

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF FINAL PERMIT

In the Matter of an
Application for Permit


Mr. C.M. Farris
Farmland Hydro, L.P.
Post Office Box 960
Bartow, Florida 33831

DEP File No. 1050053-020-AC
PSD-FL-246

Enclosed is the FINAL Permit Number PSD-FL-246 for increasing production rates as well as storage and shipping rates of the North monoammonium phosphate (MAP) and diammonium phosphate (DAP) at the Farmland Hydro, L.P., Green Bay Facility, Polk County. This permit is issued pursuant to Chapter 403, Florida Statutes and in accordance with Rule 62-212.400., F.A.C. - Prevention of Significant Deterioration(PSD).

Any party to this order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, F.S., by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department of Environmental Protection in the Office of General Counsel, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000, and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 (thirty) days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.


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


CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF FINAL PERMIT (including the FINAL permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 9-11-98 to the person(s) listed:

Mr. C.M. Farris, Farmland *
Mr. Brian Beals, EPA
Mr. John Bunyak, NPS
Mr. Bill Thomas, DEP

Clerk Stamp

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


(Clerk) 9-11-98
(Date)

FINAL DETERMINATION

Farmland Hydro, L.P.

Permit No. 1050053-020-AC, PSD-FL-246

North Monoammonium/Diammonium Phosphate Plant

An Intent to Issue an air construction permit to Farmland Hydro, L.P., to increase production of the North Monoammonium/Diammonium Phosphate (MAP/DAP) plant in Polk County, was distributed on July 2, 1998. The Notice of Intent was published in the Lakeland Ledger on July 27, 1998. Copies of the draft construction permit were available for public inspection at the Department offices in Tampa and Tallahassee.

Comments on the Intent to Issue an air construction permit were submitted by the applicant's consultant (Koogler & Associates) and the U.S Fish & Wildlife Service (FWS). No comments were received from the U.S. Environmental Protection Agency or the public. Koogler & Associates (K & A) comments relates to the specific conditions of the draft permit. FWS comments were directed at the BACT emission limits established for fluorides (F) and particulate matter (PM) for the MAP plant as well as PM for the DAP plant. Their comments and the Department of Environmental Protection (DEP) responses are as follows:

K & A comment on Section III, Specific Condition No. 5

Rule citation should reflect Rule 62-212.400 (instead of 62-212.410), F.A.C.

DEP Response

The rule citation will be changed to reflect the correct rule.

K & A comment on Section III, Specific Condition No. 9

The sulfur dioxide (SO₂) emission limits should be removed as there is no applicable standard.

DEP Response

DEP concurs with the comment of removing the SO₂ emission limits but retaining rest of the specific condition. PSD review was not triggered for SO₂ due to the modifications, and there are no state or federal emission limiting standards for SO₂ emissions from MAP/DAP plants. Section III, Specific Condition No. 9 will be changed as follows:

~~Total sulfur dioxide emissions from the reactor/granulator/dryer stacks shall not exceed 2.53 lb/hr and 11.1 TPY.~~ During periods of firing No. 2 fuel oil with a maximum sulfur content of 0.05% sulfur by weight, the firing rate shall not exceed 50 million BTU per hour and 3.1 million gallons per year. The permittee shall maintain records of the fuel oil supplier's sulfur content analysis.

K & A comment on Section III, Specific Condition No. 10

The nitrogen oxides (NO_x) emission limits should be removed as there is no applicable standard.

DEP Response

DEP will require an initial compliance test for NO_x. If the initial test indicates that the NO_x emissions are less than 40 TPY, then annual testing will not be required. Even though PSD review was not triggered for NO_x, the estimated emissions for this pollutant is approaching the significant emission rate and therefore warrants at least an initial compliance test. Section III, Specific Condition 10 will be changed as follows:

Nitrogen oxides emissions from the reactor/granulator/dryer stacks shall not exceed 7.2 lb/hr and 31.3 TPY. If the initial compliance test indicates nitrogen oxides emissions are less than 40 TPY, then annual testing for the pollutant will not be required and the emission limits will be removed. If the test indicates emissions in excess of 40 TPY, the permittee will be required to submit a PSD analysis for the pollutant.

K & A comment on Section III, Specific Condition No. 11

The pressure drop monitoring requirement should not be required for the HI-MOL Scrubber. Furthermore, it is requested that the condition allow for measurement of fan amps, in place of pressure drop, as allowed under draft Title V permit conditions. The rule citation should be Rule 62-204.800 instead of Rule 62-296.800, F.A.C.

DEP Response

DEP concurs that if the permittee can not continuously measure and record the pressure drop across any scrubber, then the fan amps can be substituted as a surrogate parameter. Additionally, monitoring the liquid flow rate will provide reasonable assurance to the Department that the control equipment's are being properly operated. The rule citation will be changed to reflect the correct rule. Section III, Specific Condition No. 11 will be changed as follows:

The permittee shall install, calibrate, operate and maintain monitoring devices that continuously measure and record the total pressure drop across each scrubbing system. If the total pressure drop can not be measured for a scrubbing system, then the liquid flow

rate and the fan amps shall be measured and recorded for that scrubbing system.
Accuracy of the monitoring devices shall be $\pm 5\%$ over the operating range. [Rules 62-297.310, ~~62-296.800~~ 62-204.800, F.A.C.; 40 CFR 60.223(c)]

K & A comment on Section III, Specific Condition No. 14

EPA Method 7E should be removed from this condition as it is not applicable.

DEP Response

EPA Method 7E will be left in the condition due to the requirement for doing an initial compliance test for NO_x emissions. If the test demonstrates less than 40 TPY NO_x emissions, then the requirement for annual testing will be dropped and so will the reference to EPA Method 7E.

K & A comment on Section III, Specific Condition No. 16

The rule citation should reflect Rule 62-204.800 instead of Rule 62-296.800, F.A.C.

DEP Response

The rule citation will be changed to reflect the correct rule.

K & A comment on Section III, Specific Condition Nos. 21 & 22

The information provided to DEP on the product storage and shipping rate was incorrect. The 120 tons per hour (tph) P_2O_5 rate conveyed to the Department corresponds to the rate associated with the North MAP/DAP Plant of 106.1 tph P_2O_5 storage and 120 tph P_2O_5 loadout, or a maximum rate of 120 tph P_2O_5 . However, the South DAP Plant also contributes to the storage and shipping building with a permitted rate of 46 tph P_2O_5 . Consequently, the storage and shipping building would handle a combined total of 152.1 tph P_2O_5 storage and 180 tph P_2O_5 loadout, or a maximum rate of 180 tph P_2O_5 .

The PM emission rate is not expected to change as a result of the proposed project as no changes are proposed to the exhaust flow rate or the existing scrubber operating parameters.

The F emission limit in the current operating permit is no longer applicable as Granular Triple Super Phosphate (GTSP) is no longer manufactured and stored at the facility. A federally enforceable condition in the 1992 North MAP/DAP Plant PSD permit required that the GTSP production capability be removed.

DEP Response

The Department recognizes the error in the information submitted by the applicant relating to storage and shipping rates and will make the necessary change to reflect the correct rates.

Based on the past compliance test results, the PM emission limit will be further reduced from the current allowable of 30.3 pounds per hour and 133 tpy to 4.1 pounds per hour and 18 tpy. Reference to F emission limit will be deleted as GTSP is no longer produced in the facility.

Accordingly, Section III, Specific Condition 21 will be changed to read as follows:

The maximum permitted process rate for the storage and shipping building is ~~120~~ 180 tons per hour (as P₂O₅).

Section III, Specific Condition 22 will be changed to read as follows:

The allowable emission rates for ~~fluoride and~~ particulate matter from shipping and storage buildings will be ~~the same as the current emission limits in AO53-239602~~ 4.1 pounds per hour and 18 TPY. [Permit AO53-239602 Rule 62-210.200, F.A.C.]

FWS Comment

F and PM emission limits should not exceed the 0.0417 lb F/T and 0.19 lb PM/T limits required by other permits issued by DEP. DEP is proposing limits of 0.0417 lb F/T and 0.3 lb PM/T for DAP and 0.06 lb F/T and 0.3 lb PM/T for MAP.

DEP Response

The Department has asked Farmland to conduct additional testing after installing improved spray nozzles in the HI-MOL Scrubber system at their MAP plant for a possible reduction of their BACT limits for F and PM. The testing will be done on a quarterly basis for a year. Based on the results submitted by the applicant, DEP will lower the BACT limits for F for the MAP plant and PM limits for the MAP/DAP plant. The interim limit is still established at 0.06 lb F/T for MAP plant and 0.3 lb PM/T for MAP/DAP plant.

In order to accommodate the additional testing requirement, DEP will extend the expiration date of the construction permit from **December 31, 1999 to May 1, 2000.**

A new specific condition No. 25 will be added to Section III of the permit. It will read as follows:

The permittee shall install improved spray nozzles in the HI-MOL scrubber system in order to reduce fluoride and particulate matter emissions during MAP production. Upon completion of performance testing, the Department shall review the performance test data and, if necessary, require additional improvements to the existing air pollution control equipment based on BACT criteria to achieve an allowable fluoride emission limit during MAP production of 0.0417 lb F/ton P₂O₅. The Department will also revise the particulate matter emission limit based on the performance test data.

The performance testing during MAP production, not to be used for compliance purposes, shall consist of four quarterly tests over a 12-month period. EPA Method 13A or 13B will be used for fluorides testing, and, EPA Method 5 for particulate matter. Each test shall consist of three complete runs, pursuant to Rule 62-297, FAC. A report shall be submitted to Department's Bureau of Air Regulation within 45 days of the last quarterly performance test. The report shall document the test results and data analysis to determine the appropriate allowable fluoride and particulate matter emission limits during MAP production. The report shall also document the scrubber operating parameters during the tests, as required by this permit.

The permittee shall notify, in writing, the Southwest District Office at least 15 days prior to commencement of each performance test so that the Department has the opportunity to observe the test.

Compliance tests during MAP and DAP production shall be conducted subsequent to the performance testing. At this time, the particulate matter limit during DAP production will also be reviewed.

CONCLUSION

The Final action of the Department is to issue the permit with the changes noted above.



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

PERMITTEE:

Farmland Hydro, L.P.
Post Office Box 960
Bartow, Florida 33831

Authorized Representative:

C. M. Farris
Vice President, Operations

File No.	1050053-020-AC
Permit No.	PSD-FL-246
SIC No.	2874
Project:	North MAP/DAP Plant
Expires:	May 1, 2000

PROJECT AND LOCATION:

Permit for the construction /modification of the North MAP/DAP Plant to increase production and the fertilizer storage and shipping rates at the Farmland (Green Bay) facility, 4390 County Road 640 West, Bartow, Polk County. UTM coordinates are Zone 17; 409.5 km E; 3080.1 km N.

STATEMENT OF BASIS:

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

ATTACHED APPENDICES ARE MADE A PART OF THIS PERMIT:

Appendix BD BACT Determination
Appendix GC Construction Permit General Conditions
Appendix CSC Emission Unit(s) Common Specific Conditions

Howard L. Rhodes, Director
Division of Air Resources
Management

AIR CONSTRUCTION PERMIT 1050053-020-AC AND PSD-FL-246

SECTION I. FACILITY INFORMATION

FACILITY DESCRIPTION

The Farmland Hydro, L.P., Green Bay Complex is a phosphate fertilizer manufacturing facility. Phosphate rock is reacted with sulfuric acid (purchased or produced on-site) to make phosphoric acid. The phosphoric acid is further processed or reacted with additional rock or ammonia to make superphosphoric acid, granulated triple super phosphate, monoammonium phosphate (MAP), or diammonium phosphate (DAP).

Farmland's North MAP/DAP Plant presently has a permitted capacity of 120 tons of MAP product per hour and 100 tons of DAP product per hour. This permit allows an increase in the permitted capacity of MAP to 200 tons of product per hour (106.1 tons of P_2O_5 input per hour) and for DAP to 150 tons of product per hour (70.4 tons of P_2O_5 input per hour). Additionally, the maximum permitted process rate for the fertilizer storage and shipping building is increased from 98 to 120 tons of P_2O_5 per hour.

REGULATORY CLASSIFICATION

The North MAP/DAP Plant is classified as a major source of air pollution or Title V source because it has the potential to emit at least 100 tons per year of particulate matter, nitrogen oxides and sulfur dioxide.

PERMIT SCHEDULE:

- 12-24-97: Date of Receipt of Application
- 04-13-98: Application deemed complete
- 07-06-98: Intent issued
- 07-27-98: Notice of Intent published in Lakeland Ledger

RELEVANT DOCUMENTS:

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

- Application received 12-24-97
- Department's incompleteness letters dated 01-23-97, 04-03-98
- Applicant's letters dated 03-06-98, 04-13-98, 06-18-98
- Fish and Wildlife Service letter dated 04-15-98
- Technical Evaluation and Preliminary Determination dated 07-02-98
- Best Available Control Technology determination (issued concurrently with permit)

AIR CONSTRUCTION PERMIT 1050053-020-AC AND PSD-FL-246

SECTION II. EMISSION UNIT(S) ADMINISTRATIVE REQUIREMENTS

1. Regulating Agencies: All documents related to applications for permits to operate, reports, tests, minor modifications and notifications shall be submitted to the Department of Environmental Protection, Southwest District Office located at 3804 Coconut Palm Drive, Tampa, Florida 33619-8218, and phone number (813)744-6100. All applications for permits to construct or modify an emission unit(s) *subject to the Prevention of Significant Deterioration (PSD)* should be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection (FDEP) located at 2600 Blirstone Road, Tallahassee, Florida 32399-2400 and phone number (850)488-0114.
2. General Conditions: The owner and operator is subject to and shall operate under the attached General Permit Conditions G.1 through G.15 listed in *Appendix GC* of this permit. General Permit Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]
3. Terminology: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code.
4. Forms and Application Procedures: The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. [Rule 62-210.900, F.A.C.]
5. Expiration: This air construction permit shall expire on May 1, 2000. [Rule 62-210.300(1), F.A.C.]. The permittee may, for good cause, request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit. However, the permittee shall promptly notify the permitting authority office of any delays in completion of the project which would affect the startup day by more than 90 days. [Rule 62-4.090, F.A.C.]
6. Applicable Regulations: The facility is subject to the following regulations: Florida Administrative Code Chapters 62-4; 62-103; 62-204; 62-210; 62-212, 62-296, and 62-297. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting requirements or regulations. [Rule 62-210.300, F.A.C.]

AIR CONSTRUCTION PERMIT 1050053-020-AC AND PSD-FL-246

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

COMMON CONDITIONS: 40 CFR 60 - NEW SOURCE PERFORMANCE STANDARDS

This permit addresses the following emission units.

EMISSION UNIT NO.	EMISSION UNIT DESCRIPTION
020	DAP/MAP/TSP Storage & Shipping
029	North MAP/DAP Plant

These emission units shall comply with all applicable requirements of 40 CFR 60, General provisions, Subpart A, adopted by reference in Rule 62-204.800(7), F.A.C.

- 40 CFR 60.7, Notification and record keeping
- 40 CFR 60.8, Performance tests
- 40 CFR 60.11, Compliance with standards and maintenance requirements
- 40 CFR 60.12, Circumvention
- 40 CFR 60.13, Monitoring requirements
- 40 CFR 60.19, General notification and reporting requirements

The North MAP/DAP Plant is subject to the applicable requirements of the New Source Performance Standards (NSPS) adopted by reference in Rules 62-204.800, F.A.C., including:

- 40 CFR 60 Subpart V, Standards of Performance for Diammonium Phosphate Plants (DAP).

SPECIFIC CONDITIONS :

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

EMISSION UNIT NO.	EMISSION UNIT DESCRIPTION
020	DAP/MAP/TSP Storage & Shipping
029	North MAP/DAP Plant

1. Unless otherwise indicated, the construction and operation of the subject North MAP/DAP production facility shall be in accordance with the capacities and specifications stated in the application. [Rule 62-210.300, F.A.C.]
2. The subject emissions units shall comply with all applicable provisions of the 40 CFR 60 New Source performance Standards for Diammonium Phosphate Plants, Subpart V. [Rule 62-204.800 F.A.C.]
3. The production rate shall not exceed 200 tons of MAP (106.1 tons of P_2O_5 feed per hour) or 150 tons of DAP (70.4 tons of P_2O_5 feed per hour). [Rule 62-210.200, F.A.C. (Definitions - Potential Emissions)]
4. The subject emission units are allowed to operate continuously (8760 hours/year). [Rule 62-210.200, F.A.C. (Definitions - Potential Emissions)]

AIR CONSTRUCTION PERMIT 1050053-020-AC AND PSD-FL-246

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

5. Total fluoride emissions during MAP production shall not exceed 6.4 lb/hr and 27.9 TPY. Total fluoride emissions during DAP production shall not exceed 2.9 lb/hr and 12.7 TPY. **[Rule 62-212.400, F.A.C.]**
6. Particulate matter emissions from the reactor/granulator/dryer stacks during MAP production shall not exceed 31.8 lb/hr and 139.3 TPY. **[Rule 62-212.400, F.A.C.]**
7. Particulate matter emissions from the reactor/granulator/dryer stacks during DAP production shall not exceed 21.1 lb/hr and 92.5 TPY. **[Rule 62-212.400, F.A.C.]**
8. Visible emissions from all scrubber stacks shall not exceed 20% opacity. **[Rule 62-212.400, F.A.C.]**
9. During periods of firing No. 2 fuel oil with a maximum sulfur content of 0.05% sulfur by weight, the firing rate shall not exceed 50 million BTU per hour and 3.1 million gallons per year. The permittee shall maintain records of the fuel oil supplier's sulfur content analysis. **[Rule 62-210.200(228), F.A.C.]**
10. Nitrogen oxides emissions from the reactor/granulator/dryer stacks shall not exceed 7.2 lb/hr and 31.3 TPY. If the initial compliance test indicates nitrogen oxides emissions are less than 40 TPY, then annual testing for the pollutant will not be required and the emission limits will be removed. If the test indicates emissions in excess of 40 TPY, the permittee will be required to submit a PSD analysis for the pollutant. **[Rule 62-210.200(228), F.A.C.]**
11. The permittee shall install, calibrate, operate and maintain monitoring devices that continuously measure and record the total pressure drop across each scrubbing system. If the total pressure drop can not be measured for a scrubbing system, then the liquid flow rate and the fan amps shall be measured and recorded for that scrubbing system. Accuracy of the monitoring devices shall be $\pm 5\%$ over the operating range. **[Rules 62-297.310, 62-204.800, F.A.C.; 40 CFR 60.223(c)]**
12. Before this construction permit expires, the subject emission units shall be tested for compliance with the above emission limits. For the duration of all tests the emission unit shall be operating at permitted capacity. Permitted capacity is defined as 90-100 percent of the maximum operating rate allowed by the permit. If it is impracticable to test at permitted capacity, then the emission unit may be tested at less than permitted capacity (i.e., 90% of the maximum operating rate allowed by the permit); in this case, subsequent emission unit operation is limited to 110 percent of the test load until a new test is conducted. Once the emission unit is so limited, then operation at higher capacities is allowed for no more than 15 consecutive days for the purposes of additional compliance testing to regain the permitted capacity in the permit. **[Rule 62-297.310, F.A.C.]**
13. The Department's Southwest District office in Tampa shall be notified in writing at least 15 days prior to the compliance tests. Written reports of the test results shall be submitted to that office within 45 days of test completion. **[Rule 62-297.310, F.A.C.]**

AIR CONSTRUCTION PERMIT 1050053-020-AC AND PSD-FL-246

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

14. The compliance test procedures shall be in accordance with EPA Reference Methods 1, 2, 3, 4, 5, 7E, 9 and 13A or 13B, as appropriate, as published in 40 CFR 60, Appendix A. 60, Appendix A. [Rules 62-204.800 and 62-297.310(7)(c), F.A.C.]
15. All measurements, records, and other data required to be maintained by this facility shall be retained for at least five (5) years following the data on which such measurements, records, or data are recorded. These data shall be made available to the Department upon request. [Rule 62-4.070(3), F.A.C.]
16. The permittee shall install, calibrate, maintain, and operate a monitoring device which can be used to determine the mass flow of phosphorus-bearing feed material to the process. The monitoring device shall have an accuracy of ± 5 percent over its operating range. The permittee shall maintain a daily record of equivalent P_2O_5 feed by first determining the total mass rate in metric ton/hour of phosphorus bearing feed using the flow monitoring device meeting the requirements of 40 CFR 60.223(a) and then by proceeding according to 40 CFR 60.224(b)(3). [Rule 62-204.800, F.A.C.; 40 CFR 60.223(b)]
17. No person shall cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor. [Rule 62-296.320, F.A.C.]
18. No person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly. [Rule 62-210.650, F.A.C.]
19. The subject emissions units shall be subject to the following:
 - Excess emissions resulting from startup, shutdown or malfunction of any source shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. [Rule 62-210.700, F.A.C.]
 - Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited. [Rule 62-210.700, F.A.C.]
 - Considering operational variations in types of industrial equipment operations affected by this rule, the Department may adjust maximum and minimum factors to provide reasonable and practical regulatory controls consistent with the public interest. [Rule 62-210.700, F.A.C.]
 - In case of excess emissions resulting from malfunctions, each source shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Rule 62-210.700, F.A.C.]

AIR CONSTRUCTION PERMIT 1050053-020-AC AND PSD-FL-246

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

20. The permittee shall submit an Annual Operating Report using DEP Form 62-210.900(4) to the Department's Southwest District office by March 1 of the following year for the previous year's operation. [Rule 62-210.370, F.A.C.]
21. The maximum permitted process rate for the storage and shipping building is 180 tons per hour (as P₂O₅). [Rule 62-210.200, F.A.C. (Definitions - Potential Emissions)]
22. The allowable emission rate for particulate matter from shipping and storage buildings will be 4.1 pounds per hour and 18 TPY. [Rule 62-210.200, F.A.C. (Definitions - Potential Emissions)]
23. The permittee shall install improved spray nozzles in the HI-MOL scrubber system in order to reduce fluoride and particulate matter emissions during MAP production. Upon completion of performance testing, the Department shall review the performance test data and, if necessary, require additional improvements to the existing air pollution control equipment based on BACT criteria to achieve an allowable fluoride emission limit during MAP production of 0.0417 lb F/ton P₂O₅. The Department will also revise the particulate matter emission limit based on the performance test data.

The performance testing during MAP production, not to be used for compliance purposes, shall consist of four quarterly tests over a 12-month period. EPA Method 13A or 13B will be used for fluorides testing, and, EPA Method 5 for particulate matter. Each test shall consist of three complete runs, pursuant to Rule 62-297, F.A.C. A report shall be submitted to Department's Bureau of Air Regulation within 45 days of the last quarterly performance test. The report shall document the test results and data analysis to determine the appropriate allowable fluoride and particulate matter emission limits during MAP production. The report shall also document the scrubber operating parameters during the tests, as required by this permit.

The permittee shall notify, in writing, the Southwest District Office at least 15 days prior to commencement of each performance test so that the Department has the opportunity to observe the test.

Compliance tests during MAP and DAP production shall be conducted subsequent to the performance testing. At this time, the particulate matter limit during DAP production will also be reviewed. [Rule 62-212.400, F.A.C.]

APPENDIX BD
BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)

North Monoammonium and Diammonium Phosphate Plant
Farmland Hydro, L.P. (Green bay Complex)
PSD-FL-246 / 1050053-020-AC
Bartow, Polk County

The Farmland Hydro, L.P. proposes to increase the production rates of monoammonium phosphate (MAP) from 120 to 200 tons per hour (TPH) and of diammonium phosphate (DAP) from 100 to 150 TPH at its existing North MAP/DAP Plant in Bartow, Polk County. The proposed modification will result in a significant increase in emissions of particulate matter (PM/PM₁₀) and fluorides (F). The project is, therefore, subject to Prevention of Significant Deterioration (PSD) review in accordance with Rule 62-212.400, Florida Administrative Code (F.A.C.). A Best Available Control Technology (BACT) determination is part of the review required by Rules 62-212.400 and 62-296, F.A.C.

The North MAP/DAP plant reacts phosphoric acid with ammonia and produces granular MAP and DAP while generating emissions as indicated below:

Pollutant	PSD Level ¹	Actual Emissions ²	Current Allowables	Proposed Emissions ³	Net Change ⁴	Subject to PSD Review?
F (MAP)	3	4.5	16.4	27.9	23.4	Yes
F (DAP)	3	4.1	12.1	18.5	14.4	Yes
PM (MAP)	25/15 ⁵	44.0	98.6	139.3	97.3 ⁶	Yes
PM (DAP)	25/15 ⁵	15.3	70.7	92.5	79.2 ⁶	Yes
NO _x	40	9.6	N/A	31.3	21.7	No
SO ₂	40	0.04	N/A	11.1 ⁷	11.1	No
CO	100	2.4	N/A	7.8	5.4	No
VOC	40	0.2	N/A	0.2	0	No

¹ Tons per year (Rule 212.400, F.A.C.)

² Based on two-year average using 1995 and 1996 compliance data for F and PM/PM₁₀. CO and VOC emissions based on AP-42 factors for boilers.

³ Proposed by applicant as allowable emissions at the new production rate.

⁴ Applicant's proposed emissions minus actuals.

⁵ PM/PM₁₀.

⁶ The net increase includes contemporaneous emissions of 2.0 tpy.

⁷ SO₂ emissions are limited by low sulfur (0.05%) oil usage.

DATE OF RECEIPT OF COMPLETE BACT APPLICATION:

April 13, 1998

APPENDIX BD
BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)

BACT DETERMINATION PROCEDURE:

In accordance with Chapter 62-212, F.A.C., this BACT determination is based on the maximum degree of reduction of each pollutant emitted which the Department of Environmental Protection (Department), on a case by case basis, taking into account energy, environmental and economic impacts, and other costs, determines is achievable through application of production processes and available methods, systems, and techniques. In addition, the regulations state that, in making the BACT determination, the Department shall give consideration to:

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

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

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

- *Fluorides* (HF, SiF₄). Controlled generally by scrubbing with pond water.
- *Particulate Matter* (PM, PM₁₀). Controlled generally by wet scrubbing or filtration.
- *Combustion Products* (SO₂, NO_x, PM). Controlled generally by good combustion of clean fuels.

APPENDIX BD
BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)

- *Products of Incomplete Combustion* (CO, VOC). Controlled generally by proper combustion.

Grouping the pollutants in this manner facilitates the BACT analysis because it enables the equipment available to control the type or group of pollutants emitted and the corresponding energy, economic, and environmental impacts to be examined on a common basis. Although all of the pollutants addressed in the BACT analysis may be subject to a specific emission limiting standard as a result of PSD review, the control of "non-regulated" air pollutants is considered in imposing a more stringent BACT limit on a "regulated" pollutant (i.e., PM, SO₂, H₂SO₄, fluorides, etc.), if a reduction in "non-regulated" air pollutants can be directly attributed to the control device selected as BACT for the abatement of the "regulated" pollutants.

BACT LIMITS PROPOSED BY APPLICANT:

POLLUTANT	EMISSION LIMIT	LIMIT BASIS	CONTROL TECHNOLOGY
F (MAP)	6.4 lb/hr	0.06 lb/ton P ₂ O ₅ input	Two-stage scrubbers using acid/pond water
F (DAP)	4.2 lb/hr	0.06 lb/ton P ₂ O ₅ input	Two-stage scrubbers using acid/pond water
PM (MAP)	31.8 lb/hr	0.3 lb/ton P ₂ O ₅ input	Two-stage scrubbers using acid/pond water
PM(DAP)	21.1 lb/hr	0.3 lb/ton P ₂ O ₅ input	Two-stage scrubbers using acid/pond water

BACT POLLUTANT ANALYSIS

GASEOUS FLUORIDES (F)

Fluoride-containing gases including hydrogen fluoride (HF) and silicon tetrafluoride (SiF₄) are evolved during the exothermic reaction between ammonia and phosphoric acid that occurs in the reactor and to a lesser extent in the granulator. Since the vent gases from the reactor and granulator contain ammonia in high concentrations, the first scrubbing stage uses a phosphoric acid stream as the scrubbing medium for recovery of ammonia so that it is recycled back to the process. A final stage of pond water scrubbing removes most of the fluoride evolved from the process as well as that which is stripped out of the phosphoric acid in the first stage scrubber.

Additional fluoride and ammonia emissions are generated in the dryer and are controlled by a separate two-stage scrubbing system as for the reactor and granulator. Gaseous fluoride and ammonia emissions from the cooler are relatively low and therefore do not require special controls. The applicant has proposed that the existing emission control equipment be considered as BACT.

APPENDIX BD
BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)

PARTICULATE MATTER (PM/PM₁₀) AND VISIBLE EMISSIONS (VE)

The sources of PM and VE, consisting primarily of DAP dust along with relatively small amounts of ammonium fluoride and other related compounds, are the granulator, dryer, cooler, screens and mills. These emissions are controlled by cyclones which remove most of the larger particles with the remainder controlled by wet scrubbers. The applicant has proposed that the existing control equipment be considered as BACT.

BACT DETERMINATION BY THE DEPARTMENT:

Based on the information provided by the applicant and other information available to the Department, the following emission limits are established employing the top-down BACT approach.

POLLUTANT	EMISSION LIMIT	LIMIT BASIS
F (MAP)	6.4 lb/hr	0.06 lb/ton P ₂ O ₅ input (includes cooler emissions)
F (DAP)	2.9 lb/hr	0.0417 lb/ton P ₂ O ₅ input (includes cooler emissions)
PM/PM ₁₀ (MAP)	31.8 lb/hr	0.3 lb/ton P ₂ O ₅ input
PM/PM ₁₀ (DAP)	21.1 lb/hr	0.3 lb/ton P ₂ O ₅ input

FLUORIDES

The top-down BACT determination for fluorides identified the control technologies listed below starting with the most stringent:

1. Packed scrubber using once-through fresh water.
2. Packed scrubber using neutralized water from a dedicated pond (fresh water makeup).
3. Packed scrubber using process cooling pond water.

Use of once-through fresh water would achieve the highest level of fluoride removal but this option is not practical for operations where water conservation is required and plant water balance problems would be created.

Option 2 is possible, the main considerations being the cost of installing the pond and equipment and the cost of operating a lime treatment unit. Lime treatment to a pH level of 3.5 to 4.0 causes fluorides to precipitate out of solution, primarily as calcium fluoride. At this point the water would contain as low as 30-60 ppm fluoride. With second-stage lime treatment to a pH of 6.0 or more, the calcium compounds (mainly dicalcium phosphate) precipitate out along with additional calcium fluoride. Upon settling at a PH in the range of 6.5 to 8.8, the fluoride content of the clear neutralized water may be as low as 15 ppm, depending on the quality of the neutralization facility and the mixing efficiency.

APPENDIX BD
BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)

Costs for Option 2 are based on the data submitted by the applicant:

ITEM	COST
Packed Scrubber	\$ 1,500,000
Lined Pond	\$ 4,500,000
Total Installed Cost (TIC)	\$ 6,000,000
Annual Costs:	
Capital Recovery (TIC x 0.1175)	\$ 705,000
Operation & Maintenance (@ 8.7% of TIC)	\$ 52,000
Total Annual Cost	\$ 757,400

Based on the Department's recently proposed BACT for fluorides from a fertilizer (prilled MAP) plant of 0.019 lb/ton P₂O₅ feed, which has an option for a recirculated scrubber water treatment system with a dedicated pond to meet the BACT emissions limit, the potential emissions from the North MAP/DAP Plant can be projected as follows:

$$\begin{aligned} \text{F Removed} &= 106.1 \text{ tph P}_2\text{O}_5 \times 0.019 \text{ lb/ton P}_2\text{O}_5 \times 8760 \text{ hrs/yr} \times \text{ton}/2000 \text{ lbs} \\ &= 8.8 \text{ tpy} \end{aligned}$$

The cost of additional control:

$$\begin{aligned} \text{Total Cost} &= \$757,400 / (27.9 \text{ tpy} - 8.8 \text{ tpy}) \\ &= \$ 39,654/\text{ton additional F removed} \end{aligned}$$

This figure is sufficiently high to rule out Option 2. However it should be noted that the low magnitude of fluoride emissions relative to their potential environmental impact justifies the consideration of higher fluoride cost effectiveness figures relative to the high tonnage pollutants such as sulfur dioxide and nitrogen oxides. Option 3, therefore, is determined by the top-down approach as the basis for the fluoride BACT emission limit.

The BACT limit for MAP is determined to be 0.06 lb/ton P₂O₅ feed based on the recent compliance test results for the MAP plant done between 1994 - 1998. Additionally, the process equipment utilized for MAP production i.e., the pipe reactor system is very sensitive to process flow changes, and this results in a wider range of emissions than that for DAP production. Farmland is the only facility in Florida that is using pipe reactor technology for MAP production. The BACT limit for DAP will be the same as determined for the IMC-Agrico Nichols and New Wales Plant (0.0417 lb F/ton P₂O₅ input). This limit has been demonstrated by Farmland based on their compliance test results between 1994 - 1998 to be achievable.

APPENDIX BD
BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)

PARTICULATE MATTER (PM/PM₁₀) AND VISIBLE EMISSIONS (VE)

The top-down approach for control of PM/PM₁₀ and VE identified the following BACT options:

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

Characteristic of this process is that the first stage of scrubbing (acid scrubber) is primarily for ammonia recovery while the primary function of the second stage scrubber is fluoride removal, leaving PM/PM₁₀ control with a secondary priority from a design standpoint. Since recovery of ammonia takes place by chemical reaction with the acid scrubbing medium, the required removal can be effected using a medium energy scrubber which also removes up to 85% of the product dust escaping the cyclones. The tail gas scrubber is a low pressure drop device that removes fluorides by absorption. For these reasons, employment of a high energy, high efficiency device for PM/PM₁₀ removal has not been a design consideration for these plants.

If maximum PM/PM₁₀ removal is considered to be a design parameter, the cost effectiveness of adding high energy scrubbing to the existing system (Option 1) would likely be in the range of \$50,000 - \$75,000 per incremental ton of PM/PM₁₀ removed based on recent analyses for other projects. On a non-incremental basis, however, assuming replacement of the existing acid scrubbers with high energy ones, the cost effectiveness would drop to about \$7,000 to \$9,000 per ton for PM/PM₁₀ removal in the 98+% efficiency range. Due to the high costs of installing new ducts, pumps, fans, and instrumentation for retrofitting an existing system, and the high energy costs, Option 1 is not feasible for this project.

Option 2 is the feasible choice, and since the existing venturi scrubbers are capable of being operated in the medium energy range, the BACT requirement will be satisfied by specifying their normal operation at a minimum pressure drop of 15 in. w.c.

COMPLIANCE

Compliance with the fluoride limit shall be in accordance with the EPA Reference Method 13A or 13B as contained in 40 CFR 60, Appendix A.

Compliance with the PM/PM₁₀ limit shall be in accordance with the EPA Reference Method 5 as contained in 40 CFR 60, Appendix A.

Compliance with the visible emission limit shall be in accordance with the EPA Reference Method 9 as contained in 40 CFR 60, Appendix A.

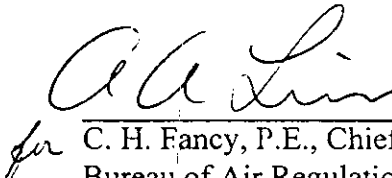
APPENDIX BD
BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)

DETAILS OF THE ANALYSIS MAY BE OBTAINED BY CONTACTING:


Syed Arif, P.E., Permit Engineer, New Source Review Section
Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Recommended By:

Approved By:



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



Howard L. Rhodes, Director
Division of Air Resources Management

9/10/98
Date:

9/10/98
Date:

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

- G.1 The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
- G.2 This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings or exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
- G.3 As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
- G.4 This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
- G.5 This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
- G.6 The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
- G.7 The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:
- (a) Have access to and copy and records that must be kept under the conditions of the permit;
 - (b) Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
 - (c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

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

- G.8 If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
- (a) A description of and cause of non-compliance; and
 - (b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

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

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

- G.9 In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
- G.10 The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.
- G.11 This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
- G.12 This permit or a copy thereof shall be kept at the work site of the permitted activity.
- G.13 This permit also constitutes:
- (a) Determination of Best Available Control Technology (*X*)
 - (b) Determination of Prevention of Significant Deterioration (*X*); and
 - (c) Compliance with New Source Performance Standards (*X*).
- G.14 The permittee shall comply with the following:
- (a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
 - (b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
 - (c) Records of monitoring information shall include:
 - 1. The date, exact place, and time of sampling or measurements;
 - 2. The person responsible for performing the sampling or measurements;
 - 3. The dates analyses were performed;
 - 4. The person responsible for performing the analyses;
 - 5. The analytical techniques or methods used; and
 - 6. The results of such analyses.
- G.15 When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

APPENDIX CSC

EMISSION UNIT(S) COMMON SPECIFIC CONDITIONS

SUBSECTION 1.0 CONSTRUCTION REQUIREMENTS

- 1.1 Applicable Regulations: Unless otherwise indicated in this permit, the construction and operation of the subject emission unit(s) shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of Chapter 403, F.S and Florida Administrative Code Chapters 62-4, 62-103, 62-204, 62-210, 62-212, 62-213, 62-296, 62-297; and the applicable requirements of the Code of Federal Regulations Section 40, Part 60, adopted by reference in the Florida Administrative Code regulation [Rule 62-204.800, F.A.C.]. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting requirements or regulations. [Rule 62-210.300, F.A.C.]

SUBSECTION 2.0 EMISSION LIMITING STANDARDS

- 2.1 General Particulate Emission Limiting Standards. General Visible Emissions Standard: Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer, or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20% opacity). [Rule 62-296-320(4)(b)1, F.A.C.]
- 2.2 Unconfined Emissions of Particulate Matter [Rule 62-296.320(4)(c), F.A.C.]
- (a) The owner or operators shall not cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any source whatsoever, including, but not limited to, vehicular movement, transportation of materials, construction, alteration, demolition or wrecking, or industrially related activities such as loading, unloading, storing or handling, without taking reasonable precautions to prevent such emission.
- (b) Any permit issued to a facility with emissions of unconfined particulate matter shall specify the reasonable precautions to be taken by that facility to control the emissions of unconfined particulate matter.
- (c) Reasonable precautions include the following:
- Paving and maintenance of roads, parking areas and yards.
 - Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing.
 - Application of asphalt, water, oil, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities.
 - Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent reentrainment, and from buildings or work areas to prevent particulate from becoming airborne.
 - Landscaping or planting of vegetation.
 - Use of hoods, fans, filters, and similar equipment to contain, capture and/or vent particulate matter.

APPENDIX CSC

EMISSION UNIT(S) COMMON SPECIFIC CONDITIONS

- Confining abrasive blasting where possible.
- Enclosure or covering of conveyor systems.

NOTE: Facilities that cause frequent, valid complaints may be required by the Permitting Authority to take these or other reasonable precautions. In determining what constitutes reasonable precautions for a particular source, the Department shall consider the cost of the control technique or work practice, the environmental impacts of the technique or practice, and the degree of reduction of emissions expected from a particular technique or practice.

2.3 General Pollutant Emission Limiting Standards: [Rule 62-296.320, F.A.C.]

- (a) The owner or operator shall not store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems.
- (b) No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor.

NOTE: An objectionable odor is defined as any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [F.A.C. 62-210.200(198)]

SUBSECTION 3.0 OPERATION AND MAINTENANCE

- 3.1 Changes/Modifications: The owner or operator shall submit to the Permitting Authority(s), for review any changes in, or modifications to: the method of operation; process or pollution control equipment; increase in hours of operation; equipment capacities; or any change which would result in an increase in potential/actual emissions. Depending on the size and scope of the modification, it may be necessary to submit an application for, and obtain, an air construction permit prior to making the desired change. *Routine maintenance of equipment will not constitute a modification of this permit.* [Rule 62-4.030, 62-210.300 and 62-4.070(3), F.A.C.]
- 3.2 Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the owner or operator shall notify the Permitting Authority as soon as possible, but at least within (1) working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; the steps being taken to correct the problem and prevent future recurrence; and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit and the regulations. [Rule 62-4.130, F.A.C.]

APPENDIX CSC

EMISSION UNIT(S) COMMON SPECIFIC CONDITIONS

- 3.3 Circumvention: The owner or operator shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rules 62-210.650, F.A.C.]
- 3.4 Excess Emissions Requirements [Rule 62-210.700, F.A.C.]
- (a) Excess emissions resulting from start-up, shutdown or malfunction of these emissions units shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized, but in no case exceed two hours in any 24 hour period unless specifically authorized by the Permitting Authority office for longer duration. [Rule 62-210.700(1), F.A.C.]
 - (b) Excess emissions that are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during start-up, shutdown, or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]
 - (c) In case of excess emissions resulting from malfunctions, the owner or operator shall notify Permitting Authority within one (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the problem; and the corrective actions being taken to prevent recurrence. [Rule 62-210.700(6), F.A.C.]
- 3.5 Operating Procedures: Operating procedures shall include good operating practices and proper training of all operators and supervisors. The good operating practices shall meet the guidelines and procedures as established by the equipment manufacturers. All operators (including supervisors) of air pollution control devices shall be properly trained in plant specific equipment. [Rule 62-4.070(3), F.A.C.]

SUBSECTION 4.0 MONITORING OF OPERATIONS

4.1 Determination of Process Variables

- (a) The permittee shall operate and maintain equipment and/or instruments necessary to determine process variables, such as process weight input or heat input, when such data is needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.
- (b) Equipment and/or instruments used to directly or indirectly determine such process variables, including devices such as belt scales, weigh hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value. [Rule 62-297.310(5), F.A.C.]

APPENDIX CSC

EMISSION UNIT(S) COMMON SPECIFIC CONDITIONS

SUBSECTION 5.0 TEST REQUIREMENTS

- 5.1 Test Performance: Within 60 days after achieving the maximum production rate at which these emission units will be operated, but not later than 180 days after initial startup and annually thereafter, the owner or operator of this facility shall conduct performance test(s) pursuant to 40 CFR 60.8, Subpart A, General Provisions and 40 CFR 60, Appendix A. No other test method shall be used unless approval from the Department has been received in writing. Unless otherwise stated in the applicable emission limiting standard rule, testing of emissions shall be conducted with the emission unit(s) operating at permitted capacity pursuant to Rule 62-297.310(2), F.A.C. [Rules 62-204.800, 62-297.310, 62-297.400, 62-297.401, F.A.C.]
- 5.2 Test Procedures shall meet all applicable requirements of the Florida Administrative Code Chapter 62-297. [Rule 62-297.310, F.A.C.]
- 5.3 Test Notification: The owner or operator shall notify the Permitting Authority in writing at least *(30) days* (initial) and *15 days* (annual) prior to each scheduled compliance test to allow witnessing. The notification shall include the compliance test date, place of such test, the expected test time, the facility contact person for the test, and the person or company conducting the test. The (30) or (15) day notification requirement may be waived at the discretion of the Department. Likewise, if circumstances prevent testing during the test window specified for the emission unit, the owner or operator may request an alternate test date before the expiration of this window. [Rule 62-297.310 and 40 CFR 60.8, F.A.C.]
- 5.4 Special Compliance Tests: When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in Rule 62-204, 62-210, 62-212, 62-296 and 62-297, F.A.C. or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the facility to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions units and to provide a report on the results of said tests to the Permitting Authority. [Rule 62-297.310(7)(b), F.A.C.]
- 5.5 Stack Testing Facilities: The owner or operator shall install stack testing facilities in accordance with Rule 62-297.310(6), F.A.C.
- 5.6 Exceptions and Approval of Alternate Procedures and Requirements: An Alternate Sampling Procedure (ASP) may be requested from the Bureau of Air Monitoring and Mobile Sources of the Florida Department of Environmental Protection in accordance with the procedures specified in Rule 62-297.620, F.A.C.
- 5.7 Operating Rate During Testing: Unless otherwise stated in the applicable emission limiting standard rule, testing of emissions shall be conducted with the emissions unit operation at permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impracticable to test at permitted capacity, an
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APPENDIX CSC

EMISSION UNIT(S) COMMON SPECIFIC CONDITIONS

emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. [Rule 62-297.310(2) and (3), F.A.C.]

SUBSECTION 6.0 REPORTS AND RECORDS

- 6.1 Duration: All reports and records required by this permit shall be kept for at least (5) years from the date the information was recorded. [Rule 62-4.160(14)(b), F.A.C.]
- 6.2 Emission Compliance Stack Test Reports:
- (a) A *test report* indicating the results of the required compliance tests shall be filed with the Permitting Authority as soon as practical, but no later than 45 days after the last sampling run is completed. [Rule 62-297.310(8), F.A.C.]
 - b) The *test report* shall provide sufficient detail on the tested emission unit and the procedures used to allow the Department to determine if the test was properly conducted and if the test results were properly computed. At a minimum, the test report shall provide the applicable information listed in Rule 62-297.310(8), F.A.C.
- 6.3 Excess Emissions Report: If excess emissions occur, the owner or operator shall notify the Permitting Authority within (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident. Pursuant to the New Source Performance Standards, excess emissions shall also be reported in accordance with 40 CFR 60.7, Subpart A. [Rules 62-4.130 and 62-210.700(6), F.A.C.]
- 6.4 Annual Operating Report for Air Pollutant Emitting Facility: Before March 1st of each year, the owner or operator shall submit to the Permitting Authority this required report [DEP Form No. 62-210.900(5)], which summarizes operations for the previous calendar year. [Rule 62-210.370(3), F.A.C.]

SUBSECTION 7.0 OTHER REQUIREMENTS

- 7.1 Waste Disposal: The owner or operator shall treat, store, and dispose of all liquid, solid, and hazardous wastes in accordance with all applicable Federal, State, and Local regulations. This air pollution permit does not preclude the permittee from securing any other types of required permits, licenses, or certifications.

Memorandum

Florida Department of Environmental Protection

TO: Howard L. Rhodes

THRU: Clair Fancy
Al Linero *CAF 9/10*

FROM: Syed Arif *Syed Arif*

DATE: September 2, 1998

SUBJECT: Farmland Hydro, L.P., 1050053-020-AC,
PSD-FL-246

Attached for approval and signature is a construction permit number 1050053-020-AC, PSD-FL-246 to increase production rates as well as storage and shipping rates for Farmland's North monoammonium phosphate (MAP) and diammonium phosphate (DAP) plant at its Green Bay facility in Polk County, Florida. A Technical Evaluation and Preliminary Determination was issued, and the facility was required to do a public notice. Comments were submitted by the applicant and U.S. Fish & Wildlife Service. Their comments have been properly responded in the final determination.

The emission unit is a source of fluorides (F) and particulate matter (PM) emissions. Control of F and PM emissions is accomplished by wet scrubbing equipment. These scrubbers are designed for a variety of functions which include ammonia recovery, particulate collection, and fluorine removal. The BACT emission limit for F and PM for the DAP plant was determined by the Department to be 0.0417 lb F/ton P_2O_5 and 0.3 lb PM/ton P_2O_5 . The interim BACT limit for F and PM for the MAP plant was determined to be 0.06 lb F/ton P_2O_5 and 0.3 lb PM/ton P_2O_5 . The applicant is required to modify the spray system for the scrubber and to conduct quarterly testing for one year during MAP production. The Department will reduce the BACT limits for F and PM based on the results of the tests.

The project provides reasonable assurance that all the requirements of the permit and BACT determination will be complied with. I recommend your approval and signature.