I Chassahowitzka National Wilderness Area located 118 km to the northwest; therefore a multi-source Class I PSD increment analysis for PM_{10} and NO_x were not required. Based on this analysis, the Department has reasonable assurance that the proposed project will not cause or significantly contribute to a violation of any of PSD increment in the Class I area.

The Department will issue the Final Air Construction Permit in accordance with the conditions of the Draft Air Construction Permit unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions. The permitting authority has determined that an Air Construction Permit is required.

The Department will accept written comments and requests for a public meeting concerning the proposed permit issuance action for a period of 30 (thirty) days from the date of publication of "PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION 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.

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 the 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 the 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 indicate so; (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	Polk County Environmental Services Natural Resources & Drainage Division 4177 Ben Durrance Road Bartow, Florida 33830 Telephone: 941/534-7377 Fax: 941/534-7374

The complete project file includes the application, technical evaluations, Draft Permit, 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 Resource Review Section at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/488-0114, for additional information.
G-331 - 2/7, 2002

RECEIVED
FEB 15 2002
By