

Jeb Bush
Governor

Department of Environmental Protection

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

David B. Struhs
Secretary

February 11, 1999

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Ms. Melody Russo
Environmental Superintendent
Cargill Fertilizer, Inc.
P.O. Box 9002
Bartow, Florida 33831

Re: DEP File No. 1050046-008-AC (PSD-FL-255)
No. 3 Fertilizer Plant Expansion - Bartow

Dear Ms. Russo:

The Bureau of Air Regulation received comments from Dave Buff by fax on February 4 regarding a draft of the preliminary permit for the subject application that the Bureau provided. Concurrently with today's mailing of the preliminary determination package, we are providing responses as listed below to Mr. Buff's faxed comments. Additional comments may be submitted by Cargill if necessary.

1. Concerning the comment that the facility should be classified as a "chemical process plant", the basis for including the phosphate processing industry on the list of 28 major facility source categories was that phosphate rock is the common raw material. Although the word "rock" is included, it does not mean that just rock drying and grinding are covered. It is obvious that just the drying and grinding of phosphate rock alone would not have been sufficient in terms of emissions for inclusion on the list of 28 without covering also the upgrading and processing based on rock as the raw material.

2. The applicant's request for a "daily average" production rate instead of an hourly rate would not prevent short-term operation at rates that could result in excessive short-term emissions. A cap or "daily average" limit on production is occasionally appropriate when a process normally encounters great variability such as the recent Cargill permit for the rock drying/grinding mills and its pollution control equipment is appropriately designed for such variability.

3. Visible emission limits in BACT determinations have been established in recent years on the basis of test results with a reasonable margin added for compliance. The applicant requests that the draft BACT limit of 10 percent opacity be changed to 15 percent based on the IMC-Agrico (PSD-FL-241) permit issued in 1998. A BACT limit of 15 percent opacity was established for IMC-Agrico based on test results showing a high of 12.5 percent opacity. The highest test result for the present permit was 5 percent opacity, for which the proposed 10 percent limit provides a margin for compliance of 100 percent.

4. The phrase "or gas line/burner maintenance" has been added to Specific Condition No. 8. The application states "No. 6 or better grade oil is proposed as a stand-by fuel in case of natural gas interruption.

5. The applicant objects to the minimum scrubber pressure drop requirement as being outside the scope Rule 62-212, F.A.C. and views it as a "work practice standard". On many occasions over many years this issue has been raised and its resolution continues to be the same - - the minimum pressure drop requirement provides reasonable assurance that the scrubber will be operated properly. Specifying operating parameters for control equipment is not new. This same condition was included in the IMC-Agrico permit referred to by

"Protect, Conserve and Manage Florida's Environment and Natural Resources"

Printed on recycled paper.

Ms. Melody Russo
Page 2 of 2
February 11, 1999

the applicant and has become a standard BACT requirement for scrubbers in similar applications. For impingement scrubbing devices removing particulate matter, pressure drop is essentially the sole determinant of efficiency, unlike gas scrubbing. Therefore, the delayed setting of pressure drop until after the performance test is not justified. A minimum pressure drop of 15 inches of water is BACT for this process and no additional testing is needed. With a sufficiently sized fixed throat venturi, L/G rates can be adjusted to achieve the required pressure drop.

The applicant's request to separate out "the DAP mode" from requirements of the permit would not be practical or appropriate since BACT applies to MAP and DAP production even though there is no New Source Performance Standard for MAP. The applicant's request might be appropriate if separate limits were required for MAP, but compliance can be demonstrated while producing either product.

7. The references to a baghouse were deleted since this was contained in a template used from a different permit. Likewise, the reference to the form of fluoride emissions has been changed to "HF and SiF₄".

If there are any questions, please call John Reynolds at 850/921-9536.

Sincerely,

A handwritten signature in dark ink, appearing to read "A. A. Linero", followed by the date "2/11".

A. A. Linero, P.E. Administrator
New Source Review Section

AAL/JR

cc: Gregg Worley, EPA
John Bunyak, NPS
Bill Thomas, SWD
Joe King, Polk Co.
David Buff, Golder Assoc.

P 265 659 420

* no green card

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail (See reverse)

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Melody Russo	
Street & Number	
Cassell FERT.	
Post Office, State & ZIP Code	
Dartmouth FI	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	
1050646-CEE-AL 2-12-99	
PSD-FI-255	

PS Form 3800 April 1995



**CARGILL
FERTILIZER, INC.**

P.O. Box 9002 • Bartow, Florida 33831 • Telephone 941-534-9610 • FAX 941-534-9680

RECEIVED

MAR 02 1999

BUREAU OF
AIR REGULATION

CERTIFIED MAIL: P 256 979 607

February 25, 1999

Mr. Al Linero
Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Mr. Linero,

Re: Affidavit of Publication - Notice of Intent to Issue Permit
Draft Permit No. 1050046-008-AC (PSD-FL-255)

Please find enclosed the original Affidavit of Publication for the Notice of Intent to Issue Permit for the above-referenced draft permit. The public notice was published in The Ledger newspaper on February 19, 1999. The Ledger serves Lakeland and Polk County, Florida.

Should you have any questions, or require additional information, please feel free to give me a call at (941) 534-9613.

Sincerely,

Melody Russo
Environmental Superintendent

Enclosure: Affidavit of Publication: Notice of Intent to Issue Permit No. 1050046-008-AC
(PSD-FL-255)

cc: Morris
Jellerson
Abel
File 60-05-04 (w/ enclosure)

cc: J. Reynolds, BAR
SWD
polk Co.
EPA
NPS



recycled paper

AFFIDAVIT OF PUBLICATION

THE LEDGER

Lakeland, Polk County, Florida

RECEIVED

MAR 02 1999

BUREAU OF
AIR REGULATION

Case No

STATE OF FLORIDA)
COUNTY OF POLK)

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

Public Notice To Issue Air Construction Permit

DEP File No. 1050046-008-AC (PSD-FL-255)
in the matter of.....

in the.....

Court, was published in said newspaper in the issues of.....
February 19, 1999

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.....

Nelson Kirkland
Classified Advertising Manager

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

DEP File No. 1050046-008-AC (PSD-FL-255)

Cargill Bartow No. 3 Fertilizer (MAP/DAP) Plant
Polk County

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit pursuant to the requirements for the Prevention of Significant Deterioration (PSD) to Cargill Fertilizer, Inc. to increase production from the No. 3 Fertilizer Plant at its facility located on Highway 60 West near Bartow in Polk County. A Best Available Control Technology (BACT) determination was required for particulate matter (PM/PM₁₀), fluorides, and visible emissions pursuant to Rule 62-212.400, F.A.C. The applicant's name and address are: Cargill Fertilizer, Inc., 3200 Highway 60 West, Bartow, Florida 33830.

The No. 3 Fertilizer Plant manufactures granulated monoammonium and diammonium phosphate (MAP/DAP). Production capacity will be increased from 2,640 to 3,000 tons per day. The modification will consist of installing new fans and four new scrubbers for removal of particulate matter and gaseous fluoride emissions. Particulate emissions will be controlled to 0.18 pounds per ton of phosphate (lb/ton P₂O₅ input) by medium energy venturi scrubbers. Fluoride emissions will be controlled to 0.041 lb/ton P₂O₅ by packed scrubbers using cooling pond water. Visible emissions will be limited to 10 percent.

An air quality impact analysis was conducted. Emissions from the facility will not contribute to or cause a violation of any state or federal ambient air quality standards. The maximum predicted PM₁₀ PSD Class II increments consumed by all sources in the area, including this project, will be as follows:

Averaging Time	Allowable Increment (microgram/m ³)	Increment Consumed (microgram/m ³)	Percent Consumed
24-hour	30	29.4	98
Annual	17	3.9	23

The project by itself has no significant impact on the PSD Class I Chassanowitzka National Wilderness Area.

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

The Department will accept requests for a public hearing (meeting) for a period of 14 (fourteen) days and written comments 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.

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 120.50(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 120.50(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 as well as the rules and

Court, was published in said newspaper in the issues of
February 19, 1999

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

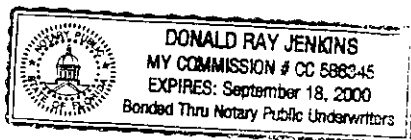
Nelson Kirkland
Classified Advertising Manager
Who is personally known to me.

Sworn to and subscribed before me this 23 RD

day of FEBRUARY A.D. 19 99

Donald Ray Jenkins
Notary Public

DONALD RAY JENKINS



(Seal)

My Commission Expires

Order#152051

C336

Cargill Fertilizer

ing) for a period of 14 (fourteen) days and written comments 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.

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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 28-106.201.

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 on 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 111 S. Magnolia Drive, Suite 4 Tallahassee, Florida 32301 Telephone: 850/488-0114 Fax: 850/922-6979	Dept. of Environmental Protection Southwest District Office 3501 Coconut Palm Drive Tampa, Florida 33619-8218 Telephone: 813/744-6100 Fax: 813/744-6084	Polk County Public Works Dept. Natural Resources 3 Orange Dr. 1177 Ben Durance Road Bartow, Florida 33830 Telephone: 941/534-7377 Fax: 941/534-7377
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The complete project file includes the Draft Permit, the application, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the New Resource Review Section at 111 South Magnolia Drive, Suite 4 Tallahassee, Florida 32301, or call 850/488-0114 for additional information.
C336 2-19-1999

CARGILL, INCORPORATED

LAW DEPARTMENT

James D. Moe
Corporate Vice President
General Counsel
& Secretary

Linda L. Cutler
Vice President
Assistant General Counsel
& Assistant Secretary

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Jeffrey J. Skelton
Tracy L. Wessel
Geri L. Williams

February 26, 1999

Writer's Direct Dial Number

(612) 742-4653

Via Courier and Fax: (850) 487-4938

Office of General Counsel
Florida Department of Environmental Protection
3900 Commonwealth Boulevard
Mail Station 35
Tallahassee, Florida 32399-3000

ATTN: Kathy Carter

RE: Request for an extension to petition for an administrative hearing
Draft Permit No. PSD-FL-255
DEP File No. 1050046-008-AC
Cargill Fertilizer, Inc., 3200 Highway 60 West, Bartow, FL 33830

Dear Ms. Carter:

This letter is to request an extension until March 22, 1999 to petition for an administrative hearing on the above-referenced permit. This request is made on behalf of Cargill Fertilizer, Inc. ("Cargill"), which operates the No. 3 Fertilizer (MAP/DAP) Plant in Polk County at 3200 Highway 60 West, city of Bartow, in Polk County, Florida. Cargill received the Intent to Issue Air Construction Permit for this facility on February 15, 1999 and published the Intent to Issue on February 19, 1999. Cargill is requesting a 30 day extension and, on the advise of the Florida Department of Environmental Protection ("FDEP") New Source Review Section, requests that this extension start from the date of publication. As good cause for granting the request for an extension of time to petition, Cargill states the following:

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MAR 01 1999
BUREAU OF
AIR REGULATION

~~February 26, 1999~~

Page 2

1. The draft PSD Air Construction Permit contains numerous terms and conditions, several of which appear to warrant clarification and/or correction.

2. Cargill has conferred with Al Linero, Administrator, New Source Review Section, FDEP, and understands that the FDEP is willing to discuss these issues and agrees that a thirty day extension from the date of publication is acceptable. Cargill is optimistic that the FDEP and it can resolve these issues through additional discussion.

3. Cargill files this request as a protective measure to avoid waiver of Cargill's right to challenge the permit as currently drafted. Granting this request will not prejudice either party but will further their mutual interest and likely avoid the need to initiate formal administrative proceedings.

If this request for an extension to petition for an administrative hearing is not granted, please consider this letter a request for an administrative hearing. If you have any questions on this matter, please contact me. Thank you for your assistance in this matter.

Sincerely yours,



Thomas W. MacLeod

TWM:

cil/124412

cc: Mr. Al Linero, FDEP
D. Jellerson, Cargill/Tampa, FL

cc: J. Reynolds, BAR

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

RECEIVED

MAR 10 1999

CARGILL FERTILIZER, INC.,

Petitioner,

BUREAU OF
AIR REGULATION

vs.

OGC CASE NO. 99-0343

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION,

Respondent.

ORDER GRANTING REQUEST FOR EXTENSION
OF TIME TO FILE PETITION FOR HEARING

This cause has come before the Florida Department of Environmental Protection (Department) on receipt of a request made by Petitioner, Cargill Fertilizer, Inc., to grant an extension of time to file a petition for an administrative hearing on Application No. 1050046-008-AC. See Exhibit 1.


Respondent, State of Florida Department of Environmental Protection, has no objection to it. Therefore,

IT IS ORDERED:

The request for an extension of time to file a petition for administrative proceeding is granted. Petitioner shall have until April 1, 1999, to file a petition in this matter. Filing shall be complete on receipt by the Office of General Counsel, Mail Station 35, Department of Environmental Protection, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000.

DONE AND ORDERED on this 5th day of March, 1999, in
Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



F. PERRY ODOM
General Counsel

Douglas Building, MS #35
3900 Commonwealth Boulevard
Tallahassee, FL 32399-3000
Telephone: (850) 488-9314

CERTIFICATE OF SERVICE

I CERTIFY that a true copy of the foregoing was mailed to:

Thomas W. MacLeod, Esq.
Cargill, Incorporated
Post Office Box 5624
Minneapolis, MN 55440-5624

on this 9th day of March, 1999.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



W. DOUGLAS BEASON
Assistant General Counsel
Florida Bar No. 0843430

Mail Station 35
3900 Commonwealth Boulevard
Tallahassee, FL 32399-3000
Telephone: (850) 488-9314

CARGILL, INCORPORATED LAW DEPARTMENT

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Corporate Vice President
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& Secretary

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Vice President &
North America
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Linda L. Cutler
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Assistant General Counsel
& Assistant Secretary

H. Jed Hepworth
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Laura Hicks Witte

Grace P. Mallory
Karin M. Nelson
Christopher W. Putnam
Mark T. Quayle
Maria-Inés Rajj
Jeffrey J. Skelton
Tracy L. Wessel
Gen L. Williams

February 26, 1999

Writer's Direct Dial Number

(612) 742-4653

Via Courier and Fax: (850) 487-4938

Office of General Counsel
Florida Department of Environmental Protection
3900 Commonwealth Boulevard
Mail Station 35
Tallahassee, Florida 32399-3000

ATTN: Kathy Carter

RE: Request for an extension to petition for an administrative hearing
Draft Permit No. PSD-FL-255
DEP File No. 1050046-008-AC
Cargill Fertilizer, Inc., 3200 Highway 60 West, Bartow, FL 33830

Dear Ms. Carter:

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Office of General Counsel
February 26, 1999
Page 2

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Sincerely yours,



Thomas W. MacLeod

TWM:
cil/124412

cc: Mr. Al Linero, FDEP
D. Jellerson, Cargill/Tampa, FL



8813 Highway 41 South - Riverview, Florida 33569 - Telephone 813-677-9111 - TWX 810-876-0648 - Telex 52666 - FAX 813-671-6146

March 15, 1999

HAND DELIVERED

Mr. Al Linero, PE
New Source Review Section
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RECEIVED

MAR 15 1999

RE: Cargill Fertilizer, Inc.
No. 3 Fertilizer Plant Expansion
Draft Permit PSD-FL-255 / 1050046-008-AC

**BUREAU OF
AIR REGULATION**

Dear Al,

Following are Cargill Fertilizer, Inc.'s comments regarding the above-referenced Draft permit. As you are aware, Cargill received the "Intent to Issue" for this permit on February 15, 1999. Due to our serious concerns about some of the permit conditions, we requested and received an extension of time in which to file for an Administrative Hearing. In order to avoid a hearing, we respectfully request that the permit be issued to reflect the following modifications. Each item below is numbered according to the specific permit condition number in the Draft permit.

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

Condition 3. The production limit set in the Draft permit is lower than requested in the permit application. The production limit should be set at 1,470 TDP P_2O_5 .

The production rate also needs to be set as a daily limit to be consistent with the method of determining compliance. In accordance with the provisions of 40 CFR 60 New Source Performance Standards for Diammonium Phosphate Plants, Subpart V, a daily record of P_2O_5 input is required. This data is obtained using a daily laboratory analysis of samples of the feed acid to the plant (see Condition 13). Since the laboratory analysis is only obtained once per day, and because the results are necessarily an after-the-fact determination, the production rate compliance determination should be based on the daily value. Note also, that these types of plants are operated in as near steady state mode as possible in order to assure consistent product quality. Therefore, the Department should have reasonable assurance that instantaneous rates are not significantly different than daily values.

Finally, you should recognize that compliance testing is conducted with the unit operating at maximum achievable rates during the duration of the test. This procedure ensures that the unit is capable of meeting the established emissions limit at maximum allowable operations.

Condition 7. The Visible emission limit should be established at 15%. This proposed project is for a



production rate increase on an existing source and existing stack in which the maximum particulate emissions are expected to be substantially higher than the past actual emissions. We believe it is unsound to base the visible emission limitation on historic test data for this source which does not account for either the increase in production or increase in particulate emissions. A 15% visible emissions limit will also be consistent with a recent BACT determination for one of our competitors (IMC-Agrico Co. No. 2 DAP Plant PSD-FL-241; 1050059-020-AC).

Condition 8. Cargill stated in the application the typical conditions under which fuel oil might be fired in the No. 3 MAP/DAP Plant in addition to the requested fuel limit of 338,000 gal/yr. The permit should be revised to remove the restriction that No. 6 fuel oil firing be limited to periods of natural gas curtailment or gas line/burner maintenance. Cargill may have other reasons to fire No. 6 oil, or a better grade, including market conditions. In addition, there is no regulatory basis for further limiting oil usage or emissions beyond the annual fuel limit. The fuel limit of 338,000 gal./yr. Does not exceed the PSD significance threshold for SO₂ of 40 TPY

Also, the 40 MMBtu/hr limit should be specified as a "daily average" since consumption rates are based on daily meter readings or tank inventory measurements.

Condition 9. This condition should be reworded to replace "...operated at a minimum pressure drop..." with "...designed for a pressure drop...". As indicated in Cargill's prior comments, the imposition of an operating requirement in a PSD construction permit is legally not appropriate for this source. More significantly, the minimum pressure drop requirement is not technically supportable, runs contrary to compliance assurance monitoring under the Title V program, and requires Cargill to incur additional costs for no environmental benefit.

A minimum pressure drop requirement is not legally appropriate as BACT for this source because it is not an emission limitation and an emission limitation can be readily established. BACT is specifically defined as "an emissions limitation ... based on the maximum degree of reduction for each pollutant subject to regulation under ACT which would be emitted from any proposed major source ... If the Administrator determines that technological or economic limitations on the application of measurement methodology to a particular emissions unit would make the imposition of an emissions standard infeasible, a design, equipment, work practice, operational standard, or combination thereof, may be prescribed instead to satisfy the requirement for the application of BACT." 40 CFR Pt. 52.21(b)(12) (emphasis added). A plain reading of this definition indicates that BACT is first and foremost an emission limit. It is only when measurement of an emission limit is determined to be infeasible that the Administrator has the authority to impose operational standards instead of an emission limitation. See also U.S. EPA, New Source Review Workshop Manual at B.56 (October 1990 draft). In no event do the regulations contemplate the imposition of both an emission limitation and operational limitations on a source through the PSD program.

In this case, FDEP has specified an emission limit in the draft permit; there is no legal basis for also imposing an operational limit on the source. In its response to Cargill's earlier comments, FDEP indicated that other sources had accepted such operational limits in addition to emission limitations. As Cargill is keenly aware, there are many factors which are weighted in the decision to contest a permit condition, including the need to commence construction. The fact that a source accepted a permit does not indicate that all conditions in the permit were properly imposed.

Moreover, there are other significant problems with the imposition of the minimum pressure drop requirement. First and foremost, the minimum pressure drop requirement appears to be without technical support. The draft permit establishes as BACT a particulate emission limit of 0.18 LB/ton P2O₅. This emission limit was derived from the emission levels currently being achieved at the



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existing No. 3 fertilizer plant as well as by comparison to recent BACT limits of 0.19 LB/ton P2O5 established for Cargill's Riverview No. 5 DAP plant and its Bartow No. 4 DAP plant. Significantly, most of the venturi scrubbers at all three of these facilities have demonstrated compliance with their respective emissions limits with pressure drops of less than 15 inches. Because these units can fully comply with BACT with a pressure drop of less than 15 inches, there is no technical basis for imposing this operating limitation in addition to the emissions limitation. The data from these tests also demonstrates that pressure drop does not directly correlate with the measured particulate emissions for any of these units. Pressure drop can be a useful compliance monitoring tool, as discussed below, but should not be a BACT requirement in itself.

Second, imposition of the minimum pressure drop requirement in a PSD construction permit runs contrary to the compliance assurance monitoring program adopted by Florida and undercuts the flexibility the FDEP grants sources in operating permit program. Under the Florida's Title V program, sources are required to identify indicators of performance and corresponding ranges or conditions which reasonably assure compliance with an emission limit. Pressure drop in a venturi scrubber is specifically identified as an example of the kinds of indicators to be developed in a compliance assurance monitoring program. See 62-204.800, F.A.C. incorporating by reference 40 CFR Pt. 64.3. The compliance assurance monitoring program allows sources to identify appropriate operating ranges and conditions. For example, Cargill's Title V permit for Bartow currently incorporates minimum pressure drop requirements based on past performance tests. By including operating limits in a construction permit, FDEP prematurely sets the operating limits and prevents FDEP and Cargill from developing appropriate operating limitations based on the performance of the unit or modify the operating limitations through the Title V permit process.

Third, imposition of a minimum pressure drop requirement requires Cargill to install different technology than was proposed in its PSD permit application, technology which is not economically feasible. It is not clear to Cargill where the 15 inch minimum pressure drop requirement originated. Cargill's permit application indicated that the scrubbers were being designed for 15 inches of pressure drop. This is fundamentally different from a system designed to meet a BACT requirement of a 15 inch minimum pressure drop. As stated by U.S. EPA, "[a] BACT emission limit or condition must be met on a continual basis at all levels of operation . . ." New Source Review Manual at B.56. To ensure that a venturi scrubber will have a pressure drop of no less than 15 inches under all normal operating conditions, the system would have to be designed to operate with at least a 21 inch minimum pressure drop. The change in design from a 15 inch minimum pressure drop to a 21 inch minimum pressure drop substantially increases the both the capital and operating costs of the control technology. Cargill would have to incur the following additional equipment costs and operating costs in order to install a system with a 21 inch minimum pressure drop:

A. Equipment costs

<u>Equipment</u>	<u>Additional Cost</u>
Granulator Venturi Scrubber	\$5,000
Cooler Venturi Scrubber	\$5,000
Dryer Evacuation Fan	\$15,000
Evacuation Duct Modifications	\$5,000
Replace Main Evacuation Fan*	\$300,000
Total Additional Capital Cost	\$330,000

**Note that the largest single upgrade required to achieve the proposed pressure drop will be replacement of the main evacuation fan which is beyond the scope of the project as proposed in the permit application.*

Proposed Revised Permit Language –

SECTION III. Emissions Unit Specific Conditions

Condition 3.

The No. 3 MAP/DAP Plant shall not produce more than 1,470 tons P_2O_5 per day [Rule 62-210.200, F.A.C.]

Condition 7.

Visible emissions from the stack shall not exceed 15% opacity [Rule 62-212.400, F.A.C.]

Condition 8.

During periods of firing natural gas only, sulfur dioxide emissions from the stack shall be presumed as minimal and a sulfur dioxide compliance test shall be waived. No. 6 fuel oil (or better grade) with a maximum sulfur content of 1.5% by weight may be fired up to 338,000 gal/year. The firing rate of either fuel shall not exceed 40 million BTU per hour daily average. The permittee shall maintain records of the fuel oil sulfur content analysis.

Condition 9.

All venturi scrubbers shall have a design pressure drop of 15 inches H_2O . The permittee shall install, calibrate, operate and maintain monitoring devices that continuously measure and record the total pressure drop across each scrubbing system. Accuracy of the monitoring devices shall be $\pm 5\%$ over the operating range. [Rules 62-297.310, 62-296.800, F.A.C; 40 CFR 60.223(c)]

Condition 10. Last Sentence.

Once the emission unit is so limited, then operation at higher capacities is allowed for no more than 30 consecutive days for the purposes of additional compliance testing to regain the permitted capacity in the permit. [Rule 62-297.310, F.A.C.]

BACT Determination PM and VE Section.

Under Option 2 discussion, refer to the design pressure drop rather than minimum pressure drop of 15 in. w.c.



B. Operating costs

On top of the added capital expense of \$330,000, imposition of a 15" minimum pressure drop requirement will result in an unreasonable increase in operating costs for the unit. As mentioned above, the unit will need to be designed to operate well above the minimum limit to assure that there are no plant shutdowns caused by scrubber pressure fluctuations. Assuming that average operating pressure drop is increased by 5", the energy consumption will increase by 275 horsepower. This will impose an additional electricity cost of \$71,856 per year (see calculations below). This additional cost will not result in any measurable decrease in particulate emissions. In fact, historical operating data demonstrates that the proposed BACT emission limit of 0.18 LB particulate per ton P₂O₅ input can be achieved without this proposed restriction. Note also that the increased energy consumption caused by the higher pressure drop will, itself, result in increase pollutant emissions at the source of power generation.

Calculation of Energy Costs Associated with Increased Scrubber Pressure Drops: Energy costs resulting from increased venturi scrubber pressure drops -	
<u>Assumptions:</u> Fan inlet volume: 210,000 acfm Pressure difference to comply with 15" minimum: 5" Fan efficiency: 60% From Perry, 5th edition, equation 6-34: Air horsepower = $0.000157 \times Q \times (\text{head, inches of water})$	<u>Calculations:</u> Air horsepower = $0.000157(210,000 \text{ acfm})(5" \text{ WC}) = 164.9 \text{ HP}$ Shaft Horsepower = $9164.9/60\% = 275 \text{ HP}$ Electric Cost = $275\text{hp}(.7457\text{kw/hp})(8760 \text{ hr/yr})(\$0.04/\text{kwh}) =$ <u>\$71,856/year</u>

These costs were not included in the FDEP's analysis. When considered, they demonstrate that a 15 inch pressure drop design can meet the same BACT emission limit, 0.18 lb/P₂O₅, as FDEP has designated for the 21 inch minimum pressure drop but at substantially lower cost. Even under top-down BACT, Cargill is unaware of any basis for imposing more expensive control technology on a source when the same BACT limit can be met with less expensive control technology.

Condition 10. The 15 day limit for conducting additional compliance testing should be changed to 30 days to be consistent with the facility Title V Operating permit. The operating permit established the 30 day limit in recognition of the additional requirement that the Department be given 15 days advance notice of a scheduled test (Condition 11). In addition, since outside contractors are used for stack testing, the 30 day limit will allow sufficient time for scheduling.

Best Available Control Technology Determination.

Under the PM/PM₁₀ and VE section it states that the BACT requirement will be satisfied by the minimum pressure drop for the acid scrubbers. As discussed above, the minimum operational pressure drops should be determined through stack testing. The language should reflect that the scrubbers should have a design pressure drop. The VE limit should be set at 15% opacity consistent with previous BACT determinations.

In order to assist in your evaluation of these matters, I have attached proposed revised language for each of the above permit conditions to reflect the above comments.

I look forward to discussing these issues with you at our meeting scheduled for Monday March 15, 1999 in your office. I trust that this information will be sufficient to assure the Department that a permit issued as we propose will meet all of the applicable regulatory requirements and be



protective of the environment.

Sincerely,

A handwritten signature in black ink that reads "David B. Jellerson" followed by a horizontal flourish.

David B. Jellerson, PE
Environmental Superintendent

cc: T. MacLeod, Esq.
D. Buff, Golder & Associates
M. Russo



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