

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF PERMIT

In the matter of an
Application for Permit by:

DEP File No. AC 53-230355
AC 53-232681
PSD-FL-204
Polk County


Mr. John A. Brafford
IMC-Agrico Company
P. O. Box 1035
Mulberry, Florida 33860

Enclosed are Permit Numbers AC 53-230355 and AC 53-232681 (PSD-FL-204) for modifications to the sulfuric acid plant and diammonium phosphate plant at IMC-Agrico's facility located on SR 676 in Polk County, Florida, issued pursuant to Section (s) 403, Florida Statutes.

Any party to this Order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

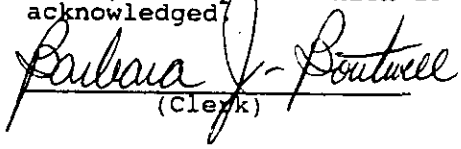

C. H. Fancy, P.E., Chief
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400
904-488-1344

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of business on 4/18/94 to the listed persons.

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED,
on this date, pursuant to
§120.52(11), Florida Statutes,
with the designated Department
Clerk, receipt of which is hereby
acknowledged.


(Clerk)

4/18/94
(Date)

Copies furnished to:
Bill Thomas, SWD
Jewell Harper, EPA
John Koogler, P.E.
Chris Shaver, NPS

Is your RETURN ADDRESS completed on the reverse side?

RECEIVED

SENDER: Complete name and address of sender. Complete items 1, 2, and 3. Print your name and address on the reverse of this form so that we can return this card to you. Attach this form to the front of the mailpiece, or on the back if space does not permit.

1. Return Receipt Requested: Write Return Receipt Requested on the mailpiece below the article number. The Return Receipt will show the date the article was delivered and the date delivered.

2. Article Addressed to: Mr. John A. Brafford
IMC-Agrico Company
P. O. Box 1035
Mulberry, FL 33860

3. Article Number: P 872 563 630

4. Service Type:
 Registered Insured
 Certified COD
 Express Mail Return Receipt for Merchandise

5. Signature (Addressee):

6. Signature (Agent): *[Signature]*

7. Date of Delivery:

8. Addressee's Address (Only if requested and fee is paid):

9. Also wish to receive the following services (for an extra fee):
 1. Addressee's Address
 2. Restricted Delivery
 Consult postmaster for fee.

Thank you for using Return Receipt Service.

PS Form 3811, December 1991 U.S. GPO: 1992-323-402 **DOMESTIC RETURN RECEIPT**

P 872 563 630



Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

PS Form 3800, JUNE 1991

Sent to Mr. John A. Brafford,	
Street and No. P.O. Box 1035 IMC Agrico	
P.O. State and ZIP Code Mulberry, FL 33860	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date Mailed: 4-18-94 Permit: AC53-230355 -232681, PSD-FL-204	

Final Determination

IMC-Agrico Company
Polk County
Nichols, Florida

Sulfuric Acid Plant
Diammonium Phosphate Plant
Production Modifications

Permit Numbers: AC 53-230355
 AC 53-232681
 PSD-FL-204

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

March 29, 1994

Final Determination

The Technical Evaluation and Preliminary Determination for the permits to increase production of the sulfuric acid and diammonium phosphate (DAP) plants at IMC-Agrico Company in Nichols, Polk County, Florida, was distributed on January 13, 1994. The Notice of Intent to Issue was published in the Lakeland Ledger on February 10, 1994. Copies of the evaluation were available for public inspection at the Department offices in Tampa and Tallahassee.

Comments on the evaluation and proposed permits were submitted by the Fish and Wildlife Service (FWS). The FWS comments and the Department of Environmental Protection (DEP) responses are as follows:

FWS Comment

FWS requested DEP to consider lowering the particulate matter (PM) emission limits proposed for the DAP plant.

DEP Response

DEP chose to impose more restrictive PM emission limits than proposed by IMC-Agrico. IMC-Agrico had initially requested limits based on NSPS, and finally based on statistical analysis of historical test data. It is not prudent to lower the PM emission limits further since they would be far below the emission limits statistically determined from past plant operating records. The lower emission limits would inevitably lead to exceedances. These exceedances would then lead to a request for a permit modification for more practical emission limitations.

The PM emission limits as proposed by DEP appear reasonable based on historical data; the projected change in operating rate; and, the projected variability of emissions.

FWS Comment

FWS requested DEP to lower sulfur content of the fuel oil to be consistent with other DEP BACT determinations.

DEP Response

Fuel oil is the secondary (back-up) fuel, while natural gas has been the primary fuel in the DAP plant. As documented in Annual Operating Reports, the DAP plant has been operating exclusively on natural gas, a trend expected to continue. The 1991-1993 fuel oil use in DAP production was nil. The fuel oil supplied to the Nichols facility is shared among a rock dryer, two boilers, sulfuric acid plant (start-up), and the DAP dryer. The permitted fuel oil utilization rate of the DAP dryer amounts to about 8 percent of the total permitted fuel oil use at the Nichols facility. The maximum sulfur dioxide (SO₂) emissions from the DAP

dryer, and the resulting ambient air impacts, are insignificant in comparison to the total SO₂ emissions and air impacts from the facility.

DEP's decision to allow the use of fuel oil with 0.5% sulfur in the DAP dryer is justified given (a) the minimal anticipated use; (b) the source accounts for only about 8 percent of the shared fuel oil supply at the site; and (c) the maximum SO₂ emissions and impacts from the DAP dryer, as compared to the total for the facility, are insignificant.

No adverse comments were submitted by the U.S. Environmental Protection Agency (EPA) in their letter dated March 7, 1994.

The following stack height language was inadvertently left out of the Technical Evaluation and Preliminary Determination for both permits:

"In approving this permit, the Florida Department of Environmental Protection 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."

This language should go in Section IV.a before the second to the last sentence. Use of this language satisfies the requirements of the 1994 EPA Workplan, which DEP committed to.

The final action of the Department will be to issue the PSD permit (PSD-FL-204) as proposed.



Florida Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

PERMITTEE:
IMC-Agrico Company
P. O. Box 1035
Mulberry, Florida 33860

Permit Number: AC53-232681
PSD-FL-204
Expiration Date: Jan. 1, 1996
County: Polk
Latitude/Longitude: 27°52'51"N
82°01'55"W
Project: Diammonium
Phosphate Plant - Production
Increase to 100 TPH

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-210, 212, 272, 275, 296, 297; and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached and specifically described as follows:

For an increase in production to 100 TPH in the diammonium phosphate plant. This source is located at the permittee's existing facility in Nichols, Polk County, Florida. The UTM coordinates are Zone 17, 398.4 km East and 3084.2 km North.

The source shall be constructed in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

*This permit is void if construction does not commence within 18 months of its issuance, if construction is discontinued for more than 18 months, or if construction is not completed and the modified plant placed in operation within a reasonable time.

Attachments are listed below:

1. IMC-Agrico's application received April 28, 1993.
2. DEP's letter dated May 26, 1993.
3. IMC-Agrico's letter dated June 4, 1993.
4. Koogler & Associates' letter dated July 30, 1993.
5. Fish & Wildlife Service letter dated February 28, 1994.

PERMITTEE:
IMC-Agrico Company

Permit Number: AC 53-232681
PSD-FL-204
Expiration Date: January 1, 1996

GENERAL CONDITIONS:

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.
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, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any 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 of 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.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgement 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.
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.
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.

PERMITTEE:
IMC-Agrico Company

Permit Number: AC 53-232681
PSD-FL-204
Expiration Date: January 1, 1996

GENERAL CONDITIONS:

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 any 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.

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.

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,

PERMITTEE:
IMC-Agrico Company

Permit Number: AC 53-232681
PSD-FL-204
Expiration Date: January 1, 1996

GENERAL CONDITIONS:

Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

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.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.120 and 17-30.300, 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.

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

13. This permit also constitutes:

- (x) Determination of Best Available Control Technology (BACT)
- (x) Determination of Prevention of Significant Deterioration (PSD)
- (x) Compliance with New Source Performance Standards (NSPS)

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 for this permit. These materials shall be retained at least three years from the date of the sample, measurement,

PERMITTEE:
IMC-Agrico Company

Permit Number: AC 53-232681
PSD-FL-204
Expiration Date: January 1, 1996

GENERAL CONDITIONS:

report, or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

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.

SPECIFIC CONDITIONS:

1. Maximum permitted production rate for the diammonium phosphate plant (DAP) shall be 100 TPH. The maximum production shall not exceed 48.4 tons/hr of 100 percent phosphoric acid (P₂O₅) input.

2. The DAP plant may operate 8,760 hours per year.

3. The maximum emissions for fluoride and particulate (PM/PM₁₀) based on FDEP's evaluation of past test data are stated in Table 1. The total emissions rates shall not be exceeded, however, the allocation of the emission rates after FDEP's approval may be adjusted based on the results of sufficient emission tests conducted at the higher production rates.

TABLE 1

EMISSIONS

<u>Source</u>	<u>Lbs/Hr</u>	<u>Fluorides</u>		<u>Particulate</u>		<u>Ton/Yr</u>
		<u>Lbs/TP₂O₅</u>	<u>Ton/Yr</u>	<u>Lbs/Hr</u>	<u>Lbs/TP₂O₅</u>	
Reactor/ Granulator	1.7	0.0354	7.5	10.1	0.21	44.2
Dryer	0.2	0.0040	0.9	7.3	0.15	32.0
Cooler	<u>0.1</u>	<u>0.0023</u>	<u>0.4</u>	<u>2.4</u>	<u>0.05</u>	<u>10.5</u>
Total	2.0	0.0417	8.8	19.8	0.41	86.7

PERMITTEE:
IMC-Agrico Company

Permit Number: AC 53-232681
PSD-FL-204
Expiration Date: January 1, 1996

SPECIFIC CONDITIONS:

4. Testing for PM/PM₁₀ and fluoride shall be done on all three stacks within a consecutive 5-day period without changing the production and raw materials rates. Testing of emissions shall be conducted with the source operating at capacity. Capacity is defined as 90-100% of rated capacity. If it is impracticable to test at capacity, then sources may be tested at less than capacity; in this case subsequent source operation is limited to 110% of the test load until a new test is conducted. Once the unit is so limited, then operation at higher capacities is allowed for no more than fifteen days for purposes of additional compliance testing to regain the rated capacity in the permit, with prior notification to the Department. The Department's Southwest District office shall be notified in writing 15 days prior to source testing. Written reports of the tests shall be submitted to that office within 45 days of test completion.

5. Compliance testing using the enclosed EPA draft method or an equivalent method which meets FDEP approval shall be conducted on all three stacks within a consecutive 5-day period without changing the production rates or raw materials to determine NH₃ emissions in ppm and lb/hr from the DAP plant. The Department shall be provided with the test results, and a professional engineer's evaluation shall be required using NH₃ emission data from the tests and FDEP/EPA-approved modeling procedures to confirm that the NH₃ ambient impacts from the DAP plant will not exceed the NH₃ annual air reference concentration (ARC) of 100 ug/m³. Should the air dispersion modeling predict an exceedance of the annual ammonia ARC, the allowable ammonia emission rates for the DAP plant shall be reduced to a level that prevents the exceedance of the annual ammonia ARC (100 ug/m³).

6. Only natural gas or No. 2 fuel oil shall be used in the drying operation. The No. 2 fuel oil shall contain no more than 0.5% sulfur, by weight. The maximum heat input rate to the dryer is limited to 16 MMBtu/hr.

7. Visible emissions shall be less than 20% opacity.

8. Fugitive emissions from the process shall be controlled by sealing and/or venting all particulate matter and fumes from the equipment to the pollution abatement system.

9. Pursuant to 40 CFR 60.223, the permittee shall comply with the following requirements for the monitoring of the DAP plant:

- (a) The permittee shall calibrate, maintain, and operate a monitoring device which can be used to determine the mass flow of phosphorus-bearing feed material to the process. The monitoring device shall have an accuracy of $\pm 5\%$ over its operating range.

PERMITTEE:
IMC-Agrico Company

Permit Number: AC 53-232681
PSD-FL-204
Expiration Date: January 1, 1996

SPECIFIC CONDITIONS:

- (b) The permittee shall maintain a daily record of equivalent P₂O₅ feed by first determining the total mass rate in tons/hour of phosphorous-bearing feed using a monitoring device for determining mass flow rate which meets the requirements of Paragraph (a) above and then by processing according to §60.224(b)(3).
- (c) The permittee shall calibrate, maintain and operate a monitoring device which continuously measures and permanently records total pressure drop across each scrubber system. The monitoring device shall have an accuracy of ±5% over its operating range.
10. Before the construction permit expires, the DAP plant shall be tested for PM/PM₁₀, fluoride, and visible emissions. Test procedures shall be in accordance with EPA reference methods 1, 2, 3, 4, 5, 9, and 13A or 13B as published in 40 CFR 60, Appendix A, (July, 1993). Ammonia emissions shall be determined using the enclosed EPA Draft Method or an equivalent method which meets FDEP approval.
11. The permittee, for good cause, may 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 (F.A.C. Rule 17-4.090).
12. An application for an operation permit must be submitted to the Southwest District office at least 90 days prior to the expiration date of this construction permit. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rules 17-4.055 and 17-4.220).

Issued this 13th day
of April, 1994

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION


Virginia B. Wetherell, Secretary



Florida Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

PERMITTEE:
IMC-Agrico Company
Post Office Box 1035
Mulberry, Florida 33860

Permit Number: AC 53-230355
PSD-FL-204
Expiration Date: Jan. 1, 1996
County: Polk
Latitude/Longitude: 27°52'51"N
82°01'55"W
Project: Sulfuric Acid Plant and
Molten Sulfur Storage
and Handling System

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-210, 212, 272, 296 and 297; and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the modifications to increase the sulfuric acid plant production to 2500 TPD 100% sulfuric acid and sulfur feed rate to a maximum of 1000 TPD and 365,000 TPY for the sulfuric acid plant. The sulfur facility consists of a rail and truck unloading system; one 2430 short ton (ST) molten sulfur north storage tank; one 1125 ST molten sulfur south storage tank; one 195 ST rail pit; one 165 ST truck pit; and the associated transfer pumps and piping. The modifications do not involve physical change to these plants. The sources are located at the IMC-Agrico Nichol's facility on CR 676 near Nichols, Polk County, Florida. The UTM coordinates of this facility are Zone 17, 398.4 km E and 3084.2 km N.

*This permit is void if construction does not commence within 18 months of its issuance, if construction is discontinued for more than 18 months, or if construction is not completed and the modified plant placed in operation within a reasonable time.

The source shall be constructed in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Attachments are listed below:

1. IMC-Agrico's application received April 28, 1993.
2. DEP's letter dated May 26, 1993.
3. IMC-Agrico's letter dated June 4, 1993.
4. Koogler & Associates' letter dated July 30, 1993.
5. Fish & Wildlife Service letter dated February 28, 1994.

PERMITTEE:
IMC-Agrico Company

Permit Number: AC53-230355
PSD-FL-204
Expiration Date: January 1, 1996

GENERAL CONDITIONS:

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.

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, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any 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 of 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.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgement 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.

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.

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

PERMITTEE:
IMC-Agrico Company

Permit Number: AC53-230355
PSD-FL-204
Expiration Date: January 1, 1996

GENERAL CONDITIONS:

auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

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 any 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.

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.

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

PERMITTEE:
IMC-Agrico Company

Permit Number: AC53-230355
PSD-FL-204
Expiration Date: January 1, 1996

GENERAL CONDITIONS:

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 extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

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.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.120 and 17-30.300, 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.

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

13. This permit also constitutes:

- (x) Determination of Best Available Control Technology (BACT)
- (x) Determination of Prevention of Significant Deterioration (PSD)
- (x) Compliance with New Source Performance Standards (NSPS)

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

PERMITTEE:
IMC-Agrico Company

Permit Number: AC53-230355
PSD-FL-204
Expiration Date: January 1, 1996

GENERAL CONDITIONS:

for 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:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

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.

SPECIFIC CONDITIONS:

1. The maximum production rate of the sulfuric acid plant shall not exceed 2500 tons per day based on 100% sulfuric acid (H₂SO₄).
2. Sulfur dioxide (SO₂) emissions from the plant shall not exceed 4 lbs/ton of 100% H₂SO₄, 416.8 lbs/hr, and 1825.6 tons/yr.
3. H₂SO₄ mist emissions from the plant shall not exceed 0.15 lb/ton of 100% H₂SO₄ produced, 15.6 lbs/hr, and 68.5 tons/yr.
4. Nitrogen oxides, (NO_x) emissions from the plant shall not exceed 0.12 lb/ton of 100% H₂SO₄ produced, 12.5 lbs/hr, and 54.8 tons/yr. The nitrogen oxides limits based on a general emission factor, are subject to revision if sufficient test data indicate that the emission factor is improper.
5. Visible emissions (VE) from the H₂SO₄ plant shall not exceed 10% opacity. VE shall not exceed 20% opacity from any source in the molten sulfur system.

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6. A continuous emission monitor shall be used to monitor SO₂ emissions from the H₂SO₄ plant in accordance with 40 CFR 60, Subpart H (July 1, 1992), Standards of Performance for Sulfuric Acid Plants. Initial compliance tests shall be conducted using: EPA Method 7E for NO_x, EPA Method 8 for SO₂ and acid mist, and EPA Method 9 for visible emissions as described in 40 CFR 60, Appendix A (July 1, 1993).

7. Testing of emissions shall be conducted with the source operating at capacity. Capacity is defined as 90-100% of permitted capacity (2250 - 2500 TPD sulfuric acid production). If it is impracticable to test at capacity, then sources may be tested at less than capacity. In this case subsequent source operation is limited to 110% of the test load until a new test is conducted. Once the unit is so limited, then operation at higher capacities is allowed for no more than fifteen days for purposes of additional compliance testing to regain the rated capacity in the permit, with prior notification to the Department. The Department's Southwest District office shall be notified in writing 15 days prior to source testing. Written reports of the tests shall be submitted to that office within 45 days of test completion.

8. The sulfuric acid plant and the molten sulfur storage and handling facility shall be allowed to operate continuously (i.e., 8760 hours/year).

9. The maximum molten sulfur feed rate to the sulfuric acid plant shall exceed neither 1000 tons per day (TPD), nor 365,000 tons per year (TPY).

10. The permittee shall employ proper operation and maintenance procedures to minimize emissions from the molten sulfur system pursuant to the applicable requirements of F.A.C. Rule 17-296.411 [Molten Sulfur Storage and Handling Facilities]. The permittee shall also comply with other applicable provisions of F.A.C. Chapters 17-210, 212, 275, 296, 297; and 17-4.

11. No objectionable odors shall be allowed, in accordance with F.A.C. Rule 17-296.200(123) [Objectionable Odor Prohibited].

12. Initial compliance tests for the molten sulfur system shall be conducted in accordance with the July 1, 1993, version of 40 CFR 60, Appendix A, using EPA Method 9, for visible emissions. Test run duration shall not be less than 30 minutes. The tests for the

PERMITTEE:
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vents of the storage tanks and sulfur pits shall be conducted while the tanks and pits are being filled (filling does not have to be continuous during the entire test). Routine VE tests shall be at the frequency specified in any permit to operate this facility issued by the Southwest District.

13. Any change in the method of operation, equipment or operating hours which would reasonably be expected to result in an increase in emissions shall be submitted to DEP's Southwest District office for approval.

14. For emission inventory and PSD purposes, the estimated maximum emissions from the sources in the molten sulfur storage and handling facility are:

Source	Estimated Emissions				
	PM/PM ₁₀	SP	SO ₂	TRS/H ₂ S	VOC
North Tank lb/hr (max)	0.2	0.1	0.2	0.1	0.1
TPY	0.6	0.24	0.6	0.36	0.36
South Tank lb/hr (max)	0.2	0.1	0.1	0.1	0.1
TPY	0.48	0.24	0.48	0.24	0.36
Truck Pit lb/hr (max)	0.3	0.1	0.5	0.1	0.3
TPY	0.48	0.24	0.48	0.24	0.36
Rail Pit lb/hr (max)	0.2	0.1	0.2	0.1	0.2
TPY	0.6	0.24	0.6	0.36	0.48

15. The permittee, for good cause, may 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 (F.A.C. Rule 17-4.090).

16. An application for an operation permit must be submitted to the Southwest District office at least 90 days prior to the expiration date of this construction permit or within 45 days after completion of compliance testing, whichever occurs first. The operation permit application shall include a set of conditions acceptable to the Department for startup/shutdown of the permittee's sulfuric

PERMITTEE:
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acid plant. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rules 17-4.055 and 17-4.220).

Issued this 13th day
of April, 1994

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Virginia B. Wetherell
Virginia B. Wetherell, Secretary

Best Available Control Technology (BACT) Determination
IMC-Agrico Company
Polk County
Permit Number AC 53-230355
PSD-FL-204

The applicant proposes to increase sulfuric acid production to 2500 tons per day for the sulfuric acid plant that is located at the Nichols phosphate fertilizer manufacturing facility on CR 676 near Nichols, Polk County, Florida.

The proposed project will result in a significant increase in emissions of sulfur dioxide (SO₂) and sulfuric acid mist. The project is therefore subject to Prevention of Significant Deterioration (PSD) review in accordance with F.A.C. Rule 17-212.400.

The BACT review is part of the PSD review requirements in accordance with F.A.C. Rule 17-212.410.

Date of Receipt of a BACT Application: April 28, 1993.

The BACT determination requested by the applicant is presented below:

<u>Control Technology</u>	Double Absorption/Fiber Mist Eliminators
<u>Pollutant</u>	<u>Emission Limits</u>
SO ₂	4 lb/ton of 100% H ₂ SO ₄ produced
Sulfuric Acid Mist	0.15 lb/ton of 100% H ₂ SO ₄ produced
Visible Emissions	10% opacity

Basis of Review:

This determination was based upon input from the applicant, EPA Region IV, and the Bureau of Air Regulation.

BACT Determination Procedure:

In accordance with Florida Administrative Code Chapter 17-212, Air Pollution, this BACT determination is based on the maximum degree of reduction of each pollutant emitted which the 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:

- (a) Any Environmental Protection Agency determination of Best Available Control Technology 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).

- (b) All scientific, engineering, and technical material and other information available to the Department.
- (c) The emission limiting standards or BACT determinations of any other state.
- (d) 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 source in question the most stringent control available for a similar or identical source or source category. If it is shown that this level of control is technically or economically infeasible for the source 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.

BACT Determined by DEP:

<u>Control Technology</u>	Double Absorption/Fiber Mist Eliminators
<u>Pollutant</u>	<u>Emission Limits</u>
SO ₂	4.0 lb/ton of 100% H ₂ SO ₄ produced
Sulfuric Acid Mist	0.15 lb/ton of 100% H ₂ SO ₄ produced
Visible Emissions	10% opacity

BACT Determination Rationale

DEP's BACT determination is the same as that proposed by the applicant, determination completed by other states, and Standards of Performance for Sulfuric Acid Plants, 40 CFR 60 Subpart H, (double absorption process). The process in itself is the control technology for SO₂. The emission limits reflect conversion efficiency of around 99.7% of SO₂ to H₂SO₄. High efficiency mist eliminators are considered BACT for sulfuric acid mist. A review of BACT/LAER Clearinghouse indicates that the double absorption technology and the use of high efficiency mist eliminators is representative of BACT using the top-down approach.

Environmental Impact Analysis

The impact analysis for the BACT determination is based on 8,760 hours/year operation. The increment impact analysis and the ambient air quality analysis resulted in the following for SO₂ emissions:

<u>Avg Time</u>	<u>Increment Impact (ug/m³)</u>	<u>Increment (ug/m³)</u>	<u>Predicted Ambient Air Quality Impact (ug/m³)</u>	<u>Fla. AAQS (ug/m³)</u>
24-hr	26	91	239	260
3-hr	100	512	685	1300

Conclusion

The incremental impact and the ambient air quality impact from SO₂ emissions due to the proposed modification is in compliance with all air pollution regulations. The impacts associated with the proposed increase in production support the Department's determination that the emission limits established herein represent BACT.

Details of the Analysis May be Obtained by Contacting:


Douglas G. Outlaw, BACT Coordinator
Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Recommended by:


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

April 6 1994
Date

Approved by:


Virginia B. Wetherell, Secretary
Dept. of Environmental Protection

April 13 1994
Date

Best Available Control Technology (BACT) Determination
IMC-Agrico Company
Polk County
Permit Number AC 53-232681
PSD-FL-204

The applicant proposes to increase diammonium phosphate (DAP) production from 80 tons/hour to 100 tons/hour at their DAP plant on County Road 676 in Polk County.

The proposed project will result in a significant increase in emissions of fluorides and particulate matter (PM/PM₁₀). The project is therefore subject to Prevention of Significant Deterioration (PSD) review in accordance with F.A.C. Rule 17-212.400.

The BACT review is part of the PSD review requirements in accordance with F.A.C. Rule 17-212.410.

Date of Receipt of a BACT Application:

April 28, 1993

BACT Determination Requested by the Applicant:

The BACT determination requested by the applicant is presented below:

Control Technology:	Venturi acid scrubbing for Reactor/Granulator Venturi reclaim water scrubbing for cooler and dryer
Pollutant:	Emission Limits:
PM/PM ₁₀	0.68 lb/ton Phosphoric Acid (P ₂ O ₅) (32.9 lb/hr, 144.1 TPY)
Fluoride	0.06 lb/ton Phosphoric Acid (P ₂ O ₅) (2.9 lb/hr, 12.7 TPY)
Visible Emissions	Not Specified

Basis of Review:

This determination was based upon input from the applicant, EPA Region IV, and the Bureau of Air Regulation.

BACT Determination Procedure:

In accordance with Florida Administrative Code Chapter 17-212, Air Pollution, this BACT determination is based on the maximum degree of reduction of each pollutant emitted which the 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:

- (a) Any Environmental Protection Agency determination of Best Available Control Technology 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).
- (b) All scientific, engineering, and technical material and other information available to the Department.
- (c) The emission limiting standards or BACT determinations of any other state.
- (d) 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 source in question the most stringent control available for a similar or identical source or source category. If it is shown that this level of control is technically or economically infeasible for the source 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.

BACT Determined by the Department:

Control Technology	Venturi acid scrubbing/Venturi reclaim water scrubbing
Pollutant:	Emission Limits:
PM/PM ₁₀ *	0.41 lb/ton P ₂ O ₅ (19.8 lb/hr, 86.7 TPY)
Fluoride*	0.0417 lb/ton P ₂ O ₅ (2.0 lb/hr, 8.8 TPY)
Visible Emissions	20% opacity

* The emissions are prorated among the granulator, dryer, and cooler stacks based on the test data submitted in Table 2-2 of the application.

TABLE 1
EMISSIONS

<u>Source</u>	<u>Lbs/Hr</u>	<u>Fluorides</u> <u>Lbs/TP₂O₅</u>	<u>Ton/Yr</u>	<u>Lbs/Hr</u>	<u>Particulate</u> <u>Lbs/TP₂O₅</u>	<u>Ton/Yr</u>
Reactor/ Granulator	1.7	0.0354	7.5	10.1	0.21	44.2
Dryer	0.2	0.0040	0.9	7.3	0.15	32.0
Cooler	<u>0.1</u>	<u>0.0023</u>	<u>0.4</u>	<u>2.4</u>	<u>0.05</u>	<u>10.5</u>
Total	2.0	0.0417	8.8	19.8	0.41	86.7

BACT Determination Rationale

The Department's BACT determination is more stringent than that proposed by the applicant and is consistent with compliance test results for the DAP plant done between 1980 - 1993. The Department's proposed fluoride emission limit is also more stringent than prior BACT limits set for other diammonium phosphate plants. The proposed particulate matter emission limit reflects a particulate removal efficiency of over 90%. No. 2 fuel oil sulfur content has been limited at 0.5%, by weight in similar BACT determinations for modifications of existing facilities. Therefore, the Department is in agreement with the applicant's proposed sulfur content.

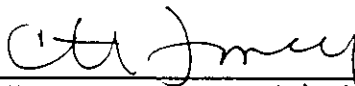
Conclusion

The impacts associated with the proposed increase in production support the Department's determination that the emission limits established herein represent BACT.

Details of the Analysis May be Obtained by Contacting:

Douglas G. Outlaw, BACT Coordinator
Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

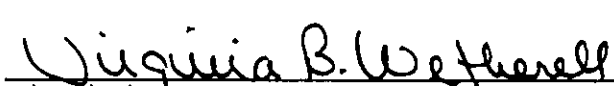
Recommended by:


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

Date

April 6 1994

Approved by:


Virginia B. Wetherell, Secretary
Dept. of Environmental Protection

Date

April 13 1994

Florida Department of
Environmental Protection

Memorandum

TO: Virginia B. Wetherell
FROM: Howard L. Rhodes *HLR*
DATE: April 6, 1994
SUBJECT: Approval of a PSD Permit (PSD-FL-204)
IMC-Agrico Company, Nichols Plant, Polk County

PATTY

Attached for your approval and signature is a PSD permit and two Best Available Control Technologies for production increases in the sulfuric acid and diammonium phosphate (DAP) plants at their facility in Nichols, Polk County, Florida.

This permit represents approval for the increase in production of the sulfuric acid plant from 2000 ton per day (TPD) to 2500 TPD and DAP plant from 80 ton per hour (TPH) to 100 TPH.

The public did not object to the issuance of this PSD permit.

I recommend your approval and signature.

HLR/SA/bjb

Attachment

RECEIVED

APR 15 1994

Bureau of
Air Regulation