KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
352/377-5822 • FAX/377-7158

KA 123-97-01

December 17, 1997

Mr. A. A. Linero
Florida Department of
Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

1050053-020-AC
PSD-FL-246

Subject: Polk County-AP
Farmland Hydro, L.P.
Green Bay Complex
PSD Permit Application
North MAP/DAP Plant Production Increase

Dear Mr. Linero:

Farmland Hydro, L.P. is submitting this PSD permit application for an increase in the production rate of the existing MAP/DAP Plant and the fertilizer storage and shipping rates at the Green Bay Complex in Polk County, Florida.

Enclosed are eight (8) copies of the permit application, along with a check in the amount of $7500 (application fee). A disk, containing the modeling output of the air impact analysis associated with the proposed project, is also enclosed.

If you have any questions, please call Pradeep Raval or me.

Very truly yours,

KOOGLER & ASSOCIATES

John B. Koogler, Ph.D., P.E.

JBK:par
Enc.

c: Charles Jenkins, Farmland Hydro, L.P.

VENDOR NO.

101890

VENDOR NAME

FLORIDA DEPT OF ENVIRONMENTAL

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

0000004695

FHL
NBCDA
FHAP

CODE	CHECK NO.
IO	0000004695
DATE	PAGE
12/19/1997	1 of 1

FARMLAND HYDRO, L.P. ACCOUNTS PAYABLE CHECK DETAIL

B.A.	DATE	INVOICE NO.	DOCUMENT NO.	GROSS	DISCOUNT	NET
FHL	12/18/1997	121797	100006071	7,500.00		7,500.00
Return to Joan						
		Total		$7,500.00		$7,500.00

DETACH VOUCHER BEFORE DEPOSITING

Farmland

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

HYDRO

NationsBank, N.A. (South)
Atlanta, Dekalb County, Georgia
64-1278/611

NO. 0000004695

DATE	CHECK NO.
12/19/1997	0000004695

AMOUNT VOID AFTER 180 DAYS

AMOUNT
*****$7,500.00

PAY EXACTLY *********7,500 DOLLARS AND 00 CENTS

TO THE ORDER OF

FLORIDA DEPT OF ENVIRONMENTAL
PROTECTION
BUREAU OF AIR REGULATIONS
TWIN TOWERS OFFICE BLDG
2600 BLAIRSTONE RD
TALLAHASSEE FL 32399-2400

FARMLAND HYDRO, L.P. ACCOUNTS PAYABLE

C M Carris

Susan Rodgers

⑈0000004695⑈ ⑆063112788⑆ 3299910424⑈

PSD PERMIT APPLICATION
FOR
NORTH MAP / DAP PLANT

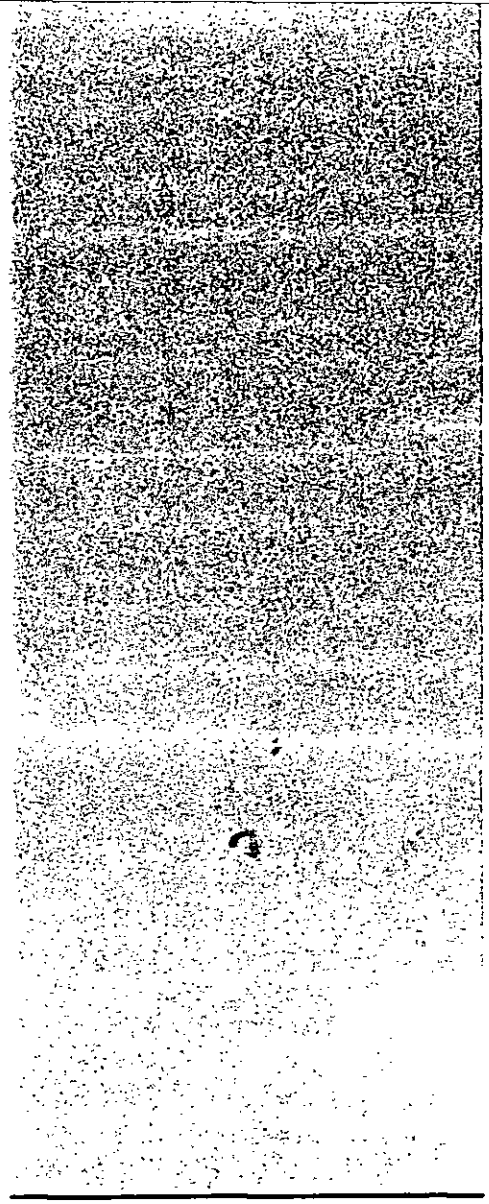
PREPARED FOR:

FARMLAND HYDRO, L.P.
GREEN BAY COMPLEX
POLK COUNTY, FLORIDA

DECEMBER 1997

PREPARED BY:

KOOGLER & ASSOCIATES
4014 N.W. 13TH STREET
GAINESVILLE, FLORIDA 32609
(352) 377-5822



KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
352/377-5822 • FAX 377-7158

RECEIVED
DEC 24 1997
BUREAU OF
AIR REGULATION

Department of Environmental Protection

DIVISION OF AIR RESOURCES MANAGEMENT

APPLICATION FOR AIR PERMIT - LONG FORM

See Instructions for Form No. 62-210.900(1)

I. APPLICATION INFORMATION

This section of the Application for Air Permit form identifies the facility and provides general information on the scope and purpose of this application. This section also includes information on the owner or authorized representative of the facility (or the responsible official in the case of a Title V source) and the necessary statements for the applicant and professional engineer, where required, to sign and date for formal submittal of the Application for Air Permit to the Department. If the application form is submitted to the Department using ELSA, this section of the Application for Air Permit must also be submitted in hard-copy.

Identification of Facility Addressed in This Application

Enter the name of the corporation, business, governmental entity, or individual that has ownership or control of the facility; the facility site name, if any; and the facility's physical location. If known, also enter the facility identification number.

1. Facility Owner/Company Name: **Farmland Hydro, L.P.**	
2. Site Name: **Green Bay Plant**	
3. Facility Identification Number: **1050053**	[ ] Unknown
4. Facility Location: Street Address or Other Locator: **4390 County Road 640 West** City: **Bartow** County: **Polk** Zip Code: **33830**	
5. Relocatable Facility? [ ] Yes [X] No	6. Existing Permitted Facility? [X] Yes [ ] No

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	December 24, 1997
2. Permit Number:	1050053-030-AC
3. PSD Number (if applicable):	PSD-FL-246
4. Siting Number (if applicable):	

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official:
   C. M. Farris, Vice President, Operations

2. Owner/Authorized Representative or Responsible Official Mailing Address:

   Organization/Firm: **Farmland Hydro, L.P.**
   Street Address: **P.O. Box 960**
   City: **Bartow** State: **FL** Zip Code: **33831**

3. Owner/Authorized Representative or Responsible Official Telephone Numbers:
   Telephone: (**941**) **533-1141** Fax: (**941**) **533 - 8793**

4. Owner/Authorized Representative or Responsible Official Statement:

   I, the undersigned, am the owner or authorized representative of the non-Title V source addressed in this Application for Air Permit or the responsible official, as defined in Rule 62-210.200, F.A.C., of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.*

Signature

Dec. 19, 1997
Date

* Attach letter of authorization if not currently on file.

Scope of Application

This Application for Air Permit addresses the following emissions unit(s) at the facility. An Emissions Unit Information Section (a Section III of the form) must be included for each emissions unit listed.

Emissions Unit ID	Description of Emissions Unit	Permit Type
020	DAP/MAP/TSP STORAGE & SHIPPING	AC1A
029	NORTH MAP/DAP PLANT	AC1A

Purpose of Application and Category

Check one (except as otherwise indicated):

Category I: All Air Operation Permit Applications Subject to Processing Under Chapter 62-213, F.A.C.

This Application for Air Permit is submitted to obtain:

[ ] Initial air operation permit under Chapter 62-213, F.A.C., for an existing facility which is classified as a Title V source.

[ ] Initial air operation permit under Chapter 62-213, F.A.C., for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.

Current construction permit number: _____

[ ] Air operation permit renewal under Chapter 62-213, F.A.C., for a Title V source.

Operation permit to be renewed: _____

[ ] Air operation permit revision for a Title V source to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number: _____

Operation permit to be revised: _____

[ ] Air operation permit revision or administrative correction for a Title V source to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. Also check Category III.

Operation permit to be revised/corrected: _____

[ ] Air operation permit revision for a Title V source for reasons other than construction or modification of an emissions unit. Give reason for the revision; e.g., to comply with a new applicable requirement or to request approval of an "Early Reductions" proposal.

Operation permit to be revised: _____

Reason for revision: _____

_____

Category II: All Air Operation Permit Applications Subject to Processing Under Rule 62-210.300(2)(b), F.A.C.

This Application for Air Permit is submitted to obtain:

[ ] Initial air operation permit under Rule 62-210.300(2)(b), F.A.C., for an existing facility seeking classification as a synthetic non-Title V source.

Current operation/construction permit number(s): _____

[ ] Renewal air operation permit under Rule 62-210.300(2)(b), F.A.C., for a synthetic non-Title V source.

Operation permit to be renewed: _____

[ ] Air operation permit revision for a synthetic non-Title V source. Give reason for revision; e.g., to address one or more newly constructed or modified emissions units.

Operation permit to be revised: _____

Reason for revision: _____

_____

Category III: All Air Construction Permit Applications for All Facilities and Emissions Units

This Application for Air Permit is submitted to obtain:

[X] Air construction permit to construct or modify one or more emissions units within a facility (including any facility classified as a Title V source).

Current operation permit number(s), if any: **AO53-239602, -250142**

[ ] Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.

Current operation permit number(s): _____

[ ] Air construction permit for one or more existing, but unpermitted, emissions units.

Application Processing Fee

Check one:

[X] Attached - Amount: $ **7500** [ ] Not Applicable.

Construction/Modification Information

1. Description of Proposed Project or Alterations: **This application for a PSD construction permit is submitted to increase the allowable MAP/DAP fertilizer production rates of the North MAP/DAP Plant and the fertilizer storage and shipping rates, as described in the application and associated report. No physical modifications are anticipated with the proposed project.**
2. Projected or Actual Date of Commencement of Construction: **6-1-98**
3. Projected Date of Completion of Construction: **6-1-99**

Professional Engineer Certification

1. Professional Engineer Name: : **John B. Koogler, Ph.D., P.E.** Registration Number: **12925**
2. Professional Engineer Mailing Address: Organization/Firm: **Koogler & Associates** Street Address: **4014 NW 13th Street** City: **Gainesville** State: **FL** Zip Code: **32609**
3. Professional Engineer Telephone Numbers: Telephone: (**352**) **377** - **5822** Fax: (**352**) **377** - **7158**

4. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

If the purpose of this application is to obtain a Title V source air operation permit (check here [ ] if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [X] if so), I further certify that the engineering features of each such emissions unit described in this application have been ~~designed~~ or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [ ] if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Signature _____ Date 12/17/97

(seal)

* Attach any exception to certification statement.

Application Contact

1. Name and Title of Application Contact: **Pradeep Raval**
2. Application Contact Mailing Address: Organization/Firm: **Koogler & Associates** Street Address: **4014 NW 13th Street** City: **Gainesville** State: **FL** Zip Code: **32609**
3. Application Contact Telephone Numbers: Telephone: **(352) 377 - 5822** Fax: **(352) 377 - 7158**

Application Comment

This application is submitted in the format discussed with FDEP. Additional information will be submitted , if necessary, during the permitting process.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates: Zone: **17** East (km): **409.50** North (km): **3080.10**			
2. Facility Latitude/Longitude: Latitude (DD/MM/SS): **27/50/39** Longitude (DD/MM/SS): **81/56/26**			
3. Governmental Facility Code:	4. Facility Status Code: **A**	5. Facility Major Group SIC Code: **28**	6. Facility SIC(s): **2874**
7. Facility Comment (limit to 500 characters): **Phosphate Fertilizer Plant**			

Facility Contact

1. Name and Title of Facility Contact: **Charles Jenkins, Manager of Env. & Safety Servs.**
2. Facility Contact Mailing Address: Organization/Firm: **Farmland Hydro, L.P., Green Bay Plant** Street Address: **P.O. Box 960** City: **Bartow** State: **FL** Zip Code: **33831**
3. Facility Contact Telephone Numbers: Telephone: **(941) 533-1141** Fax: **(941) 533 - 8793**

Facility Regulatory Classifications

1. Small Business Stationary Source? [ ] Yes [X] No [ ] Unknown
2. Title V Source? [X] Yes [ ] No
3. Synthetic Non-Title V Source? [ ] Yes [X] No
4. Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)? [X] Yes [ ] No
5. Synthetic Minor Source of Pollutants Other than HAPs? [ ] Yes [X] No
6. Major Source of Hazardous Air Pollutants (HAPs)? [ ] Yes [X] No
7. Synthetic Minor Source of HAPs? [ ] Yes [X] No
8. One or More Emissions Units Subject to NSPS? [X] Yes [ ] No
9. One or More Emission Units Subject to NESHAP? [X] Yes [ ] No
10. Title V Source by EPA Designation? [ ] Yes [X] No
11. Facility Regulatory Classifications Comment (limit to 200 characters):

B. FACILITY REGULATIONS

Rule Applicability Analysis (Required for Category II applications and Category III applications involving non Title-V sources. See Instructions.)

NA

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

FDEP CORE LIST	
FS 120, 403	
FAC 62-4, 204, 210, 212, 213, 214, 252, 256, 257, 281, 296, 297	
40 CFR 52, 55, 60, 61, 63, 82.	

C. FACILITY POLLUTANTS

Facility Pollutant Information

1. Pollutant Emitted	2. Pollutant Classification
PM/PM10	**A**
SO2	**A**
NOX	**A**
SAM	**A**
FL	**B**
CO	**B**

D. FACILITY POLLUTANT DETAIL INFORMATION

Facility Pollutant Detail Information: Pollutant _____ of _____

1. Pollutant Emitted: **NA**		
2. Requested Emissions Cap:	(lb/hour)	(tons/year)
3. Basis for Emissions Cap Code:		
4. Facility Pollutant Comment (limit to 400 characters):		

Facility Pollutant Detail Information: Pollutant _____ of _____

1. Pollutant Emitted:		
2. Requested Emissions Cap:	(lb/hour)	(tons/year)
3. Basis for Emissions Cap Code:		
4. Facility Pollutant Comment (limit to 400 characters):		

E. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements for All Applications

1. Area Map Showing Facility Location: [**X**] Attached, Document ID: **Report** [ ] Not Applicable [ ] Waiver Requested
2. Facility Plot Plan: [**X**] Attached, Document ID: **Report** [ ] Not Applicable [ ] Waiver Requested
3. Process Flow Diagram(s): [ ] Attached, Document ID:_____ [ ] Not Applicable [**X**] Waiver Requested
4. Precautions to Prevent Emissions of Unconfined Particulate Matter: [ ] Attached, Document ID:_____ [**X**] Not Applicable [ ] Waiver Requested
5. Fugitive Emissions Identification: [ ] Attached, Document ID:_____ [ ] Not Applicable [**X**] Waiver Requested
6. Supplemental Information for Construction Permit Application: [**X**] Attached, Document ID: **Report** [ ] Not Applicable

Additional Supplemental Requirements for Category I Applications Only

7. List of Proposed Exempt Activities: [ ] Attached, Document ID:_____ [**X**] Not Applicable
8. List of Equipment/Activities Regulated under Title VI: [ ] Attached, Document ID:_____ [ ] Equipment/Activities On site but Not Required to be Individually Listed [**X**] Not Applicable
9. Alternative Methods of Operation: [ ] Attached, Document ID: _____ [**X**] Not Applicable
10. Alternative Modes of Operation (Emissions Trading): [ ] Attached, Document ID:_____ [**X**] Not Applicable

11. Identification of Additional Applicable Requirements: [ ] Attached, Document ID:_____ [X] Not Applicable
12. Compliance Assurance Monitoring Plan: [ ] Attached, Document ID:_____ [X] Not Applicable
13. Risk Management Plan Verification: [ ] Plan Submitted to Implementing Agency - Verification Attached, Document ID:_____ [ ] Plan to be Submitted to Implementing Agency by Required Date [X] Not Applicable
14. Compliance Report and Plan: [ ] Attached, Document ID:_____ [X] Not Applicable
15. Compliance Certification (Hard-copy Required): [ ] Attached, Document ID:_____ [X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

A. TYPE OF EMISSIONS UNIT (Regulated and Unregulated Emissions Units)

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one:

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one:

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **DAP/MAP/TSP STORAGE & SHIPPING**		
2. Emissions Unit Identification Number: **020** [ ] No Corresponding ID [ ] Unknown		
3. Emissions Unit Status Code: **A**	4. Acid Rain Unit? [ ] Yes [**X**] No	5. Emissions Unit Major Group SIC Code: **28**
6. Emissions Unit Comment (limit to 500 characters):		

Emissions Unit Control Equipment

A.

1. Description (limit to 200 characters): **WET SCRUBBER**
2. Control Device or Method Code: **013**

Emissions Unit Information Section (__1__of__2__)

B.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

C.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Details

1. Initial Startup Date: **NA**		
2. Long-term Reserve Shutdown Date: **NA**		
3. Package Unit: **NA** Manufacturer:	Model Number:	
4. Generator Nameplate Rating: **NA**	MW	
5. Incinerator Information: **NA** Dwell Temperature: Dwell Time: Incinerator Afterburner Temperature:		°F seconds °F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate: **NA**		mmBtu/hr
2. Maximum Incineration Rate: **NA**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **120 TPH P2O5**		
4. Maximum Production Rate:		
5. Operating Capacity Comment (limit to 200 characters): **BASED ON 30-DAY AVERAGE.**		

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule:		
	24 hours/day	**7** days/week
	52 weeks/year	**8760** hours/year

D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

Rule Applicability Analysis (Required for Category II applications and Category III applications involving non Title-V sources. See Instructions.)

N/A

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

SEE PAGE 12.	

E. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:	
2. Emission Point Type Code: [ ] 1 [X] 2 [ ] 3 [ ] 4	
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **NA**	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:	
5. Discharge Type Code: [ ] D [ ] F [ ] H [ ] P [ ] R [X] V [ ] W	
6. Stack Height:	**131** feet
7. Exit Diameter:	**8.0** feet
8. Exit Temperature:	**77** °F

Emissions Unit Information Section (__1__of__2__)

9. Actual Volumetric Flow Rate:	**98,000** acfm
10. Percent Water Vapor :	**NA** %
11. Maximum Dry Standard Flow Rate:	**NA** dscfm
12. Nonstack Emission Point Height:	**NA** feet
13. Emission Point UTM Coordinates: Zone: East (km): North (km):	
14. Emission Point Comment (limit to 200 characters): **Common Scrubber For Shipping and Storage Building.**	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment __1__ of __3__

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Fertilizer Storage**	
2. Source Classification Code (SCC): **3-05-105-97**	
3. SCC Units: **Tons Processed**	
4. Maximum Hourly Rate: **120 tph P2O5**	5. Maximum Annual Rate: **1,051,200**
6. Estimated Annual Activity Factor: **NA**	
7. Maximum Percent Sulfur: **NA**	8. Maximum Percent Ash: **NA**
9. Million Btu per SCC Unit: **NA**	
10. Segment Comment (limit to 200 characters): **Tons Product Stored, tph based on 30-day average.**	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment __2__ of __3__

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Fertilizer Curing (for TSP)**	
2. Source Classification Code (SCC): **3-05-105-97**	
3. SCC Units: **Tons Processed**	
4. Maximum Hourly Rate: **120 tph P2O5**	5. Maximum Annual Rate: **1,051,200**
6. Estimated Annual Activity Factor: **NA**	
7. Maximum Percent Sulfur: **NA**	8. Maximum Percent Ash: **NA**
9. Million Btu per SCC Unit: **NA**	
10. Segment Comment (limit to 200 characters):	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment __3__ of __3__

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Product Shipping**	
2. Source Classification Code (SCC): **3-05-105-97**	
3. SCC Units: **Tons Processed**	
4. Maximum Hourly Rate: **120 tph P2O5**	5. Maximum Annual Rate: **1,051,200**
6. Estimated Annual Activity Factor: **NA**	
7. Maximum Percent Sulfur: **NA**	8. Maximum Percent Ash: **NA**
9. Million Btu per SCC Unit: **NA**	
10. Segment Comment (limit to 200 characters): **TPH based on 30-day average.**	

G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	**013**	**000**	**EL**
FL	**013**	**000**	**EL**

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: **PM/PM10**

2. Total Percent Efficiency of Control: **96 %**

3. Potential Emissions: **30.3** lb/hour **132.7** tons/year

4. Synthetically Limited?
   [ ] Yes [X] No

5. Range of Estimated Fugitive/Other Emissions:
   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year

6. Emission Factor: **30.3 LB/HR**
   Reference: **PERMIT**

7. Emissions Method Code:
   [ ] 0 [X] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5

8. Calculation of Emissions (limit to 600 characters):

   PM/PM10 = 30.3 LB/HR X 8760 HRS/YR X TON /2000 LBS = 132.7 TPY

9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):

   Currently permitted rates. No changes in emissions expected from the proposed project.

Emissions Unit Information Section (__1__of__2__)

Allowable Emissions (Pollutant identified on front of page)

A.

1. Basis for Allowable Emissions Code: **OTHER**		
2. Future Effective Date of Allowable Emissions: **NA**		
3. Requested Allowable Emissions and Units: **30.3 LBS/HR**		
4. Equivalent Allowable Emissions:	**30.3** lb/hour	**132.7** tons/year
5. Method of Compliance (limit to 60 characters): **EPA METHOD 5**		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

B.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hr	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: **FL**

2. Total Percent Efficiency of Control: %

3. Potential Emissions: **2.75** lb/hour **12** tons/year

4. Synthetically Limited?
   [ ] Yes [X] No

5. Range of Estimated Fugitive/Other Emissions:
   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year

6. Emission Factor: **2.75 LB/HR**
   Reference: **PERMIT**

7. Emissions Method Code:
   [X] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5

8. Calculation of Emissions (limit to 600 characters):

FL = 2.75 LBS/HR X 8760 HRS/YR X TON/2000 LBS = 12 TPY

9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):

Currently permitted rates. No changes in emissions expected from the proposed project.

Emissions Unit Information Section (__1__of__2__)

Allowable Emissions (Pollutant identified on front of page)

A.

1. Basis for Allowable Emissions Code: **OTHER**		
2. Future Effective Date of Allowable Emissions: **NA**		
3. Requested Allowable Emissions and Units: **2.75 LBS/HR**		
4. Equivalent Allowable Emissions:	**2.75** lb/hour	**12** tons/year
5. Method of Compliance (limit to 60 characters): **EPA METHOD 13A OR 13B**		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Testing for F required only if TSP produced and stored.**		

B.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hr	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Visible Emissions Limitation: Visible Emissions Limitation ___1___ of ___1___

1. Visible Emissions Subtype: **VE**
2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **20%** Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4. Method of Compliance: **EPA METHOD 9**
5. Visible Emissions Comment (limit to 200 characters): **GENERAL VE**

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:
2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4. Method of Compliance:
5. Visible Emissions Comment (limit to 200 characters):

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION
(Regulated and Unregulated Emissions Units)

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

[X] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

[ ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[X] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3. Increment Consuming/Expanding Code:			
PM	[ ] C	[ ] E	[ ] Unknown
SO2	[ ] C	[ ] E	[ ] Unknown
NO2	[ ] C	[ ] E	[ ] Unknown
4. Baseline Emissions:			
PM		lb/hour	tons/year
SO2		lb/hour	tons/year
NO2			tons/year
5. PSD Comment (limit to 200 characters):			

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements for All Applications

1. Process Flow Diagram [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [X] Not Applicable
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [X] Not Applicable
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:_____ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operation
[ ] Attached, Document ID:_____ [X] Not Applicable

11. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID:_____ [X] Not Applicable

12. Identification of Additional Applicable Requirements
[ ] Attached, Document ID:_____ [X] Not Applicable

13. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID:_____ [X] Not Applicable

14. Acid Rain Application (Hard-copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID:_____

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:_____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:_____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:_____

[X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

A. TYPE OF EMISSIONS UNIT
(Regulated and Unregulated Emissions Units)

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one:

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one:

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **NORTH MAP/DAP FERTILIZER PLANT**		
2. Emissions Unit Identification Number: **029** [ ] No Corresponding ID [ ] Unknown		
3. Emissions Unit Status Code: **A**	4. Acid Rain Unit? [ ] Yes [**X**] No	5. Emissions Unit Major Group SIC Code: **28**
6. Emissions Unit Comment (limit to 500 characters):		

Emissions Unit Control Equipment

A.

1. Description (limit to 200 characters): **Wet Scrubber**
2. Control Device or Method Code: **013**

B.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

C.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Details

1. Initial Startup Date: **NA**		
2. Long-term Reserve Shutdown Date: **NA**		
3. Package Unit: **NA** Manufacturer:	Model Number:	
4. Generator Nameplate Rating: **NA**	MW	
5. Incinerator Information: **NA** Dwell Temperature: Dwell Time: Incinerator Afterburner Temperature:		°F seconds °F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate:		**50** mmBtu/hr
2. Maximum Incineration Rate: **NA**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **NA**		
4. Maximum Production Rate: **200 TPH MAP OR 150 TPH DAP**		
5. Operating Capacity Comment (limit to 200 characters): **200 TPH MAP OR 150 TPH DAP**		

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule:	
24 hours/day	**7** days/week
52 weeks/year	**8760** hours/year

D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

Rule Applicability Analysis (Required for Category II applications and Category III applications involving non Title-V sources. See Instructions.)

N/A

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

SEE PAGE 12.	

E. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:	
2. Emission Point Type Code: [ ] 1 [X] 2 [ ] 3 [ ] 4	
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **DRYER/SCREENS/MILLS STACK** **R/G STACK**	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **NA**	
5. Discharge Type Code: [ ] D [ ] F [ ] H [ ] P [ ] R [X] V [ ] W	
6. Stack Height:	**129** feet
7. Exit Diameter:	**7.5** feet
8. Exit Temperature:	**109** °F

Emissions Unit Information Section (_2_ of _2_)

9. Actual Volumetric Flow Rate:	**170,000** acfm
10. Percent Water Vapor :	**NA** %
11. Maximum Dry Standard Flow Rate:	**NA** dscfm
12. Nonstack Emission Point Height:	**NA** feet
13. Emission Point UTM Coordinates: Zone: East (km): North (km):	
14. Emission Point Comment (limit to 200 characters):	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment __1__ of __4__

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Chemical Manufacturing - Fuel-Fired Equipment Process Heaters - Natural Gas**	
2. Source Classification Code (SCC): **3-90-006-99**	
3. SCC Units: **Million Cubic Feet Burned**	
4. Maximum Hourly Rate: **0.05**	5. Maximum Annual Rate: **438**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: **NA**	8. Maximum Percent Ash: **NA**
9. Million Btu per SCC Unit: **1000**	
10. Segment Comment (limit to 200 characters):	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment __2__ of __4__

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Chemical Manufacturing - Fuel-Fired Equipment Process Heaters - Fuel oil**	
2. Source Classification Code (SCC): **3-90-005-99**	
3. SCC Units: **THOUSAND GALLONS BURNED**	
4. Maximum Hourly Rate: **0.357**	5. Maximum Annual Rate: **3128**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: **0.05**	8. Maximum Percent Ash: **NA**
9. Million Btu per SCC Unit: **140**	
10. Segment Comment (limit to 200 characters):	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment __3__ of __4__

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **FERTILIZER PRODUCTION**	
2. Source Classification Code (SCC): **3-01-030-24**	
3. SCC Units: **TONS PRODUCED**	
4. Maximum Hourly Rate: **200**	5. Maximum Annual Rate: **1,752,000**
6. Estimated Annual Activity Factor: **NA**	
7. Maximum Percent Sulfur: **NA**	8. Maximum Percent Ash: **NA**
9. Million Btu per SCC Unit: **NA**	
10. Segment Comment (limit to 200 characters): **200 TPH MAP**	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment __4__ of __4__

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **FERTILIZER PRODUCTION**	
2. Source Classification Code (SCC): **3-01-030-23**	
3. SCC Units: **TONS PRODUCED**	
4. Maximum Hourly Rate: **150**	5. Maximum Annual Rate: **1,314,000**
6. Estimated Annual Activity Factor: **NA**	
7. Maximum Percent Sulfur: **NA**	8. Maximum Percent Ash: **NA**
9. Million Btu per SCC Unit: **NA**	
10. Segment Comment (limit to 200 characters): **150 TPH DAP**	

G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
NOx	**000**	**000**	**NS**
SO2	**000**	**000**	**NS**
CO	**000**	**000**	**NS**
PM	**013**	**000**	**EL**
FL	**013**	**000**	**EL**

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: **PM/PM10**

2. Total Percent Efficiency of Control: **%**

3. Potential Emissions: **31.8** lb/hour **139.3** tons/year

4. Synthetically Limited?
   [ ] Yes [X] No

5. Range of Estimated Fugitive/Other Emissions:
   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year

6. Emission Factor: **31.8 LBS/HR**
   Reference: **Plant performance**

7. Emissions Method Code:
   [ ] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [X] 5

8. Calculation of Emissions (limit to 600 characters):

PM/PM10 = 31.8 LB/HR X 8760 HRS/YR X TON/2000 LBS = 139.3 TPY

9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):

Emissions Unit Information Section (2 of 2)

Allowable Emissions (Pollutant identified on front of page)

A.

1. Basis for Allowable Emissions Code: **BACT**		
2. Future Effective Date of Allowable Emissions: **NA**		
3. Requested Allowable Emissions and Units: **31.8 LBS/HR**		
4. Equivalent Allowable Emissions:	**31.8** lb/hour	**139.3** tons/year
5. Method of Compliance (limit to 60 characters): **EPA METHOD 5**		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **BACT**		

B.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hr	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: **FL**

2. Total Percent Efficiency of Control: **%**

3. Potential Emissions: **6.37** lb/hour **27.9** tons/year

4. Synthetically Limited?
   [ ] Yes [X] No

5. Range of Estimated Fugitive/Other Emissions:
   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year

6. Emission Factor: **0.06 LB/TON P2O5**
   Reference: **CFR**

7. Emissions Method Code:
   [X] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5

8. Calculation of Emissions (limit to 600 characters):

FL = 0.06 LB/TON P205 X 106.1 TPH P205 = 6.37 LB/HR
X 8760 HRS/YR X TON/2000 LBS = 27.9 TPY

9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):

Emissions Unit Information Section (__2__of__2__)

Allowable Emissions (Pollutant identified on front of page)

A.

1. Basis for Allowable Emissions Code: **RULE**		
2. Future Effective Date of Allowable Emissions: **NA**		
3. Requested Allowable Emissions and Units: **0.06 lb/ton P2O5**		
4. Equivalent Allowable Emissions:	**3.74** lb/hour	**16.4** tons/year
5. Method of Compliance (limit to 60 characters): **EPA METHOD 13A OR 13B**		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **BACT**		

B.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hr	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Visible Emissions Limitation: Visible Emissions Limitation ___1___ of ___1___

1. Visible Emissions Subtype: **VE**
2. Basis for Allowable Opacity: [**X**] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **20%** Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4. Method of Compliance: **EPA METHOD 9**
5. Visible Emissions Comment (limit to 200 characters): **GENERAL VE**

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:
2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4. Method of Compliance:
5. Visible Emissions Comment (limit to 200 characters):

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION
(Regulated and Unregulated Emissions Units)

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

[X] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

[ ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[X] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3. Increment Consuming/Expanding Code:			
PM	[ ] C	[ ] E	[ ] Unknown
SO2	[ ] C	[ ] E	[ ] Unknown
NO2	[ ] C	[ ] E	[ ] Unknown
4. Baseline Emissions:			
PM		lb/hour	tons/year
SO2		lb/hour	tons/year
NO2			tons/year
5. PSD Comment (limit to 200 characters):			

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements for All Applications

1. Process Flow Diagram [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [X] Not Applicable
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [X] Not Applicable
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:_____ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable

Emissions Unit Information Section (_2_ of _2_)

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operation
[ ] Attached, Document ID:_____ [X] Not Applicable

11. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID:_____ [X] Not Applicable

12. Identification of Additional Applicable Requirements
[ ] Attached, Document ID:_____ [X] Not Applicable

13. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID:_____ [X] Not Applicable

14. Acid Rain Application (Hard-copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID:_____

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:_____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:_____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:_____

[X] Not Applicable

REPORT IN SUPPORT OF A PSD PERMIT APPLICATION

PREPARED FOR:

FARMLAND HYDRO, L.P.
GREEN BAY COMPLEX
POLK COUNTY, FLORIDA

DECEMBER 1997

PREPARED BY:

KOOGLER & ASSOCIATES
4014 N.W. 13TH STREET
GAINESVILLE, FLORIDA 32609
(352) 377-5822

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LIST OF FIGURES

LIST OF TABLES

1.0 SYNOPSIS OF APPLICATION

1.1 APPLICANT

Farmland Hydro, L.P.
Green Bay Complex
P.O. Box 960
Bartow, FL 33831

1.2 FACILITY LOCATION

Farmland Hydro, L.P. (Farmland), Green Bay Complex, consists of a phosphate chemical fertilizer manufacturing facility approximately six miles southwest of Bartow, Florida, on State Road 640 in Polk County. The UTM coordinates of the Farmland, Green Bay Complex are Zone 17, 409.5 km east and 3079.5 km north.

1.3 PROJECT DESCRIPTION

Farmland proposes to increase the granular monoammonium phosphate (MAP) and diammonium phosphate (DAP) production rate of the existing North MAP/DAP Plant from 120 to 200 tons per hour MAP and 100 to 150 tons per hour DAP. This corresponds to an increase in the maximum process input rate from the current 62.4 tph P205 to 106.1 tph P205 (based on MAP production at a 98 percent recovery factor). The project may involve minor plant process equipment changes (e.g. pumps, piping, ducting etc.) to achieve the production rate increase. The existing fertilizer storage and shipping system will be able to accomodate the increase without requiring any changes to the existing equipment.

The proposed project will result in a significant net increase, pursuant to Rule 62-210, Florida Administrative Code (FAC) in the emission rate of fluorides and particulate matter.

Farmland is submitting this report in support of the PSD permit application to the Florida Department of Environmental Protection (FDEP) for an increase in the production rate of the existing North MAP/DAP Plant. The report includes a description of the existing chemical complex, a review of Best Available Control Technology (BACT), an ambient air quality analysis and an evaluation of the impact of the proposed modification on soils, vegetation and visibility.

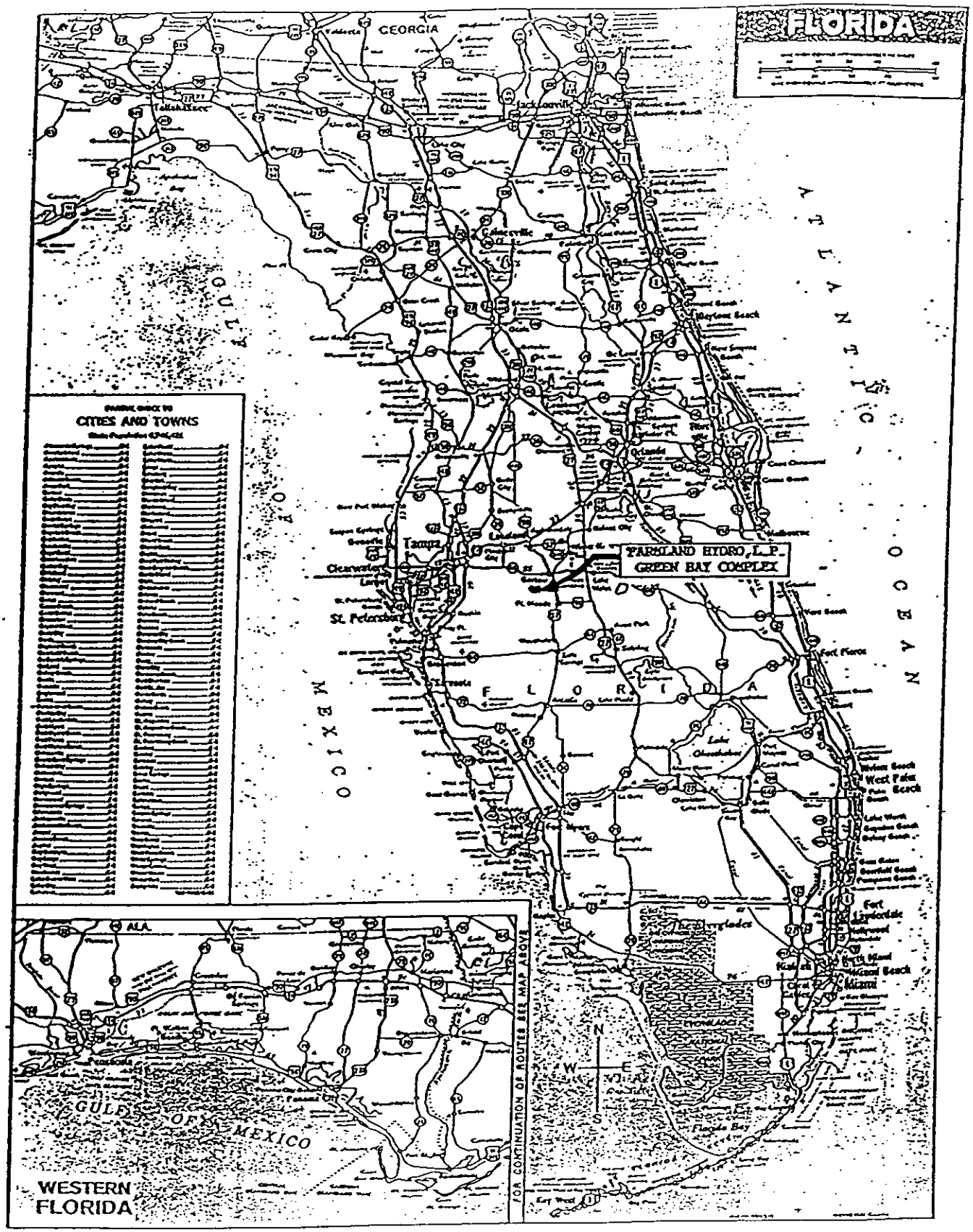
2.0 FACILITY DESCRIPTION

Farmland Hydro, L.P., Green Bay Complex, consists of a phosphate chemical fertilizer manufacturing facility located in Polk County (see Figures 2-1 and 2-2). The existing fertilizer complex processes wet phosphate rock into fertilizer products. Phosphate rock is reacted with sulfuric acid to produce phosphoric acid. The phosphoric acid is then converted into fertilizer products. The chemical complex includes sulfuric acid plants, phosphoric acid plants, a super phosphoric acid plant, plants to produce MAP and DAP, and storage, handling, grinding and shipping facilities for phosphate rock, ammonia, sulfur, and fertilizer products. Figure 2-3, Plot Plan, shows the location of the existing plants.

FIGURE 2-1

SITE LOCATION MAP

FARMLAND HYDRO, L.P.



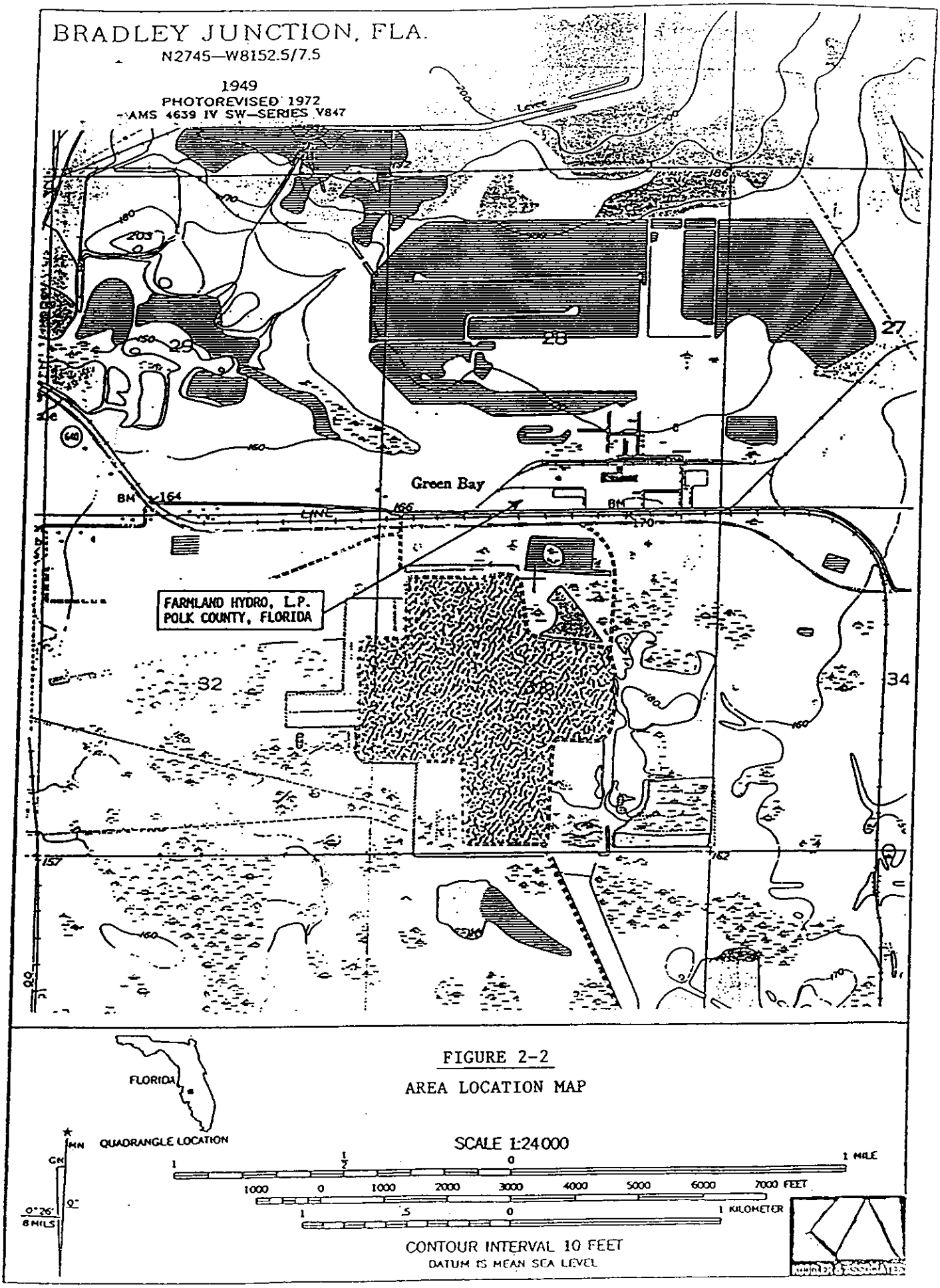


FIGURE 2-2

AREA LOCATION MAP

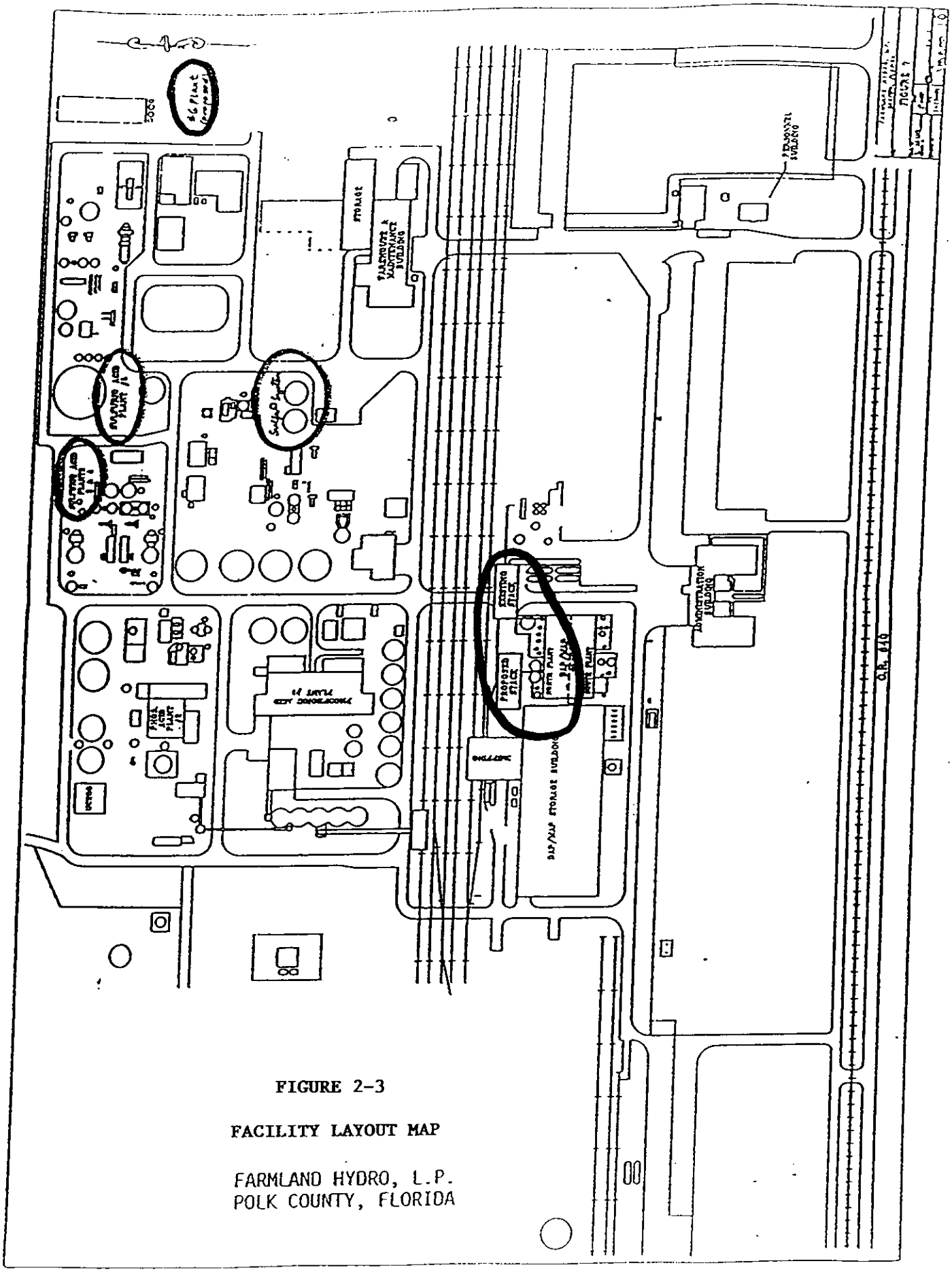


FIGURE 2-3

FACILITY LAYOUT MAP

FARMLAND HYDRO, L.P.
POLK COUNTY, FLORIDA

3.0 PROPOSED PROJECT

In 1992, FDEP issued PSD-FL-186 for the modification of the North MAP/DAP Plant to allow an increase in the production rate of the plant. Major physical modifications were made to the plant at that time to increase the production rates. Based on the operating experience over the past few years, Farmland expects the existing plant to operate at even higher rates than currently permitted. The current request for a production increase is proposed with virtually no equipment changes. At the most, there may be need for replacement of minor components such as pumps, piping and ductwork, for the smooth operation of the plant. No major equipment changes are planned for the proposed project. A process flow diagram is not included as there is no change from the information in FDEP files.

In retrospect, the 1992 projection of the ultimate production capacity of the modified plant was underestimated. The requested production rates, of 200 tons per hour MAP and 150 tons per hour DAP, reflect the rates that should probably have been requested in 1992. This corresponds to a maximum feed rate of 106.1 tph P205.

Some of the excess phosphoric acid currently produced, normally supplied to off site customers, will be diverted to the North MAP/DAP Plant for the proposed production increase. Consequently, the proposed project will not result in a modification of any other chemical plant at the facility.

3.1 AIR EMISSIONS

The proposed increase in production rate of the North MAP/DAP Plant is expected to result in an increase in actual air emissions. The changes in air emissions associated with the proposed project are summarized in Table 3-1. No emissions changes are expected in the storage/shipping areas. The projected net emissions increases, presented in Table 3-2, are significant (as defined in Rule 62-212, FAC) for fluorides (F) and particulate matter (PM/PM10); and, less than significant for sulfur dioxide (SO2), nitrogen oxides (NOx), carbon monoxide (CO) and volatile organic compounds (VOCs).

3.2 RULE REVIEW

The following are the state and federal air regulatory requirements that apply to new or modified sources subject to a Prevention of Significant Deterioration (PSD) review.

In accordance with EPA and State of Florida PSD review requirements, all major new or modified sources of air pollutants regulated under the Clean Air Act (CAA) are subject to preconstruction review. Florida's State Implementation Plan (SIP), approved by the EPA, authorizes the Florida Department of Environmental Protection (FDEP) to manage the air pollution program in Florida.

The PSD review determines whether or not significant air quality deterioration will result from a new or modified facility. Federal PSD regulations are contained in 40CFR52.21, Prevention of Significant Deterioration of Air Quality. The State of Florida has adopted PSD

regulations which are essentially identical to the federal regulations and are contained in Chapter 62-212 of the Florida Administration Code (FAC).

All new major facilities and major modifications to existing facilities are subject to control technology review, source impact analysis, air quality analysis and additional impact analyses for each pollutant subject to a PSD review. A facility must also comply with the Good Engineering Practice (GEP) stack height rule.

A major facility is defined in the PSD rules as any one of the 28 specific source categories (see Table 3-3) which has the potential to emit 100 tons per year (tpy) or more, or any other stationary facility which has the potential to emit 250 tpy or more, of any pollutant regulated under the Clean Air Act. A major modification is defined in the PSD rules as a change at an existing major facility which increases the actual emissions by greater than significant amounts (see Table 3-4).

3.2.1 Ambient Air Quality Standards

The EPA and the state of Florida have developed/adopted ambient air quality standards, AAQS (see Table 3-5). Primary AAQS protect the public health while the secondary AAQS protect the public welfare from adverse effects of air pollution. Areas of the country have been designated as attainment or nonattainment for specific pollutants. Areas not meeting the AAQS for a given pollutant are designated as nonattainment areas for that pollutant. Any new source or expansion of existing sources in or near these nonattainment areas are usually subject to more stringent air permitting requirements. Projects proposed in attainment areas are subject to air permit requirements which would ensure continued attainment status.

3.2.2 PSD Increments

In promulgating the CAA Amendments, Congress quantified concentration increases above an air quality baseline concentration levels for sulfur dioxide (SO2) and particulate matter less than 10 microns (PM10) which would constitute significant deterioration. The size of the allowable increment depends on the classification of the area in which the source would be located or have an impact. Class I areas include specific national parks, wilderness areas and memorial parks. Class II areas are all areas not designated as Class I areas and Class III areas are industrial areas in which greater deterioration than Class II areas would be allowed. There are no designated Class III areas in Florida.

In 1988, EPA promulgated PSD regulations for nitrogen oxides (NOx) and PSD increments for nitrogen dioxide (NO2) concentrations. FDEP adopted the NO2 increments in July 1990 (see Table 3-6 for PSD increments).

In the PSD regulations, baseline concentration is defined as the ambient concentration level for a given pollutant which exists in the baseline area at the time of the applicable baseline date and includes the actual emissions representative of facilities in existence on the applicable baseline date, and the allowable emissions of major stationary facilities

which commenced construction before January 6, 1975, but were not in operation by the applicable baseline date.

The emissions not included in the baseline concentration and, therefore, affecting PSD increment consumption are the actual emissions from any major stationary facility on which construction commenced after January 6, 1975, for SO2 and PM10, and February 8, 1988, for NO2, and the actual emission increases and decreases at any stationary facility occurring after the baseline date.

3.2.3 Control Technology Evaluation

The PSD control technology review requires that all applicable federal and state emission limiting standards be met and that Best Available Control Technology (BACT) be applied to the source. The BACT requirements are applicable to all regulated pollutants subject to a PSD review.

BACT is defined in Chapter 62, FAC as an emission limitation, including a visible emission standard, based on the maximum degree of reduction of each pollutant emitted which the Department, on a case-by-case basis, taking into account energy, environmental, and economic impacts, and other costs, determines is achievable through application of production processes and available methods, systems, and techniques (including fuel cleaning or treatment or innovative fuel combustion techniques) for control of such pollutant.

If the Department determines that technological or economic limitations on the application of measurement methodology to a particular part of a source or facility would make the imposition of an emission standard infeasible, a design, equipment, work practice, operational standard or combination thereof, may be prescribed instead, to satisfy the requirement for the application of BACT. Such standard shall, to the degree possible, set forth the emissions reductions achievable by implementation of such design, equipment, work practice or operation.

Each BACT determination shall include applicable test methods or shall provide for determining compliance with the standard(s) by means which achieve equivalent results.

The reason for evaluating the BACT is to minimize as much as possible the consumption of PSD increments and to allow future growth without significantly degrading air quality. The BACT review also analyzes if the most current control systems are incorporated in the design of a proposed facility. The BACT, as a minimum, has to comply with the applicable New Source Performance Standard for the source. The BACT analysis requires the evaluation of the available air pollution control methods including a cost-benefit analysis of the alternatives. The cost-benefit analysis includes consideration of materials, energy, and economic penalties associated with the control systems, as well as environmental benefits derived from the alternatives.

EPA determined that the bottom-up approach (starting at NSPS and working up to BACT) was not providing the level of BACT originally intended. As a result, in December 1987, EPA strongly suggested changes in the

implementation of the PSD program including the "top-down" approach to BACT. The top-down approach requires an application to start with the most stringent control alternative, often Lowest Achievable Emission Rate (LAER), and justify its rejection or acceptance as BACT. Rejection of control alternatives may be based on technical or economical infeasibility, physical differences, locational differences, and environmental or energy impact differences when comparing a proposed project with a project previously subject to that BACT.

3.2.4 Air Quality Monitoring

An application for a PSD permit requires an analysis of ambient air quality in the area affected by the proposed facility or major modification. For a new major facility, the affected pollutants are those that the facility would potentially emit in significant amounts. For a major modification, the pollutants are those for which the net emissions increase exceeds the significant emission rate.

Ambient air monitoring for a period of up to one year, but no less than four months, is required. Existing ambient air data for a location in the vicinity of the proposed project is acceptable if the data meet FDEP quality assurance requirements. If not, additional data would need to be gathered. There are guidelines available for designing a PSD air monitoring network in EPA's "Ambient Monitoring Guidelines for Prevention of Significant Deterioration."

FDEP may exempt a proposed major stationary facility or major modification from the monitoring requirements with respect to a particular pollutant if the emissions increase of the pollutant from the facility or modification would cause air quality impacts less than the de minimis levels (see Table 3-4).

3.2.5 Ambient Impact Analysis

A source impact analysis is required for a proposed major source subject to PSD for each pollutant for which the increase in emissions exceeds the significant emission rate. Specific atmospheric dispersion models are required in performing the impact analysis. The analysis should demonstrate the project's compliance with AAQS and allowable PSD increments. The impact analysis for criteria pollutants may be limited to only the new or modified source if the net increase in impacts due to the new or modified source is below significant impact levels.

Typically, a five-year period is used for the evaluation of the highest, second-highest short-term concentrations for comparison to AAQS or PSD increments. The term "highest, second-highest" refers to the highest of the second-highest concentrations at all receptors. The second-highest concentration is considered because short-term AAQS specify that the standard should not be exceeded at any location more than once a year. If less than five years of meteorological data are used in the modeling analysis, the highest concentration at each receptor is normally used.

3.2.6 Additional Impact Analysis

The PSD rules also require analyses of the impairment to visibility and the impact on soils and vegetation that would occur as a result of the project. A visibility impairment analysis must be conducted for PSD Class I areas along with an air quality related values (AQRV) analysis. Impacts due to commercial, residential, industrial, and other growth associated with the source must be addressed.

3.2.7 Good Engineering Practice Stack Height

In accordance with Rule 62-210, FAC, the degree of emission limitation required for control of any pollutant should not be affected by a stack height that exceeds GEP, or any other dispersion technique. GEP stack height is defined as the highest of:

1. 65 meters (m), or
2. A height established by applying the formula:
   $Hg = H + 1.5 L$
   where:
   Hg - GEP stack height,
   H - Height of the structure or nearby structure, and
   L - Lesser dimension, height or projected width of nearby structure(s)
3. A height demonstrated by a model or field study.

The GEP stack height regulations require that the stack height used in modeling for determining compliance with AAQS and PSD increments not exceed the GEP stack height. The actual stack height may be higher or lower.

3.3 RULE APPLICABILITY

The proposed North MAP/DAP Plant production increase is classified as a major modification to a major facility subject to both state and federal regulations as set forth in Chapter 62-212, FAC. The facility is located in an area classified as attainment for each of the regulated air pollutants. The proposed project will result in significant increases, as defined in Rule 62.212, FAC, in the emissions of F and PM/PM10, and is subject to PSD preconstruction review requirements. This will include a determination of BACT, an air quality review, Good Engineering Practice stack height analysis and an evaluation of impacts on soils, vegetation and visibility.

TABLE 3-1

CHANGES IN EMISSION RATES
NORTH MAP/DAP PLANT

	ALLOWABLE EMISSION RATES			
	CURRENT (120 TPH MAP)		PROPOSED (200 TPH MAP)	
	lb/hr	tpy	lb/hr	tpy
Fluorides	3.74	16.4	6.37	27.9
Particulates	22.5	98.6	31.8	139.3

NOTES:

(1) See Appendix A for calculations of emission rates.
(2) The emission rates corresponds to the total for both North Plant stacks combined.

TABLE 3-2

NET EMISSION CHANGES(1)
NORTH MAP/DAP PLANT

POLLUTANT	EMISSION RATE (tpy)				PSD?
	ACTUALS	PROPOSED	NET CHANGE	SIG.(2)	
Fluorides	4.5	27.9	23.4	3	YES
Particulates	44.0	139.3	97.3 (3)	25/15	YES
Sulfur Dioxide	0.04	11.1 (4)	11.1	40	NO
Nitrogen Oxides	9.6	31.3	21.7	40	NO
Carbon Monoxide	2.4	7.8	5.4	100	NO
Organics, VOCs	0.2	0.2	0	40	NO

(1) See Appendix A for emission calculations.

(2) Pursuant to Rule 62-212, FAC. Significant levels for PM and PM10 are 25 and 15 tpy, respectively.

(3) The net increase includes contemporaneous emissions of 2.0 tpy.

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

TABLE 3-3

MAJOR FACILITY CATEGORIES

Fossil fuel fired steam electric plants of more than 250 MMBTU/hr heat input
Coal cleaning plants (with thermal dryers)
Kraft pulp mills
Portland cement plants
Primary zinc smelters
Iron and steel mill plants
Primary aluminum ore reduction plants
Primary copper smelters
Municipal incinerators capable of charging more than 250 tons of refuse per day
Hydrofluoric acid plants
Sulfuric acid plants
Nitric acid plants
Petroleum refineries
Lime plants
Phosphate rock processing plants
Coke oven batteries
Sulfur recovery plants
Carbon black plants (furnace process)
Primary lead smelters
Fuel conversion plants
Sintering plants
Secondary metal production plants
Chemical process plants
Fossil fuel boilers (or combinations thereof) totaling more than 250 million BTU/hr heat input
Petroleum storage and transfer units with total storage capacity exceeding 300,000 barrels
Taconite ore processing plants
Glass fiber processing plants
Charcoal production plants

TABLE 3-4

REGULATED AIR POLLUTANTS - SIGNIFICANT EMISSION RATES

Pollutant	Significant Emission Rate tons/yr	De Minimis Ambient Impacts ug/m3
CO	100	575 (8-hour)
NOx	40	14 (NO2, Annual)
SO2	40	13 (24-hour)
Ozone	40 (VOC)	-
PM (TSP)	25	10 (24-hour)
PM10	15	10 (24-hour)
TRS (including H2S)	10	0.2 (1-hour)
H2SO4 mist	7	-
Fluorides	3	0.25 (24-hour)
Vinyl Chloride	1	15 (24-hour)
	pounds/yr	
Lead	1200	0.1 (Quarterly avg)
Mercury	200	0.25 (24-hour)
Asbestos	14	-
Beryllium	0.8	0.001 (24-hour)

TABLE 3-5

AMBIENT AIR QUALITY STANDARDS

Pollutant	FDEP (State)		USEPA (National)			
			Primary		Secondary	
	ug/m3	PPM	ug/m3	PPM	ug/m3	PPM
SO_2, 3-hour	1,300	0.5	-	-	1300	0.5
24-hour	260	0.1	365	0.14	-	-
Annual	60	0.02	80	0.03	-	-
PM10, 24-hour	150	-	150	-	150	-
Annual	50	-	50	-	50	-
CO, 1-hour	40,000	35	40,000	35	-	-
8-hour	10,000	9	10,000	9	-	-
Ozone, 1-hour	235	0.12	235	0.12	235	0.12
NO_2, Annual	100	0.05	100	-	100	-
Lead, Quarterly	1.5	-	1.5	-	1.5	-

TABLE 3-6

PSD INCREMENTS

Pollutant	Allowable PSD Increments (State/National) Class I ug/m3	Class II ug/m3	Class III ug/m3
TSP, Annual	5	19	37
24-hour	10	37	75
SO2, Annual	2	20	40
24-hour	5	91	182
3-hour	25	512	700
NO2, Annual	2.5	25	50

4.0 BEST AVAILABLE CONTROL TECHNOLOGY

Best Available Control Technology (BACT) is required to control air pollutants emitted from newly constructed major sources or from modification to the major emitting facilities if the modification results in significant increase in the emission rate of regulated pollutants (see Table 3-4 for significant emission levels). The emission rate increases proposed by Farmland have been summarized in Table 3-1. A BACT analysis is therefore required for F and PM/PM10.

4.1 EMISSION STANDARDS FOR MAP/DAP PLANTS

Federal New Source Performance Standards (NSPS) have been promulgated for DAP plants. These standards became effective on October 22, 1974 and are codified in 40 CFR 60, Subpart V and require fluoride emissions to be limited to no more than 0.06 pound per ton of P2O5. Although no separate NSPS exist for MAP plants, the fluoride emission standard that applies to the DAP plants has generally been extended to MAP plants. The NSPS under Subpart V do not include emission standards for other criteria pollutants.

EPA revised/amended the New Source Performance Standards for DAP plants in 1989. At that time, no changes to the emission standard was deemed necessary or justified. There has been no change in EPA philosophy related to DAP plants since the 1989 review. This is apparent in EPA's proposed Maximum Achievable Control Technology (MACT) standard for hydrogen fluoride (HF), recently proposed under 40 CFR 63. The proposed MACT standard, which regulates HF as F, imposes the existing NSPS for fluorides, of 0.06 lbF/ton P2O5 feed, on existing plants.

4.2 CONTROL TECHNOLOGY

At all the MAP/DAP plants, wet scrubbing equipment is conventionally applied for removal of ammonia, fluorides and particulate dusts from effluent gas streams. These scrubbers are designed for a variety of functions which include ammonia recovery, particulate collection, and fluorine removal. These functions require a complex arrangement of the scrubbing equipment often tailored for the requirements of a specific facility. No add-on controls are utilized for products of combustion.

Although the FDEP's control technology review focus is usually on fluorides, the fertilizer manufacturing process collectively optimizes the collection of particulate matter, ammonia recovery and fluorides. The combination of requirements for particulate collection, gas absorption for NH3 recovery, and fluoride emission control dictates the choice of air pollution control equipment at the time of construction of the plant.

The current control equipment was determined to be BACT by FDEP in 1992, when the plant was being modified. The scrubbing arrangement consists of a two stage venturi-cyclonic followed by an ammonia vaporizer using an innovative design. The ammonia vaporizer condenses the moisture out of the process exit gas stream. The condensate then scrubs the fluorides in the process exit gas stream prior to discharge to the atmosphere.

There have been two other control technologies evaluated by FDEP in recent BACT determinations relative to granular MAP/DAP manufacture. One control alternative involves the use of once-through fresh water in tail gas scrubbing, while the other involves the use of recirculated neutralized water in the tail gas scrubber with a dedicated pond.

The use of once-through fresh water is not possible given the strict water conservation requirements imposed by the Water Management District. The use of recirculated neutralized water was recently evaluated and found not to be cost effective. It is expected that this conclusion would hold true for most existing facilities where the existing scrubbing systems were permitted under BACT requirements.

The following discussion addresses the estimated costs associated with the use of a tailgas packed bed scrubber with recirculated scrubber water for control of fluorides from the proposed project. The recirculated water treatment system would include neutralization and a dedicated cooling pond.

FDEP has previously enquired about standard "cost factors" for cost estimation. However, it has not been possible to get any such factors from contractors who insist that each project has to be evaluated on a case by case basis due to an increasing number of legal, environmental and economic variables.

The information below has been gathered based on Farmland's past experience, and from recent discussions with private contractors in the phosphate industry.

1. The dedicated lined cooling pond size, based on flow and required heat dissipation rate, is estimated at 30 acres.

2. The construction cost associated with a completed lined pond, including a liming station, is estimated at $4,500,000.

3. Liming costs associated with neutralization of the scrubber water, assuming fresh water makeup, can range from $5 to $10 per 1000 gallons, depending on the buffering capacity. For the proposed project, it is assumed that the liming cost would be $5/1000 gals. The total annual maintenance costs and liming, are estimated at $30,000 per year.

4. Sludge disposal costs are not included as it is assumed that the sludge can be stored on-site at no additional cost. The cooling pond has been sized accordingly.

5. The pumping costs are estimated at $22,400 per year, based on Farmland's costs for pumping water elsewhere in the plant.

6. The cost of a packed bed tailgas scrubber is estimated by Farmland at $1,500,000 based on cost information from past projects.

The resulting cost of a tailgas scrubber with a dedicated scrubber water pond system to serve the North MAP/DAP Plant can be estimated as follows:

ITEM		COST
Packed Scrubber		$1,500,000
Lined Pond		$4,500,000
Total		$6,000,000
Annual Costs:		
Capital Recovery (1)	Total cost x 0.1175	$ 705,000
Pumping & Maintenance		$ 52,400
Total		$ 757,400

The capital recovery is based on an amortization factor of 0.1175, for 10 percent interest rate over a 20 year period.

Based on FDEP's recently proposed BACT for fluorides from a fertilizer (prilled MAP) plant, of 0.019 lb/ton P205 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:

Total F = 106.1 tph P205 x 0.019 lb/ton P205 x 8760 hrs/yr x ton/2000 lbs
= 8.8 tpy

The cost of additional control:

Total cost = $757,400 / (27.9 tpy - 8.8 tpy)
= $39,654/ton F removed

Based on this incremental cost, the tailgas scrubber using recirculated neutralized scrubber water treatment system, with a dedicated cooling pond, is rejected as BACT.

4.3 BACT CONCLUSION

Based upon the discussion presented in previous sections, the current North MAP/DAP Plant scrubbing system configuration represents BACT for F and PM. Based on the past plant performance, the 1992 BACT determination can be updated for this review. Farmland proposes a F limitation of 0.06 lb/ton P205 feed, corresponding to the proposed MACT for existing plants, as BACT for the proposed project. A lower F limit is not proposed in order to allow for normal variability in F emissions, as measured by EPA reference methods. A PM emission limit of 0.3 lb/ton P205 feed is proposed as BACT based on past plant performance, compared with the current (BACT) limitation of 0.36 lb/ton P205 feed.

5.0 AIR QUALITY REVIEW

The air quality review required of a PSD construction permit application potentially requires both air quality modeling and air quality monitoring. The air quality monitoring is required when the impact of air pollutant emission increases and decreases associated with a proposed project exceed the de minimis impact levels defined by Rule 62-212, FAC or in cases where an applicant wishes to define existing ambient air quality by monitoring rather than by air quality modeling.

The air quality modeling is required to provide assurance that the emissions from the proposed project, together with the emissions of all other air pollutants in the project area, will not cause or contribute to a violation of any ambient air quality standard.

The air quality review for the proposed project evaluated the ambient air impacts resulting from the proposed increase in emissions and stack gas velocity. Table 5-1 contains modeling input parameters used in the ambient air quality impacts analysis. Modeling analysis for fluorides was not required by FDEP as there are no corresponding ambient air standards for comparison; and, the changes in hourly emissions are relatively minor.

The air dispersion modeling for PM was conducted using the EPA approved ISC-ST model, Version 96113 (ISC3). The PM emissions modeled to determine the ambient air impacts reflect the allowable emissions associated with the proposed project (see Table 5-1).

The modeling utilized a discrete receptor grid representing the property boundary and polar grid based receptor locations extending to about 3 kilometers, representing the furthest property boundary. An additional polar receptor ring was located at 5 kilometers downwind of the plant, with receptors located at 10 degree intervals from 10 to 360 degrees. The Class I area receptor locations previously identified by the Department were included in the modeling.

Five years of Tampa meteorological data were used in the modeling for the period 1987 to 1991.

Building wake effects were considered in the modeling using the EPA approved BPIP program.

The modeling results, presented in Table 5-2, indicate that the maximum predicted PM impacts from the proposed project will be less than significant at the Class I and II areas. Consequently, additional refined modeling is not required.

TABLE 5-1

AIR QUALITY MODELING PARAMETERS

FARMLAND HYDRO, L.P.
POLK COUNTY, FLORIDA

Stack	Pollutant	Emissions (g/s)	Ht (m)	Dia (m)	Vel (mps)	Temp (°K)
R/G (Current)	F PM/PM10	0.24 0.83	39.3	1.68	10.64	354
R/G (Proposed)	F PM/PM10	0.31 1.16	39.3	1.68	13.90	372
Dryer/Cooler (Current)	F PM/PM10	0.24 2.00	39.3	2.29	13.11	315
Dryer/Cooler (Proposed)	F PM/PM10	0.49 2.85	39.3	2.29	19.55	316

NOTES:

(1) Information on fluorides from MAP production mode (maximum emissions), although not modeled, is presented above for reference purposes only.

TABLE 5-2

SUMMARY OF SIGNIFICANT IMPACT ANALYSES
FOR PM/PM10

FARMLAND HYDRO, L.P.
POLK COUNTY, FLORIDA

MET YEAR	MAX. PREDICTED PM10 AMBIENT AIR IMPACTS (ug/m3) (1)			
	Class I Area		Class II Area	
	24-hr	Annual	24-hr	Annual
1987	0.03	0.001	4.44	0.12
1988	0.02	0.002	5.40 (2)	0.10
1989	0.03	0.002	3.99	0.10
1990	0.03	0.001	3.84	0.11
1991	0.03	0.001	4.66	0.10
EPA SIG.(3)	0.3	0.2	5	1
NPS SIG.(4)	0.27	0.08	NA	NA
Is Impact Significant ?	NO	NO	NO	NO

NOTES:

(1) The above predicted impacts represent the highest-high impacts.
(2) The highest-second high impact was 3.67 ug/m3 (insignificant impact).
(3) Significant impact levels proposed by EPA.
(4) Significant impact levels suggested by National Park Service.

6.0 GOOD ENGINEERING PRACTICE STACK HEIGHT

The criteria for good engineering practice stack height states that the height of a stack should not exceed the greater of 65 meters (213) feet or the height of nearby structures plus the lesser of 1.5 times the height or cross-wind width of the nearby structure. This stack height policy is designed to prevent achieving ambient air quality goals solely through the use of excessive stack heights and air dispersion.

The two North MAP/DAP Plant stacks are both less than 213 feet in height above-grade. This satisfies the good engineering practice (GEP) stack height criteria.

7.0 IMPACTS ON SOILS, VEGETATION AND VISIBILITY

7.1 IMPACT ON SOILS AND VEGETATION

As a basis for promulgating the air quality standards, EPA undertook studies related to the effects of all major air pollutants and published criteria documents summarizing the results of the studies. The studies included in the criteria documents were related to both acute and chronic effects of air pollutants. Based on the results of these studies, the criteria documents recommended air pollutant concentration limits for various periods of time that would protect against both chronic and acute effects of air pollutants with a reasonable margin of safety.

The results of the air quality modeling indicate that the maximum predicted PM10 Class I and Class II area impacts from the proposed project will be less than significant. Therefore, it is reasonable to conclude that there will be no adverse effects on the soils, vegetation or visibility of the area.

No adverse effects are expected on the soils, vegetation or visibility from the fluorides emissions associated with the proposed project based on past FDEP assessment of fluoride levels in the vicinity of the fertilizer complex.

7.2 GROWTH RELATED IMPACTS

The proposed modification will require no increase in personnel to operate the plant. Also, the increase in fertilizer production may cause a slight increase in truck traffic but will have a negligible impact on traffic in the area as compared with traffic levels that presently exist. Therefore, no additional growth impacts are expected as a result of the proposed project.

7.3 VISIBILITY IMPACTS

A screening approach suggested by EPA (Workbook for Plume Visual Impact Screening and Analysis, 1988) and computerized in a model referred to as VISCREEN was used for the analysis. The VISCREEN - Level 1 modeling results, presented in Table 7-1, indicate that there will be no adverse visibility impacts from the proposed project.

7.4 AIR QUALITY RELATED VALUES ANALYSIS FOR CLASS I AREA

Based on the predicted ambient air impacts from the proposed project, no adverse impacts are expected on the air quality related values in the nearest Class I area, Chassahowitzka National Wildlife Refuge.

TABLE 7-1

Visual Effects Screening Analysis for
Source: FARMLAND
Class I Area: CHASSAHOWITZKA

User-selected Screening Scenario Results Input Emissions for

Particulates	3.96	G	/S
NOx (as NO2)	.89	G	/S
Primary NO2	.00	G	/S
Soot	.00	G	/S
Primary SO4	.00	G	/S

Default Particle Characteristics Assumed.
Transport Scenario Specifications:

Background Ozone:	.04 ppm
Background Visual Range:	65.00 km
Source-Observer Distance:	105.00 km
Min. Source-Class I Distance:	105.00 km
Max. Source-Class I Distance:	125.00 km
Plume-Source-Observer Angle:	11.25 degrees
Stability:	6
Wind Speed:	1.00 m/s

R E S U L T S

Asterisks (*) indicate plume impacts that exceed screening criteria

Maximum Visual Impacts INSIDE Class I Area
Screening Criteria ARE NOT Exceeded

					Delta E		Contrast	
Backgrnd	Theta	Azi	Distance	Alpha	Crit	Plume	Crit	Plume
SKY	10.	84.	105.0	84.	2.00	.152	.05	.002
SKY	140.	84.	105.0	84.	2.00	.027	.05	-.001
TERRAIN	10.	84.	105.0	84.	2.00	.077	.05	.001
TERRAIN	140.	84.	105.0	84.	2.00	.016	.05	.000

Maximum Visual Impacts OUTSIDE Class I Area
Screening Criteria ARE NOT Exceeded

					Delta E		Contrast	
Backgrnd	Theta	Azi	Distance	Alpha	Crit	Plume	Crit	Plume
SKY	10.	25.	75.0	144.	2.00	.191	.05	.002
SKY	140.	25.	75.0	144.	2.00	.033	.05	-.001
TERRAIN	10.	50.	91.7	119.	2.00	.098	.05	.001
TERRAIN	140.	50.	91.7	119.	2.00	.021	.05	.001

8.0 CONCLUSION

It can be concluded from the information in this report that the proposed increase in the production rate of the North MAP/DAP Plant, as described in this report, will not cause or contribute to a violation of any air quality standard, PSD increment, or any other provision of Chapter 62, FAC.

APPENDIX A

EMISSIONS CALCULATIONS

NORTH MAP/DAP PLANT
FARMLAND HYDRO, L.P.

CURRENT MAXIMUM ALLOWABLE EMISSION RATES

The maximum F and PM emissions are expected during MAP Production:

F = 3.74 lb/hr; 16.4 tpy

PM/PM10 = 22.5 lb/hr; 98.6 tpy

CURRENT ACTUAL EMISSION RATES

Based on 1995 and 1996 compliance tests conducted during MAP production (primary product):

Year	Hours Operated	Compliance Test Emission Rate (lb/hr) F	PM
1995	7413	1.57	12.73
1996	7738	0.82	10.51
AVERAGE	7576	1.20	11.62

SUMMARY OF FUEL USE:

Year	Natural Gas (MMCF, or MF)	No. 6 Oil (1000 gal, or TG)
1995	141.6	Negligible
1996	133.9	10.5
AVERAGE	137.8	Negligible

Actual F and PM/PM10 emissions can be estimated from the annual hours of operation and the compliance test data, while the emissions of SO2, NOx, CO and VOCs can be estimated based on fuel use and AP-42 factors for natural gas combustion.

F	=	1.20 lb/hr x 7576 hrs/yr x ton/2000 lbs
	=	4.5 tpy
PM/PM10	=	11.62 lb/hr x 7576 hrs/yr x ton/2000 lbs
	=	44.0 tpy
SO2	=	137.8 MMCF/yr x 0.6 lb/MMCF x ton/2000 lbs
	=	0.04 tpy
NOx	=	137.8 MMCF/yr x 140 lb/MMCF x ton/2000 lbs
	=	9.6 tpy
CO	=	137.8 MMCF/yr x 35 lb/MMCF x ton/2000 lbs
	=	2.4 tpy
VOCs	=	137.8 MMCF/yr x 2.8 lb/MMCF x ton/2000 lbs
	=	0.2 tpy

PROPOSED ALLOWABLE EMISSION RATES

MAXIMUM PROCESS RATE: Based on maximum (MAP) production capacity and 98% conversion efficiency.

P2O5 INPUT	=	200 tph MAP x 0.52 x 1/0.98 conversion
	=	106.1 tph P2O5
F	=	106.1 tph P2O5 x 0.06 lb F/ton P2O5
	=	6.37 lb/hr
	x	8760 hrs/yr x ton/2000 lbs
	=	27.9 tpy
PM/PM10	=	106.1 tph P2O5 x 0.3 lb PM/ton P2O5
	=	31.8 lb/hr
	x	8760 hrs/yr x ton/2000 lbs
	=	139.3 tpy

Natural gas will be fired in the unit. No. 2 fuel oil (0.05% sulfur) will continue to be used as a back up fuel (in case of natural gas curtailment).

Natural Gas Mode:

Natural gas usage	=	50 MMBtu/hr / 1000 Btu/CF
	=	0.05 MMCF/hr
SO2	=	0.6 lb/MMCF x 0.05 MMCF/hr
	=	0.03 lb/hr
	x	8760 hrs/yr x ton/2000 lbs
	=	0.13 tpy

NOx	=	140 lb/MMCF x 0.05 MMCF/hr
	=	7.0 lb/hr
	x	8760 hrs/yr x ton/2000 lbs
	=	30.7 tpy
CO	=	35 lb/MMCF x 0.05 MMCF/hr
	=	1.8 lb/hr
	x	8760 hrs/yr x ton/2000 lbs
	=	7.7 tpy
VOCs	=	2.8 lb/MMCF x 0.05 MMCF/hr
	=	0.14 lb/hr
	x	8760 hrs/yr x ton/2000 lbs
	=	0.61 tpy

Fuel Oil Mode:

Fuel oil usage	=	50 MMBtu/hr / 140,000 Btu/gal
	=	357 gal/hr, or 0.357 TGB/hr
SO2	=	142 (0.05) lb/TGB x 0.357 TGB/hr
	=	2.5 lb/hr
	x	8760 hrs/yr x ton/2000 lbs
	=	11.1 tpy
NOx	=	20 lb/TGB x 0.357 TGB/hr
	=	7.1 lb/hr
	x	8760 hrs/yr x ton/2000 lbs
	=	31.3 tpy
CO	=	5 lb/TGB x 0.357 TGB/hr
	=	1.8 lb/hr
	x	8760 hrs/yr x ton/2000 lbs
	=	7.8 tpy
VOCs	=	0.2 lb/TGB x 0.357 TGB/hr
	=	0.07 lb/hr
	x	8760 hrs/yr x ton/2000 lbs
	=	0.31 tpy

Only PM and F are significant from the proposed project (Rule 62-212, FAC).

NET EMISSIONS INCREASES

As the proposed PM and F emissions are significant, a net emissions increase for those pollutants can be evaluated as follows:

Net emissions = Proposed + Contemporaneous - Actual

Based on site permitting history, the following contemporaneous emissions would need to be included in the calculations.

F = 0 tpy

PM/PM10 = 2.0 tpy

The net emissions increases associated with the proposed project can be estimated as follows:

F = (27.9 + 0 - 4.5) tpy
= 23.4 tpy

PM/PM10 = (139.3 + 2.0 - 44) tpy
= 97.3 tpy

APPENDIX B - CURRENT AIR PERMITS

Department of
Environmental Protection

Lawton Chiles
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Virginia B. Wetherell
Secretary

PERMITTEE:
Farmland Hydro, L.P.
P. O. Box 960
Bartow, Florida 33830

PERMIT/PROJECT:
Permit No: AO53-250142
County: Polk
Expiration Date: 08/24/99
Project: North MAP/DAP
Fertilizer Plant

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-200 through 297, and Chapter 62-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans and other documents, attached hereto or on file with the department and made a part hereof and specifically described as follows:

For the operation of the North MAP/DAP granulation plant with maximum permitted productions rates of 120 tons per hour of monammonium phosphate (MAP) or 100 tons per hour of diammonium phosphate (DAP). The North MAP/DAP Plant consists of the following components and particulate/ammonia/fluoride emission control devices:

- a reactor-granulator (R-G) system with emissions controlled by a "double mole" (high-mole and low-mole) three stage acid scrubber followed by a BFL scrubber which uses recirculated condensate and process water as the final scrubbing liquid;
- a 50 MMBtu/hour natural gas/No. 2 fuel oil fired dryer with emissions controlled by a cyclone and a downflow phosphoric acid scrubber followed by a cyclonic separator;
- a screens/mills (S/M) system with emissions controlled by a cyclone and a downflow phosphoric acid scrubber;
- a product cooler with emissions controlled by a dry cyclone and a venturi-cyclonic phosphoric acid scrubber.

The exhausts from the dryer scrubber and S/M scrubber are further controlled by a common recycled process water cross-flow scrubber. The gas flow from the dryer & S/M cross-flow scrubber and the product cooler scrubber are discharged to the atmosphere through the main plant stack (129 feet tall, 7.5 feet diameter). The gas flow from the R-G BFL scrubber is discharged to the atmosphere through the new R-G stack (129 feet tall, 5.5 feet diameter).

PERMITTEE:
Farmland Hydro, L.P.

PERMIT/PROJECT:
Permit No.: AO53-250142
Project: North MAP/DAP Plant

Description (continued):

Location: State Road 640 West, South of Bartow

UTM: 17-409.5 E 3079.5 N **NEDS No:** 0053 **Point ID No:** 29

Replaces Permit Nos.: AC53-210886 and AO53-171758

Specific Conditions:

1. A part of this permit is the attached 15 General Conditions. [Rule 62-4.160, F.A.C.]

2. Issuance of this permit does not relieve the permittee from complying with applicable emission limiting standards or other requirements of Chapters 62-200 through 62-297, or any other requirements under federal, state or local law. [Rule 62-210.300, F.A.C.]

3. This plant is subject to and shall meet the requirements of Federal New Source Performance Standards (NSPS) Subpart V - Standards of Performance for the Phosphate Fertilizer Industry: Diammonium Phosphate Plants, 40 CFR 60.220 through 60.224. [Rule 62-296.800, F.A.C. and 40 CFR 60 Subpart V]

Operation Limitations

4. This plant is permitted for continuous operation (i.e 8,760 hours/year). [Construction permit AC53-210886]

5. The maximum production rate for this plant shall not exceed 120 tons per hour of monammonium phosphate (MAP) nor 100 tons per hour of diammonium phosphate (DAP). GTSP shall not be manufactured in this plant.
[Construction permit AC53-210886]

6. The phosphoric acid feed rate shall not exceed 62.4 tons per hour P_2O_5 during MAP production nor 46.0 tons per hour P_2O_5 during DAP production.
[Construction permit AC53-210886]

7. The ammonia feed rate shall not exceed 16.1 tons per hour during MAP production nor 21.9 tons per hour during DAP production.
[Construction permit AC53-210886]

Specific Conditions

8. The maximum heat input rate to the dryer shall not exceed 50 MMBtu/hour. Natural gas shall be used as the primary fuel with No. 2 fuel oil, with a maximum sulfur content of 0.5% by weight, used as a backup fuel when the natural gas supply to the plant is curtailed. Operation of the dryer with No. 2 fuel oil shall not exceed 400 hours during any 12 consecutive month period.
[Construction permit AC53-210886]

9. The permittee shall not circumvent any pollution control device or allow emissions of air pollutants without the applicable air pollution control device(s) operating properly. Based upon the scrubber operating parameters during the February 1994 compliance tests, the scrubbers associated with the North MAP/DAP plant shall be operated at no less than 90% of the following values:

	ΔP (" H_2O)	Flow Rate (GPM)
R/G High Mol Acid Scrubber	5.2	a
R/G Low Mol Acid Scrubber	15.0	a
R/G BFL Scrubber	11.0	285
S/M Acid Scrubber	4.0	400
Dryer Acid Scrubber	19.2	a
S/M & Dryer Cross Flow Scrubber	a	1000
Product Cooler Acid Scrubber	16.0	a

a - baseline level to be established during 1995 annual compliance tests

In order to be permitted to operate at less than 90% of the above values additional compliance tests shall be conducted at the lower rates. The test results shall be submitted to the Air Compliance Section of the Southwest District Office of the Department within 45 days of the test. Acceptance of the test(s) by the Department will automatically constitute an amended permit at the lower tested rate.
[Rule 62-210.650, F.A.C., construction permit AC53-210886, and Farmland Hydro L.P. response letter dated June 24, 1994]

10. Any process equipment, vessel, seal tank, duct, etc., having the potential to emit air pollutants shall be sealed or covered during plant operation to minimize fugitive emissions.
[Construction permit AC53-210886]

Specific Conditions

Emission Limitations

11. Visible emissions from any part of this plant shall not be equal to or greater than 20% opacity.
[Rule 62-296.310(2)(a), F.A.C.]

12. Fluoride emissions from this plant shall not exceed the following:

A. MAP Production

Allowable Fluoride Emissions

Rate	Main Stack	R/G Stack	Plant Total
lbs/ton P_2O_5	--	--	0.06
lbs/hr	1.87	1.87	3.74
tons/year	8.2	8.2	16.4

B. DAP Production

Allowable Fluoride Emissions

Rate	Main Stack	R/G Stack	Plant Total
lbs/ton P_2O_5	--	--	0.06
lbs/hr	1.60	1.16	2.76
tons/year	7.0	5.1	12.1

[Rules 62-296.403(1)(f), and 62-296.800, F.A.C; construction permit AC53-210886 as amended April 19, 1994; PSD BACT Determination dated July 27, 1992; and 40 CFR 60.222 (NSPS Subpart V]

13. Particulate matter emissions from this plant shall not exceed the following:

A. MAP Production

Allowable Particulate Emissions

Rate	Main Stack	R/G Stack	Plant Total
lbs/hr	15.9	6.6	22.5
tons/year	69.6	29.0	98.6

Specific Conditions

13. (continued)

B. DAP Production

Allowable Particulate Emissions

Rate	Main Stack	R/G Stack	Plant Total
lbs/hr	10.6	5.5	16.1
tons/year	46.5	24.2	70.7

[Construction permit AC53-210886 as amended April 19, 1994]

14. The permittee shall not cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor. [Rule 62-296.320(2), F.A.C.]

15. All reasonable precautions shall be taken to prevent and control generation of unconfined emissions of particulate matter in accordance with the provisions in Rule 62-296.310(3)(c), F.A.C. These provisions are applicable to any source, including but not limited to, vehicular movement, transportation of materials, construction, alteration, demolition or wrecking, or industrial related activities such as loading, unloading, storing and handling. Lignosulfates (lignin) shall be used when needed to control unconfined dust emissions when handling MAP and DAP product. Defoamers may be added to the 28% P_2O_5 scrubbing liquid. [Rule 62-296.310(3)(b), F.A.C.]

16. Reasonable precautions for minimizing fugitive emissions of ammonia shall be taken and shall include the following:

A. routine inspections of vessels, piping and hoses:

B. placing scrubbers in operation prior to feeding ammonia to the process; and

C. the prompt repair of any leaks.

[Rule 62-4.070(3), F.A.C. and construction permit AC53-210886]

Monitoring Requirements

17. The permittee shall calibrate, maintain and operate a flow monitoring device to continuously measure and record 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. [Rule 62-296.800, F.A.C. and 40 CFR 60.223(a)(NSPS Subpart V)]

Specific Conditions

18. The permittee shall calibrate, maintain, and operate monitoring devices which continuously measure and permanently record the total pressure drop across each of the process scrubbing systems. The monitoring devices shall have an accuracy of ±5 percent over their operating range.
[Rule 62-296.800, F.A.C. and 40 CFR 60.223(c)(NSPS Subpart V)]

Compliance Testing Requirements

19. Test the emissions from each stack (main stack and Reactor-Granulator stack) during MAP production and during DAP production for the following pollutants annually on or during the 60 day period prior to the date of February 27 of each year. The annual testing for DAP or MAP production shall be waived if that product has not been manufactured during the 12 month period prior to the annual compliance testing deadline. A report of the test data shall be submitted to the Air Compliance Section of the Southwest District Office of the Department within 45 days of each test.

(X) Particulate matter (PM)
(X) Visible emissions (VE)
(X) Fluoride (F)

[Rules 62-297.340 and 62-297.570, F.A.C. and construction permit AC53-210886]

20. The permittee shall test the emissions from each stack (main stack and Reactor-Granulator Stack), during MAP production and during DAP production, for ammonia during the 6 month period prior to submittal of an application for renewal of this permit (corresponds to approximately a five year test frequency). Ammonia emissions shall be determined using a variation of the EPA Draft Method, using large impingers with 100 mls of 1.0 normal sulfuric acid in the first three impingers, the last impinger dry, and a probe with an external design similar to that used in EPA Method 16; or any other test method agreed to by the Department. A report of the test data shall be submitted to the Air Compliance Section of the Southwest District Office of the Department within 45 days of testing. [Rules 62-297.340(1)(c) and 62-297.570, F.A.C. and construction permit AC53-210886]

21. Compliance with the emission limitations of Specific Condition Nos. 11, 12, and 13 shall be determined using EPA Methods 1, 2, 4, 5 (PM), 9 (VE), and 13A or 13B (fluorides) contained in 40 CFR 60, Appendix A and adopted by reference in Rule 62-297, F.A.C. The minimum requirements for stationary point source emissions test procedures and reporting shall be in accordance with Rule 62-297, F.A.C. and 40 CFR 60, Appendix A.
[Rule 62-297.330, F.A.C. and construction permit AC53-210886]

Specific Conditions

22. The visible emissions tests shall be conducted by a certified observer and be a minimum of sixty (60) minutes in duration. The test observation period shall include the period during which the highest opacity can reasonably be expected to occur.
[Rule 62-297.330(1)(b), F.A.C.]

23. The permittee shall notify the Air Compliance Section of the Southwest District Office of the Department at least 15 days prior to the date on which each formal compliance test is to begin of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted.
[Rule 62-297.340(1)(i), F.A.C.]

24. The permittee shall determine compliance with the total pound/ton of equivalent P_2O_5 feed fluoride emission standard as follows:

A. The emission rate (E) of total fluorides shall be computed or each run using the following equation:

$$E = \left(\sum_{i=1}^{N} Csi\ Qsdi\right)/(P\ K)$$

where:

E = emission rate of total fluorides lb/ton of equivalent P_2O_5 feed.
Csi = concentration of total fluorides from emission point "i", mg/dscf.
Qsdi= volumetric flow rate of effluent gas from emission point "i", dscf/hr.
N = number of emission points associated with the affected facility.
P = equivalent P_2O_5 feed rate, metric ton/hr (ton/hr).
K = conversion factor, 453,600 mg/lb.

B. Method 13A or 13B shall be used to determine the total fluorides concentration (Csi) and volumetric flow rate (Qsdi) of the effluent gas from each of the emission points. The sampling time and sample volume for each run shall be at least 60 minutes and 0.85 dscm (30 dscf).

[Rule 62-296.800, F.A.C. and 40 CFR 60.224(b)(1)(NSPS Subpart V)]

Specific Conditions

25. Testing of emissions shall be conducted during operation of this plant at a production rate within 90-100% of the maximum permitted MAP/DAP production rates shown in Specific condition No. 5. A compliance test submitted at a rate less than 90% of the maximum permitted rate will automatically constitute an amended permitted input rate at that lesser rate plus 10%. Within 30 days of that lower amended permitted rate being exceeded, a new compliance test shall be conducted at the higher rate. The test results shall be submitted to the Air Compliance Section of the Southwest District Office of the Department within 45 days of testing. Acceptance of the test by the Department will automatically constitute an amended permit at the higher tested rate plus 10%, but in no case shall the maximum permitted MAP/DAP production rates specified in Specific Condition No. 5 be exceeded. The process rate during the test shall be included with each test report. Operating under conditions that are not representative of normal operating conditions may fail to provide reasonable assurance of compliance. [Rule 62-4.070(3), F.A.C.]

26. The following information shall be submitted with each compliance test report:

A. Production Data - identification of product being produced (MAP or DAP) and production rate during test period in tons/hour and tons P_2O_5/hour;

B. Scrubber Data - pressure drops across scrubbers (inches water) and scrubber liquid flow rates (gpm) during the test period for the scrubbers shown in Specific Condition No. 9.

[Rule 62-4.070(3), F.A.C.]

Recordkeeping Requirements

27. The permittee shall maintain a daily record of equivalent P_2O_5 feed rate by first determining the total mass rate in tons/hour of phosphorus bearing feed using the flow monitoring device (Specific Condition No. 17) and then calculating the P_2O_5 feed rate in accordance with 40 CFR 60.224(b)(3) based upon the P_2O_5 content of the phosphorus bearing material.
[Rule 62-296.800, F.A.C. and 40 CFR 60.223(b)(NSPS Subpart V)]

Specific Conditions

28. The permittee shall maintain daily records of the following for the North MAP/DAP Plant:

A. plant operating time and product being produced (MAP or DAP);

B. phosphoric acid and P_2O_5 consumption;

C. ammonia consumption;

D. MAP and DAP production;

E. pressure drops (inches water) and liquid flow rates (gpm) (if measured) for each of the scrubbers;

These records shall be recorded in a permanent form suitable for inspection by the Department upon request, and shall be retained for at least a two year period.
[Rule 62-4.070(3), F.A.C. and construction permit AC53-210886]

29. In order to document compliance with the No. 2 fuel oil limitations of Specific Condition No. 8, the permittee shall maintain a record of the following:

A. Date and duration (hours) of each occurrence when No. 2 fuel oil is fired in the dryer.

B. Quantity of No. 2 fuel oil burned (gallons) and total hours of operation firing No. 2 fuel oil in the dryer for each calendar month.

C. Records of the sulfur content of the No. 2 fuel oil delivered/received for use in the dryer. This may be based on vendor supplied information or results of analysis of samples taken at the facility.

These records shall be recorded in a permanent form suitable for inspection by the Department upon request, and shall be retained for at least a two year period. [Rule 62-4.070(3), F.A.C.]

Additional Requirements

30. Ammonia emission estimates listed below are for inventory purposes only. Should the actual ammonia emissions (pounds/ hour as determined by stack test) exceed the listed estimates, the permittee shall model the maximum ammonia emission rates to show that the Acceptable Ambient Concentration for ammonia of 100 ug/m^3 (annual average) is not being exceeded and submit a report on these

(continued)

Specific Conditions

30. (continued)
results to the Air Compliance Section of the Southwest District Office of the Department within 90 days of becoming aware of the higher ammonia emission rates.

A. MAP Production

Estimated Maximum Ammonia Emissions

Rate	Main Stack	R/G Stack	Plant Total
lbs/hr *	7.0	30.9	37.9
tons/year	30.7	135.5	166.2

(* 24 hour average)

B. DAP Production

Estimated Maximum Ammonia Emissions

Rate	Main Stack	R/G Stack	Plant Total
lbs/hr *	5.2	128.7	133.9
tons/year	22.7	563.7	586.4

(* 24 hour average)

[Construction permit AC53-210886 as amended April 19, 1994]

Reporting Requirements

31. The permittee shall submit to the Air Compliance Section of the Southwest District Office of the Department each calendar year on or before March 1, a completed DER Form 62-213.900(4), "Annual Operating Report for Air Pollutant Emitting Facility" for the preceding calendar year. [Rule 62-210.370(2), F.A.C.]

Permits

32. At least two applications to renew this operating permit shall be submitted to the Southwest District Office of the Department no later than June 25, 1999 (60 days prior to the expiration date of this permit). A Title V permit application submitted prior to this date shall negate this requirement. [Rule 62-4.090(1), F.A.C.]

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

For Richard D. Garrity, Ph.D.
Director of District Management
Soutwest District Office

Department of Environmental Protection

Lawton Chiles
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Virginia B. Wetherell
Secretary

PERMITTEE:
Farmland Hydro, L.P.
P.O. Box 960
Bartow, Florida 33830-0960

PERMIT/PROJECT:
Permit: AO53-239602
County: Polk
Amended: 3/15/95
Expiration Date: 01/15/99
Project: DAP,MAP,TSP Storage and Shipping Buildings

This permit is issued under the provisions of Chapter 403, Florida Statutes, Chapter 17-4, and Chapters 17-200 through 17-297, Florida Administrative Code. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans and other documents, attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the operation of the Storage and Shipping Buildings processing DAP, MAP, or TSP. Process operations in the shipping building include: product screening, product transfer by conveyor belts, and a product shipping bin. The maximum process rate for the storage building is 98.0 tons per hour (as P_2O_5), and the maximum process rate for the shipping building is 90.0 tons per hour (as P_2O_5).

Particulate matter emissions from both the storage and shipping buildings and all operations in the buildings are controlled by an ARCO cyclonic wet scrubber utilizing pond water.

Location: Green Bay Plant, S.R. 640, Bartow, Florida

UTM: 17-409.5 E 3079.5 N **NEDS No:** 0053 **Point ID:** 20

APIS ID: 40-TPA-53-0053-20

Replaces Permit: AO53-201632

farm02am.pmt

ERMITTEE:
armland Hydro, L.P.

PERMIT/PROJECT:
Permit No.: AO53-239602
Project: DAP,MAP,GTSP Shipping Buildings

PECIFIC CONDITIONS:

A part of this permit is the attached 15 General Conditions. Rule 62-4.160, F.A.C.]

Issuance of this permit does not relieve the permittee from omplying with applicable emission limiting standards or other equirements of Chapters 62-200 through 62-299, Florida Administrative ode, or any other requirements under federal, state or local law. Rule 62-210.300, F.A.C.]

ission Limitations:

The combined total fluoride emission rate from the ARCO scrubber tack, for both buildings and all operations, shall not exceed 2.75 ounds per hour, and 12.05 TPY, and is based on the maximum allowable luoride emission rates from each building allocated as follows:

	lbs./hr.	TPY
Shipping Building	0.13	0.57
Storage Building	2.62	11.48
Total:	2.75	12.05

[Permit AO53-201632]

The maximum allowable particulate matter emissions rate from the RCO scrubber stack, for both buildings and all operations, shall not xceed 30.3 pounds per hour, or as calculated by the Process Weight able Formula contained in Rule 62-296.310, F.A.C., based on the torage building process rate, whichever is less.
Permit AO53-201632, and Rules 62-296.310 and 62-296.700(2), F.A.C.]

Visible emissions from any emission point associated with the torage and shipping buildings shall not be equal to or greater than 0% opacity.
Rule 62-296.310(2)(a), F.A.C.]

perational Limitations:

The storage building and the shipping building are permitted for ontinuous operation (8760 hours per year). [Permit application]

The maximum permitted process rate for the storage building is 3.00 tons per hour (as P_2O_5). [Permit AO53-201632]

PERMITTEE:
Farmland Hydro, L.P.

PERMIT/PROJECT:
Permit No.: AO53-239602
Project: DAP,MAP,GTSP Shipping Buildings

SPECIFIC CONDITIONS:

8. The maximum permitted process rate for the shipping building is 90.00 tons per hour (as P_2O_5). [Permit AO53-201632]

9. Based on the compliance test conducted September 8, 1994, the permitted process rate for the storage building is 91.74 tons per hour (as P_2O_5). [Rule 62-4.070(3), F.A.C.]

10. All reasonable precautions shall be taken to prevent and control generation of unconfined emissions of particulate matter. These provisions are applicable to any source, including but not limited to, vehicular movement, transportation of materials, construction, alteration, demolition or wrecking, or industrial related activities such as loading, unloading, storing and handling. [Rule 62-296.310(3), F.A.C.]

Testing/Compliance Requirements:

11. Test for fluoride emissions, and particulate matter emissions, per Specific Condition Nos. 3, and 4, within thirty (30) days of placing all the following equipment in normal commercial operation: the two single deck screens on side "A" processing line; the two ribbon blenders on side "A" processing line; and the single ribbon blender on side "B" processing line. Should the above test fall on or within sixty (60) days prior to the normal annual compliance test date of July 26, than the test will also suffice for annual compliance demonstration. Otherwise, test as per Specific Conditions Nos. 3 and 4 annually, within sixty(60) days prior to the due date of July 26. A copy of the test data shall be submitted to the Southwest District Office of the Department of Environmental Protection within forty-five(45) days of testing. (See Specific Conditions 16, 17, 18) [Rules 62-297.340 and 62-297.570, F.A.C.]

12. Test for visible emissions per Specific Condition No. 5 within thirty (30) days of placing all the following equipment in normal commercial operation: the two single deck screens on side "A" processing line; the two ribbon blenders on side "A" processing line; and the single ribbon blender on side "B" processing line. Should the above test fall on or within sixty (60) days prior to the normal compliance test date of July 26, than the test will also suffice for compliance demonstration. Otherwise, test sixty(60) days prior to the due date of July 26, and within sixty(60) days prior to the due date of January 25. The visible emissions test scheduled for the July 26 due date shall be concurrent with the fluoride emissions

PERMITTEE:
Farmland Hydro, L.P.

PERMIT/PROJECT:
Permit No.: AO53-239602
Project: DAP,MAP,GTSP Shipping Buildings

SPECIFIC CONDITIONS:

and particulate matter emissions tests required as per Specific Condition No. 11. A copy of the test data shall be submitted to the Southwest District Office of the Department of Environmental Protection within forty-five(45) days of testing. [Rules 62-297.340 and 62-297.570, F.A.C.]

13. Compliance with the emission limitations of Specific Condition Nos. 3, 4 and 5 shall be determined using EPA Methods 1, 2, 3, 4, 5, 9, 13A or 13B contained in 40 CFR 60, Appendix A and adopted by reference in Chapter 62-297, F.A.C. The minimum requirements for stack sampling facilities, source sampling and reporting, shall be in accordance with Chapter 62-297, F.A.C. and 40 CFR 60, Appendix A.

14. The visible emissions test shall be conducted by a certified observer and be a minimum of sixty(60) minutes in duration. The visible emissions test period shall be concurrent with one of the particulate matter stack test runs and include the period during which the highest opacity reading can reasonably be expected to occur. [Rule 62-297.330(1)(b), F.A.C.]

15. Testing of fluoride emissions, particulate matter emissions, and visible emissions per Specific Condition Nos. 3, 4, 5, 11, and 12 should be conducted within 90-100% of the maximum permitted process rates of 98.00 tons per hour (as P_2O_5) for the storage building and 90.00 tons per hour (as P_2O_5) for the shipping building. All product screens and ribbon blenders should be in normal operation during the test period. A compliance test submitted at process rates less than 90% of the permitted process rates will automatically amend this permit to reflect the reduced rate(s), plus 10%. To increase the process rate(s), another compliance test shall be performed within fifteen(15) days of commencement of the higher rate(s) and the results submitted to the Department for approval within forth-five(45) days. Acceptance of the test by the Department will automatically amend this permit to the new rate(s), plus 10%, but in no case shall the maximum permitted rates of Specific Condition Nos. 7 or 8 be exceeded. All emission test reports submitted to the Department shall include a statement of the process rates. Failure to submit the actual process rates during the test, or operating at conditions which do not reflect normal operating conditions may invalidate the test.
[Rule 62-4.070(3), F.A.C.]

PERMITTEE:
Farmland Hydro, L.P.

PERMIT/PROJECT:
Permit No.: AO53-239602
Project: DAP,MAP,GTSP Shipping Buildings

SPECIFIC CONDITIONS:

TSP (Triple Superphosphate) Testing Requirements:

16. Testing of fluoride emissions per Specific Condition No. 3 is required only when producing TSP (Triple Superphosphate). The Fluoride emissions test shall be conducted only after the fertilizer plant has been producing TSP normally for at least two(2) days immediately prior to the test. The emission test report submitted to the Department shall include a statement of the actual process rates during the test, and a statement of the time period that TSP was being produced prior to the test.
[Rule 62-4.070(3), F.A.C.]

17. Testing of fluoride emissions, particulate matter emissions, and visible emissions per Specific Condition Nos. 3, 4 and 5 shall be conducted any time TSP is produced and stored within the storage building. The emission test reports submitted to the Department shall include a statement of the actual process rates during the test.
[Rule 62-4.070(3), F.A.C.]

18. Testing of fluoride emissions, particulate matter emissions, and visible emissions per Specific Condition Nos. 3, 4 and 5 shall be conducted any time TSP is produced and shipped from the shipping building. The emission test reports submitted to the Department shall include a statement of the actual process rates during the test.
[Rule 62-4.070(3), F.A.C.]

Notification Requirements:

19. The permittee shall notify the Air Program of the Southwest District Office of the Department of Environmental Protection at least fifteen(15) days prior to the date on which each formal compliance test is to begin of the date, time, and place of each test, and the contact person who will be responsible for coordinating the test. [Rule 62-297.340(1)(i), F.A.C.]

Reporting Requirements:

20. Submit to the Air Program of the Southwest District Office of the Department of Environmental Protection, each calendar year, on or before March 1, an emission report (DER Form 62-210.900(4) - *Annual Operating Report for Air Pollutant Emitting Facility*), for this source, for the preceding calendar year. [Rule 62-210.370(2), F.A.C.]

PERMITTEE:
Farmland Hydro, L.P.

PERMIT/PROJECT:
Permit No.: AO53-239602
Project: DAP,MAP,GTSP Shipping Buildings

SPECIFIC CONDITIONS:

Permit Renewal:

21. Four applications for a Title V operating permit shall be submitted to the Southwest District Office of the Department as specified in Rule 62-213, F.A.C., at least 60 days prior to the expiration date of this permit. To properly apply for an operation permit, the applicant shall submit the appropriate application form, and compliance test reports as required by this permit. [Rules 62-4.220 and 62-297.340(1)(a), F.A.C.]

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

For Richard D. Garrity, Ph.D.
Director of District Management
Southwest District

coop602.amd

Department of
Environmental Protection

Lawton Chiles
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Virginia B. Wetherell
Secretary

JUL 05 1995

NOTICE OF PERMIT AMENDMENT

CERTIFIED MAIL
Mr. C. M. Farris
Vice President, Operations
Farmland Hydro L.P.
Post Office Box 960
Bartow, FL 33831

Dear Mr. Farris:

RE: Polk County Air Permit
AO53-239602 (As Amended 3/15/95)
DEP File No. 268882

On March 27, 1995, the Department received your application for amendment of the above Permit for the Storage/Shipping operation in Polk County. The Department, pursuant to Florida Administrative Code Rule 62-4.070, hereby issues the attached permit amendment.

CHANGE PROJECT DESCRIPTION FROM:

The maximum process rate for the storage building is 98.0 tons per hour (as P_2O_5), and the maximum process rate for the shipping building is 90.0 tons per hour (as P_2O_5).

CHANGE PROJECT DESCRIPTION TO:

The maximum process rate for the storage building is 98.0 tons per hour (as P_2O_5), and the maximum process rate for the shipping building is **98.0 tons per hour (as P_2O_5) based upon a rolling 30-day average.**

CHANGE SPECIFIC CONDITION NO. 8 FROM:

8. The maximum permitted process rate for the shipping building is 90.00 tons per hour (as P_2O_5). [Permit AO53-201632]

CHANGE SPECIFIC CONDITION NO. 8 TO:

8. The maximum permitted process rate for the shipping building is 98.0 tons per hour (as P_2O_5) based upon a rolling 30-day average. Pursuant to Rule 62-4.070(3) and 62-4.160 (14)(b), F.A.C., records of loading rates shall be maintained on a daily and rolling 30-day average basis. These records shall be retained for a minimum of 3 years and shall be made available to the Department upon request. [Permit AO53-201632 and amendment request of March 27, 1995]

CHANGE SPECIFIC CONDITION NO. 15 FROM:

15. Testing of fluoride emissions, particulate matter emissions, and visible emissions per Specific Condition Nos. 3, 4 and 5 should be conducted within 90-100% of the maximum permitted process rates of 98.00 tons per hour (as P_2O_5) for the storage building and 90.00 tons per hour (as P_2O_5) for the shipping building. A compliance test submitted at process rates less than 90% of the permitted process rates will automatically amend this permit to reflect the reduced rate(s), plus 10%. To increase the process rate(s), another compliance test shall be performed within fifteen(15) days of commencement of the higher rate(s) and the results submitted to the Department for approval within forth-five(45) days. Acceptance of the test by the Department will automatically amend this permit to the new rate(s), plus 10%, but in no case shall the maximum permitted rates of Specific Condition Nos. 7 or 8 be exceeded. All emission test reports submitted to the Department shall include a statement of the process rates. Failure to submit the actual process rates during the test, or operating at conditions which do not reflect normal operating conditions may invalidate the test.
[Rule 17-4.070(3), F.A.C.]

CHANGE SPECIFIC CONDITION NO. 15 TO:

15. Testing of fluoride emissions, particulate matter emissions, and visible emissions per Specific Condition Nos. 3, 4 and 5 should be conducted within 90-100% of the maximum permitted process rates of 98.00 tons per hour (as P_2O_5) for the storage building and 98.00 tons per hour (as P_2O_5) for the shipping building. A compliance test submitted at process rates less than 90% of the permitted process rates will automatically amend this permit to reflect the reduced rate(s), plus 10%. To increase the process

rate(s), another compliance test shall be performed within fifteen(15) days of commencement of the higher rate(s) and the results submitted to the Department for approval within forth-five(45) days. Acceptance of the test by the Department will automatically amend this permit to the new rate(s), plus 10%, but in no case shall the maximum permitted rates of Specific Condition Nos. 7 or 8 be exceeded. All emission test reports submitted to the Department shall include a statement of the process rates. Failure to submit the actual process rates during the test, or operating at conditions which do not reflect normal operating conditions may invalidate the test.
[Rule 62-4.070(3), F.A.C.]

A person whose substantial interests are affected by this permit amendment 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 receipt of this Permit. 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
(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 permit. 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 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.

This permit amendment is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition and conforms to Rule 17-103.070, F.A.C. Upon timely filing of a petition or a request for an extension of time this permit amendment will not be effective until further Order of the Department.

When the Order (Permit Amendment) is final, any party to the Order has the right to seek judicial review of the Order 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 the Final Order is filed with the Clerk of the Department.

This letter must be attached to and becomes a part of permit AO53-239602, as amended March 15, 1995. If you have any questions, please call Bill Schroeder, of my staff, at (813)744-6100 extension 104.

Executed in Tampa, Florida,

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

for Richard D. Garrity, Ph.D.
Director of District
Management

RDG/WES/ws

cc: Dr. John Koogler, P.E., Koogler & Associates

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT AMENDMENT and all copies were mailed before the close of business on JUL 05 1995 to the listed persons.

Clerk Stamp

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

(Clerk) JUL 05 1995 (Date)

APPENDIX C - MODELING OUTPUT DISK FILE INDEX

THIS DISK CONTAINS PARTICULATE MATTER (PM) MODELING FILES FOR THE FARMLAND HYDRO, L.P. FACILITY IN GREEN BAY, FLORIDA. THE FOLLOWING ARE OUTPUT FILES ARE IN ASCII FORMAT.

THE FOLLOWING FILES CONTAIN ISCST3 MODELING OF:
SIA FOR CLASS I AREA CHASSAHOWITZKA NWR, AND CLASS 2 AREAS
BUILDING DOWNWASH PROFILE INPUT PROGRAM (BPIP) FILES.

CLASS 1 MODELING OF SIGNIFICANT IMPACT ANALYSIS (SIA) FOR CHASSAHOWITZKA NWR CLASS 1 AREAS ARE PROVIDED IN THE FOLLOWING FILES;

FARP1-87 OUT	51,270	11-18-97	PM CLASS 1 SIA FOR 1987
FARP1-88 OUT	51,270	11-18-97	PM CLASS 1 SIA FOR 1988
FARP1-89 OUT	51,270	11-18-97	PM CLASS 1 SIA FOR 1989
FARP1-90 OUT	51,270	11-18-97	PM CLASS 1 SIA FOR 1990
FARP1-91 OUT	51,270	11-18-97	PM CLASS 1 SIA FOR 1991

SIGNIFICANT IMPACT ANALYSIS (SIA) FOR CLASS 2 AREAS ARE PROVIDED IN THE FOLLOWING FILES:

FARP2-87 OUT	169,214	11-18-97	PM CLASS 2 AND FAAQS SIA FOR 1987
FARP2-88 OUT	169,214	11-18-97	PM CLASS 2 AND FAAQS SIA FOR 1988
FARP2-89 OUT	169,214	11-18-97	PM CLASS 2 AND FAAQS SIA FOR 1989
FARP2-90 OUT	169,214	11-18-97	PM CLASS 2 AND FAAQS SIA FOR 1990
FARP2-91 OUT	169,214	11-18-97	PM CLASS 2 AND FAAQS SIA FOR 1991

BUILDING INPUT PROFILE PROGRAM (BPIP) FILES ARE PROVIDED IN BPIP-DW.EXE. BUILDING DOWNWASH CALCULATIONS ARE USED IN ALL MODELING. THE FOLLOWING BPIP FILES ARE PROVIDED:

FRM1	INP	2,124	10-28-97	INPUT FOR PM SOURCES
FRM1	OUT	5,836	10-28-97	OUTPUT FOR PM SOURCES
FRM1	SUM	91,659	10-28-97	SUMMARY FOR PM SOURCES

IF THERE ARE ANY QUESTIONS OR IF I MAY PROVIDE ADDITIONAL FILES, OR CLARIFICATION PLEASE CALL.

DECEMBER 17, 1997
KOOGLER AND ASSOCIATES
(352) 377-5822
KOOGLER@WORLDNET.ATT.NET