

→ P 4/27

Check Sheet

Company Name: *Cargill Fertilizer*
Permit Number: *AC 29-238303*
PSD Number:
County: *Hillsborough*
Permit Engineer:
Others involved:

Application:

- Initial Application
- Incompleteness Letters
- Responses
- Final Application (if applicable)
- Waiver of Department Action
- Department Response
- Other

Intent:

- Intent to Issue
- Notice to Public
- Technical Evaluation
- BACT Determination
- Unsigned Permit
- Correspondence with:
 - EPA
 - Park Services
 - County
 - Other
- Proof of Publication
- Petitions - (Related to extensions, hearings, etc.)
- Other

Final Determination:

- Final Determination
- Signed Permit
- BACT Determination
- Other

Post Permit Correspondence:

- Extensions
- Amendments/Modifications
- Response from EPA
- Response from County
- Response from Park Services
- Other

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF PERMIT

In the matter of an
Application for Permit by:

DEP File No. AC29-238303
Hillsborough County


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

Enclosed is Permit Number AC29-238303 to replace the Granulator and RG Scrubber in the No. 5 Diammonium Phosphate plant at the Cargill facility in Riverview, Hillsborough 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

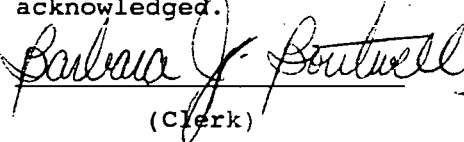

C. H. Fancy, P.E., Chief
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400
904-488-1344

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 April 4, 1994 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) 4/4/94
(Date)

Copies furnished to:
W. Thomas, SWD
J. Campbell, EPCHC
D. Buff, P.E.

Final Determination

Cargill Fertilizer, Inc.
Hillsborough County
Riverview, Florida

No. 5 Diammonium Phosphate Plant
Replacement of Granulator and RG Scrubber

Permit No. AC 29-238303

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 permit to replace the granulator and RG scrubber in the No. 5 Diammonium Phosphate plant at Cargill's facility in Riverview, Hillsborough County, Florida, was distributed on February 24, 1994. The Notice of Intent to Issue was published in the Polk County Democrat on March 5, 1994. Copies of the evaluation were available for public inspection at the Department's Tallahassee and Tampa offices and the Environmental Protection Commission of Hillsborough County. Comments were received from Cargill requesting elimination of Specific Condition No. 7 requiring detailed drawings showing sampling port locations. Cargill contends that this condition is unnecessary since the stack is existing. The Department decided to include this condition in all construction permits to address compliance testing problems that have arisen in the past. Since this project involves the installation of a new scrubber, it should have the capability of being tested as an individual unit, i.e., sampling ports provided at the proper distance upstream and downstream. The requirement under Specific Condition No. 7 applies only to this modification and therefore drawings should be submitted only for the new scrubber ports.

Cargill also requested a change in the sulfur dioxide compliance testing requirements (Specific Condition No. 8) to allow compliance verification through the fuel supplier's sulfur analysis. The Department agreed to make this change while revising the emission limits to reflect exclusive use of No. 2 oil vs. No. 6 oil as fuel backup.

The final action of the Department will be to issue construction permit AC 29-238303 as modified.



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:

Cargill Fertilizer, Inc.
8813 Highway 41 South
Riverview, Florida 33569

Permit Number: AC 29-238303
Expiration Date: June 30, 1996
County: Hillsborough
Latitude/Longitude: 27°51'28"N
82°23'15"W
Project: No. 5 Diammonium
Phosphate Plant - Replacement of
Granulator and RG Scrubber

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-209 through 17-297 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 specifically described as follows:

For the replacement of the granulator and reactor/granulator scrubber in the No. 5 diammonium phosphate plant. This source is located at the permittee's existing facility in Riverview, Hillsborough County, Florida. The UTM coordinates are Zone 17, 362.9 km East and 3082.5 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.

Attachments are listed below:

1. Application received on September 23, 1993.
2. DEP's incompleteness letter dated October 22, 1993.
3. Cargill's response letter dated November 24, 1993.
4. DEP's incompleteness follow-up letter dated December 21, 1993.
5. Cargill's response letter dated January 28, 1994.
6. Cargill's letter dated March 23, 1994.

PERMITTEE:
Cargill Fertilizer, Inc.

Permit Number: AC 29-238303
Expiration Date: June 30, 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:
Cargill Fertilizer, Inc.

Permit Number: AC 29-238303
Expiration Date: June 30, 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:
Cargill Fertilizer, Inc.

Permit Number: AC 29-238303
Expiration Date: June 30, 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:

- () Determination of Best Available Control Technology (BACT)
- () 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

PERMITTEE:
Cargill Fertilizer, Inc.

Permit Number: AC 29-238303
Expiration Date: June 30, 1996

GENERAL CONDITIONS:

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. Maximum permitted production rate for the No. 5 DAP plant shall be 73.5 TPH P₂O₅ input.
2. The No. 5 DAP plant may operate 8,760 hours per year.
3. The emissions from the No. 5 DAP plant shall not exceed:

| Pollutant | Maximum Allowable Emissions | |
|---------------------|-----------------------------|------|
| | lb/hr | T/yr |
| PM/PM ₁₀ | 12.8 | 56.0 |
| SO ₂ | 12.7 | 2.6 |
| Fluoride | 3.3 | 14.5 |
| Visible Emissions | 10% Opacity | |

4. 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 and be used for no more than 400 hours per year.

5. Fugitive emissions from the process, conveying and storage equipment shall be controlled by sealing and/or venting all particulate and fumes from the equipment to the pollution abatement system.

PERMITTEE:
Cargill Fertilizer, Inc.

Permit Number: AC 29-238303
Expiration Date: June 30, 1996

SPECIFIC CONDITIONS:

6. The permittee shall measure and record the liquid flow rate and total pressure drop across each scrubber system. These records shall be maintained for 2 years and available for inspection by regulatory agency personnel on request.

7. The Permittee shall provide sampling ports in the scrubber outlet duct or stack and shall provide access to the sampling ports in accordance with Rule 17-297, F.A.C. Detailed drawings of the stacks showing testing facilities and sampling port locations as required by Rule 17-297.345 shall be submitted to the Southwest District Office and the Environmental Protection Commission of Hillsborough County (EPCHC) for approval at least 60 days prior to construction.

8. Before the construction permit expires, the No. 5 DAP plant shall be sampled for PM/PM₁₀, visible emissions, and fluorides. Test procedures shall be in accordance with EPA reference methods 5, 9 and 13A or 13B as published in 40 CFR 60, Appendix A. The Southwest District and the EPCHC shall be notified in writing 15 days or more prior to the compliance test. Compliance with the sulfur dioxide emission limit shall be determined through fuel usage records and the fuel sulfur content determined by the fuel supplier, provided that the permittee shall be responsible for ensuring that the fuel analysis shall comply with sampling and analysis procedures under EPA Method 19 (ASTM D270-65, D129-64, D1552-83, D4057-81, D240-76).

9. Testing of emissions shall be conducted with the source 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 sources may be tested at less than capacity; in this case subsequent source operation is limited to 110 percent 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 15 consecutive days for the purposes of additional compliance testing to regain the permitted capacity in the permit.

10. 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).

11. An application for an operation permit must be submitted to the Southwest District office and the EPCHC 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

PERMITTEE:
Cargill Fertilizer, Inc.

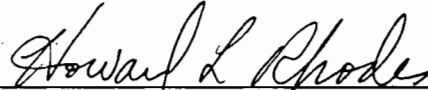
Permit Number: AC 29-238303
Expiration Date: June 30, 1996

SPECIFIC CONDITION:

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 1 day
of April, 1994

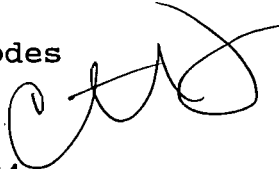
**STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION**



Howard L. Rhodes
Director
Division of Air Resources
Management

Memorandum

Florida Department of
Environmental Protection

TO: Howard L. Rhodes
FROM: C. H. Fancy 
DATE: March 29, 1994
SUBJECT: Approval of Construction Permit AC29-238303
Cargill Fertilizer, Inc.

Attached for your approval and signature is a non-PSD permit prepared by the Bureau of Air Regulation for the above mentioned company to replace the granulator and scrubber in the No. 5 Diammonium Phosphate plant at their facility in Riverview (south of Tampa).

The permit application was originally filed with the Southwest District and Hillsborough County before being forwarded to BAR due to the project's connection with a previous BAR-issued construction permit. The previous permit (PSD-FL-178) covered similar modifications to the same source, however, the need for the current modifications was not foreseen by Cargill until now. Consequently, this additional work is being handled as a supplemental non-PSD project since it involves no increase in allowable emissions.

I recommend your approval and signature.

HLR/JR/bjb

Attachments

P 872 563 625



Receipt for Certified Mail

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

PS Form 3800, JUNE 1991

| | |
|---|----|
| Sent to Mr. David B. Jellerson | |
| Street and No. 8813 Highway 41 South | |
| P.O., State and ZIP Code Riverview, Florida 33569 | |
| 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: 4/4/94 AC 29-238303 | |

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- 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.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

RECEIVED

I also wish to receive the following services (for an extra fee):

- 1. Addressee's Address
- 2. Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Mr. David B. Jellerson
Environmental Supervisor
Cargill Fertilizer, Inc.
8813 Highway 41 South
Riverview, Florida 33569

4a. Article
Bureau of
P Air Regulation

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

7. Date of Delivery
4/7/94

5. Signature (Addressee)
[Signature]

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

6. Signature (Agent)

Thank you for using Return Receipt Service.



January 19, 1996

Mr. John Reynolds
Air Permitting Engineer
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RECEIVED

JAN 22 1996

BUREAU OF
AIR REGULATION

*JR
loy*

Re: Cargill Fertilizer, Riverview, Florida
AC29-238303; No. 5 DAP Plant

*#-23-96
Fee Reg*

Dear Mr. Reynolds:

Cargill Fertilizer, Inc., was issued an air construction permit on April 4, 1994, to replace the existing granulator and reactor/granulator (RG) scrubber in the No. 5 DAP plant at the Riverview facility. The construction permitted under this permit has not yet begun (i.e., the replacement of the granulator and R/G scrubber), but is projected to begin in 1996. The purpose of this correspondence is to advise the Department of an additional change in the No. 5 DAP plant. This change involves the use of recirculated pond water in the two plant tail gas scrubbers.

The current operation of the two plant tail gas scrubbers (the RGCE tail gas scrubber and the dryer tail gas scrubber) is to use up to 4,200 gpm total of single-pass pond water for both scrubbers. The two scrubbers are supplied pond water through a single water supply system. Cargill is proposing to change the present system to a recirculating pond water system, i.e., the pond water collected in the scrubbers will be recirculated back to the scrubbers. Fresh pond water will be added as needed to maintain the minimum water flow rate.

This change will not affect the maximum emission rates contained in permit AC29-238303. Cargill expects the changed system to comply with all permit conditions.

Cargill would also like to request an extension of the expiration date of the permit. The current expiration date is June 30, 1996. Since construction on the granulator has not yet begun, a 1-year extension to June 30, 1997 is requested. This will allow time for construction, startup, and compliance testing.

Please call if you have any questions concerning this request.

Sincerely,

David A. Buff

David A. Buff, P.E.
Professional Engineer #19011

SEAL

DAB/vjp

cc: David Jellerson, Cargill; Kathy Edgemon, Cargill; Ben Kalra, HCEPC
Jim McDonald, FDEP Tampa
File (2)

KBN ENGINEERING AND APPLIED SCIENCES, INC.

15227A/2

6241 Northwest 23rd Street
Suite 500
Gainesville, Florida 32653-1500
352-336-5600 FAX 352-336-6603

5405 West Cypress Street
Suite 215
Tampa, Florida 33607
813-287-1717 FAX 813-287-1716

1801 Clint Moore Road, Suite 105
Boca Raton, Florida 33487
407-994-9910
FAX 407-994-9393

7785 Baymeadows Way
Suite 105
Jacksonville, Florida 32256
904-739-5600 FAX 904-739-7777

1616 'P' Street NW, Suite 350
Washington, DC 20036
202-462-1100
FAX 202-462-2270



RECEIVED

March 23, 1994

MAR 25 1994

Mr. John Reynolds
Air Permitting Engineer
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Bureau of
Air Regulation

Re: Cargill Fertilizer, Riverview, Florida
AC29-238303
No. 5 DAP Plant

Dear Mr. Reynolds:

This correspondence is submitted on behalf of Cargill Fertilizer to provide the Department with comments on the Technical Evaluation and Preliminary Determination (TE&PD) dated February 24, 1994 for the above referenced permit. Our comments are referenced by the Specific Condition (SC) listed in the draft permit.

SC 7.

This condition requires detailed drawings of the stack and sampling facilities for the No. 5 DAP plant. Please consider that this is an existing stack which already has stack sampling facilities approved by the Department. Therefore, this condition is considered as unnecessary.

SC 8.

This condition requires that several pollutants be stack tested, including SO₂. It is requested that the stack testing requirement for SO₂ be eliminated as an unnecessary requirement. Since no credit has been taken for SO₂ removal in the No. 5 DAP plant scrubber, compliance for SO₂ can be demonstrated through fuel oil receipts (supplier certification) or analysis. Suggested wording for a SC which addresses this requirement is presented as follows:

Compliance with the SO₂ emission limitation of Specific Condition 3 and fuel oil sulfur content of Specific Condition 4 shall be demonstrated by either of the following:

- A. Certificates of fuel oil analysis (including sulfur content by weight) from the fuel oil vendor for each shipment of fuel oil for the No. 5 DAP plant.
- B. By sampling and analysis (including sulfur content by weight) of the fuel oil in the tank supplying the No. 5 DAP plant. Sampling shall be conducted after each fuel oil delivery.

12258A1/4

KBN ENGINEERING AND APPLIED SCIENCES, INC.

1034 Northwest 57th Street
Gainesville, Florida 32605
904-331-9000
FAX 904-332-4189

5405 West Cypress Street,
Suite 215
Tampa, Florida 33607
813-287-1717 FAX 813-287-1716

1801 Clint Moore Road, Suite 105
Boca Raton, Florida 33487
407-994-9910
FAX 407-994-9393

6821 Southpoint Drive North,
Suite 216
Jacksonville, Florida 32216
904-296-9663 FAX 904-296-0146

One Church Street, Suite 801
Rockville, Maryland 20850
301-738-1100
FAX 301-738-1105

Mr. John Reynolds
March 23, 1994
Page 2



Thank you for consideration of these comments, and please call if you have any questions concerning this information.

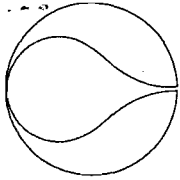
Sincerely,

David A. Buff

David A. Buff, M.E., P.E.
Professional Engineer #19011

DAB/ehj

cc: David Jellerson, Cargill
Elton Curran, Cargill
Bel Kalra, HCEPC
Jim McDonald, FDEP Tampa
File (2)



**CARGILL
FERTILIZER, INC.**

RECEIVED

8813 Highway 41 South - Riverview, Florida 33569 - Telephone 813-677-9111 - TWX 810-876-0648 - Telex 52666 - FAX 813-671-6149

MAR 17 1994

March 9, 1994

CERTIFIED MAIL: Bureau of
P 266 884 149 Air Regulation

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

Subject: Proof of Publication - Notice of Intent to Issue
a Permit to replace the Granulator and RG Scrubber
in the No. 5 Diammonium Phosphate Plant at Cargill
Fertilizer, Inc.'s Riverview, Florida, Facility.

Gentlemen:

You will find enclosed Proof of Publication as required by
Florida State Department of Environmental Protection
following receipt of an application for above listed permit
from Cargill Fertilizer, Inc.

If there are any questions, please contact me.

Sincerely,

Elton Curran
Environmental Superintendent

x.c. D. Clark
O. Morris
D. Jellerson

Enclosure

/dh

File: P-30-33-1

G. Reynolds
B. Thomas
G. Harper, EPA
G. Campbell, EPCMC



recycled paper

THE TAMPA TRIBUNE

Published Daily

Tampa, Hillsborough County, Florida

State of Florida }
County of Hillsborough } ss.

Before the undersigned authority personally appeared R. Putney, who on oath says that he is Accounting Manager of The Tampa Tribune, a daily newspaper published at Tampa in Hillsborough County, Florida; that the attached copy of advertisement being a

LEGAL NOTICE

in the matter of _____

STATE OF FLORIDA

was published in said newspaper in the issues of _____

MARCH 5, 1994

Affiant further says that the said The Tampa Tribune is a newspaper published at Tampa in said Hillsborough County, Florida, and that the said newspaper has heretofore been continuously published in said Hillsborough County, Florida, each day and has been entered as second class mail matter at the post office in Tampa, in said Hillsborough 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.

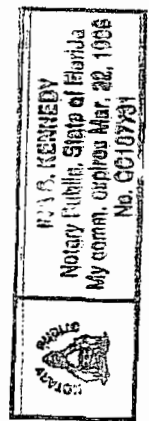
Sworn to and subscribed before me, this 5 day of MARCH, A.D. 1994

Personally Known or Produced Identification _____
Type of Identification Produced _____

(SEAL)

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF INTENT TO ISSUE PERMIT
The Department of Environmental Protection gives notice of its intent to issue a permit to Cargill Fertilizer, Inc., 8813 Highway 41 South, Riverview, Florida 33569, to replace the granulator and RG scrubber in the No. 5 Diammonium Phosphate plant at their facility in Riverview, Hillsborough County, Florida. A determination of Best Available Control Technology (BACT) was not required. The proposed project is subject to federal new source performance standards. The project will not increase allowable emissions and therefore will not result in additional harm to the environment. The Department is issuing this intent to issue for the reasons stated in the Technical Evaluation and Preliminary Determination.
A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, 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 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within 14 days of publication of this notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.
The Petition shall contain the following information; (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed; (b) A statement of how and when each petitioner received notice of the Department's action or proposed action; (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (d) A statement of the material facts disputed by Petitioner, if any; (e) A statement of facts which petitioner contends warrants reversal or modification of the Department's action or proposed action; (f) A statement of which rules or statutes peti-

tioner contends require reversal or modification of the Department's action or proposed action; and (g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.
If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, 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 decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.
The application 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:
Department of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Park
Courtyard
Tallahassee, Florida 32301
Department of Environmental Protection
Southwest District Office
3804 Coconut Palm Drive,
Tampa, Florida 33619-8218.
Environmental Protection
Commission of Hillsborough County
1410 N. 21st Street
Tampa, Florida 33605
Any person may send written comments on the proposed action to Mr. Preston Lewis at the Department's Tallahassee address. All comments received within 14 days of the publication of this notice will be considered in the Department's final determination.
1745 3/5/94



P 872 562 606



Receipt for Certified Mail

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

| | |
|---|----|
| Sent to Mr. David B. Jellerson | |
| Street and No. 8813 Highway 41 South | |
| P.O., State and ZIP Code Riverview, Florida 33569 | |
| 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: 2/24/94 AC 29-238303 | |

PS Form 3800, JUNE 1991

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- 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.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- Addressee's Address
- Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Mr. David B. Jellerson
Environmental Supervisor
Cargill Fertilizer, Inc.
8813 Highway 41 South
Riverview, Florida 33569

4a. Article Number
P 872 562 606

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

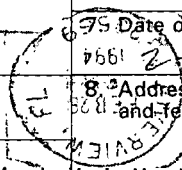
7. Date of Delivery

7661 2-26-94

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

5. Signature (Addressee)

6. Signature (Agent)



Thank you for using Return Receipt Service.



Lawton Chiles
Governor

Florida Department of Environmental Protection

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

Virginia B. Wetherell
Secretary

February 24, 1994

CERTIFIED MAIL - RETURN RECEIPT REQUESTED


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

Dear Mr. Jellerson:

Attached is one copy of the Technical Evaluation and Preliminary Determination and proposed permit for Cargill Fertilizer, Inc. to replace the granulator and RG scrubber in the No. 5 Diammonium Phosphate plant at their facility in Riverview, Florida.

Please submit any written comments you wish to have considered concerning the Department's proposed action to Mr. Preston Lewis of the Bureau of Air Regulation.

Sincerely,


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

CHF/JR/bjb

Attachments

cc: B. Thomas, SWD
J. Campbell, EPCHC
D. Buff, P.E.
D. Wadley, EPA

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

CERTIFIED MAIL

In the Matter of an
Application for Permit by:

DEP File No. AC 29-238303
Hillsborough County

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

INTENT TO ISSUE

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

The applicant, Cargill Fertilizer, Inc., applied on September 23, 1993, to the Department of Environmental Protection for a permit to replace the granulator and RG scrubber in the No. 5 Diammonium Phosphate plant at their facility in Riverview, Hillsborough County, Florida.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes and Florida Administrative Code (F.A.C.) Chapters 17-212 and 17-4. The project is not exempt from permitting procedures. The Department has determined that a construction permit is required for the proposed work.

Pursuant to Section 403.815, Florida Statutes and Rule 17-103.150, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Notice of Intent to Issue Permit. The notice shall be published one time only within 30 days in the legal ad section of a newspaper of general circulation in the area affected. For the purpose of this rule, "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. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within seven days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

The Department will issue the permit with the attached conditions unless a petition for an administrative proceeding (hearing) is filed pursuant to the provisions of Section 120.57, F.S.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, 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 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Petitions filed by the permit applicant and the parties listed below must be filed within 14 days of receipt of this intent. Petitions filed by other persons must be filed within 14 days of publication of the public notice or within 14 days of their receipt of this intent, whichever first occurs. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information;

- (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
- (b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
- (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
- (d) A statement of the material facts disputed by Petitioner, if any;
- (e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;
- (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and
- (g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this intent. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of receipt of this intent in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a

waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

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, Florida 32399
904-488-1344

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this INTENT TO ISSUE and all copies were mailed by certified mail before the close of business on 2/24/94 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.

Barbara J. Poutwell 2/24/94
Clerk Date

Copies furnished to:

- B. Thomas, SWD
- J. Campbell, EPCHC
- D. Buff, P.E.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF INTENT TO ISSUE PERMIT

The Department of Environmental Protection gives notice of its intent to issue a permit to Cargill Fertilizer, Inc., 8813 Highway 41 South, Riverview, Florida 33569, to replace the granulator and RG scrubber in the No. 5 Diammonium Phosphate plant at their facility in Riverview, Hillsborough County, Florida. A determination of Best Available Control Technology (BACT) was not required. The proposed project is subject to federal new source performance standards. The project will not increase allowable emissions and therefore will not result in additional harm to the environment. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, 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 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within 14 days of publication of this notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information; (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed; (b) A statement of how and when each petitioner received notice of the Department's action or proposed action; (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (d) A statement of the material facts disputed by Petitioner, if any; (e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action; (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and (g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, 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 decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

The application 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:

Department of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Park Courtyard
Tallahassee, Florida 32301

Department of Environmental Protection
Southwest District Office
3804 Coconut Palm Drive
Tampa, Florida 33619-8218

Environmental Protection Commission of
Hillsborough County
1410 N. 21st Street
Tampa, Florida 33605

Any person may send written comments on the proposed action to Mr. Preston Lewis at the Department's Tallahassee address. All comments received within 14 days of the publication of this notice will be considered in the Department's final determination.

Technical Evaluation
and
Preliminary Determination

Cargill Fertilizer, Inc.
Hillsborough County
Riverview, Florida

No. 5 Diammonium Phosphate Plant
Replacement of Granulator and RG Scrubber

Permit No. AC 29-238303

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

February 24, 1994

I. Application Information

A. Applicant

Cargill Fertilizer, Inc.
8813 Highway 41 South
Riverview, Florida 33569

B. Request

The Department received an application on September 23, 1993, for a permit to replace an existing granulator and scrubber in the No. 5 Diammonium Phosphate (DAP) plant at the applicant's facility in Riverview, Florida. After receiving additional information on January 28, 1994, the application was deemed complete.

C. Classification/Location

The applicant's facility (SIC Code 2874) is located south of Tampa at U.S. 41 South and Riverview Drive, with latitude of 27°37'28"N and longitude of 82°23'15"W. The UTM coordinates of the site are: Zone 17, 362.9 km E and 3082.5 km N.

II. Project Description/Emissions

It is proposed to replace the existing granulator and the reactor/granulator scrubber so that the unit can attain the maximum production rate allowed under the conditions of construction permit PSD-FL-178 issued by the Department in 1991. A review of the permitting history is necessary to understand the Department's position regarding this project.

In 1991 Cargill applied for a PSD permit to increase the No. 5 DAP production from 55.2 to 67.2 TPH P₂₀₅ by upgrading their screens, mills, elevators and conveyors, along with their existing product cooler and ammonia scrubber. Requested in the application were fluoride (F1) emission increases amounting to 6.1 tons F1/yr which were offset by contemporaneous reductions of 17.2 tons F1/yr, resulting in a net requested reduction of 11.1 tons F1/yr. The Department questioned the requested offsets and, after consulting with EPA-Region IV, issued the permit (PSD-FL-178) which gave Cargill an increase over actuals of 2.9 vs. 6.1 tons F1/yr. This coincided with the limit that EPA had imposed in an earlier modification of the original EPA-issued PSD permit (PSD-FL-026) for the 55.2 TPH production rate. In view of the questions the Department had about the emission credits, it was decided that a 2.9 ton/yr increase over actuals would be reasonable and would represent a less-than-significant increase (3 tons F1/yr) notwithstanding the offsets. This limit (3.3 lb F1/hr, 14.5 tons F1/yr) provided no increase in allowable fluoride emissions for the increase in production from 55.2 to 67.2 TPH P₂₀₅. (Other pollutant emission increases were less than significant except for particulate matter which triggered PSD review).

Shortly after PSD-FL-178 was issued in 1991, Cargill requested that the permit be amended to further increase the production rate from 67.2 TPH P₂O₅ to 73.5 TPH P₂O₅, with no increase in allowable emissions since Cargill thought the scrubber capacity would handle the additional load. This amendment was issued in October 1992.

In 1993 Cargill encountered unforeseen bottlenecks that prevented them from attaining the maximum permitted production rate of 73.5 TPH P₂O₅. They found that in order to achieve the permitted rate of 73.5 TPH, the granulator and scrubber would have to be replaced with larger units. Cargill requested an 18 month extension of time to replace this equipment. It was decided that since this was beyond the scope of work originally contemplated, and since the new equipment should undergo review, it could be handled by way of a minor modification permit. Cargill was notified that a permit application for this additional work should be submitted to the Department's Southwest District office.

Upon receiving Cargill's minor modification permit application, the district staff contended that the additional work should be done under a new PSD permit because the difference between the most recent actuals and current allowable exceeds 3 tons/yr. Cargill contended that another PSD review was uncalled for since the underlying project (production rate increase to 73.5 TPH) has already gone through PSD review.

In reviewing EPA's decision on Cargill's emission credits for PSD-FL-178, it is clear that Cargill was entitled to offset credits that were more than sufficient to net them out of PSD review for fluorides. Therefore, the Department will not require PSD review for this additional work which was not foreseen when Cargill applied for their PSD permit in 1991.

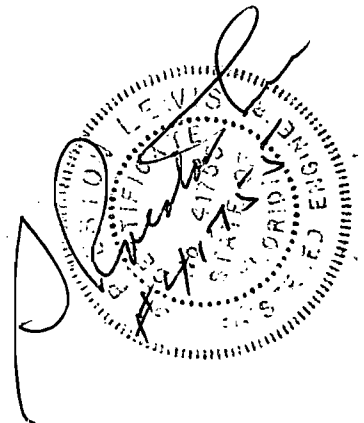
III. Rule Applicability

The construction permit application is subject to review under Chapter 403, Florida Statutes, and Florida Administrative Code (F.A.C.) Chapters 17-212, 17-296 and 17-4. The regulated pollutants affected by this project are PM/PM₁₀, visible emissions and fluorides. The facility is located in an area classified as an air quality maintenance area for particulate matter (PM) and as unclassifiable for PM₁₀. Attainment classification does not exist for fluoride since it is a non-criteria pollutant. The proposed project is not subject to the preconstruction review requirements of F.A.C. Rule 17-212.400, Prevention of Significant Deterioration (PSD). PM/PM₁₀ emissions will be limited by the previous BACT determination (PSD-FL-178). Fluoride emissions will also be limited as before (PSD-FL-178). Therefore, there will be no change in allowable emissions for this project.

Since this project will allow attainment of the previously permitted but untested maximum production rate of 73.5 TPH input, all compliance testing required under PSD-FL-178 will have to be redone to demonstrate compliance at the higher rate.

IV. Conclusion

Based on the information provided by Cargill Fertilizer, Inc., the Department has reasonable assurance that the proposed project, as proposed herein, will not cause or contribute to a violation of an ambient air quality standard, PSD increment, or any other technical provisions of Chapters 17-209 through 17-297 of the Florida Administrative Code.





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:

Cargill Fertilizer, Inc.
8813 Highway 41 South
Riverview, Florida 33569

Permit Number: AC 29-238303
Expiration Date: June 30, 1996
County: Hillsborough
Latitude/Longitude: 27°51'28"N
82°23'15"W
Project: No. 5 Diammonium
Phosphate Plant - Replacement of
Granulator and RG Scrubber

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-209 through 17-297 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 specifically described as follows:

For the replacement of the granulator and reactor/granulator scrubber in the No. 5 diammonium phosphate plant. This source is located at the permittee's existing facility in Riverview, Hillsborough County, Florida. The UTM coordinates are Zone 17, 362.9 km East and 3082.5 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.

Attachments are listed below:

1. Application received on September 23, 1993.
2. DEP's incompleteness letter dated October 22, 1993.
3. Cargill's response letter dated November 24, 1993.
4. DEP's incompleteness follow-up letter dated December 21, 1993.
5. Cargill's response letter dated January 28, 1994.

PERMITTEE:
Cargill Fertilizer, Inc.

Permit Number: AC 29-238303
Expiration Date: June 30, 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:
Cargill Fertilizer, Inc.

Permit Number: AC 29-238303
Expiration Date: June 30, 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:
Cargill Fertilizer, Inc.

Permit Number: AC 29-238303
Expiration Date: June 30, 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:

- () Determination of Best Available Control Technology (BACT)
- () 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

PERMITTEE:
Cargill Fertilizer, Inc.

Permit Number: AC 29-238303
Expiration Date: June 30, 1996

GENERAL CONDITIONS:

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. Maximum permitted production rate for the No. 5 DAP plant shall be 73.5 TPH P₂O₅ input.
2. The No. 5 DAP plant may operate 8,760 hours per year.
3. The emissions from the No. 5 DAP plant shall not exceed:

| Pollutant | Maximum Allowable Emissions | |
|---------------------|-----------------------------|------|
| | lb/hr | T/yr |
| PM/PM ₁₀ | 12.8 | 56.0 |
| SO ₂ | 32.4 | 83.7 |
| Fluoride | 3.3 | 14.5 |
| Visible Emissions | 10% Opacity | |

4. 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.
5. Fugitive emissions from the process, conveying and storage equipment shall be controlled by sealing and/or venting all particulate and fumes from the equipment to the pollution abatement system.

PERMITTEE:
Cargill Fertilizer, Inc.

Permit Number: AC 29-238303
Expiration Date: June 30, 1996

SPECIFIC CONDITIONS:

6. The permittee shall measure and record the liquid flow rate and total pressure drop across each scrubber system. These records shall be maintained for 2 years and available for inspection by regulatory agency personnel on request.

7. The Permittee shall provide sampling ports in the scrubber outlet duct or stack and shall provide access to the sampling ports in accordance with Rule 17-297, F.A.C.. Detailed drawings of the stacks showing testing facilities and sampling port locations as required by Rule 17-297.345 shall be submitted to the Southwest District Office and the Environmental Protection Commission of Hillsborough County (EPCHC) for approval at least 60 days prior to construction.

8. Before the construction permit expires, the No. 5 DAP plant shall be sampled for PM/PM₁₀, visible emissions, sulfur dioxide, and fluorides. Test procedures shall be in accordance with EPA reference methods 5, 6, 9 and 13A or 13B as published in 40 CFR 60, Appendix A. The Southwest District and the EPCHC shall be notified in writing 15 days or more prior to the compliance test.

9. Testing of emissions shall be conducted with the source 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 sources may be tested at less than capacity; in this case subsequent source operation is limited to 110 percent 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 15 consecutive days for the purposes of additional compliance testing to regain the permitted capacity in the permit.

10. 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).

11. An application for an operation permit must be submitted to the Southwest District office and the EPCHC 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

PERMITTEE:
Cargill Fertilizer, Inc.

Permit Number: AC 29-238303
Expiration Date: June 30, 1996

SPECIFIC CONDITION:

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 _____ day
of _____, 1994

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Howard L. Rhodes
Director
Division of Air Resources
Management

APPLICATION TO CONSTRUCT

**NO. 5 DIAMMONIUM
PHOSPHATE PLANT
*GRANULATOR REPLACEMENT***

CARGILL FERTILIZER, INC.

Prepared For:

**Cargill Fertilizer, Inc.
8813 Highway 41 South
Riverview, FL 33569**

Prepared By:

**KBN Engineering and Applied Sciences, Inc.
1034 NW 57th Street
Gainesville, FL 32605**

**September 1993
12258Y1/F2**

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION



D.E.R.

SEP 23 1993

AC 29-238303

SOUTHWEST DISTRICT
TAMPA

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Diammonium Phosphate Plant [] New¹ [x] Existing¹

APPLICATION TYPE: [x] Construction [] Operation [] Modification

COMPANY NAME: Cargill Fertilizer, Inc. COUNTY: Hillsborough

Identify the specific emission point source(s) addressed in this application (i.e., Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) No. 5 Diammonium Phosphate Plant Stack

SOURCE LOCATION: Street 8813 Highway 41 South City Riverview

UTM: East 362.9 North 3082.5

Latitude 27 ° 51 ' 28 "N Longitude 82 ° 23 ' 15 "W

APPLICANT NAME AND TITLE: David Jellerson, Environmental Supervisor

APPLICANT ADDRESS: 8813 Highway 41 South, Riverview, Florida 33569

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Cargill Fertilizer, Inc.

I certify that the statements made in this application for a construction permit are true, correct and complete to the best of my knowledge and belief. Further, I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provision of Chapter 403, Florida Statutes, and all the rules and regulations of the department and revisions thereof. I also understand that a permit, if granted by the department, will be non-transferable and I will promptly notify the department upon sale or legal transfer of the permitted establishment.

*Attach letter of authorization

Signed: David B. Jellerson

David Jellerson, Environmental Supervisor

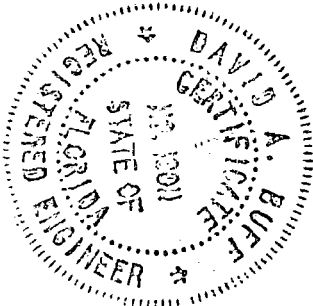
Name and Title (Please Type)

Date: 9-15-93 Telephone No. (813) 677-9111

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)
This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that

¹See Florida Administration Code Rule 17-2.100(57) and (104)

the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.



Signed David A. Buff
David A. Buff

Name (Please Type)

KBN Engineering and Applied Sciences, Inc.
Company Name (Please Type)

1034 NW 57th Street, Gainesville, FL 32605
Mailing Address (Please Type)

Florida Registration No. 19011 Date: 09/07/93 Telephone No. (904) 331-9000

SECTION II: GENERAL PROJECT INFORMATION

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

See Attachment A for complete description

B. Schedule of project covered in this application (Construction Permit Application Only)
Start of Construction upon permit issuance Completion of Construction June 1996

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

New scrubber system: \$290,000

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

Permit No. AC29-196763

Issued 11/26/91

Expires 6/30/94

E. Requested permitted equipment operating time: hrs/day 24; days/wk 7; wks/yr 52;
If power plant, hrs/yr _____; if seasonal, describe: _____

F. If this is a new source or major modification, answer the following questions.
(Yes or No) *Not Applicable*

1. Is this source in a non-attainment area for a particular pollutant? _____
 - a. If yes, has "offset" been applied? _____
 - b. If yes, has "Lowest Achievable Emission Rate" been applied? _____
 - c. If yes, list non-attainment pollutants. _____
2. Does best available control technology (BACT) apply to this source?
If yes, see Section VI. _____
3. Does the State "Prevention of Significant Deterioration" (PSD)
requirement apply to this source? If yes, see Sections VI and VII. _____
4. Do "Standards of Performance for New Stationary Sources" (NSPS)
apply to this source? _____
5. Do "National Emission Standards for Hazardous Air Pollutants"
(NESHAP) apply to this source? _____

- H. Do "Reasonably Available Control Technology" (RACT) requirements apply
to this source? _____ Yes
- a. If yes, for what pollutants? Particulate Matter
 - b. If yes, in addition to the information required in this form, any information
requested in Rule 17-2.650 must be submitted.

Attach all supportive information related to any answer of "Yes". Attach any
justification for any answer of "No" that might be considered questionable.

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable:

| Description | Contaminants | | Utilization Rate - lbs/hr | Relate to Flow Diagram |
|--------------------------------|--------------------|--------------|---------------------------|------------------------|
| | Type | % Wt | | |
| <i>Phos Acid 100% + solids</i> | <i>Particulate</i> | <i>100.0</i> | <i>232,877</i> | |
| | <i>Fluoride</i> | <i>1.8</i> | | |
| <i>Anhydrous ammonia</i> | - | - | <i>70,367</i> | |
| | | | | |
| | | | | |

B. Process Rate, if applicable: (See Section V, Item 1)

1. Total Process Input Rate (lbs/hr): 302,832 (dry basis)

2. Product Weight (lbs/hr): 320,000 (wet basis); 301,897 (dry basis)

C. Airborne Contaminants Emitted: (Information in this table must be submitted for each emission point, use additional sheets as necessary)

| Name of Contaminant | Emission ¹ | | Allowed ² Emission Rate per Rule 17-2 | Allowable ³ Emission lbs/hr | Potential ⁴ Emission | | Relate to Flow Diagram |
|------------------------|-----------------------|-------------|--|--|---------------------------------|-------------|------------------------|
| | Maximum lbs/hr | Actual T/yr | | | lbs/hr | T/yr | |
| <i>Particulate</i> | <i>12.8</i> | <i>56.1</i> | - | <i>12.8</i> | <i>12.8</i> | <i>56.1</i> | |
| <i>Fluoride</i> | <i>3.3</i> | <i>14.5</i> | <i>0.06 lb/ton</i> | <i>3.3</i> | <i>3.3</i> | <i>14.5</i> | |
| <i>Sulfur Dioxide</i> | <i>12.7</i> | <i>2.6</i> | <i>N/A</i> | <i>N/A</i> | <i>12.7</i> | <i>2.6</i> | |
| <i>Nitrogen Oxides</i> | <i>3.6</i> | <i>15.0</i> | <i>N/A</i> | <i>N/A</i> | <i>3.6</i> | <i>15.0</i> | |
| <i>Carbon Monoxide</i> | <i>0.89</i> | <i>3.7</i> | <i>N/A</i> | <i>N/A</i> | <i>0.89</i> | <i>3.7</i> | |
| <i>VOC</i> | <i>0.068</i> | <i>0.30</i> | <i>N/A</i> | <i>N/A</i> | <i>0.068</i> | <i>0.30</i> | |

¹See Section V, Item 2.

²Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input).

³Calculated from operating rate and applicable standard.

⁴Emission, if source operated without control (See Section V, Item 3).

D. Control Devices: (See Section V, Item 4)

| Name and Type (Model & Serial No.) | Contaminant | Efficiency | Range of Particles Size Collected (in microns) (If applicable) | Basis for Efficiency (Section V Item 5) |
|---------------------------------------|--------------------|------------|--|--|
| <i>Two Packed Body,</i> | <i>Particulate</i> | <i>98%</i> | <i>Submicron</i> | <i>Design</i> |
| <i>Up-flow scrubbers</i> | <i>Fluoride</i> | <i>95%</i> | <i>N/A</i> | <i>Design</i> |
| <i>and three in venturi</i> | | | | |
| <i>scrubbers manufactured</i> | | | | |
| <i>by D.M. Weatherly</i> | | | | |
| | | | | |

E. Fuels

| Type (Be Specific) | Consumption* | | Maximum Heat Input (MMBTU/hr) |
|-----------------------|--------------|----------------------|----------------------------------|
| | avg/hr | max./hr | |
| <i>No. 2 Fuel Oil</i> | | <i>178.6 gal/hr</i> | <i>25.0 (avg)</i> |
| <i>Natural Gas</i> | | <i>24,390 scf/hr</i> | <i>25.0 (avg)</i> |
| | | | |
| | | | |

*Units: Natural Gas--MMCF/hr; Fuel Oils--gallons/hr; Coal, wood, refuse, others--lbs/hr.

Fuel Analysis:

Percent Sulfur: Nil/ 0.5% (max) Percent Ash: N/A / 0.1
 Density: N/A / 8.0 lbs/gal Typical Percent Nitrogen: <1 / 0.2 to 0.9
 Heat Capacity: 1,025 Btu/scf / 17,500 BTU/lb N/A / 140,000 BTU/gal
 Other Fuel Contaminants (which may cause air pollution): _____

F. If applicable, indicate the percent of fuel used for space heating.

Annual Average N/A Maximum _____

G. Indicate liquid or solid wastes generated and method of disposal.

There are no solid wastes. Scrubber water is recycled to a plant-wide water
recycle system.

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack):

Stack Height: 132.5 ft. Stack Diameter: 7.0 ft.
 Gas Flow Rate: 122,000 ACFM 103,000 DSCFM Gas Exit Temperature: 115 °F.
 Water Vapor Content: 8 % Velocity: 50.5 FPS

SECTION IV: INCINERATOR INFORMATION

Not Applicable

| Type of Waste | Type 0 (Plastics) | Type I (Rubbish) | Type II (Refuse) | Type III (Garbage) | Type IV (Pathological) | Type V (Liq. & Gas By-prod.) | Type VI (Solid By-prod.) |
|--------------------------|-------------------|------------------|------------------|--------------------|------------------------|------------------------------|--------------------------|
| Actual lb/hr Incinerated | | | | | | | |
| Uncontrolled (lbs/hr) | | | | | | | |

Description of Waste _____
 Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____
 Approximate Number of Hours of Operation per day _____ day/wk _____ wks/yr. _____
 Manufacturer _____
 Date Constructed _____ Model No. _____

| | Volume (ft) ³ | Heat Release (BTU/hr) | Fuel | | Temperature (°F) |
|-------------------|--------------------------|-----------------------|------|--------|------------------|
| | | | Type | BTU/hr | |
| Primary Chamber | | | | | |
| Secondary Chamber | | | | | |

Stack Height: _____ ft. Stack Diameter: _____ Stack Temp. _____
 Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity: _____ FPS

*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control devices: Cyclone Wet Scrubber Afterburner
 Other (specify) _____

Brief description of operating characteristics of control devices: _____

Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.):

NOTE: Items 2, 3, 4, 6, 7, 8, and 10 in Section V must be included where applicable.

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]
See Attachment B
2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods, 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.
See Attachment B
3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).
See Attachments B and C
4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.)
See Attachment C
5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3 and 5 should be consistent: actual emissions = potential (1-efficiency).
See Attachment C
6. An 8 ½" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.
Attached
7. An 8 ½" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Examples: Copy of relevant portion of USGS topographic map).
Attached
8. An 8 ½" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.
Attached

- 9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.
- 10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

Not Applicable

- A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

[] Yes [] No

| Contaminant | Rate or Concentration |
|-------------|-----------------------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

- B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy)

[] Yes [] No

| Contaminant | Rate or Concentration |
|-------------|-----------------------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

- C. What emission levels do you propose as best available control technology?

| Contaminant | Rate or Concentration |
|-------------|-----------------------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

- D. Describe the existing control and treatment technology (if any).

- | | |
|---------------------------|--------------------------|
| 1. Control Device/System: | 2. Operating Principles: |
| 3. Efficiency:* | 4. Capital Costs: |

*Explain method of determining

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant

Rate or Concentration

| Contaminant | Rate or Concentration |
|-------------|-----------------------|
| | |
| | |
| | |
| | |

10. Stack Parameters

a. Height: ft.

b. Diameter ft.

c. Flow Rate: ACFM

d. Temperature: °F.

e. Velocity: FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

a. Control Devices:

b. Operating Principles:

c. Efficiency:¹

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:²

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

a. Control Device:

b. Operating Principles:

c. Efficiency:¹

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:²

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

¹Explain method of determining efficiency.

²Energy to be reported in units of electrical power - KWH design rate.

- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space, and operate within proposed levels:

3.

- a. Control Device:
- b. Operating Principles:
- c. Efficiency:¹
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy:²
- h. Maintenance Cost:
- i. Availability of construction materials and process chemicals:
- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space, and operate within proposed levels:

4.

- a. Control Device:
- b. Operating Principles:
- c. Efficiency:¹
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy:²
- h. Maintenance Cost:
- i. Availability of construction materials and process chemicals:
- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space, and operate within proposed levels:

F. Describe the control technology selected:

- 1. Control Device:
- 2. Efficiency:¹
- 3. Capital Cost:
- 4. Useful Life:
- 5. Operating Cost:
- 6. Energy:²
- 7. Maintenance Cost:
- 8. Manufacturer:
- 9. Other locations where employed on similar processes:
- a. (1) Company:
- (2) Mailing Address:
- (3) City:
- (4) State:

¹Explain method of determining efficiency.

²Energy to be reported in units of electrical power - KWH design rate.

ATTACHMENT A
PROJECT DESCRIPTION

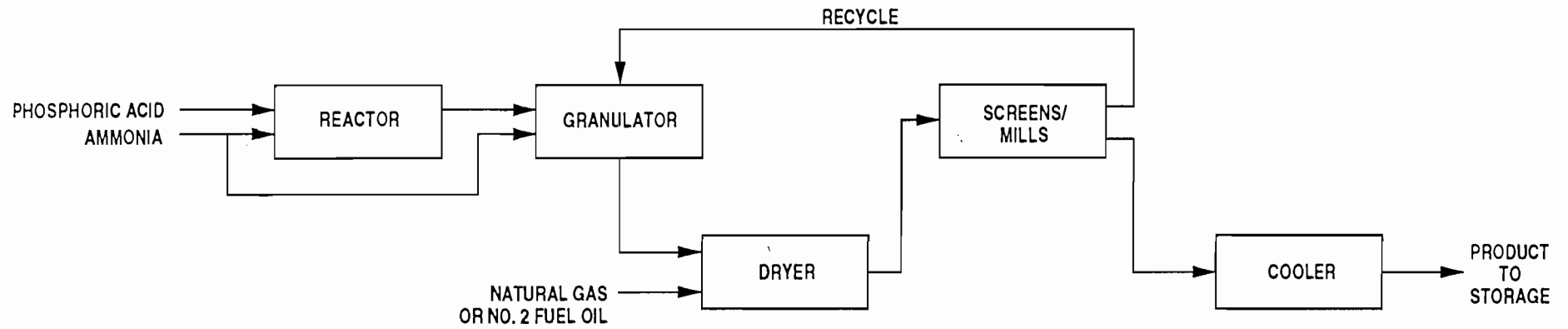
ATTACHMENT A

1.0 PROJECT DESCRIPTION

Cargill Fertilizer, Inc., currently operates the No. 5 Diammonium Phosphate (DAP) plant at its phosphate fertilizer manufacturing facility in Riverview, Florida. In the DAP manufacturing process, phosphoric acid and anhydrous ammonia are reacted in a sealed reaction tank. Ammonia is then further added to the ammoniated acid in a rotary reactor-granulator. The granulated, unsized DAP is then dried in a rotary dryer. The dryer is fired by natural gas as primary fuel and by No. 2 fuel oil as backup fuel.

The dried DAP material is sized and screened, and the oversized and undersized material is recycled back to the granulator. The product is then cooled in a rotary drum cooler, screened, and sent to storage. A simplified flow diagram of the process is presented in Figure A-1.

The No. 5 DAP plant received a construction permit from the Florida Department of Environmental Regulation (FDER) in November 1991 (AC29-196763; PSD-FL-178) for an increase in the maximum DAP production rate from 55.2 TPH P_2O_5 to 67.2 TPH P_2O_5 input. Subsequently, this permit was amended (January 30, 1992) to allow DAP production of up to 73.5 TPH P_2O_5 input. This production increase was to be realized primarily by upgrading screens, mills, elevators, and conveyors to increase recycle capacity. Along with the production modifications, pollution control upgrades included an improved ammonia recovery system, installation of more efficient scrubber spray nozzles, increased scrubber liquid flow rates, and improved energy efficiency. The increased production was to be implemented while limiting stack emissions to the previously permitted levels. However, due to product quality issues, the production rate continues to be limited to well below the permitted rate of 73.5 TPH P_2O_5 input.



A-2

Figure A-1 PROCESS FLOW DIAGRAM, NO. 5 DAP PLANT



This permit modification, then, is for the replacement of the granulator to improve product quality at DAP production rates up to 73.6 TPH P_2O_5 input. This product quality improvement will be accomplished by increasing the residence time in the granulator. The modified plant will operate with the same evacuation flows. However, because the larger granulator has the potential to cause greater fluctuations to the evacuation system, the existing Reactor/Granulator venturi scrubber will be replaced with a larger unit less susceptible to fluctuations.

The new scrubber will be a copy of the Weatherly Dryer venturi scrubber currently in operation at the No. 5 DAP plant. The new scrubber will be fabricated locally. Purchase and installation of the new scrubber (including all appurtenances) is estimated to cost \$290,000. All other project activities indicated in the original permit application remain the same. Due to the time required for order, fabrication, installation, and check out of this equipment, we request that the modified permit expiration date be set for June 1996. The existing air evacuation system, including the recently permitted modifications, is shown in Figure A-2.

Emissions from the reactor, granulator, dryer, cooler, and materials handling equipment are controlled by cyclones, three venturi scrubbers in parallel, and finally by two up-flow tail gas scrubbers operating in parallel. The exhaust gases are then ducted to the atmosphere through a single stack.

All maximum emissions as presented in the previous application remain the same, except for those due to fuel burning in the dryer. The maximum heat input to the dryer on an annual average basis will be increased to 25 MM BTU/hr (annual average). Maximum hourly heat input can range up to 40 MM BTU/hr. In addition, fuel oil firing in the dryer will be limited to a maximum of 400 hr/yr. The maximum emissions from the modified No. 5 DAP plant are presented Attachment B. Information concerning the new air pollution control equipment is provided in Attachment C.

A-4

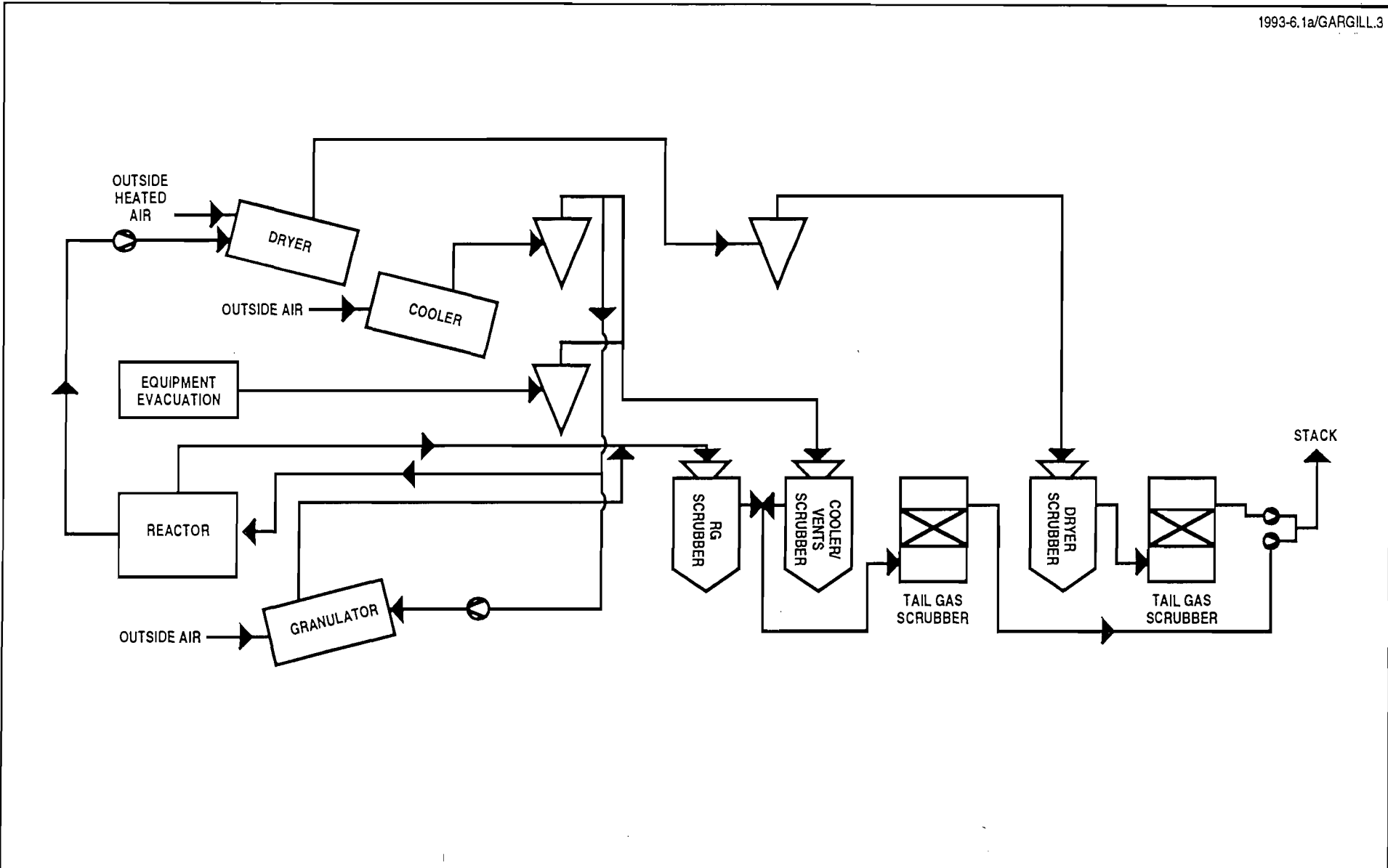


Figure A-2 AIR EVACUATION SYSTEM, EXISTING NO. 5 DAP PLANT



A comparison of the current maximum permitted emission rates with the proposed maximum emission rates from the No. 5 DAP plant is presented in Table A-1. As shown, there will be no change in the maximum permitted rates for particulate matter and fluorides, while maximum sulfur dioxide emissions will decrease.

Table A-1. Comparison of Current and Proposed Maximum Permitted Emission Rates, No. 5 DAP Plant

| Pollutant | Current Permitted or Maximum ^a | | Proposed Permitted or Maximum | |
|----------------------------|--|------|----------------------------------|------|
| | lb/hr | TPY | lb/hr | TPY |
| Particulate Matter | 12.8 | 56.0 | 12.8 | 56.0 |
| Fluorides | 3.3 | 14.5 | 3.3 | 14.5 |
| Sulfur Dioxide | 32.4 | 83.7 | 12.7 | 2.6 |
| Nitrogen Oxides | 2.1 | 9.2 | 3.6 | 15.0 |
| Carbon Monoxide | 0.54 | 2.35 | 0.89 | 3.7 |
| Volatile Organic Compounds | 0.041 | 0.18 | 0.068 | 0.30 |
| Ammonia | 20.0 | 87.6 | 20.0 | 87.6 |

^aBasis: AC29-196763, PSD-FL-178, and permit application dated May 1991.

ATTACHMENT B

EMISSION ESTIMATES FOR NO. 5 DAP PLANT

ATTACHMENT B

- I. Process Data
Production rate = 160 tons/hr = 320,000 lb/hr
 P_2O_5 content = 46%
 P_2O_5 input rate = 160 TPH x 0.46 = 73.6 TPH = 147,200 lb/hr
Maximum operating hours = 8,760 hr/yr
- II. Fuel Usage Data
Annual average heat input rate = 25.0×10^6 Btu/hr
Fuel oil @ 140,000 Btu/gal, 0.5% S max
 25.0×10^6 Btu/hr + 140,000 Btu/gal = 178.6 gal/hr (avg.)
Natural gas @ 1,025 Btu/scf
 25.0×10^6 Btu/hr + 1,025 Btu/scf = 24,390 scf/hr (avg.)
- III. Emission Calculations
- a. Fluorides (F1)
F1 emissions will be limited to the current limit of 3.3 lb/hr and 14.5 TPY.
F1 emissions = 3.3 lb/hr
 $3.3 \text{ lb/hr} \times 8,760 \text{ hr/yr} + 2,000 \text{ lb/ton} = 14.5 \text{ TPY}$
Emission limit = 0.06 lb/ton P_2O_5 input (NSPS) or 3.3 lb/hr, whichever is more restrictive.
- b. Particulate Matter
PM emissions will be limited to the current emission limit of 12.8 lb/hr
 $12.8 \text{ lb/hr} \times 8,760 \text{ hr/yr} + 2,000 \text{ lb/ton} = 56.1 \text{ TPY}$
Emission limit = 0.19 lb/ton P_2O_5 input or 12.8 lb/hr, whichever is more restrictive.
- c. Sulfur Dioxide
Theoretical emissions from distillate fuel oil burning, based upon AP-42 factors:
Factor = 142 S lb/1,000 gal = 142 x 0.5
= 71 lb SO_2 /1,000 gal
Emissions = 178.6 gal/hr x 71 lb/1,000 gal
= 12.68 lb/hr (avg.)
Maximum annual fuel oil usage: 178.6 gal/hr x 400 hr/yr
= 71,440 gal/yr
Maximum annual emissions due to fuel oil: 71,440 gal/yr
x 71 lb SO_2 /1,000 gal + 2,000 lb/ton = 2.54 TPY
- Natural gas burning: AP-42 factor = 0.6 lb/10⁶ scf
 $24,390 \text{ scf/hr} \times 0.6 \text{ lb/10}^6 \text{ scf} = 0.015 \text{ lb/hr (avg.)}$
 $0.015 \text{ lb/hr} \times (8,760 - 400) \text{ hr/yr} + 2,000 \text{ lb/ton} = 0.063 \text{ TPY}$
- Total annual SO_2 = 2.54 TPY + 0.06 TPY = 2.60 TPY

d. Nitrogen Oxides

Fuel oil burning: AP-42 factor = 20 lb/1,000 gal
 $178.6 \text{ gal/hr} \times 20 \text{ lb/1,000 gal} = 3.57 \text{ lb/hr (avg.)}$

Natural gas burning: AP-42 factor = 140 lb/10⁶ scf
 $24,390 \text{ scf/hr} \times 140 \text{ lb/10}^6 \text{ scf} = 3.41 \text{ lb/hr (avg.)}$

Maximum annual emissions: [(3.57 lb/hr x 400)
+ (3.41 lb/hr x 8,360)] + 2,000 lb/ton = 15.0 TPY

e. Carbon Monoxide

Fuel oil burning: AP-42 factor = 5 lb/1,000 gal
 $178.6 \text{ gal/hr} \times 5 \text{ lb/1,000 gal} = 0.89 \text{ lb/hr (avg.)}$

Natural gas burning: AP-42 factor = 35 lb/10⁶ scf
 $24,390 \text{ scf/hr} \times 35 \text{ lb/10}^6 \text{ scf} = 0.85 \text{ lb/hr (avg.)}$

Maximum annual emissions:
(0.89 x 400) + (0.85 x 8,360)] + 2,000 lb/ton
= 3.73 TPY

f. Nonmethane Volatile Organic Compounds

Distillate fuel oil burning: AP-42 factor (nonmethane)
= 0.2 lb/1,000 gal
 $178.6 \text{ gal/hr} \times 0.2 \text{ lb/1,000 gal} = 0.036 \text{ lb/hr (avg.)}$

Natural gas burning: AP-42 factor (nonmethane)
= 2.8 lb/10⁶ scf
 $24,390 \text{ scf/hr} \times 2.8 \text{ lb/10}^6 \text{ scf} = 0.068 \text{ lb/hr (avg.)}$

Maximum annual emissions based upon worst-case fuel:
 $0.068 \text{ lb/hr} \times 8,760 \text{ hr/yr} / 2,000 \text{ lb/ton} = 0.30 \text{ TPY}$

ATTACHMENT C
AIR POLLUTION CONTROL EQUIPMENT

ATTACHMENT C

Provided in Table C-1 are design operating parameters for the replacement R/G scrubber, based on preliminary design data. These data are subject to change upon final design, but the final design scrubber performance will be equivalent to, or better than, the design provided in Table C-1.

Table C-1. Preliminary Scrubber Design Parameters, New R/G Scrubber for No. 5 DAP Plant

| Source | Scrubber Type | Design Manufacturer | Design Inlet Flow (acfm) | Pressure Efficiency | | Gas-Liquid Drop (in. w.g.) | Ratio (acf/gal) | Scrubbing Liquid | |
|--------------------|------------------|------------------------|--------------------------------|------------------------|----|----------------------------------|--------------------|---------------------|--------------------------|
| | | | | PM | F1 | | | | |
| Reactor/Granulator | Venturi | D.M. Weatherly | Current Design | 34,000 | 95 | - | 13-28 | 16.0 | Recirculating Phos. Acid |
| | | | Proposed Design | 60,000 | 98 | 89 | 13-18 | 30.0 | Recirculating Phos. Acid |

AP-42 EMISSION FACTORS

TABLE 1.3-1. UNCONTROLLED EMISSION FACTORS FOR FUEL OIL COMBUSTION

EMISSION FACTOR RATING: A

| Boiler Type ^a | Particulate ^b Matter | | Sulfur Dioxide ^c | | Sulfur Trioxide | | Carbon Monoxide ^d | | Nitrogen Oxide ^e | | Volatile Organics ^f | | | |
|--|------------------------------------|------------------------|-----------------------------|------------------------|----------------------|------------------------|---------------------------------|------------------------|-------------------------------|------------------------------|--------------------------------|------------------------|----------------------|------------------------|
| | kg/10 ³ l | lb/10 ³ gal | kg/10 ³ l | lb/10 ³ gal | kg/10 ³ l | lb/10 ³ gal | kg/10 ³ l | lb/10 ³ gal | kg/10 ³ l | lb/10 ³ gal | Nonmethane | | Methane | |
| | kg/10 ³ l | lb/10 ³ gal | kg/10 ³ l | lb/10 ³ gal | kg/10 ³ l | lb/10 ³ gal | kg/10 ³ l | lb/10 ³ gal | kg/10 ³ l | lb/10 ³ gal | kg/10 ³ l | lb/10 ³ gal | kg/10 ³ l | lb/10 ³ gal |
| Utility Boilers Residual Oil | g | g | 19S | 157S | 0.34S ^h | 2.9S ^h | 0.6 | 5 | 8.0 (12.6)(5) ⁱ | 67 (105)(42) ⁱ | 0.09 | 0.76 | 0.03 | 0.28 |
| Industrial Boilers Residual Oil | g | g | 19S | 157S | 0.24S | 2S | 0.6 | 5 | 6.6 ^j | 55 ^j | 0.034 | 0.28 | 0.12 | 1.0 |
| Distillate Oil | 0.24 | 2 | 17S | 142S | 0.24S | 2S | 0.6 | 5 | 2.4 | 20 | 0.024 | 0.2 | 0.006 | 0.052 |
| Commercial Boilers Residual Oil | g | g | 19S | 157S | 0.24S | 2S | 0.6 | 5 | 6.6 | 55 | 0.14 | 1.13 | 0.057 | 0.475 |
| Distillate Oil | 0.24 | 2 | 17S | 142S | 0.24S | 2S | 0.6 | 5 | 2.4 | 20 | 0.04 | 0.34 | 0.026 | 0.216 |
| Residential Furnaces Distillate Oil | 0.3 | 2.5 | 17S | 142S | 0.24S | 2S | 0.6 | 5 | 2.2 | 18 | 0.085 | 0.713 | 0.214 | 1.78 |

^aBoilers can be approximately classified according to their gross (higher) heat rate as shown below:

Utility (power plant) boilers: $>106 \times 10^9$ J/hr ($>100 \times 10^6$ Btu/hr)

Industrial boilers: 10.6×10^9 to 106×10^9 J/hr (10×10^6 to 100×10^6 Btu/hr)

Commercial boilers: 0.5×10^9 to 10.6×10^9 J/hr (0.5×10^6 to 10×10^6 Btu/hr)

Residential furnaces: $<0.5 \times 10^9$ J/hr ($<0.5 \times 10^6$ Btu/hr)

^bReferences 3-7 and 24-25. Particulate matter is defined in this section as that material collected by EPA Method 5 (front half catch).

^cReferences 1-5. S indicates that the weight % of sulfur in the oil should be multiplied by the value given.

^dReferences 3-5 and 8-10. Carbon monoxide emissions may increase by factors of 10 to 100 if the unit is improperly operated or not well maintained.

^eExpressed as NO₂. References 1-5, 8-11, 17 and 26. Test results indicate that at least 95% by weight of NO_x is NO for all boiler types except residential furnaces, where about 75% is NO.

^fReferences 18-21. Volatile organic compound emissions are generally negligible unless boiler is improperly operated or not well maintained, in which case emissions may increase by several orders of magnitude.

^gParticulate emission factors for residual oil combustion are, on average, a function of fuel oil grade and sulfur content:

Grade 6 oil: $1.25(S) + 0.38$ kg/10³ liter [$10(S) + 3$ lb/10³ gal] where S is the weight % of sulfur in the oil. This relationship is based on 81 individual tests and has a correlation coefficient of 0.65.

Grade 5 oil: 1.25 kg/10³ liter (10 lb/10³ gal)

Grade 4 oil: 0.88 kg/10³ liter (7 lb/10³ gal)

^hReference 25.

ⁱUse 5 kg/10³ liters (42 lb/10³ gal) for tangentially fired boilers, 12.6 kg/10³ liters (105 lb/10³ gal) for vertical fired boilers, and 8.0 kg/10³ liters (67 lb/10³ gal) for all others, at full load and normal (>15%) excess air. Several combustion modifications can be employed for NO_x reduction: (1) limited excess air can reduce NO_x emissions 5-20%, (2) staged combustion 20-40%, (3) using low NO_x burners 20-50%, and (4) ammonia injection can reduce NO_x emissions 40-70% but may increase emissions of ammonia. Combinations of these modifications have been employed for further reductions in certain boilers. See Reference 23 for a discussion of these and other NO_x reducing techniques and their operational and environmental impacts.

^jNitrogen oxides emissions from residual oil combustion in industrial and commercial boilers are strongly related to fuel nitrogen content, estimated more accurately by the empirical relationship:

$\text{kg NO}_2/10^3 \text{ liters} = 2.75 + 50(N)^2$ [$\text{lb NO}_2/10^3 \text{ gal} = 22 + 400(N)^2$] where N is the weight % of nitrogen in the oil. For residual oils having high (>0.5 weight %) nitrogen content, use 15 kg NO₂/10³ liter (120 lb NO₂/10³ gal) as an emission factor.

TABLE 1.4-1. UNCONTROLLED EMISSION FACTORS FOR NATURAL GAS COMBUSTION^a

| Furnace size & type (10 ⁶ Btu/hr heat input) | Particulate ^b | | Sulfur dioxide ^c | | Nitrogen oxides ^d | | Carbon monoxide ^e | | Volatile organics | | | |
|--|-----------------------------------|------------------------------------|-----------------------------------|------------------------------------|-----------------------------------|------------------------------------|-----------------------------------|------------------------------------|-----------------------------------|------------------------------------|-----------------------------------|------------------------------------|
| | kg/10 ⁶ m ³ | lb/10 ⁶ ft ³ | kg/10 ⁶ m ³ | lb/10 ⁶ ft ³ | kg/10 ⁶ m ³ | lb/10 ⁶ ft ³ | kg/10 ⁶ m ³ | lb/10 ⁶ ft ³ | Nonmethane | | Methane | |
| | | | | | | | | | kg/10 ⁶ m ³ | lb/10 ⁶ ft ³ | kg/10 ⁶ m ³ | lb/10 ⁶ ft ³ |
| Utility boilers (> 100) | 16 - 80 | 1 - 5 | 9.6 | 0.6 | 8800 ^h | 550 ^h | 640 | 40 | 23 | 1.4 | 4.8 | 0.3 |
| Industrial boilers (10 - 100) | 16 - 80 | 1 - 5 | 9.6 | 0.6 | 2240 | 140 | 560 | 35 | 44 | 2.8 | 48 | 3 |
| Domestic and commercial boilers (< 10) | 16 - 80 | 1 - 5 | 9.6 | 0.6 | 1600 | 100 | 320 | 20 | 84 | 5.3 | 43 | 2.7 |

^aExpressed as weight/volume fuel fired.

^bReferences 15-18.

^cReference 4. Based on avg. sulfur content of natural gas, 4600 g/10⁶ Nm³ (2000 gr/10⁶ scf).

^dReferences 4-5, 7-8, 11, 14, 18-19, 21.

^eExpressed as NO₂. Tests indicate about 95 weight % NO_x is NO₂.

^fReferences 4, 7-8, 16, 18, 22-25.

^gReferences 16, 18. May increase 10 - 100 times with improper operation or maintenance.

^hFor tangentially fired units, use 4400 kg/10⁶ m³ (275 lb/10⁶ ft³). At reduced loads, multiply factor by load reduction coefficient in Figure 1.4-1. For potential NO_x reductions by combustion modification, see text. Note that NO_x reduction from these modifications will also occur at reduced load conditions.